Britany

Phaeorymania Part II

By

Asbury, M.D.
Botany

Phanerogamae continued.

Ord. Caprifoliaceae


1. Sambucus javanica, Reine.


Hab. Luzon; in the Mayajai Mountains. (A missy fragment, with fruits fallen from the inflorescence.)

2. Sambucus tripetalaus, Lindl.


Hab. New South Wales. The specimen was in a package marked "Bay of Islands, New Zealand," but it was probably collected in Australia.
2. Alsenosmia, A. Brun.

Alsenosmia, A. Brun., B. S. T. 2, 1815.


1. Alsenosmia macrophylla, A. Brun.

Alsenosmia macrophylla, A. Brun., t. c.; Hook. f. Fl. N. Zeal. 1, p. 102, f. 23.

Nab. Bay of Islands, New Zealand. (In fruit)

1. Alsenosmia quercifolia, A. Brun.

Nab. Bay of Islands, New Zealand.

Dr. Hooker, who has reduced several of Cunningham's species might have preferred this, and even all of them except A. macrophylla, to A. Banksii.

2. Alsenosmia Banksii, A. Brun.

Alsenosmia Banksii, atroplicifolia, &

A. Brun., Fl. N. Zeal. 1, p. 102, f. 23.

Nab. Bay of Islands, S. B., New Zealand.

(Noy various forms.)
Ord. Rubiaceae.

1. Rubia, Tourne.

1. Rubia angustifolia, Linn.
Hab. Madeira; between Funchal and Santa Anna. (A variety of \textit{R. tinctoria}, no doubt.)

2. Galium, Tourne.


\textit{Rubia Kelbrum}, Cham. \& Schlecht., in \textit{Linnaea, 3, p. 229. \& C. Prov. 4, p. 572.}

Hab. Chili, near Valparaiso and Santiago, Peru, near Callao, Brazil.
in the Organ Mountains; the same as Rubia affinis, S. D. Jones, a narrow-leaved variety. Lima: young Specimen without blooms or fruit; apparently a narrow-leaved form of the same species, and Rubia ciliata, 18. Dec. K.

2. Galium ciliatum, Ruiz & Pav.

Galium ciliatum, Ruiz & Pav., Fl. Peru, 1979, p. 89.
Rubia ciliata, DC. Prodr. 4, p. 591.

Stat., Cusco, Peru. (Imperfect specimen, the corolla not present.)


Rubia Chilensis, Motin, F. Fl. Patagonia, 4, p. 590.

Stat., Rio Negro, South Patagonia.


Stat., High Andes near Santiago, Chile.


Hab. Chili, near Santiago.


Hab. Valparaiso, Chili. (Perhaps not distinct from the following species.)


Hab. Orange Harbor, Fuego.

This can hardly have been introduced into the Antarctic regions, where it was found in the time of Cook's voyage, and has since been detected at various stations. In the United States, at least in the eastern side of the continent it does not occur in such situations as to appear unequivocally indigenous.
but the evidence on the other hand is decisive in favor of the conclusion that it is so.


*Galium prodigoso*, L., in Trans. Linn. Soc. Phil. 4, p. 29.

Hab. Madeira.


Hab. Peru, near Baños.

The peduncles are solitary at the end of the branches and short, still the plant in part doubtles belongs to this species; partly in fruit, this character of a campanulate corolla can not be verified.
10. *Galium obovatum*, N. B. K.


Peru, mar.

Hab. Obrajillo.


Hab. Orange Harbor, Tierra.


G. umbrosum, Island. in Fort. Proc. no. 500, Fig. Colver.

Hab. Lord Auckland Islands.
This is Stokes’s variety *hispidum*, but the leaves are *hispid-ciliatus*, rather than *ciliato-pilosus*. Dr. Hooker did not collect this, nor any other *Galium* upon the Lord Auckland Islands, where, however, almost any New Zealand and herbaceous species might be expected.


Hab. Hunter’s River, New South Wales.

14. *Galium Gandi’chandi*, D. B.

Hab. Hunter’s River, New South Wales.

This must be Dr. Gandolli’s *G. Gandi’chandi*, which came from Pat Jackson. But it is nearly allied to Dr. Stokes’s *G. alcaei*, figured in the *Flora of Tasmania*. 
3. Phyllis, Linn.

1. Phyllis Nobla, Linn.

Hab. Madeira; on dry rocks near San Vicente, etc. Found also by Dr. Nöbel on the Carolas. Formerly known from the Canary Islands only.


A peculiarly, South Sea genus, most conspicuous and most numerous in species in New Zealand, found in the Northern Hemisphere only in the Sandwich Islands, lat. 19°-22°. From this group we have six species, all new
Dr. As a Grey

Long before Clos published his Hedzičke
repens (which you make out to be a
connecting link between Coprosma and
Restera, Calliomena Coprosma Calycina)
The plant had been described by Bronte

The III "out of the Nepomucen log book"

"This points out its close affinity
to Coprosma"
Japanesedb.
bathy\textit{umbor}-L.
cellace\textit{a}
\textit{subfragile}
\textit{subfragilis}
\textit{parasitic}
\textit{invasive}
Published for the first time, although all but one had lain long in herbaria, and the two most remarkable (E. toxonotropum and E. ernodonicum) were gathered one of them by Nelson in Cook's last voyage, the other by Nelson in Vancouver's Voyage, (as well as E. Menziesii, by Menzies).

* Australiaceae *


N. New South Wales, near Sydney.

* * * Novo. Zelandiæ et Aucklandiae


*Ceprossa grandifolia*, Nob. 7. Fl.

N. Z. Arch. 11, p. 1014

From acaea australis, A. Riesti.

Nab. Bug. of Islands, New Zealand.

In flower and fruit.

We adopt Stouter's name since our specimens plainly belong to this *C. grandifolia*; but we remark that the stamens, leaves of the corolla, and the distinct teeth of the calyx are often as many as six or more, if we had paid more attention to Dr. Stouter had not pointedly assured us that this *C. lineata* and Randl's
2. robusta were distinct species, we should have been disposed to unite them, as Foster probably did, under one species.


Hab. Bay of Islands, New Zealand; in fruit.

For this species (and just as does Dr. Hooker, in the preceeding), Kaup refers the *Kumaea australis* of A. Richard. I suspect that it is, in part at least, the type of Foster's *E. lucida*. The specimen communicated under this name by Foster to the Bankianian Herbarium has rather small leaves and short peduncles.
4. *Coprosma fodiennisia* Harv.


*Hab.* Auckland Islands. (A plant of abominable stench.)

5. *Coprosma Spathulata* A. Brum.

*Coprosma Spathulata* A. Brum. *Mee. Fl. N. Zeal.* *l.c.* p. 207; *ibid.* *Fl. N. Zeal.* *l.c.*

*Hab.* Bay of Islands, New Zealand. In fruit.


*Hab.* Bay of Islands, New Zealand. In fruit.
7. *Copsosma porphyracea* R. Br. & R. Catesby, 1810

**Hab.** Bay of Islands, and Haururu Bay, New Zealand.

The collection comprises the larger form, approaching *C. hortense* in appearance, and confined by C. von Mises to the species, and var. *hirsuta*, var. *hirsuta* in foliage, as well as intermediate specimens. It is with fruit only. This and the related species are fully characterized by Mr. Horsky.

8. *Copsosma acerosa* R. Br. & R. Catesby, 1810

**Hab.** Haururu Bay, New Zealand.

9. *Copsosma rotundifolia* R. Br. & R. Catesby, 1810

**Hab.** Haururu Bay, New Zealand.

In single only: neither flowers nor fruit, a form with small and pointed leaves.


*Hab.* Auckland Islands.

11. *Coprosma repens* Stock. f.

*Coprosma repens* Stock. Fl. Antar., I. e. t. 16; t. Fl. N. Zealand. I. e.

*Hab.* Auckland Islands.

[Sketch: "Oceanicæ", (Tab. 1)]


*C. persicofolia* Glabr., di oica; stipulis late triangulatis cuspidatis; foliis membranaceis penninervis lanceolatis sensim acuminiatis, petiolo brevi; pedunculis brevissimis, paniculatis; calyces limbio viribus dentatis; corolla profunde
quadrifida; drupa oblonga.

Hab. Ovola on and Namua leve, Fijian Islands.

Apparently an erect shrub, with slender branches; internodes very short, the nodes strongly acuminate by the short and nearly persistent stipules. The leaves, especially on the more vigorous shoots, may be likened to those of the Peach (whence the specific name), only they are of smaller size, 3 or 4 inches long, and two-thirds or three-quarters of an inch in width; in some specimens of only half this size. They are membranaceous, broadly lanceolate, tapering above gradually to a point, and at the base abruptly contracted into a petiole of 3 or 4 lines in length, glabrous, dull, scarcely paler beneath, where they are rather prominently feather-veined; the base of each primary vein curiously enlarged into a thick and broad, solid, or at length cup-shaped glandular-looking body. Inflorescence in the axils and exceeding the petiole.
Persimile from one to three in each axil, very short, each bearing about three, or perhaps more, flowers. Ovary trilocular, 3-celled, and very obscurely 4-angled. Corolla not more than a line long, deeply 4-lobed. The slender papillate styles much exserted. Young fruit narrowly oblong.

The above relates to the female plant alone; no specimens with male flowers were collected. So that the grand species is probably dioecious.

13. Coprosma *Taitensis*, Y. M.

C.? glaberrima, fruticosa; stipulis triangulatis acutis subhastatis praeter tibus; foliis sic coriaceis oblongis obtusis basi in petiolum angustatis; pedunculis brevissimis vel brevisculis 2–5 floris; synapta obvato-globosa, apice stidea. (Society Island

**Tab. Tahiti**; in forests on the hills and mountains.
Shrub 6 to 8 ft. high, glabrous. Stipules much smaller and shorter than in C. robusta, more persistent, united at the base. Leaves between chartaceous and coriaceous in texture, 1½ or 2 inches long, ½ to 1½ inches wide, oblong or obovate-oblong. The base narrowed into a petiole of 2 or 3 lines in length. Flowers red. The two species are in fruit, only with the axillary peduncles very short, not longer than the fruit, and probably not more than three flowered; the other has the fruits bearing about peduncles half an inch long, leaving 3 or 5 superficially arranged sessile drupes. These are globe oblate-globose, not over 2 lines long, the calyx-limb obsolete. Pericarp 2, thick and bony.Seed erect, truncate-incurved. The slender endosperm and albumen as in the genus Cyprena.

This cannot be Forster’s Cyprena triflora. It is apparently a new Cyprena allied to C. robusta, but the flowers are unknown. Dr. Forster’s C. petiolata from Tanna Island (Milne, in cruise of the Herald) resembles the Tahiti species, but is pubesculent, with paler and rather rounder leaves, &c.
C. fulicosa, dioica, fere glabra; stipulis triangulari-acuminatis basi chartaceis connatis; foliis oblongis seu lanceolato-oblongis acutis basi in petiolum gracilem attenuatis; pedunculis paniculosis pedicellisque bevisumis; fl. subintegro, corolla b-7-fidibus tubo breviore, fl. form. 5-b. mero, calycis tubo ultra ovarium globosum nunc longissime producto (limbo cupulari breviter 5-b. dentato) super drupas, intratnostri persistente.

Tab. Hawaii, Sandwich Islands, in the districts of Puna and Naimea, and near the Crater of Lua Pöhe. Also gathered by Nelson, Macrae, and Vanderlind; also recently by Perry.
Shrub with slender branches, glabrous or a little pubescent when young. Stipules triangular and more or less pointed, 2 or 3 lines long, carinate at the base, more or less puberulent or silky, pubescent, deciduous. Leaves thin, chartaceous in texture, glabrous, obovate, sometimes oblong, lanceolate, acuminate or slightly pointed, 1½ to 2½ inches long, ½ to 1½ lines wide, conspicuously tapering at the base into a slender petiole of 3 to 10 lines in length; the veins not conspicuous. Flowers dioecious, 3 to 5 in a cluster, very short and inconspicuous on a peduncle, which at length may become 3 or 4 lines in length, the cluster subtended by a pair of small bracts with their stipules. Calyx of the Male flowers with a very short, petaliform, nearly entire calyx, and a campanulate floral...
shaped corolla, the broad limb of which is 6-7-cleft; the lobes short, long-lanceolate, valvate in estivation. Stamens 6 or 7, as in the genus. Female flowers slender, ovary globular. Calyx-tube prolonged beyond the globular adnate ovary into a solid and abrupt beak, twice the length of the ovary itself, and as long as the tube of the corolla (about a line and a half), bearing at its summit a small, cupulate, and irregularly but sharply (more or less 5-6-toothed limb. Corolla narrowly funnelform; the limb 5-6-cleft, with a valvate estivation. Stamens 9-11. Stigmas 2. Very long and filiform, as in the genus. Drupes obovoid-globose, about 4 lines long, abruptly beaked by the persistent prolongation forming as it were a stipe to the abruptly somewhat dilated peral limb of the calyx persistent on its summit; the whole beak varies from
one and a half to nearly three lines in length, and forms a remarkable feature, which suggests the specific name. Another peculiarity, observable in our specimens, is found in the 5 to 12 longitudinal parallel crescent-shaped ridges of the drupe, nearly symmetrically disposed; these are very conspicuous upon the dried fruit, and do not disappear by soaking. They belong to the base cusp; there are no corresponding ridges upon the calyx of the fruitlet. Oval and emarginate as in the genus.

[In King's specimens, recently received, the fruit is destitute of the ridges above mentioned; and the bulk of the fruit does not exceed a little more than a half in length; in some fruits upon the same individual it is reduced to a mere neck beneath the cupulate limb of the calyx.]

Plate

**Oxyccoa rhynco**

1. *Carpo*: branch of a fruitlet plant. Fig. 1. A small branch of a fruitlet plant, in flower. 2. A cluster of these. Male flowers, with their bracts and stipules, shown separate at 3, spread out. 4. Female flowers separate. 5. Section of the ovary and calyx of the same. 6. A male flower. 7. Vincticle
section of a fruit and its stalk. 8. Transverse section of the fruit. 9. Embryo detached. All except fig. 1. Magnified.

(Cephalotaxus longifolia, sp. nov.)

C. glaberrima, fruticosa; stipulis in vaginae oblongae caulitis et basi circumscissa caducis; foliis subcoriaceis nitidulis lanceolatis utrinque acutis sub-lanceae petiolatis; pedunculis fructiferis petiolo brevioribus capitato-pluri-floris; drupae ovatae calycibus brevibus 5-7 dentatae convexa apiculae lata.

Hab. Oahu, Sandwich Islands; in the mountains behind Honolulu, where it was also gathered by Sand-ichau.

The leaves no flowers of this species. It is very well marked by its sheathing stipules, long and narrow willow-like leaves, and the entire
Smoothness of every part. The stipules are from 4 to 6 lines in length, smooth, chestnut-colored, united into a sheath which is 2-4 lobed at the summit, and early caducous by circumcision at the base and also by splitting down one side. Branches very leprous, the internodes generally shorter than the petals. Leaves very smooth, thickish, bright green, lanceolate, or broadly linear lanceolate, acute at both ends, 2½ to 4 inches long, ½ to 3 lines wide, and of the same width for nearly their whole length, the primary veins not prominent, but very numerous. Petiole of the larger leaves almost an inch in length, of the smaller about half that length. Fruitiferous peduncles 2 to 5 lines long, bearing a capitate cluster of several drupes (sometimes as many as 10) ovoid, red drupes, of about 3 lines in length, crowned with a small, and minutely 5-7-toothed, edge of the calyx. Endocarp of a reddish, long pyriform. In Bryo, ts., as in the generic.

C. punctata, divica, glabra; stipulis
triangularis acuminatis basi sub-
commatis; foliis chartaceis lanceola-
tis seu oblongo-lanceolatis utrinque
acutis vel acuminatis. 

gracile, alternatis; pedunculis pet-
tolens gracile breviobitus, apice panc-
ecifloris; floribus 6-7 meris; drupae
obovatae, globosa apice plana.

Eunarthronia foliosa, Nutt. ined. in
Herb. Hook.

Hab. Oahu, Sandwich Islands,
also collected by Sandwich, Nootsall,
and Symeann, and recently by Perry.

Only a fragment of the male
plant of this being found in the
collection, it is the character is complete.
from specimens gathered by Semmann, &c. It most resembles C. longifolia; but the stipules are quite different, being small, acuminate from a broad base or very short sheath. They are only 2 lines long and pubescent, at least on their margins. Otherwise the plant is glabrous. The leaves, also, are only 1½ to 2 inches long, more tapering both upwards and downwards, the broadest part in the middle from a third to half an inch in width, the texture chartaceous rather than coriaceous, the veins very fine and numerous. Petiole from a quarter to half an inch in length, slender. Pedicels 1½ to 3 lines long, in the male plant terminated by a cluster of only 3 or 4 sessile flowers involucrate by a very small pair of bracts or reduced leaf, shorter than the corolla accompanied as usual by its pair of stipules. Calyx (male) peltiform, minutely 1-7-toothed, shorter than
The tube or contracted base of the 6-7-leaf corolla. Stamina 6 or 7. Female flowers not observed. Dripes in the specimens solitary, obturate-globose, very with a rounded naked summit, the limb of the calyx obsolete.

The species is quite intermediate between C. longifolia and C. Munziesii, var. B.

Plate B. Cypres. a foliis.
Fig. 10. Fruit and leaves, of the natural size.
11. Magnified vertical section of a drupe.
12. Embryo from the same.
Opromia fubens, Sp. Nov.

C. pubescens, dioica; stipulis latis
doloeis basi connatis strigoso seri-
ecis; foliis chartaceis obovato-oblongis
oblongisve basi in petiolum attenua-
tis supra glabris subitae reticu-
late-venosis ramulisque pubescentis-
ibus; pedunculis petiolo brevioribus
vel subnullis; floribus cariusculis, mas-
culis b-7. meris; calyce irregularii,
vestita breviter in fundibuliforme.

Variet, a. drypis secus ramosque sub-
seriibus basi bifractatis ovarii deis
rostello brevi apiculatis; et
Kauai: Var. B. drypis obovatis obtusissimis post
vestitus in pedunculo communem.

Hal. forest and high Bullock
plains on the side of Mooma Kea,
Kauai: Var. B. Kanai, Sandwich Islands.
Apparently a much branched and more or less fraing
straggling shrub, dioecious; the bran-
ches of the female plant squoamose
with the crowded vestiges of stipules, abbrevi-
ated peduncles, &c., the leaves expanded
at their summit. Stipules dilated
triangular, 1½ to 3 lines long, connate for
nearly half their length, strigose exter-
nally with an appressed silky-hisiate
pubescence which is more or less de-
cinose. Leaves of a firm that rather
than texture but rather thin, dull,
glabrous above except a slight pubescence
on the midrib and principal veins, but
fromy with a short pubescence beneath,
especially on the midrib and the numerous
rather prominent veins and reticulated vein-
lets, ½ to 2¾ inches long, at most one
inch broad, obturate or oval-oblong,
obtuse, below tapering gradually into a
rather slender petiole of a quarter or
half an inch in length. The possess
one specimen with male flowers, another with fruit, but no female flowers. Male flowers several in a loose head subtended by a pair of foliaceous bracts of about the length of the flower-buds, and raised on a peduncle of not more than 3 lines in length. Calyx 2 lines long, campanulate, irregular, being unequally cleft into 3 or 4 short and broad lobes, and some of these 2-lotted at the apex. Corolla 3 or 4 lines long, short-infundibuliform, the narrow tube expanding into a broad throat or limb divided into 6 or 7 occasionally 7 lanceolate lobes. Stamens as many, nearly or quite free from the corolla, with the at length elongated filaments and large and club-shaped pointed anthers of the genus. The fruiting specimen (from Hawaii) bears apparently single drupes or peduncles of only a line or at most a line and a half in
length. The drupes are ovoid, 4 lines long, and generally pointed with an abrupt beak about half a line long, on which there is no trace of a calyx tooth. The sixth structure and that of the seed, if, are as in the genus.

The var. B., from the mountains of Kauai, is a small fruit, drupes 3 sessile upon the summit of a peduncle of a quarter or half an inch in length, and often with 2 or 3 sessile ones lower down on the peduncle, rather smaller than in var. A., and more ovate, the very small (summit) crowned with a depressed flat areola. The difference in the inflorescence is probably of no account. The blunt summit of the fruit being blunt and marked (as in most species of the genus) alone causes some hesitation in referring the specimen to the present species. An imperfect fruit specimen with one or two male blossoms and smaller, less pubescent leaves probably belongs to this species.
18. Goprous a Menziesii, sp. nov.

C, fruticosus, dioica; rami pubescentes; stipulis brevibus connatis sericeo-pubescentibus; foliis ovatis seu ovato-ellipticis, subobtusis, pubescen

C, fruticosus, dioica; rami pubescents; stipulis brevibus connatis sericeo-pubescentibus; foliis ovatis seu ovato-ellipticis, subobtusis, pubescen

C, fruticosus, dioica; rami pubescentes; stipulis brevibus connatis sericeo-pubescentibus; foliis ovatis seu ovato-ellipticis, subobtusis, pubescen
Stab. Hawaii, Sandwich Islands (Kauai, Maui, Molokai, Douglas, Kauai); in the districts of Puna and Hā'ikū. Mountains of Kaua'i (a thick-leaved, 11-andron form). B. Hawaii; Sand Island. F. On Mōna Loa and Mōna Kea; also in the on the mountains of Maui.

This species vindicate the character for variability which this species, the genus is noted for in the Nāvea and flora. Indeed the woody plants of the Pacific islands generally seem to be remarkably polymorphous. Attached specimen of this single species, as I must regard it, would undoubtedly be referred to three or four different types. The more luxuriant and thinner-leaved forms probably collected in forests; those with thicker and smaller leaves, crowded on short branches or their rigid spars of tea short branches, are from
the naked and exposed region of the moun-
tains above the limit of trees — Branches
in all more or less pubescent when
young, Stipules short and broad more
pubescent, especially in the condensed
forms, when they are rather persistent.
Leaves always glabrous, 1½ or 2 inches,
or in var. 1, reduced to an inch or
less in length, obtuse, acute, or rounded
at the apex, acute or tapering at the
base, dull, the Primary veins slender
and numerous, the Veins less much re-
ticulated; petioles 2 to 5 lines long. Flowers
deciduous, Peduncles solitary or 2 or 3
together from the axil, or from axillary
and leafy aborted short spurs, those of
the male flowers very short; of the female
2 to 3 lines long, or in var. B, 3 to 5 lines
long, bearing from one to three flowers;
in var. 1, both the male and female
and the fruit sessile or nearly so in
the axil or on short spurs. Only
of the male flowers pistiliform, the mar-
gin acutely dentilculate; its acute tube
in the female flowers ovary contracted under the small and capsule 5-9-toothed limb. Corolla short-funnel form, usually 7-9-clawed, rarely 5-clawed, in the male flowers of one specimen 11-clawed, and the stamens of the same number. Filaments, anthers, 5, as in the genus. Style, sometimes 3 or 4, very long. Drupes globular, about 3 lines long at maturity, cuneated, not produced at the apex, but crowned with the short sometimes rather remains of the conspicuous 5-9-toothed limb of the calyx. Pyrene long. Albumen and seed as in the genus.

A form of var. P., with remarkably acute leaves approaches to acutiloba, etc., in New York, from Normandie group, Louisiana, Archipelago?
C. pumicosa, proeminent, dicha, glabra (nisi ramulis junces ramis juniores), stipulis brevissimis connatis, foliis con fortissimis parvis sublineari obtusis avenis siliis patellatis imagine parce hispidulis, floribus sessilibus, fructibus sessilibus, seminibus ramulosis terminatis. 4 mois, corolla tubulosa; in flore i California.

Hab. Hawaii, Sandwich Islands; on the lava-plains and near the craters of Lilo Pele. Also long since collected by Merriam, and more recently by the Rev. J. Field, and lately by Nels.

A proeminent shrubby plant, glabrous, except a minute pubescence on the youngest parts, especially the long and trailing branches. These, and still
more than numerous that and rigid branchlets are thickly covered with the linear or linear-oblong, thick, and rigid, shining, sessile, acute or obtuse, scarce evergreen leaves. These on vigorous shoots are about half an inch long and a line and a half wide, on the lateral branchlets generally shorter and blunter, the midrib rather evident, but no veins are visible; the white surface minutely and thickly punctate under a lens, the acute margin sparsely beset with ciliate, with short bristles. Stipules very short, blunt or truncate, rather hairy, connate with each the base of the leaf on each side. Male blossoms not seen. Female flowers solitary and sessile at the apex of the branchlets, their long stigmas projecting from among the leaves. Linth of the calyx nearly as long as the short tube, deeply 4-cleft; the lobes oblong-lanceolate, Corolla 3
lines long, tubular, slightly infundibuliform, 4-lipped at the apex. Stigma was nearly an inch in length. Drupes globose, nearly half an inch long when mature, with a distinct small calyx-leaf; sarcocarp very conspicuous.

Pyrene small, plano-convex, between cartilaginous and bony, smooth. Pedicel, embryo almost as long as the firm, fleshy albumen; styledons oval.

A strikingly well-marked species with aspect and foliage so like Ceramita nodosa littoralis as to suggest the specific name here applied to it.

It appears that Cypasma calyptrae, long in Sowerby. Ann. Zool. Drit. 4, p. 15. was published by Sowerby almost twenty years before, under the name of Leptostigma, in Zuck. Syst. Nat. 3. p. 270. (L. Armottianum, W. G. L.), and its affinity to Cypasma pointed out. The genus, I suppose will move in Cypasma.
5. *Nestera*, Banks Island.

1. *Nestera depressa*, Banks Island.

1. St. George’s Harbour, Fuegia, Mountains of Tahiti, Society Islands, Mountains of Oahu, and Hawaii, Sandwich Islands, Mosea; *N. depressa*", the forma acutifolia of Miguel.

The habitats in the Society and Sandwich Islands are new, but not unexpected for a plant so widely diffused over the remote parts of the Southern Hemisphere, and in America reaching to Venezuela, and even to the mountains of Cuba, of some narrower-leaved specimens gathered by Mr. Wright, without flowers or fruit being here. The Sandwich Islands, lying under the northern tropic, afford the most northerly station known. New Zealand and the Auckland Islands, the Falklands, Tristan da Cunha, Tasmania, Java, Luzon, &c., and probably Madagascar, are other habitats. The specimens from Luzon have acute leaves (though broadly ovate or subulate), and are probably the same as those of *N. depressa*, which Dr. Forster inclines to refer to his *N. depressa* var. *N. depressa* var. *N. depressa* var. *N. depressa* var. *N. depressa*. This, according to Miguel, is the prevailing form in the Hawaiian Archipelago, and is probably not really distinct from *N. depressa*. 

Stat. Bay of Islands, New Zealand,
(The only part of the world where N. depressa
is associated with other species.)


Var. a. *pinta*.

*Ponax pinta*, de *Cand.* 4, p. 615.

Var. b. *glabra*.

*Ponax glabra*, de *Cand.* 4, p. 615.

Tab., Sydney and Hunter's River, New South Wales. Both varieties, and an intermediate form.
1. *Opercularia paleata*, Young.

*Opercularia paleata*, Young in Rixi,
Trans. 3, p. 30. t. 5; Juss. in Austr. Am.,
C. reynoldsii, rubioides, x ligustri
folia, Juss., l.c.;

Hab. New South Wales, near
Sydney, L. Cook's River, 16. (New Zealand
and?)

These larger and broad-leaved forms
all appear to belong to one polymor-
phous species, which perhaps is *O.
aspina* and *O. diphylla* of Goetner;
one or both. One of our specimens
indeed, with oblong and obovate leaves and
considerable hairiness, is ticketed as from
the Bay of Islands, New Zealand. But
some plants undoubtedly gathered at Syd-
ney have been erroneously so ticketed.

The reason for suspecting such mistake
in the present instance is that no one else since Cook's voyage has collected an Opercularia in New Zealand, which could hardly be if any grow around the Bay of Islands. Perhaps the original species are really Australian, and this should take the name of *O. tephrylla*.


St. Prod. 4, p. 61.

*O. aspera*, Juss. in Herb. Mus. Par. 1, c. 1, p. 427, t. 70, f. 1.

**Hab.** Hunter's River, New South Wales.


*Opercularia myoporifolia*, Juss. in Herb. Mus. Par. 1, c. 1, t. 71, f. 13; Scb. 1, c. 1.

**Hab.** Sydney, New South Wales.
4. Opercularia sessiliflora, Juss.

Opercularia sessiliflora, Juss. in Am. Mus. Pur. l.c. t. 70. f. 2; DC. l.c.

Hab. Sydney, New South Wales. A depauperate and smaller-leaved form.
8. Spermacoce, Linn.


21. Spermacoce (Borneria) verticillata, Linn.

Spermacoce verticillata, Linn. Spec. 1, p. 102 (Sill. et. Till. p. 369, t. 279, Fig. 3.58. Borneria verticillata, G. Meyer, Fl. Essey. p. 83; to. l. c.


Hab. Rio Janeiro, Brazil. St. Fago, Cape de Verde Islands.

No good marks are evident for the African from American forms which linnaceus united in his Spermacoce verticillata. The fruit is glabrous in our specimens from St.
Jago, and their dehiscence is the same is both.

The difference between *Spermacoce* Borseria and *Spermacoce*, if not unimportant in character, are not always sufficiently marked to render a generic separation advisable.

2. *Spermacoce (Borseria) ferruginea*, St. Hil.


*Borseria ferruginea*, J. B. Prodr. 4: p. 5747.

**Hab. Rio Janeiro, Brasil.**

3. *Spermacoce (Borseria) appendiculata*, St. Hil.

**Hab. Rio Janeiro, Brasil.** (Specimens too young for proper determination.)
6. Spermacoce (Borneria) Roxburghiana, Wall. Cat. no. 6186.


Hab. Luzon, near Manilla.

7. Spermacoce articulatis, Linna. f.

Hab. Singapore. One of the states varying into S. hispida.


Hab. St. Jago, Cape de Verde Islands.

Rio Janeiro, Brazil. Callao, Peru.
4. Spermacoce (Boronia) Parviflora.

Brot. 4, p. 334; Benthi. in Rost. Herb. Bras.
Bent. p. 4.
B. 'ranispassa, St6. l.c. (Spermacoce ranispasa
Boll. in St6.)

Hab. Stq. Fago, Cape de Verde Islands.
(Not before enumerated as from the Canaries.
these islands).

5. Spermacoce (Boronia) alata, Aubl.

Var. Missulata: Pune brevi scabro-pustul.
foliis obtusis obtusis.

Hab. Rio Janeiro, Brazil.

The Guiana Plant as described
by Aublet and by de Candolle is said
to be glabrous, but Hostmann's no.
975, which otherwise accords with Aublet's
figure, is little less hairy than our speci-
men from Brazil, which, however, has
rounder leaves. In both is short-stomate,
and dehiscent. Both cocci are dehiscent
in the manner of Boronia. The angles of
the stem are strongly winged.

*Hab.* St. Jago, Cape de Verde Islands.

Not before recorded from these islands, but a native of the adjacent parts of the continent.

2. *Diodia congesta*, DC.

*Diodia congesta*, DC. Prodr. 4, p. 563.

*Hab.* Rio Janeiro, Brazil.

Only a single specimen was collected; but it sufficed to complete the give the characters of the flower and the fruit, both of which were unknown to the late Dr. Schott, who described the species from a barren plant. - Leaves half at inch or less in length, the lower oblong; the upper ovate or oblong-ovate, slightly cuneate, all closely pinnate. The strongly and numerous peta of the stamine are about the length of the internodes, even when they are most developed, as at in the middle
of the stem. Corolla funnel-form, 
4 lines in length, minutely hairy, 
reduced teeth 4½, two of them lancetate 
and fully half the length of the fruit; the 
other intermediate ones broad and rounded 
on half shorter. Fruit of this genus, short 
obovate and somewhat 4-sided, densely 
clothed with hispid with long and 
white bristles, in the manner of some 
Gallic.


1. **Triodon glomeratus**, Lb. 
**Triodon glomeratus**, Lb. Prod. 4. p. 546 

Hab. Organ Mountains, near Rio Janeiro, 
Brazil.

2. **Triodon lupus paradoxus**.

**Diodia paradox**a, Chamb. in Linnae. 9. p. 216.

Hab. Organ Mountains, near Rio Janeiro, Brazil.
This belongs to the genus Triconia, and is related, not to the other Brazilian species, but to the Mauritiam T. laxus of Martin.


*Hab.* Rio Janeiro, Brazil. Widely dispersed over all the warmer parts of America. It is adventive in California, but probably of recent introduction. Remy found it at the Sandwich Islands.


*Hab.* Andes of Chili above Santiago, near the snow line.

*Mitracarpium* [melius *Mitracarpium*],
Zucc. in Roem. & Schult. *Syst. Mant.*
3, p. 210; Scham. *Schlecht.* in *Linnaea*
p. 70, 74; *ibid.*

1. *Mitracarpium senegalense,* *N.*

*Mitracarpium senegalense,* *N.* *Prob.*
4, p. 572; *Webb,* in *Niger* *ib.* p.
133.

*Hab.* The specimen was ticketed
"Rio;" but it is more likely to have
been gathered at the post last previ-
ously visited, namely St. Jorge, Cape
de Verde Islands.

2. *Mitracarpium salmianum,* *N.* *c.*

*Hab.* Rio Janeiro, Brazil.
14 Knoxia, Linna.

1. Knoxia coriophora, Milld.

Knoxia coriophora, Milld. Spec. 1e p. 582.
K. exsecta & K. teres, 4e. Prod. 4e p. 569.


15. Emmeohiza, Pohl.

1. Emmeohiza Brasiliana, Pohl.


Hab. Organ Mountains, Brazil.
If the following Cassianian species is rightly referred to *Canthium* by Burman and others, of which the and which seem no reason to doubt that it is, then the name of *Electania, Burmian. Linn.*, should have been adopted for the genus, being far older than that of *Canthium, Lam.* As this would now require great change in names, it may perhaps be avoided by laying stress upon the fact that, according to Dr. Candolle, N. Burmann founded the genus in part upon a *Celastrus*.
1. *Canthium Thunbergianum* (Steud.)

*Electronia ventosa*, Linna. Mant. t. 52, f. 2. Prod. & P. 4, p. 471.


Cape of Good Hope. (In fruit.)


**Hab.** O'ahu, Nānāe, He'eia, and some other, Kēalakekua Bay, Koolau Mountains, Oahu, Sandwich Islands.

The leaves are not so lucid as in the original *C. lucidum*; but they are the same in structure and shape, varying however into narrowly oblong forms, the opening above as well as below, in the He'eia specimens. Their lower surface, in both,

commonly bears a sort of gland in the axil of some of the veins, in the form of a small tubular protrusion at length, with hollow and with a pore-like orifice. The corolla is parted almost to the base into 4, 5, or, in the plant from Gamble's Island, sometimes into 6 divisions. Sepals oblong, much thickened, some were thickened, others thin. Stamens, st. tubes, oil in the surface, ovules and seeds produc-
S. Starkia. Cordia hypocrateriformis, into limbe lobis cryo longi- 
more: anthera subelliptica, micromata.

3. Canthium barbatum, Benth.

Canthium barbatum, Benth. in
Tait. P. 52.

Stb. Tahiti, Societylands.
common in deep woods near the coast.

Mr. Benthem has rightly referred
this plant to Canthium, from which
name it and the preceding species
differ only in the elongated tube of
the corolla. The name by which the
section may be indicated is one of the
aboriginal names, according to Forster's
manuscript notes, published by Gwillim,
in the Zephyritis Taitensis. Faste's
detailed description and Foster and Arnold's figure. What I have little to
be desired. We have only to add that
the authors are oblong-lanceolate and muc
erminate, as Foster describes them,
not didymous as represented in the plate
above cited. Oval, pendulous from
the upper part of the small cell, semi
androceous, the antheridia superior.
Fruit obvolute, didymous, half an inch
in length and breadth. (Pyrene 2,
nearly half an inch long, between
lunate and uniform, thick, rough, acutely
2-3-caronate on the back, ovoids, the
lunate, conform to the cell: albumen
fleshy, embryo slender about half the
length of the albumen; radicle superior.
Foster says there are four seeds in
pairs; but all the specimens examined
are dioecy, and the cells uniovulate.

4. Canthium sessilifolium, sp. nov.

6. inornem, glabrum; foliis oblongo-ovatis
peu obvatis, lanceolatis, basi rotundata
fere sessilibus, shortaeceis supra alicae
cis; Pedicellis solitariis vel 2-3 in
axilla fasciulatis flore gracile (semi
pollinarii) dimidio brevioribus; Pedunc
culo communis utro, limbo calycis
5-dentato; corolla lobis 5 tubo flos
dimidio brevioribus; pyrenis diminitibus
fere rectis angustis.
Nab. Nama - land, one of the Fijian Islands.

An evident congener of C. barbatum, but at once distinguished by its much smaller and sessile leaves with a rounded base, and the more slender tube to the corolla. Branches slender, unarmed, stipules subulate from a broad base, deciduous. Leaves from 1½ to nearly 3 inches long, the broader ones an inch wide, obtuse, or obtusely subacuminate, indistinctly veined, shining above, rather dull beneath, perfectly glabrous, much longer than the internodes. There is a very short spur in the axils from which flowers proceed which may sometimes develop at length into a short common peduncle or thechis, in the manner of the preceding species. Pedicles 3 lines long, solitary or 2 or 3 in a fascicle. Calyx teeth 5, very short, acute. Corolla slightly 3-lobed; the narrow tube about nearly 5 lines long; throat densely bearded; stamens 5, about 2 lines long. Nutlets exerted from the throat.
oblong, abruptly mucronate, nearly sessile. Stigma a little exerted, thick, somewhat 2-lipped. Ovary two-celled, with a pendulous ovule in each cell. Drupes obvolute, stigmatic, 3 or 4 lines long; the pyrene and the narrowly oblong, 2-edged straight, the latter suspended from near the apex. Embryo cylindrical, almost as long the length of the fleshy albumen; radicle supra-nerv.

* Another species of this subgenus occurs in Prof. Harvey's collection in the Azores Islands; viz._

_Canthium (Tardea) Harveyi (sp. nov.):_ incrassate, glabrum; folis ovato-obovatis subrotundatis sparsis pubes pallidis (2½-3½ poll. longis) apice rotundatis et obtuse subacuminatis basi in petiolo (circ. 3 lin. longum) appendiculatis; influenta et varie pisiforme marginare. — Navao et D.'s fuka, Friendly Islands, W. H. Harvey, 1855. — The _C. Harveyi_ of Scemann's list, no. 220, from the Fijian Islands, is only _C. lucidum._
Simoniicus, Kumpa.

Clar. Emend. Flores polygamii, uniflori, ovario abortu sterili et hermafroditici. Calyceus limbus cupuliflorum, truncatus vel obsolete dentatus, persistens. Corolla hypocrateriformis, initus muda; lobis 4-10 aestivatione valvatis. Stamina 4-10 tubo inserta; filamenta brevissima; antherae lineares basi sagittatae. Stylus apice 5-10 fibris, lobis subulatis inaequalibus initus stigmatosis. Ovarium pluriseriatum multiloculare. Ovula in loculis solitariae aut apice funiculio brevissimo seu stipulis da cupulari suspensa. Fructus drupaceus, polygyrinus; pyrenae numerosissimae angustis circa axem elongatis imbricatis et multiseries imbricatis suppositionibus, putamine apice sacciforme. Sperma lineari oblongum, strophiato obtusum, suberoso instant clasum 

Semen lineare vel oblongum; albumen vitellum. Embryo seminis conformis, cylindricus; radicula supera cotyledonibus brevi; radicula multo brevioribus. Arboris vel fruticulis; stipulis interpetiolatis.
Ponulalis gum. apetosae convolutis deo. cProbis, foliis coriaceis per crassiusculis, venulis (Pagina superioria prasentini) trauissimae et exsertim reticulatis; Pedunculis axillaribus unit. 1-3. III. fl. mae. 

1. cymosto-5-multiplos.


Polyphragnma, Desf. in Mem. Mus. Par. 3, p. 6 t. 2; K. Rich, Prod. p. 177.

Burneyna (Cham. Schlcht. in Linnae. 4, p. 189, excl. sp. no. 1.

Timonius (excl. sp. & char.) & Polyphragnma, de. Prod. 4, p. 445, 461.


Petersia Spec. 1, 2, Math. in de. Prod. 4, p. 395.
For information enabling me to fix
clear up the character the synonymy and
assign the true characters of this genus
and Zlbée, I am indebted to the
head and Nester of our Science, Robert
Brown. He had, nearly half a century
ago, identified with Zinnia of Kunphi-
us a Plant collected by Sir Joseph Banks
at Endeavour River, and by himself on
the same coast of tropical Australia, and
in the Banksian herbarium had referred
the Erathalis of Forster to the same genus.
The allied Sandwich Island Plant was
also known to him, in fruit at the same
early period, and suspected to be probably not
cagenic, which he and me, in adopting
the genus Zinnia, probably from the Bank-
sian herbarium, followed Chamisso and
Schlectendahl in referring the Sandwich
Plant to the same genus, but took
the eponymous characters from the former.
That he had no idea of the fruit of the latter
is evident from his having referred it,
as figured by the younger Gardiner, to
the genus Polyphragma. Next, which he was not
aware is identical with Zinnia of
Kunphius. Finally, Forster also undertook
which last (by decision) was the more in

to elucidate these plants, but he wrongly describes the internal structure of the seed, and divides genuine species of Timonius between Bobea and Phytolacca. In this he is followed by Miquel, who, however, a little later (Fl. Ind., Bot. 2, p. 355) becomes aware of the fact that the two supposed genera are much the same thing. Kovalevsky includes in his Bobea very much alike.

Eupyracea of Night and Ambore, which Kovalevsky includes in his Bobea is certainly of this group, and exhibits the fine reticulation of the veinlets on the upper face of the leaves. But the valvate, aristate, ovate, and the form and various species from Timonius. I have not seen the fruit. I single ovary examined from a flowering specimen gathered in Ceylon by Mr. Shivasie, presents only five cells in the ovary! The styles are inserted, but each ovary is surrounded by five bracts, and one style. The ovary has a nearly shining, and softly thick, cortinaceous, and somewhat slightly compressed, pyriform, and a base, somewhat quadrangularly ascendent, in the union of the leaves. The fruit is not of the Lepechinia.

* A good fruit, now examined, shows about twelve irregularly disposed pyriform. It is that of a Timonius somewhat simplified, to which Shivasie rightly refers Eupyracea. Bobea sericanta. Mig. is a nearly related species, if not identical.
Our freezear species have thin, almost papyraceous, and linear cylindrical pyramids, and a fine linear reticulation of both surfaces of the leaf. But *Timonius acuminatus*, R. Br., which is probably *T. neurophorii* Schott. (*Polyphragmum sericeum*, Linn. and *Acantus Timorous*, Schott.) is intermediate in both respects; the ultimate veins in its run into transverse linear meshes within the coarser reticulations, visible on the lower but not on the upper surface of the leaf.

1. *Timonius Forsteri*, Schott. (Tab.)


*Erythalis polygama*, Hook. Prod. 4, p. 17. (*E. obvata*, in ind. p. 98; Schott.)

*E. uniflora*, Banks. Linn. t. 4, Flora t. Att. (Suppl.) 3, p. 92, t. 146.


*Brunnea Forsteri*, Cham. & Schlcht. in

*Polyphragmum minus*, Schott. Prod. 4, p. 461.
Barlocco, Karaka, Tahiti, Society Islands, Vincennes, Kings, Milne's, and other small oceanic islands.

Guillermou has reproduced from his original description in the *Zephyritis Faitensis.* The younger Goodwin's figure of the fruit-fruit is not bad. We give some analyses to supply the needful details.

Plate 2. — *Simonsius Forsteri.* Fig. 18.
2. *Timonius sarotafolius*, sp. nov. (Tab.)

T. folis (etiam mascentibus) cum stipe =

lis pinnatifidis ramosisque glaberrimas

ecliptico alterius utrinque acuminatis,

costis primaries absolutes, venulis ex-

berrimis lineato reticulatis tenues

immo, striatis, areolis lineari, elongatis par-

allelis; pedunculis frutiferis petiolum

aequantibus; pyrenis albo-massolaceis

linearibus, putamina tenis.

Hab. Sandalwood Bay, Fiji, Islands,
at an elevation of about 2000 feet.

A shrub or tree (the size not recorded), sparingly gathered in fruiting

specimens only, and, as appears from the
figures with the withered remains of a fertile blossom. The specimens are completely glabrous, even to the nascent leaves. Branchlets tend, slender, stipules large for this family, apparently larger than those of *A. kundushi*, an inch or more in length, oblong-lanceolate, in texture between chartaceous and ocellate, chestnut-colored, convolute in the bud, of which they form the pedicel, caducous when the leaves expand. Leaves convolute in variation, oblong-elliptical, with the apex abruptly more or less acuminate, and the base more gradually tapering, 2 to 3½ inches long (and the pedicel about half an inch in length), an inch or more in breadth, smooth, of the same hue both sides, not shining lucid but of a somewhat satiny aspect, owing to the close and fine parallel ultimate veinallets, which are so fine as scarcely to be discerned by the naked eye. Of ordinary primary veins there are only obscure indications, but one or even two intramarginal veins are sometimes more apparent. The whole side veination, with these exceptions the
consists, in fact, of very closely set, uniform, and exceedingly delicate nervose veniules, proceeding side by side obliquely from the midrib to the margins, and intersecting at considerable distances, or as to form narrowly linear and parallel meshes, which in the dried specimens are barely visible to the unassisted eye, but are conspicuous under a lens, especially on the upper surface of the leaf. No flowers are known except the vestiges of a perfect one, which was delineated upon the plate under Mr. Nichol's supervision (Fig. 3), from which, and from his artist's sketches, the figures 10, 11, and 12 have been prepared. It appears that the limb of the calyx is extremely short and completely truncate; the corolla is chest, and evidently of valvular aestivation, and the anthers line an and sagitta. The inner of the corolla, as appears from the remains, is glabrous externally, which is remarkable in this genus. The pistilous and stamens are simple and one flower, about half an inch.
long, equaling the pedicles. Fruit globose, as large as a pea, crowned with the very short, truncate, and entire lobes of the calyx. Sepals very numerous and pluriseriate, in the manner of the genus, as it was retroflexly incurved; the petaline much thinner than that of *T. fosteri*, between characeans and crustaceans in texture, the apex only fibro-characeans and sericeous, closed with a short corky plug, which represents the funiculus of the seed, and is of fully its diameter, its lower extremity a little hollowed and applied to the hilum. The mucum.

All seeds, seed cylindrical, invested by an exceedingly thin and reticulated testa. Albumen more, except a mere film. Embryo cylindrical: radicle superior: cotyledons very short.

Plate 13. *Timonius papillosus*.

Fig. 8, Variation of a leaf. 9, Army; and shrivelled remains of a flower. 10, Podura and Antherae dispalae. 11, Antherae. 12, Style. 13, Spike. 14, Transverse section of the same. 15, Longitudinal section of a spike. 16, A pyrus. 17, Longitudinal section of the same. The details magnified.
3. Timonius affinis. Sp. Nov. (Fig.)

J. foliis ovalibus basi subcontractis

in obscurae penninervis, venis sub

reticulatatis, retibus valvularum varie

viris hinc inde contraries, cæterum

precedentibus,

T. Timonius affinis, Gray in Proc. Amer. Acad. 4, p. 36.

Petraea milita, Wall. in Fl. Prodr. 4, p. 375.

Hat, Sandalwood Bay, Jazzee Islands.

(In fruit only.)

This so much resembles the pre-

ceding species that it ought perhaps to

be regarded for the present as a range varie-
ty of it.

The stipules, fruit, &c, are

quite the same. The greater breadth of

the leaves is of no account. But these

want the setting appearance, and show

at least on the upper surface, although

obscenely, veins of the ordinary sort, which

inseparate coarsely towards the margins.

The rest of the variation consists of the same

delicate veinlets as those of T. capitata, only

forming similar linear meshes. These

towards the centre of the leaf are parallel

to the main veins, i.e. obliquely transverse.
to the midrib; but towards the margins, where the main veins osculate into coarse reticulations, these are traversed by the fine meshes in the opposite direction, or in various directions in adjacent portions of the leaf, in the manner represented in Fig. 4. The fruit is more minute and more abundant in these specimens than in the preceding. The whole structure is illustrated in the figures and their explanation below.

Since the above was written, and my observations upon Timimus, as published in the Proceedings of the American Academy of Arts and Sciences (1867), I was led by the peculiarities of variation to suspect that Botting’s *Ostertagia mitida* and *Ostertagia fruticosa*, from the Philippine Islands, belonged were species of Timimus, in which the spine has (not unnaturally) been taken for seed.

A comparison kindly made at my request by Professor Gisebach in connection with Professor Botting confirms this conjecture, and makes it almost certain that my Timimus affinis is Botting’s *Ostertagia mitida*. It is clear, therefore, to revert to this specific name, especially since 1, *Papftea* (flatus may also have to be included in it.

Plate A. Timimus mitida.

Fig. 1. Variation of a leaf. 2. A spike. 3. Transverse section of the same. 4. A long coronal section of a spike. 5. A spike, divided lengthwise, to show the contained seed and its piliferous. 6. The same, with the style removed, to show the embryo. 7. Embryo detached. The details are vastly magnified.
Bolea, Gandica.

Cham. emend. Flores hermaproditi.

Fructus drupaceus, 3-10-pyrenus.
Pyrenes parallelis, ossice, crassos, par-

carpio tenue. Semen, cum funiculo seu strophiiola crassissim
sim a durâ (instar obturamentis) in star
stari etem latius, local

angustum subcurvato, pyrenarum im-
plus: albumen viculum. Em-

boyo feminis conformis; radicula
longa cylindrica, et glei ramius sub
complanatis breviis. — Arborum
Sandwichensi; stipulis interseidi-
aribus discretis & adaebris squa-
nacibus caducis & pedunculis axil-
aribus vel terminalibus; unio-banc-
floris. — Evnulio foliis unum et
hermine ac hermisone reticulatis.

Nesia, Sandich., in Nat. Veg. Freyc.
p. 473. 1. 93. de Rovthals
Burpe & M. no. 2. Chev. Schlecht. in
Dunca, 4. p. 140

Sinuous, et parte et eaves., I. C. Prov. l. c.
p. 461. de Rovthals.
Laudichaud's name of Bœea
is to be preferred to Burneja of Cham-iso not only because the plate in the
Botany of Freycinet's Voyage was earliest
published, but because Burneja was found
primarily upon a genuine species of
Simomium, viz., upon Foster's Erithalis.
As a genus, the castigation of the corolla
(now first made out), the completely her-
aphrodite blossoms (as far as known),
and the comparatively few, thick, and
unisepalous Pyrene, amply distin-
guish it for Bœea from Simomium. The
two genera would even fall into different
subtribes according to the distribution
of the Coffeeæ, suggested by Mr.
Bentham, viz., Simomium with
Eupyrēna, into his Vanguerieæ, and
Bœea into his Guettardææ. But the
close coincidence of these genera in
most other respects greatly overbalances the
character derived from the castigation
of the ovula, while the nearly exalbenu-
cinous embryo, and the plug-shaped
funiculus filling the upper end of the cell,
and the delicate reticulation of the vein-
lets of the leaves (which is discernible in
Chromelia and Guettarda) undoubtedly
refer them to the Guettardae.*

Corolla lobis aestivatione imbricatis, raro
valvatis. Ovarium 2- multiloculare;
ovula in loculis solitaria suspensa.
Drupa 2- pluriloculais vel 2- pleiopy-
nea. Semina e funiculo erasto
obturatorium subito suspensa; albumen
nullum vel parvum. Radicula longa,
cotyledones parvi.
1. *Biblea* elater, Gaudich. & c.

13. *glaberrima*; folis oblongis oblongis sub lanceolatis, bases in petiolum sat longum attenuatis, pedunculis gracilibus 3-7 mm longis, flores inter medio sessiles, umbellis basi sub-capsulatae.


*Timonius Gaudichaudii*, P. Brong., p. 461.

Hab., Pohnpei, Sandwich Islands; on the mountains behind Anibare; where it has been collected by Merrie, and Macrae, as well as by Chamisso and by Gaudichaud; also recently by Momy.

A small tree, with tender branches, or the former ones more or less compressed, glabrous. Stipules interpetiolaria, nearly half an inch in length, persistent, triangular lanceolate, truncate, somewhat connate in the bud, early deciduous. Leaves 2 to 4 inches long, on petioles of an inch or less in length, oblong or oblong, with an acute or cuneate base, rather membranaceous, moderately feathered with the venules on the under surface very finely and peculiarly articulated in the manner of *Timonius*. The few blossoms seen and examined are all hermaphroditic. Peduncles axillary, 2 or 3 inches long, articulated at with the stem and with the pedicels, 3-7 mm, the intermediate flower sessile, the lateral ones on diverging pedicels half an inch long. The short and nearly entire capsular or spherically shaped calyx cupule subtends the base of each flower. Calyx rather lyrate; the free portion erect and about as long
as the adnate tube, truncate, very
obscenely 2-4-toothed. Corolla pur-
pis, glabrous without and within,
about half an inch in length, salver-
form, the tube thrice the length of
the limb, the broadly oval and very
obese lobe strongly imbricated. In
destination, two external and two inter-
mal, Staminas nearly included, in-
serted above the middle of the tube of the
Corolla; filaments 2 mm. Very short, nar-
row, smooth; anthers linear, in-
serted a little above the sagittal cleft
base, the apex and the basal lobe are apic-
ulate. Style grooved below, cleft
above into 3 or 4 filiform lobes of une-
qual length, or in two divisions which
are again cleft, making as many lobe
as there are cells in the ovary;
stigmas oblong, small, introrsely ter-
minal. Ovary 4-10-celled, or in
one specimen examined only 3-celled; cells
small, parallel. Ovule solitary, an-
tropous, suspended from the summit of the
cell upon a sort of cupulate stylelike
which is as broad as the ovule itself.
Simple globular, from a quarter to a third of an inch in diameter, crowned with the cupulate limb of the calyx; the flesh thin, the mass of the fruit occupied by the (3 or) 4 to 10 separate but completed, parallel, oblong, very thick-walled and bony pyrene; these are nearly straight, in a single vertical, or when numerous as a few become extremities, and if they are embraced into one or two cells, will; their cavity is small compared with the thickness of the bony wall, a little curved, the concavity towards the axis, and larger at the upper end, which is filled by what answered in the ovary to the strophide or pyrmicus, which now forms a firm, crustaceous plug, a little broader than the seed itself. Testa very thin and delicate, reticulated. Albumen only a titrate thin film or lining to the coat of the seed. Embryo: conform cylindrical; radicle elongated, superior; cotyledons oval, a little flattened, broader than the radicle.

15. foliis oblongis vel subovatis basi obtusis breviter petiolatis, juniores praesertim ramosque kinto-pubescentibus; pedunculis brevibus unifloris?

Itab. Oahu, on the mountains behind Honolulu.

Only a single and incomplete specimen, with a solitary fruit, occurs in the collection; but, if I mistake not, it was also gathered by Candish and in the cruise of the Bonite. There can hardly be any mistake about the genus. The only question is whether it may not be a mere variety of B. elation. But, besides the pronounced pubescence which clothes the younger branches and foliage, and persists on the midrib and the veins of the lower surface, of the the petioles are much shorter, only 2 or at most 3 lines long, the leaves are rather ovoid-oblong than ovate, and obtuse
or abrupt at the base. They are 2 or 3 inches in length, and one inch or an inch and a half in width, scar glabrous above. Like the original species, they fall off readily in the dried state, and they exhibit the same fine reticulation of the veinlets. Stipules 3 lines long, ovate, chestnut-colored, hairy on the thickened midrib, somewhat ciliate, early deciduous. Flowers unknown. The single drupe was borne in the fork of the stem, on a simple peduncle only 3 lines in length, which was articulated both with and articulated with it; it is glabrous, 3 lines in diameter, tough, articulate with a very small truncate limb of the calyx. Rarely cups very thin, Pyrene 4, thick and long, as in Ps. elation, the structure of the seed not made out.

Note:
In this genus I am constrained to append
Chomelia, Jacq.

1. (Chomelia? Sandwichensis. sp.)

C.?, ramis junioribus pubescentibus; foliis glaberrimis oblongo-ovatis acuminatis basi rotundatis; fructu diphyreo globoso calyx cisis lobis oblongo ovatis ovalibus obtusissimis recurvis cornato.

Hab. Kaala Mountains, Oahu, Sandwich Islands.

Shrub or tree with the branches scarred all over with the contiguous cicatrizes of fallen leaves and stipules, when young pubescent or hispitate, at length glabrous. Stipules interpetiolar, small, ovate, thickish, hairy outside, caducous. Leaves
much crowded at the end of the
branchlets, perfectly glabrous, even
in their nascent state,
ovate or oblong-ovate, gradually taper-
ing above into an acute acumination,
1½ to 2 inches long, ½ to 9 to 12 lines wide,
broadest towards the rounded base,
somewhat coriaceous, bright green on
both sides; the veins not prominent;
the veinslets, especially on the upper face,
forming minute and elegant transverse
reticulations in the manner of Bolea
and other Guettardae. Petioles 2 to
4 lines long. Peduncles axillary,
a little longer than the petioles, few-
flowered. Limb of the calyx (about
the length of the turbinate ovary, deeply
4-lobed; the lobes ovate or ob-ovate, very
obtuse, increasing with the fruit and
becoming coriaceous and recurved and about
one third of its length, glabrous. A
young flower had exhibited a 4-lobed
corolla still enclosed in the open calyx;
the lobes with a hairy corniculate appressed dorsal appendage, within which they are corniculate, glabrous, and intricately overlapping, two being exterior. Further slender oblong, linear or short filaments. Style glabrous, 2-3-leaved at the summit. Drupes globose, 2½ lines in diameter, a little hairy when young, with a very thin bar-cups surrounding two thick and long separable pyrenes, like those of 

Moehre. Seed suspended from the summit of each narrow and nearly straight cell by a plum-like cory-enchased funiculus. Radicle cylindrical, occupying nearly the whole bulk of the seed, surrounded by a thin layer of albumen, the lower extremity bearing a pair of very minute thin cortical ones.

The developed flowers of this plant are unknown. The above characters have been drawn from one or two very young flowers, buds and fruits. Where better known it may prove to be a new generic type
of the Guettardella. But it is more likely to fall into Chornelia or into Berthianis genus Guettardella, which is hardly well distinguished by the number of ovarian cells. Chornelia vibescivides, Brtke occasionally exhibits a 4-celled fructanen, and the pyramids of Guettardella Chinensis are very often consolidated into a 4-celled frutus in the specimens collected by Mr. Charles Wright.
Guettarda, Linn.

1. *Guettarda (Cadamba) speciosa, Linn.\* Cultivated.

    
    Hrb. Tongatapu. (Fiji Islands).

    King's Island, Mangri Islands.

Miquel (Fl. Ind. Bat. 2. p. 261), while characterizing this tribe Guettardia, upon indications supplied by Bentham, by its solitary pendulous ovules, still retains the phrase "Semen erecta" in the generic character, both in this and other species of *Guettarda*, and the capsulate funiculus, becomes in fruit a crustaceous plv'; this nature of which was rightly understood by R. Miquel, the tapering of the ovules and forming seed to an acute apex at the base of the cell may have misled those authors who describe the seed as erect. As to the embryo, that of *S. speciosa* was better understood by G. Miquel than by R. Miquel. It consists, in fact, of a macrosporous radicle,
which, with the obscurely-marked etylodes at the tapering lower end, and fills the seed, surrounded nearly enclosed what intervenes between it and the delicate testa is apparently tegmen rather than a film or albumen.

There is only a thicker film of this sort in the species named \textit{Gselliptica} in the Flora of South America, the only other species which I possess fruit of; also the embryo is similar, and the etylodes, although difficult to separate in the mature seed, are plainly discernible a little earlier in scarcely ripe ones; they are very short, oval, plane convex, and of no greater diameter than the tapering radicle at that end.

\textit{2. Guettarda rugosa, Swartz.}

Stated Brazil; in the Organ Mountains near Rio Janeiro.

folis ovato-oblungis acuminatis membranaceis supra sero glabris subius mamulisque appresso puberulis; pedunculis petili um subaquan-"tibus 3-7 floris; omnis ovati calyce distibus obtusissime 4-5 dentato coronata 3-7 loculari, loculis recis-
tis.

Sav. Ovolan and Muthanata, Leejue Islands.

The specimens belong apparently to a good sized shrub or small tree, with deciduous silky and subulate deciduous stipules, and thin, oblong or ovate oblong and acuminate leaves, of 2 or 3 inches in length, rather prominently feather veined, nearly glabrous above, but minutely subescent with fine appressed hairs underneath, as are the branches, the older ones glabrate. Petioles slender, half an inch long. No blossoms remain, but one or more must have
been known to Mr. Rich, who, in a
*Botanical* Memorandum attached to the
specimens, remarks that the *Corda* is
bulbous, minute externally, and on the in-
cluded lobes of the limb, also hairy inside.
Particularly near the base: filaments that
insulate the mid-leaves of the tube: every
3-6 cells; style thickened, furnished with
10?13
lines. The 1-leaved and thick style,
or base, remains upon some of the
young fruits, and is blunt at the extremity.
If the stigmas are really linear, the
plant should be a *Corda*, and the ovary and fruit
accord with that genus, as which our plant
may as well be defined until the most
exact nature of the Corda is known. Should
it prove to be a eudicot, as the
*Arrabon*

the plant can hardly belong to that

and are suggested from the very apex of
the (usually 4 or 7) cells, and
they have a well-marked cupulate funiculus or
neurospore in the *Arrabon*

the short limb of the calyx is truncate
and very slightly 4-toothed. Scape not
larger than a pea, and, more or less
angled at the *Corda* state, with a thin case
and a somewhat angulated, long
peduncle, having from 3 to 7 connate
and straight cells.

This plant should be compared with
the *Burrardilla* from the Philippine
Islands, spoken of by Mr. Bentham
in *Flora Hongkongensis*, p. 158. In
its resemblance to *Corda China* is great
to *Corda China* in which, moreover, the
species, though somewhat separate, as
described, are (in 6, 8, 15 species originally)
more commonly located
into a 4-lobed calyx limb, so that the
*Arrabon*, in which, moreover, the
*Corda* was, though sometimes separate, as
described, are (in 6, 8, 15 species originally)
more commonly located
into a 4-lobed calyx limb, so that the
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*Arrabon*, in which, moreover, the
*Corda* was, though sometimes separate, as
described, are (in 6, 8, 15 species originally)
Second

Scurvy on a British ship, 1757.

Some scurvy on a British ship, 1757.

Second

Scurvy on a British ship, 1757.

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Some scurvy on a British ship, 1757.

Second

Scurvy on a British ship, 1757.
Chiococca, P. Brongn.

1. Chiococca densifolia, Mart.


Hab. Brazil, near Rio Janeiro, and in the Organ Mountains, Rio Negro, South Patagonia.
Ixora, Linn.

To unite Ixora and Pavetta, as Blume and Miguel have done, seems not unnatural. But in that case the former, instead of the latter name standing, should be retained, not only because the name Ixora had been preferred by Lamarck, Lamarck, but because it is, as a Linnean genus, ten years older than Pavetta, appearing as it does in the first edition of the Genera Plantarum.

Miguel wrongly characterises the group (his tribe Pavettæ, the subtribe Ixoreæ of Bentham) as having the lobes of the corolla imbricated in aestivation; whereas they are most obviously and as far as noted constantly convolute, as Bentham has stated, in the Niger Flora, where explaining that he uses the term 'imbricate' in a general sense to cover any overlapping forms that may occur, in contrast distinction to those the valvate aestivation.
1. *Ixora stricta*, Roehl.

Hab. Philippine Islands, at Caldera, ts., and Mangsi Islands. The latter specimen from the latter station (in fact only) may belong to Lindley's *Ixora crocata*, which, however, is probably only a form of *I. stricta*. From Sandal Wood Bay, Frejilie Islands, is a fragment, destitute of flowers, which may belong to this species. Still another species with large, polychrome leaves, was gathered at the Frejilie, 27th of December, but cut off flower.

2. *Ixora pendula*, Jack.

Hab. Mountains near Bânos, Luzon, small island in the Southern Sea.


Hab. Singapore. (Flowers undeveloped.)

*Hab.* In the vicinity of Manila, Luzon.


*I. glaberrima*; foliis ovalibus utrinque obtusis vel obtusiusculis, florasibus etiam petiolatis ovatis. *Capitulum* tri-florum fulcrantibus; dentibus calyce subulatis, stipulis lentissime aristatis.

*Hab.* Upolu, one of the Samoan Islands.

Apparently a much-branched shrub or tree, glabrous throughout, even to the branches and racemose leaves. Stipules early deciduous, triangular or subulate base tapering into a subulate acuminate tip about 4 lines in length. Leaves of a rather cartilaginous texture, smooth and of about the same size both sides, reticulate-veining, 2 to 4 inches long, from
one to 2½ wide, oval, mostly obtuse or with an obscure and blunt acumination at the apex, the base abruptly contracted into a petiole of 2 to 4 lines in length. The floral or bracteal leaves are more like the ordinary leaves in this species than in the following, being only the uppermost pair of smaller size, an inch or an inch and a half in length, inclined to wane in outline, and more rather acute at both ends, the base scarcely contracted into a short, but distinct petiole. This pair of leaves immediately subtends a sessile cluster of three nearly sessile flowers. It is occasionally profusely, an untechnical development from either axil. From one or both axils, flower glabrescent. Teeth of the calyx 4 or 5, lanceolate obtuse, about the length of the undivided free part of the limb. Corolla slender, shaped; the slender tube nearly an inch long, flanged and glabrescent within; the lobes convolute in asteration, ovate-lanceolate, tapering to an acute point. Stamens inserted in the throat of the corolla; filaments very short; anthers lanceolate, fixed by the base, adnate-
acute or introse, somewhat apiculate—acute. Ovary 2-celled, with a pellate ovule in each cell. Style filiform, glabrous. Stigmas linear-oblong, thick, fleshy, corniculate, or somewhat concreted below, exserted from the tube of the corolla, about not equaling its lobes. Drupe of the size of a small pea, ovoid-pyramidal; the pyrene thin, crustaceous, flattened hemisphere, flat on the inner face; seed pellate, deeply excavated at the hilum.

This and the two following species, with \textit{E. pyrami} (\textit{Cephalotis pyrami}, \\
\textit{Hook. & Arn.}, \textit{Bot. Zeit.} p. 147-153) appear to constitute a well-marked section of \textit{Ixora}, but are not genetically distinct on account of their bract and leaves forming a ring involucre to a cluster of three or more sessile flowers. The present species, parasites, having these leaves very similar to the rest of the foliage, differ least from \textit{Ixora pyrami}, and calls not be genetically separated from it. Our specimens are not in good condition. But there is sufficient to show that
they belong neither to Hooker and Arnott's *Bryalepis fragrans*, nor to Foster's *Bryalepis Atlantica* species. The petiolate involucral leaves, the long unarmed stipules, and the glabrous style distinguish it from the former, as that is figured in the *Botany of Bucchey's Voyage*, and the same marks, as well as the smoothness of the corolla inside, distinguish it from Foster's still imperfectly known plant. Hooker and Arnott were in doubt whether their plant were not the same as Foster's *Bryalepis*, who had Foster's plant to compare with the figure of the former, remarks, that, besides the difference in the leaves, which is unimportant, the flowers of Foster's plant are pentamericous, while those of *Bryalepis fragrans* are tetramericous. In this he overlooks the fact, that, although the flowers are described in the letterpress as tetramericous, they are all represented as pentamericous on the plate. They probably vary in this respect. In one of these species the teeth of the calyx are generally five, while the lobes of the corolla and the stamens are only four. Better distinctions appear in the comparing
The description and figure of I. programus
with Forster's account of this plant,
as printed in the Zephyratis Taitensis.
The bracts of the latter are said to be an
inch long, transversely rugose, and deciduous;
three of the former 1.8 mm long, the
flowers white and two inches long; the lobes
of crook willows within and at the throat
villous; as also the style; the lobes of
the stigma spreading and moreover the
seeds, or rather pyrenes, are said to
exuvate, channeled or bisulcate on the
outside, which is hardly congruous with
the present genus. I. programus is
said to have red flowers, a red corolla,
and it is figured as glabrous within and less
than an inch long, the bracts only 6 or 8
lines long, the style only a little glandular,
ct. Neither of these plants were seen
for met with at the Society Islands
by the American Expedition.
b. *Ixora (Phyllidema) Vitteusin*

1. *Glabberrima*: foliis ovato-oblungis acuminatis basi rotundatis, floribus seu bracteis late cordatis carpe possibility spiculonum triquetrum pulverantis; dentibus calycis brevis simili; stipulis longissimi aristatis

**Var. B.** foliis oblongis utrrecte angustatis in petiolum attenuatis.

*Hab. Cooolau, Keajee Islands.*

A shrub with slender branches, glabres throughout. Leaves thin, 2 to 4 inches long, oblong or ovate-oblong, mostly acuminate, rounded at the base, the short but distinct petals only one or two lines long. Stipules as in the preceding species, but more slenderly aristate. Inflorescence distinctly different from the ordinary foliage, not more than an inch long, very broadly cordate, closely setile, acute: inflorescence sometime*...
from the axils of these involucral leaves. Flowers 3, sessile in the involucre, glabrous throughout. Calyx-tube 4 or 5, extremely short, tubulate, Gosser, 45, nearly as long. Samoseus, fr. slender tube, tubules 4 or 5, nearly as long. Glabrous within. Styles 2 or 3, very acute, slightly incurved below. Ovaries of the stigma at length spreading. Stigmas glabrous. Sepals the size of a pea, silky. Pyrene chartaceous. Hemispherical, with a deep, ovoidal excavation at the middle of the inner face, seed conformed to the cell, peltate, with a large central hilum. Embryo nearly the length of the fleshy albumens (not conic). Albumens incurved; the radicle incurved; the radicle hairy, nearly twice the length of the broad, uniform, meniscoval cotyledons.

A fruiting specimen, also from the Hejje island, the station not recorded, here indicated as a variety, is remarkable for its obovate leaves, of a rather thicker texture and firmer texture, tapering to both ends, the base narrowing gradually into a petiole which is sometimes 3 or 4 times long, in others.

St. foliis oblongis subacuminatis basi obtusissimis seu leviter subobtusatis glabris, floribus minu. bracteis ovatis arcte sessilibus capitulum pluriflorum pulcherantibus; dentibus calycis brevissimis; corolla cum ovario extus pubera; stipulis leviter pubulato-aristatis.

*Upolu and* [Tavai (?)] Samoan Islands.

Branchlets compressed, glabrous. Leaves when young, slightly pubescent, soon glabrous, linear-oblong, rather narrow. Branches, 7 to 9 inches long and from 2 to 3½ wide, in distinct petioles, of only 2 or 3 lines in length, elongated-oblong or oblong-oblanceolate, and mostly with a short and rather obtuse, acumination, the base commonly obtuse or subobtusate with a narrow sinus. Stipules tapering from a broadish base into subulate or short-awned tip, caducous. Inflorescence as in the proceeding.
but the capituli generally in threes, at the summit of the branches, very short pedicled, each with from 9 to 16 flowers on very short and thick pedicels. Involute of a pair of oval or semi-dish-oval thin leaves, which are closely sessile, developed with the flower-heads, and expanded before these are full-grown, one or two inches long, obtuse at both ends, not cordate, or early deciduous. The club-shaped ovaries and their pedicels pubescent with short and short hairs, as is the whole entire surface of the corolla, even when old. Tushi of the calyx truncate, minute, 4 or 5. Tube of the corolla an inch in length, the lobes 4, ovate-lanceolate, acute, 3 or 4 lines long. Further sagittate, apiculate. Style slightly hairy below the middle. Lobes of the stigma oval, thick, short, obtuse, connivent. Drupe and seed nearly as in the last species.
** Americana **

88. Oxora eriantha, sp. nov.

Stipulis aristato-subulatis; foliis ovalis ovatisque subulatis, obtusis subacuminatis subseriatis basi rotundatis vel subulatis ramisque glabris; cyma parva terminali floribusque subseriatis; corolla extus cum calice pubescenta, lobis ovato-lanceolatis acutis, in fructu gracillimo triplo brevioribus.

Hab. Brazil, near Rio Janeiro.

Imparfit as the specimen is, it clearly belongs to a true Oxora, allied to "O. Bahiensis," "O. Schomburgkiana," &c. of Bentham. Branches rude, glabrescent stipules 3 lines long, subulate-aristate from a broad base. Leaves glabrous, 3½ to 6 inches long, 2 or 3 inches wide, oval, obovate, oval, or the uppermost ovate obtuse, more or less acuminate, rounded or slightly cordate at the base, almost sessile, rather membranaceous. Cymule about 5-
Flowered, submersed, at the terminal and in the axils of the uppermost leaves. Flowers very short pedicilled. Calyx 4-5-toothed, densely pubescent. Corolla with a slender tube 9 or 10 lines in length, softly pubescent outside, except perhaps the lower part of the tube, which is sometimes glabrate; the lobes conuplicate in stivation, ovate-lanceolate, acute. Ovary and fruit of the genus.
Pavetta, Linn.

1. Pavetta Indica, Linn.

Hab. Near Manilla, Philippine Islands.
(Apparently the same species was gathered at the Hensie Islands and New Hebrides by Milne.)

2. Pavetta weberafolia, N. Br.

Pavetta weberafolia, N. Br. in Wall. Bot. no. 6182; Son, Syst. Pl. 3. p. 575.
P. eustephia (spalminate), Miq. Fl. Ind. Bat. 2. p. 279.
Hab. Mangosi Islands.

(5 to 9 inches long, elongated, oblong. Leaves large, bright green and glabrous
on both sides, broad, 

with 9 to 11
pairs of primary veins; veinslets reticulated.

Petiole an inch or less in length, 

narrower leaves. Limb of the calyx truncate, nodular, apparently greenish or white,

villous-tomentose in the throat; the lobes often 6 or 7 in number, oblong-linear, very obtuse,

nearly the length of the tube, half the

length of the erectly clavate, thickened style.
This is likely to be some species described
by the Dutch Botanists; but I do not identify it
with any of them.
3. *Pavetta paludosa*, Blume


Tab. Small island in the Solom. Sea. (In print.)
Morinda, Naud., Lin.


Sphaerophora, Blume, Mrs. Bot. deyd. 1, p. 174, t. 36.

In the Niger Flora, Mr. Benthann proposed to include the Morindaeae of De Candolle in his subtribe Nanglieriaceae characterized by a valvate secession of the corolla and pendulous ovules. Miqel has followed this indication in his Flora of both the Dutch East Indies (although retaining Morindaeae as a tribe) and introduced the phrase "ovulis penduliis" into the character of Morindaeae. Although this has not prevented him from using referring to it Blume's genus Sphaerophora, rightly enough, although that is figured with anatropous ovules ascending from the base of the cell. Now Mr. Benthann was led into the error, and
and why Miguel did not detect and correct it, is not clear. Certain it is
that the micropyle of the ovule and
the radicle are inferior in all the
species I have been able to examine,
both of *Eumorinda* and *Raderas*,
in some, as in *E. citrifolia*, for the
type of the first section, and *M.*
middii of the second, the ovule is fixed
near the middle, in others, nearer the
micropyle, in a few so close to it
that the ovule is truly aematoxyren and
ascending; invalidating, as might be ex-
pected, the main characters of Korthals'
genera *Bridelia* and *Rennellia*, all
the more so that the original species
of *Morinda* have "ovula appensa.*

Morinda should accordingly stand
either form a subtribe of the *Coffeae*
or be referred to the *Ixoraceae*.


Hab. Society Islands. Samoan Islands,
and in most of the small Pacific islands
visited, such as Disappointment, Wilkes, Gaudichaud and King's Islands. Dr. Seemann also
collected it at the Truk Islands.


M. Padavara, Juss. (Padavara, Schult. Hort. Malab. 7. t. 27.)


M. microphylla, Juss. in Fl. Prodr. 4. p. 449.)


The view of the great variability of M. umbellata our Oceanic species may fairly be referred to this species. The most doubtful is those

4. M. umbilicata, Schult. in Fl. Prodr. 4. p. 449.)

"..."
bellata of Foster, which Dr. Picken
ing records as a shrub, with no
mention of its being perennial;
neither does Jack in his M. Lehrer-8
Dr. The epidermis is sometimes per-
taneous, and the villous beard of the
inside of its limbs, which abounds
in most flowers, appears to be want-
ing in some few of them.

The specimens from the Tegjre Is-
ands are the same as those of
Seymours ap. no. 222.
3. Morinda myrtifolia, sp. nov.

U. (S. Padavara) glaberrima; ramis gracilibus, leandentibus; stipulis in vaginae truncatam brevem constituens; foliis sublonguiter petiolatis subcoriaceis nitidulis lanceolat-seu ellipticis, oblatis stramine obtusis

Stipulis obtuse acuminatis, venis primariae basi cancellatis, axillis radialis pedunculis terminalibus bracteis solidariis 2-4.-nervis; capitulis plurifloris globosis; tubo corollae 4.-fido intus villose-barbate.

Hab. Mathurata and Ovalau, Leippe Islands.

A slender and very smooth, deciduous species, with short stipules completely united into a truncate sheath, and small nearly coriaceous leaves. These are from one and a half to two inches long, on pediole of 4 to 6 lines in length, very smooth both sides and with impressed veins, destitute of glands or beard in their axils; perianth elliptical
and rather obtuse at both ends, or in vigorous shoots inclining to ovate-lanceolate and obtuse. Petiole, 3 to 5 lines long, often solitary or in pairs, occasionally four in a terminal umbel. Flowers very small, nearly as in M. umbellata, 1/2 or more in the capitulum. The syncarpous fruit globular, about 4 lines in diameter, and when fallen mature are obtained the same. Possibly take in the Tahiti Foster, M. umbellata of Tahiti.

Pyrne 4, suberiform, seed conformed to the cell, fixed rather below the middle. Navick inferior.

No. 223 of De Launay's Tjucie collection and specimens collected by Dr. Harvey at Warran or Lifuka are larger-leaved forms of M. myrtifolia, approaching the Tahitian M. umbellata, of which species it may prove to be a variety.

M. (P. Padavara?) glabra, Scandens; stipules in vaginae brevem connotatis, utrinque seminum utrinque uni-bicuspidatis; foliis ovatis et oblongo-lanceolatis acuminales chartaceis supra lucidis, venulis reticulatis subtiliis opacus venis primis maris tautum perspicuis in axillis sepium barbataulis; pedunculis terminalibus (futuris) solitariis terminisque terminalibus petioli fere quantibus, fructibus globosis pollicari.

Hab. Orolog, Keejce Islands; in woods, about 1200 feet above the level of the sea.

This is said to be a vine, with the smooth leaves bright green and shining above. They are 4 or 5 inches long, and 1½ to 2 inches wide, on petioles 6 or 8 lines in length. They are of a chartaceous or somewhat coriaceous


texture, very smooth, but with minute traces of pubescence underneath. Oblanceolate or rounded at the base, and tapering gradually from below the middle to a more or less acuminate apex. The primary veins 3 to 5 on each side of the midrib are very slender and slightly patent beneath. The venation at all not at all strong. The "glands" in this axil are nearly as in M. umbellata, but their malaxine much less bluish. Flowers unknown. The pynecae or general fruit is globose, bore-celled, fully an inch in diameter, and composed of the Coriaceae of 15 to 20 flowers, each tetrapyrnous. Seeds ascending from near the base of the cell, free inserted by a very narrow hilum. Radicle inferior.

M. (S. Padavara) scandens, undique velutino-pubescentis; foliis membranacisis ovato-oblatae, oblongae, caducae-acuminatis basi sinu parvo sub-cordatis penetrantesPenninervis; pedunculis plurinervis, in umbella terminali; capitulis plurifloris; syncarpio globoso pubescente.

Hab. Keejhe Islands; "common; collected for various economical purposes."

"A vine", with slender, obliquely quadrangular branches which, with the foliage, peduncles, and fruit, are velutino-pubescent with a soft pubescence throughout. Leaves thin and membranaceous, oblong-ovate or oblong-obovate with a small cordate sinus at the base, or the uppermost lanceolate, the apex abruptly contracted into a slender acumination; the primary veins slightly prominent underneath, and straight, 9 to 13 pairs. The leaves are from 3 to 5 inches long and from one
to 2½ wide. Petioles 4½ 6½ long. Stipules appressed, almost distinct, early deciduous. Peduncles 5 to 7 in a terminal umbel, about half an inch long. Flowers not seen, having all fallen. Ovaries about 10, united into a globular head, each 4-celled and one-ovuled; ovule pendulous, axis oblong, micropyle inferior. The nearly full-grown fruit, is still protostem, globular, and barely half an inch in diameter.
M. (§ Padavara) glabra, a candens; ramis gracilibus; stipulis puberulis; foliis obovatis-cuneatis obtusis vel retusis coriaceis supra nitidulis subtusquam inter costas rectas prominentibus et reticulatis; pedunculis plurimis terminalibus; capitulo globoso 7-10-floro.

Hab. Sandalwood Bay, Heajee Islands. (In fruit.)

A climbing species, with rather slender branches, glabrous, or the peduncles to, somewhat puberulent. Stipules short, apparently intraflora-cese and the two united only at the base, but they are mostly imperfect or fallen, and their character not ready to be made out. Leaves coriaceous, smooth, crowded on the flowering branches, about 2 inches long and an inch wide, obvate-cuneate, contra tapering into a petiole.
You and I have in common, with the upper surface of the earth, the sun, the planets, the moons, and the stars. In this universe, we are all alone. And yet, we are not alone. We are part of a vast network of interconnected systems, both natural and human-made. Together, we form a complex web of life and consciousness. It's a beautiful and frightening thing to think about, isn't it?
Myrmeccedia, Jack.

1. M. impunctata

M. impunctata: foliis lanceolato- ovatis, stipitato RUPTU, oloribus; corolla tubulosa, calyce e cum ovario connectivato utroque lateri RUPTUM "nudis, glabermissis"; style simplicissimo, stigmatem quadrato RUPTU, lato indiso, villoso, lanato RUPTU, kiliato cinceto; fructus obpyramidalis quadrilobis, pyraminis 4 cornitis.

Hab. Multinata, one of the Fijian Islands, in forests, at the elevation of 2000 feet.

Murb. Parasitic or pseudo-parasitic on trees by a dilated, naked, tuberous base cavernous within. The dichotomous branches somewhat fleshy, unarmed; the white plant smooth and glabrous. Leaves thickish, obscurely veined, about 2 inches long, short-petiolated.
Lanceolate-oblung or narrowly spatulate-oblung, obtuse or acute, the base mostly acute. Stipules very short, truncate to sheath, caducous. Flowers sessile and crowded in small fascicles in the axils of the leaves. Calyx campanulate, about a line and a half long, the limb of free portion equaling the adherent portion, truncate and entire. Corolla white, band of pubescence thick, from 6 to 9 lines, mostly half an inch in length, tubular, 4-keeled, perfectly glabrous and naked within as well as without, no glands or appendages in the throat; the lobes oblong, valvate in aestivation. Stamens 4, inserted in the throat of the corolla, glabrous; filaments complanate, lanceolate, short; anthers oblong-linear, obtuse, attached a little above the pagodate base, in the bud convolute in a ring around the summit of the style. The stigmata covering the aperture. Pollen-grains very large, spherical. Style filiform, perfectly entire, stigma terminated by 4 disciform stigmas, consisting of four prominent apiculate lobes, surrounded subtended by a kind
of indusiate margin which is fringed by a circle of columnar hairs. Ovary short, 4-celled, with a single androecium ovule erect from the base of each cell. Style in the dried spe-
cimen 3 lines long, olivaceous and upwardly somewhat 4-sided, the trunc-
teate summit crowned in the centre with the persistent annular limb of the calyx, which is filled by the projecting, effigynous, thick, smooth, and even, of a hard horny texture. Seed attached to the tapering, base of the cell by a small funiculus, conforming to the cavity, tends thin. Embryo in the axis of the fleshy al-
bumen and of nearly its length, greenish, terete, flattened in curved above the radicle, inferior, gradually elevated downwards, about twice the length of the narrow and flattish-semi-terete epi-
leaves.
However it may be with the two species figured by Gaarder and with bladed styles and laciniate-chief stigma, the present is undoubtedly a genuine representative of Jack's genus Myrmecodia, and its stigma, as here described and figured, probably corresponds with the "stigma simplex tormentorum" of M. tuberosa. At the same time our plant differs from all other known species in wanting altogether the beard in the throat of the corolla, as described by Jack and figured by Gaarder, and the formicate scales mentioned by Plummer. The pyriforms, moreover, are far from being chartaceous. There is considerable confusion about the species in the books, which the Dutch botanists ought to clear up.

Plate — Myrmecodia imberbis,

with the cellular enlarged attachment, Fig. 1. A. flower. 2. Corolla laid open, 3, 4. Stamens, front and back view. 5. Pistil, and the portion of the calyx laid open to show the large epigynous disk. 6. Vertical section of the calyx and corolla. 7. Same, with the indurated stigma. 8. Dissection of the style with the indurated stigma. 9. Vertical section of the same, 10. Transverse...
section of the same. 11. A Sept. 12. The entry, the details are magnified.

Hydrophyllum, Jack.

1. Hydrophyllum longiflorum, sp. nov.

2. foliis elongato-oblongis; corolla grisea illinna (peri pollinari) intus glabra, tubo lobis oblongis pluris longiore.

Tab. Ovulare, one of the Iseaje Islands, at an elevation of 1000 feet; growing on the trunks and branches of trees.

Pseudo-Parasitic, Branches apparently slightly fleshy, stipules extremely short, 1 truncate, caducous. Leaves thickish, 2 1/2 to 4 inches long, 9 to 18 lines wide, narrowly oblong, obtuse, often acute at the base, not distinct but very short petioles, obscurely feather veined. Flowers clustered and sebile in the axils of the leaves in the manner of Myrsineae, limb or free portion of the calyx very short, truncate, or very indistinctly repand-torrall.
Corolla hypocrateriforme with a slender elongated tube, about an inch in length, naked and glabrous inside; the lobes 4, oblong, obtuse, apparently valvate in stivation. Stamens 4, inserted in the throat of the corolla: filaments very short: anthers oblong. Style filiform: stigma 2, petaloid, reniform - orbicular. Ovary 2-celled. Ovule solitary, erect. Style oblong, obtusely apiculate with a conical-truncate epigynous disk, which projects beyond the corolla. Very short vestiges of the very short limb of the calyx: paracarp thin: pyranum 2-celled, nerves between chartaceous and cartilaginous; the cells at maturity fissile, perhaps fissile at the top. Seed (erect) and embryo nearly as in Myrmecocodia.

From the lack of materials, the above description is drawn in part from sketches made by Mr. Dick, which accompany the specimens of this genus, if the analyses are correct, I should refer Sandwichia Myrmecocodia inermis and his M. echinata, neither of which can be Jack's M. tuberosa. Like our M. imbricata, the present species differs from its congeners in the larger corolla glabrous and naked within.
Mephitis dia, Reimer., Blume.

Two specimens of related if not of the same species of this genus, were collected in the Maja-
Jai Mountains, Luzon. But they are insufficient for determination or description.
Suteria, S.C.

1. Suteria Stockeriana, Gardn.


Hab. Organ Mountains, Brazil, near Rio Janeiro. (In fruit.)

Geophila, Ion.

1. Geophila reniformis, Ion, Míg.

Hab. Hejje Islands. Upright and

Sarai, Samoan Islands. Mountains near Bäños, Luzon, Philippine Islands. Prof. Harvey likewise detected it at the Hejje

Islands; the Peduncles only one-flowered.

Calyx tubo angusto, limbo valde
ampliate, infundibuliformi sec.
mentonaeque ramositate in
petaloideis 5 lobi. Lobi supra
equalibus ciliato-barbatis. Co
tilla calycem modice superans,
tubulosa, facie infundibuliformi,
lobis 5 petalibus apice cornicen-
lato-cunctatis aestivatione valvatis.
Stamina 5, facie corollae inserta,
sub inclusa: filamenta brevissima;
antherae oblongae-linaries, basi
biloba. Stylius filiformis, basi
disco epigyno levato arcte cine-
tus; stigma 2 (v. 3), linearia
dentis filiformia. Ovarium bi (raro
tri-) loculare. Ovula in loculis
solitaria, e basi erectam anatropa.
Drupa apice ruda, dipysma,
varius tripysma; pyrenae carici
lagiicies facie planis, semen cav
vel concavis.
The text is not legible due to the quality of the image. It appears to be a page from a book or manuscript, written in English. Without clearer visibility, it is challenging to transcribe accurately.
Apparently a stout shrub, nearly glabrous, with the leaves crowded at the summit of the thick branches. Stipules infrafoliae and punctate hairless, united below into a short sheath, above separating into four ovate triangular spreading lobes. Leaves about a foot long, oblanceolate, oblong, or lanceolate, oblong with the base tapering into a distinct petiole of one or two inches in length, slightly acuminate, glabrous, except some hairiness along the midrib and veins beneath, conspicuously feather veined, the primary veins 1/2 to 1/3 pairs.

Flowers terminal, in a pedicellate glomerate cyme, composed of many flowered capitula in form clusters, each surrounded by an involucre formed of one or more broad and thin, membranaceous, incised, lacerate, or toothed, reticulate-vining, broad bracts,
which almost equal the flowers, they are villous-ciliate, but otherwise glabrous. Flowers in very short pedicels, the lateral ones bracteolate; bractlets oval or oblong, entire or somewhat incised at the summit. Tube of the calyx generally inconspicuous and narrow in blossom, obconical or clavate, the limb remarkably ampliate, campanulate, funnel-form, thin and membranaceous and perhaps more or less petaloid or colored, reticulate veins, about half an inch long, cleft often rather unequally about one third of its length into 5 obovate and obtuse lobes, glabrous, except that the lobes are densely ciliate-bearded with villous and many jointed hairs. Stamens inserted on the throat of the calyx.

Corolla scarcely twice the length of the calyx and very much narrower than it, tubular, with a somewhat funnel-form throat, naked within, and 5
The color of the flowers not recorded.

Oblong spreading leaves; these have hooded, corniculate tips, and are valvate in aestivation. Stamens form in the throat of the corolla; filaments very short, naked or slightly hairy; anthers oblong-linear, emarginate, deeply notched at the base. Epigynous disk remarkably elevated, closely surrounded, surrounding the base of the long and filiform naked style. Stigmas 2, narrowly linear. Flower in the flowers examined narrow and inconspicuous, but with a single narrow ovule erect from the base of each of the two cells. In the pistil 2 specimens the bracts have all fallen and left a naked cluster of somewhat oburate and truncate drupes. These are said to be brown-red; they are naked at the summit, the limb of the calyx having disappeared, very short-pedicelled, 3 or 4 lines.
long; barbecay thin. Fig. 1 2 oblong, truncatoconical. The placenta cartilaginous, rather thin, flat at the commissure, obscurely 3-4-angled dorsally, but not ground. Siliques

ovoid, not capitate. Seed can be viewed to the cell, inserted by a thin edge, or may be the very base of the cell, with a very thin adherent testa; the surface obscurely pustose or irregular; but the cartilaginous albumen is solid and even. Embryo near the base of the albumen, about a quarter of its length; radicle inferior, elongated conical; cotyledons thin and flat, round-oval, considerably broader and much shorter than the radicle.

This and the following species belong to a striking new genus of the Psychotriae (including Pachyphea elidea), which is well distinguished by its large and deciduous frondiform, deciduous limb of the calyx, which suggests the generic name.
The ovaries are in the flowers examined are so small compared with the abruptly dilated calyx, and so continuous with the pedicel, as to suggest the idea that the flowers are polygamous, but they are ovulate, and the style and stigmas are apparently perfect well-formed. The materials for the study of the floral structure are scanty. Although not wholly satisfactory, the plate, as engraved under the superintendence of Mr. Rich, is left unaltered, except that I have added the details of the fruit and seed.

Plate. Calycosia petiolata.

Fig. 1. A detached flower, 2. A calyx laid open, showing the contained young corolla in bud, 3, 4. Stamens, 5. Summit of a corolla laid open, 6. Pistil, the calyx-limbs cut away, 7. Vertical section of the ovary, 8. A drupe, 9. Vertical section of a drupe, 10. Transverse section of a drupe, 11. One of the pyrene, central view, 12. Section of the same, somewhat magnified, 13. Embryo. The details all unaltered.
2. Calycocia sessilis, sp. Nov.

6. foliis spatulato-lanceolatis basi sensim angustatis sessilibus; floribus arcto capitata congestis; calyce ultra medium quinquifidum quinquefidum, lobis line aribus; pyrenis dorso tricarinatis.

Hab. Savai, one of the Samoan Islands.

Shrub 4 to 6 feet high, with the leaves crowded at the summit of the thick branches, a foot or more in length, 2 to 3½ inches wide, oblong-lanceolate with a long alternate base, sessile, membranaceous, glabrous, the venation as in the preceding species. Flowers all densely crowded into a large sessile mass or capitulum, occupying which is sessile at the summit of the stem, surrounded by
The ample leaves and fulvous with thin and membranaceous
fracts in the manner of C. petio-lata; but these appear to be nar-
mer, ovate, or obtuse, or obtuse lanceolate, and more scarios or cedal.
Inner fracts of Petiolata lanceolate or linear, laciniate-tripod or
entire, strongly bearded like the
lobes of the calyx along the mar-
gins and slightly so on the back,
Petiole of the calyce flowers 2 or 3
lines long, limb of the calyx as
long as in C. petiolata, but nar-
mer, the undivided portion more
vulbar but proportionally shorter;
the 5 often somewhat unequal lobes
maximly linear-obtuse, linear-
ligulate, obtuse, larger than the
whole tube, a little shorter than the
their margins ciliated with a band of tridium, many points, and
could, if properly thought of as can be
made out, the structure of the corolla,
Plumes, style, 14, accords with that of the preceding species. Ovary also similar, but sometimes trimerous. Sepals oblong, 4 lines in length, obtuse but not truncate, grooved in the dry state; the 2 or sometimes 3 cartilaginous pyriform flat at the commissure, carinate on the back with 2 or sometimes 2 rather sharp ridges separated by intermediate grooves. Seed conform to the cavity, and similarly ridged or grooved on the flattish back. The central face plane or nearly so. Albumen and embryo as in the **C. petiolaris**.

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**Plate. Calycorcia sessilis. Fig. 14. Transverse section of a trope. 15. Fossil, and 16. Ventral view of a pyriform. 17. Section of the same edgewise. 18. Embryo. Variously magnified.**
Straussia.

Calyx tubo turbinate; limbo cupuliformi truncato vel sepando bru.
Corolla brevis, 4-5 fida; lobis tubo aquilunguis sede longioribus, estivatione valvatis. Stamina 4-5, fascic ininserta; filamenta brevia; anthere oblonga, basifixae. Hypan filiformis; stigma 2 sub dilatata. Ovarium bilocularis. Ovula in loculis solitaria, e basi erecta, anatropa. Frusta sesissima pyriformis, dipyrnax; pyrenes chartaceis vel tenuiter cartilagineis plano-convexis, cavibus. Semen plano-convexum seu erectulum; leviterモノeidesum; testa tenuissima adhaerente; albumen cartilagineum, corneum. Venter pulcro sursum clauso excavatum, antem fissa, fissura lata tenui sub-bilamellatum. Embryo parvus.
Coffea vel Psychotria. - Arboris ant, foliis pennatis, adnatis, stipulis interpetiolaribus subcamicis obtusiis, 
max decidentis; cyma terminali 
longe multiflorae pedunculata; floribus 
parvis.

Coffea sp. spec. spuria, Johann. v. Schlecht. in Linneia, 4, 
p. 32-36, except. 1820 no. 2.

Coffea, sect. Straussia, SB. Prod., 
4, p. 502, except. 1893

Straussia, SB. nom. ind. in Herb. Stock.

1. Straussia Raudiana, (C). 

5. foliis subsecatis, cuneatis, obtusiis, 
junviis subtilis ad tenuas costas 
cum pedicillis calycibusque pedis 
sine ferrugineo-pilosulis; corolle 
fauce arista imberbi; antra
pyriformi sub quadra angulata.


Apionema obovata V. A. Pendule.
flora, Nutt. in Nutt. Hook.

Hab. Oahu, Sandwich Island, in the mountains behind Honolulu.

A shrub or tree, with spiny branches, or the branches often or less compressed.

A good detailed description of this shrub or tree is given in the Linn. l.c., where it was first made known, by Chamisso and Schlchtendal. We have only to add what is needful to complete the account. The fine ferrugineous pubescence of the young
shoots, foliage is variable, being slight and sparse on the lower surface of some young leaves, but conspicuous and persistent on the middle and veins of others, even when full grown. The leaves are ob-ovate or oblong-ovate, usually with a cuneate-attenuate base and almost sessile, or with a marginal petiole only a line or two in length; they vary from 2 to 4 or even 6 inches in length, and from one to 3 inches in width. Peduncle 1 to 5 inches long, commonly glabrous; the small bracts, ferrugineous-ciliate. Flowers only 2 lines long, greenish. Limbs of the calyx cupuliform, a little shorter than the turbinate ovary, truncate, but expand widely, obsecrately 4-5-toothed, usually a little hairy under a lens, but the margin scarcely or seldom ciliate. Corolla deeply 4-5-cleft; the lobes thick obovate, valvate in aestivation; they are probably widely spreading or reflexed in anthesis, as in the other species, but
we have no expanded flowers. In the bud, they are made, they are wholly glabrous and naked within. In this line are oblong, or very short petals. Style 2-clawed at the very apex. Ovary 2-celled. Ovules solitary and erect from the base of each cell. Fruit drupaceous, with a thin pulp, sarcocarp, pyriform, and commonly when dry, having four rather salient ridges or costa, especially towards the tapering base, 5 to 7 lines long, obtuse or truncate at the apex, where it bears the vestiges of the very short limb of the calyx. Pyrenes 2, separable at maturity. Thim of a chartaceous or somewhat cartilaginous texture, flat on the ventral face, convex on the back, smooth and even, or with a slight dorsal ridge, at maturity bipartible by the dehiscece of the whole in two face (as in Chasalia, &c.) in the manner described by Chamisso and Schlechtendal.
Seed erect from the base of the cell, on a short and broad and flat, scale-like funiculus, somewhat membranous, and with a shallow notch (concave) at the summit, the scutule on the ventral face furking just below the summit, as described by Chamisso and Schlechtendal; the dorsal side nearly smooth even; the thin and brown testa adherent to the hard cornified albumen.

The ventral face of the albumen is furnished for nearly its whole length by a deep but closed groove, which is transversely dilated at its termination. Entirely separate from this, there is commonly, if not always, a broad fissure in the axis of the albumen, which in the transverse section appears as a lunate-curved line almost dividing the albumen into an outer and an inner plate. It is symmetrical, and lined by a membrane, and not
traceable to an infolding of the seed, like that of coffee-grain. Embryo near the base of the albumen, axial radicle hairy in form, rather longer than the cotyledonary foliaeaeus cotyledons.

These plants, usually referred by Chamisso and Schlechtendal to Coffea, are but remotely related to that genus, which (although strangely left placed in the Psychotriae by Miquel, contrary to the assigned characters of the group) is justly defined by Bentham as having "the estivation and placentation of Ixora and Pavetta, with an axillary inflorescence and a peculiar seed." The present genus, which must retain de Candolle's preterial name of Struassia, is allied to Chasalica, but well distinguished by the very short corolla as well as by the seed.

Plate 8. Struassia Radhmana. Fig. 11, Cluster of fruit, of the natural size. 12, Longitudinal, and 13, transverse section of a drupe, magnified. 14, Nutral, and 15, transverse view of a pyrenae, magnified. 16, Embryo, magnified.
2. *Strandisia Mariniana* (Ldl.) 

S. totum glandulose, foliis breviter sericeis; bracteis ovato-oblatae, stipite albis; ovario valde sericeo, fructu sericeo, semen album. 

*Coffea Mariniana*, Cham. et 

Schlecht. l.c.; De. l.c.; Wall. 

l.c. 

*C. Chamissonis*, Hook. et Arn. 


Apemusa pulchata, Nutt. in Mem. 

Hook. 

Hab. Oahu, Sandwich Islands, 

on the Koala Mountains, &c. Collected, 

along with the preceding, by all the 

botanists who have visited these isl-

*ids.*
This is distinguished from the preceding by being glabrous throughout (or rarely with the midrib underneath and the peduncle pilose with straight and not transverse hairs) by the less cuneate leaves, which often have petals from 2 to 5 lines in length, and by having a few bracted spots at the margin of the ovary, at the base of each leaf, between the leaflets. These were overlooked by Stuckey and Arnott in describing their Coffea Chamissonis, which is certainly of this species; although present, they are not so conspicuous as would be supposed from Chamissonis' description. Good materials are needed to show whether they are truly and uniformly wanting in S. Kadhwa. The leaves vary much in shape, from obvate-elliptical to narrowly cuneate-oblanceolate. Margin of the calyx perhaps more nearly entire than in the pre-
ceding, glabrous. Lobes of the corolla
long, thick, as long as the tube, valvate in asination, in anthesis recurved, as long as the tube. Filaments short, naked. Stigma oblong, fixed by the base. Style filiform, thickened upward. Stigma 2. Ovary, oblong, thickish. Ovary, as in the last; the drupe also very similar, perhaps rather smaller and not more oblate, less milled when dry, or with slight grooves in place of the ribs.

Plate: *Strawera Marimiana.*

Fig. 17. Fruit, of the cluster of fruit, of the natural size. 18. Magnified transverse section of a drupe. 19. Vertical view of one of the pyrenes.
3. **Straussia Hawaiensis**, sp. nov.

*foliis laequis petiolatis obovatis* calycibusque glaberrimis, corolla lancea inter stamina *Hawaiata*; drupa parva ovoidea vel ob-

ovala.

*Nab. Hawaii, Sandwich Islands, in the district of Puna, and in the forest near the Crater Lua Pile.*

A slender tree, with a slender trunk, 20-

50 feet high. Glabrous throughout, or some-
times with minute ferruginous

pubescence on the midrib and veins

of young leaves, and on the branches

of the cyme. Leaves obovate, with

a more or less cuneate base, 3 to 5½ inches
long, and 2 or 3 inches broad, rounded

at the summit, and often tipped with a

small and abrupt blunt point, of a

firm chartaceous texture, the 13 to 20
Pair of veins, rather conspicuous under
neath, the base tapering into a
petiole an inch in length, Stipule
ovate, very obtuse, somewhat curved,
early deciduous. Peduncle terminal
one or two inches long, Calyx as in
the preceding, nearly glaucescent, the primar-
y and the secondary divisions mostly
vesticulate, thickish. Limb of the calyx
enulate, about the length of the ovary,
truncate, entire, glabrous. Corolla 1½
or 2 lines long, the 5 valvate lobes as long
as the tube, thick, valvate in asivation,
at length reflexed; the throat with a
bearded spot at the base of each lobe.
Style, ovary, &c., as in the foregoing species.
Fruit (apparently mature) at most
3 lines in length, short-ovate, with
a slightly narrowed base; the pyre-
nae, seeds, &c., similar in structure
to the two preceding species.
The conspicuousity pedicled and usually large leaves, and the small fruit are relied upon for distinguishing this species from the S. Mariniana.

Plate  - Straussia Hawaiensis.
Fig. 1. A flower-bud. 2. Diagram of the pistil of the corolla. 3. Expanded blossom. 4. Corolla laid open. 5. Longitudinal section of the corolla. 6. Cluster of fruit, of the natural size. 7. Vertical, and 8. Transverse sections of a drupe. 9. Vertical view of a pyriform. 10. Embryo. - All but figs. 5 & 6 magnified.
Chasalia, Commes.

Polyozus, Blume, Lour. Fl. Coch. 1, p. 943.
Blume, Bijdr. p. 947.
Calospermum, Blume, Bijdr. p. 944.

1. Chasalia

Chasalia montana, Miq. 3.

6. glaberrima; stipulis brevissimis vaginis, utrinque bipinnulatis, inaequali, coriaceis truncatis, arrectis, foliis ovalibus basi acutis, unis, primariis utrinque 8-9, epigynae acetatis, saepe decurrentes, petiolum globoso, limbo integerrimo brevissimo, primum evanido cornuito; pyrenis

Psychotria membranifolia, Benth. in DC. Blätt. 4, p. 152.
Hab. Mangsi Islands.

Branchlets sparse or nearly so, very glabrous, subulose. Stipules very short, connivent into a truncate sheath, hardly a line long, its margin at first prominently ciliate. Leaves oval, obtuse or obtusely and slightly pointed with an abrupt acumenation, acute at the base, or abruptly tapering into a petiole of an inch or little more in length, 5 to 9 inches long, and 3 to 4½ wide, entirely glabrous, light green and membranaceous in the dried specimen, perhaps a little precedent when fresh; the primary veins somewhat conspicuous underneath, 8 or 9 on each side of the midrib, diverging nearly at a right angle; the loosely reticulated veinlets rather inconspicuous. Flowers not seen. They were apparently rather few, in a loose and beside terminal cyme, the
Primary branches of which are slender, but the pedicels short. Scape globose or slightly pyriform, almost half an inch long when mature, when young crowned with a short thin ring less than half a line high, which seems to be the whole limb of the calyx, and which disappears from the mature fruit; par cocciaps thin: Pyrenacea 2, about 4 lines wide obovate-ovatulicar in circumscritpition, hemispherical, smooth and even on the back with only faint indications of a central ridge or nerve, deeply carinato-tubercle dotted out on the inner face, the putamen chartaceous in texture, at length fissile around the margin so as to separate or be separable into two car- cavo-convex valves. Seed conforms to the cavity of the putamen, erect, meniscoidal or crateriform, thin, with a delicate adherent testa. Albumen
corners, solid and even. Embryo near its base, very small; the radicle inferior, about the length of the water and thin cetyledons. The materials are very imperfect, except for the fruit.

C: glaberrima; stipulis breviissimis vaginatis truncatis; foliis oblongis ovalibusque basi acutis, venis primariis 6–8; cyma laxa flora breviter pedunculata; calyce tubo utra ovarium obovatum producet et in limbus crateriformem subito sub quadridentatum frondem obgatur; abrumpite expanso; pyrenis 2 fore apice subtridentatis dorsum carinatis et ventro concaviusculis hand pedicatis; semen aculeiiformi incurvo.

Isab. Forgetable, one of the Friendly Islands.

"Thikb 6 to 8 feet high", glabrescent throughout, with principal sterile branches truncate. Stipules very short, cuneate into a narrow sheath or ring, deciduous very thin and
Species, deciduous or weeping, aways much as in the preceding species, but more inclined to be obovate, 3 to 5 inches long, 1½ to 3 inches wide, membranaceous, with 6 or 8 pairs of primary veins; petiole an inch or less in length; ovary terminal, or a peduncle not over half an inch in length, loosely rather few-flowered; pedicles shorter than the calyx. Calyx (after flowering) oblong-urceolate, the obovate tube extended a line and a half beyond the ovary, then abruptly dilated into a cup-shaped, obliquely 4-toothed, foliaceous limb, of nearly 2 lines in length. Corolla tubular, 4-cleft. Young fruit crowned with the calyx flaps, which is the obvoid, two- or three-celled capsule. Obovate, smooth, externally, the strongly convex back carinate, ridged above the middle, especially with a rather sharp ridge which vanishes below; the ventral face slightly concave. The truncate summit bearing a medial and two marginal, short and
blunt teeth; seed conforms to the nut-awn plucked, to split into an outer and an inner valve, as in the foregoing species. Seed conforms to the cell, somewhat mesicoidal, but much thicker than in C. craterispina, moderately concave on the inner face, where it is marked with a central and slightly impressed trilinolate groove, the trigono-cate summit obscurely 3-toothed. Embryo small, at the base of the corneous albumen.

Since the preceding was written, I have had the opportunity to examine a fine fruiting plant. C. castrata, Macrosorum, on Navar or Diphka. Fruits half an inch long, exclusive of the persistent and foliaceous capsule-like limb of the calyx, probably globose when fresh, seed thick (the cross section 3 lines long and 1½ lines in thickness), mesicoidal, but the inner face only slightly concave, destitute of ridges or grooves.
3. *Chasalia pyriformis*, sp. nov.

C. ? glaberrima; stipulis vaginantibus trunciis brevibus; foliis oblongis tarsi acutis, venis primarie utrinque 7-9; cyma sessili paniculata; fructu oblongo, pyriformi calyces limbo cupulato sub 4- dentato coronato; pyrenesis 2 ventris planis dorso creta leviter tuberculatis haeque carinatis; semine cartelliformi plani usculo.

Isol. Samuan or Navigators' Islands.

A single specimen, in fruit, occurs in the collection, which I place in *Chasalia* on account of its manifest affinity to the foregoing species, but it might as well, perhaps, be referred to *Psychotria*. The truncate vaginate stipules are like those of C.
Anicorum and are equally deciduous, only the uppermost remaining. Leaves much like the last, light green, very glabrous, 4 or 5 inches long, about 2 inches wide, tapering into a rather short petiole. The cyme appears to have been strictly sessile at the summit of the stand, short, and few-flowered. Flowers not seen. Sepal oblong or elongate-pyriform, 8 lines long, Connus with the limb or free portion of the calyx smaller than that of C. Anicorum, only 1½ lines long; paracarp thin; pyrenae obovate-oblong, 3 lines broad, thin, cartilaginous, plano-convex, not grooved nor costate, but obscurely tuberculate, or rugose, or uneven on the back, especially near the truncate or slightly emarginate summit. Seed bentelliform, lightly concave on the inner face, and obscurely uneven, like the petalum, on the back; otherwise nearly as in C.
Anicoruma. - Addition materials of this species and the foregoing are needed for further comparison.

In Penny's collection from Cahu, Sandwich Islands is a Chasalia? (or perhaps a Psychotria) too imperfect for determination.

= Psychotria herzogii. W. H. Mann.
Psychotria, Lin.  

*Oceanica.*  

(Sab.)  

Psychotria Brackenridgii, sp. nov.

P. stipulis caducis; foliis oblongo-lanceolatis utrinque acutis vel acuminiatis basi in petiolum longissimum angustatis fere glabris chartaceis; pedunculis 1-5 terminatis elongatis cymo

trichotonam multifloram generantibus cum radiis pedicellisque perfugineo-puberis; fructibus ovatis 8-costatis truncatibus calycis limbo petreviso cap parvo cupuliformi coronatis puberulis; pyrenecis ten

uiter cartilagineis intus planis dorso convexo carinato tricosatis.

Tab. Oroban, Feejee Islands.

[fruit only]
Of all our species this most approaches those which I have referred to Chasalia. It is probably a large shrub, in the fruit, the flowers are unknown. Branches stout, smooth, glabrous. Stipules not seen, having fallen from the specimen. Leaves of a rather firm consistence, oblong-lanceolate, 6 or 8 inches long, 1½ to 2½ wide, more or less acuminate, tapering at the base into a petiole of one or two inches in length, glabrous, except a few small hairs along the midrib underneath; the primary veins prominent, about 12 pairs, the veinlets obscure. Peduncles terminal, 3 inches long, in one specimen solitary, in others these are 5 in a umbel, clothed with a fine rusty pubescence, as is the rest of the inflorescence. Gynoecium subsessile, rather small, and apparently close and open twice or thrice in chlamydeous; the primary rays about
half an inch long, slender; pedicels in fruit from 2 to 4 lines long. Drys 4½ or 5 lines long, short oval, very obtuse at the base and truncate at the summit, the centre of which is apiculate with persistent, small, ob- surely 4-toothed limb of the calyx, if scarcely more than half a line in length. In the dry state, the bar- caps being thin, it is pretty con- spicuously 8-ribbed, and thus is noted to be the case in the fresh plant. Persea 2. Plano-convex, the inner face not grooved nor concave, the outer 8-ribbed marked with 3 sharp and salient equidistant ribs, the summit retuse; the foot more base thin and ob- tuse; phylamen thin and cartilaginous or chartaceous-emustaceous, seed erect, flat, dec- telliform, somewhat concave on the vertical face, acutely 3-ribbed on the dorsal.

Plate 38, Psychotria Brachyandrae, Fig. 15. 8. Plumule and fruit, of the natural size. 16, Longitudinal.
P. glabra; foliis oblongo-lanceolatis magnis basi in petiolum laequum angustatis, venis primaris conspicuis utrique 15-19, cymis terminatis per pediculus; fructibus pedicellatis fusiformibus limbo calycis cupulatis truncatis collo pubescentes coriaceis; pyrenis linearibus oblongis apice bidentatis in us planis 2-50 obtuse tricostatis suberoso-crustaceis.

Tab. Sarai, one of the Samoan or Navigator’s Islands.

Branches stout, Stipules not seen. Leaves perhaps somewhat fleshy, glabrous, oblong-lanceolate, 7 to 12 inches long, 2½ or 3 inches wide, acute at the base or at both ends; the primary veins 15 to 19 pairs, prominent
on both faces, diverging nearly at a right angle from the strong midrib, and vanishing near the margin, pell-to 2½ or 3 inches long. Flowers not seen. Sepals apparently 3 from the summit of the branch; pedicelles 3 or 4 inches in length. Sepals pedicelled, just conical, about 7 lines long, and crowned with a cupuliform truncate limb of the calyx, a line and a half long, which is continuous with the more or less narrowed apex of the fruit, and a little enlarged upwards; Stcoe- carp thin. Petals 2, rather narrow, 1½ lines long. Palms convex, of a rather echy crustaceous texture, flat within, usually 3-ribbed on the back, the apex having a narrow notch between two short and blunt tooth-like projections. Seed confirmed to the cell; the inner surface faced slightly concave, the outer 3-ribbed. Albumen cartilaginous. - Apparently a well-marked species; but characterised from imperfect materials except as to the fruit.
Plate

Ptychostria clustera

corpus. Fig. 36. Scope, of the natural size. 37. Magnified transverse section of the same. 38. Dorsal view of a Jay, magnified.

P. glabra; stipulis tenuibus squariosis caducis; foliis membranaceis oblongo-lanceolatis quinque-obovato-oblongis utrinque acuminatis medio sæpiscatis, venis primariis 9-11 jugis; cyma terminali compoista tripartita vel 3, radice pedunculis radibusque petiolum aquan- tibus; floribus confertis pedicel- latis parvis; calycibus limbo expan- svus truncatis integerrimo ovario æquilongo; corolla brevi ad medium lanceolata vel ovata, suffusa obovatis retusis, junioresibus fere oblongali; pyrnis dorso obtuso costatis subtrigosis in tubus concavissima.

Psychotria Asiatica, Hart, Prod. 16, n° 903.
Var. B. Vitiensis: foliis longius petiolatis (marginibus aut planis aut undulatis); fructu viro retuso.

Hab. Tahiti, Society Islands. Also Tanarua and Navigators’ Islands.

Var. B. Ovolau, Viti or Fuejee Islands.

Tree or shrub glabrescent, with slender and somewhat compressed, rather herbaceous branches. Leaves membranaceous, thin, bright green and of the same hue: both sides, oblong-lanceolate, or sometimes, varying to oblong-obovate, mostly acuminate at both ends, 4 to 8 inches long, or 2½ inches wide, the 9 to 11 pairs of primary veins slender but rather conspicuous. Petiole slender half an inch to an inch in length. Stipules thin and searious or sessile short hairy; rachis, very short, somewhat emerced, truncate, bearing a narrow ring.

Cymes or cymes terminal, many-flowered, pedunculate, or single and short-peduncled, the branches verticillate; pedicels obscurely pedunculate, about the length of the flowers, which are barely 2 lines in length. Calyx tubular nearly as long as the expanded pateriform and entire limb. Corolla a cam-
paniculate, funnel form, white, 5-crested (rarely 6-crested) about to the middle. Villous in the throat at the insertion of the stamens; the oblong obovate lobes valvate in ostivation. Ovule erect from the base of the cell. Style deep 2-crested, but the two filiform lobes of stigmas often united by their edges into a line or stretched out the body. Drupse short-ovovate, about 4 lines long, setose at the naked summit, or when partly grown the pulp is not much developed obovovate. Pyrene turgid, rather cartilaginous, rather obscurely 3-5-ribbed and rugose or uneven on the back, slightly sulcate down the middle of the ventral face. Seed sulcate on the ventral face, even or obscurely ribbed on the back.

The specimens from the Jejeue Islands, Nov. 3, which may be safely joined to this species, have
longer petals in proportion to the size of the leaves, viz., an inch or even more in length, while the blade is only 4 or 5 inches long, and from one to 2 inches wide; the ring left by the fall of the stipules is often minutely hairy within, and the drupes are mostly smaller, barely 3 lines long and scarcely or slightly velvety. —The plant from Tahiti is most probably *Fastris O.* Asiatica, of which I have seen two leaves only, in the herbarium of the British Museum. This is the *Stylophorum disparum* of Sunnarr’s Hesperic list, no. 235, but surely not of Labillardiere.

(*) Narrow-leaved form has the leaves remarkably unbranched.

Plate 103. *Oxyduria Fasterniana.* Fig. 23. A drupe, of the natural size. 24, Transverse, and 25, longitudinal section, magnified.
Psychotria turbinata. Sp. nov.

P. fere glabra; stipulis caducius.
foliis ovato-obtusis, lanceolatis basi in petiolum longi,
usculis attenuatis sub-membranaceis, venis primariis 9-12-jugis;
cyma terminali multi-flora petio-
los vii superantes; fructibus turbi-
tatis vertex planis; pyrenis 2-3 ventre
inferne planis, superne profunde ex-
sculpitis dorsi-que incrassatis, tuberculatis
costatis incrassatis, possimis divaricat-
costibus.

Tab. Ovolao, Feejee Islands.
(Also Viti-levu, Mac Gillivray, in voy. Herald.)

Shrub or tree with stout branches,
glabrous, except a microscopic pubescence
on the cyme, petides, and lower side of
the midrib. Stipules fallen, leaving
scarcely a trace. Leaves 6 or 8 inches long,
3, 3½, or rarely only 2 inches broad, obvate,
oblong, or the uppermost in one specimen oblong, lanceolate and acute, generally rather obtuse, the base tapering into a pedicel of an inch or more in length, the texture thickish, membranaceous, the primary veins 9 to 12 pairs slender but rather conspicuous beneath. Gymn terminal, generally nipple, the 3 stamens peduncles less than an inch long, twice or thrice trichotomous or ciliate; pedicels in fruit 2 lines long.

Flowers not pelt. Drupes broadly turbinate and generally (when dissecting a little flattened) laterally, at least in the dried state, flat to with a shallow areola, the broad at the base, the flat tip nearly equal to the length. Pyrene 2 or sometimes 3, thin below and not grooved or costate except a small suture at the middle of the flat ventral face; this face is somewhat obcordate in shape.
the upper part being deeply hollowed out on the inner face and the cup-shaped space filled with sarcocarp, while posteriorly it is abruptly enlarged and tuberculate thickened, or obscurely 3-5-costate. Seed conform to the cell; the transverse section of the bottom flat on the ventral face, but towards the summit strongly concave and 3-5-lobed or ribbed on the back. In the vertical section the seeds diverge from each other, upwards. Embryo near the base of the hard albumen, orbicular, thin, a little broader and shorter than the radicle.

Plate: *Pychostria turbinata*. Fig. 8, Drupe of the natural size. 9, Longitudinal, and 10, transverse section of a Drupe. 11, Ventral and 12, longitudinal, dorsal view of a pyriform. 13, Ventral, and 14, dorsal view of a seed. All except fig. 8 magnified.
Psychotria insularum, Sp. No. 1

Canneceps acuminatus

P. glabra; stipula caduca; foliis oblongis utrinque acutis vel acuminatis longiunculatae petiolatis characeo-membranaceous, venis primarios 7-10-jugis; cyma terminali sessili 3-5-partita, composita, radice 3-5-trichotonis divisionibusque divergentiis gracilibus apice 3-5-floris; floribus gracilibus pedicellatis; calycibus linito ovato, calyptris ovato-circularibus, ovario aequo, dentibus denticulatis et acutissimis; corolla testudiniforme, lanceolata, villosissima, fructibus ovoidibus breviter coronatis; pyrenis in tenuis planis solis tricostatis et molliter cristulatis, rugoso-muculatis.

Hab. Tutuila and Upolu, transports to Manu Islands, Tongatapu, Friendly Islands (also Society Islands, Bidwill, and Huna Islands, if sameensis No. 250 belongs here.)
A tall shrub, glabrous throughout, with erect branches; the internodes rather long. Leaves oblong, varying occasionally toward lanceolate or oval, acute or acuminate at both ends, 3 to 5 inches long, rather chartaceous in texture, the 7 to 10 pairs of primary veins slender but rather conspicuous; petals, from half an inch to an inch and a half in length. Sepals, rather large, lanceolate, acuminate, very thin, caducous when the leaves expand. Cyme terminal, or becoming lateral by the continuation of the stem, very loose and open, generally sessile and triple or quintuple, dividing at the base into 3 or 5 slender rays (1 or 2 inches long), and these into microscopic divisions, which are commonly widely divergent, and bear from 3 to 5 flowers on slender pedicels of 2 or 3 lines in length. Limbs
of the calyx rather conspicuous, open
cup-shaped, much broader than the ovary,
at most a line and a half long, and of about its length, its mass in
truncate, and furnished with 5, either minute or more conspicuous,
subulate or acute, often unequal
teeth. Corolla funnel-form, gla-
rious outside, the tube 3 lines long,
very villous in the throat & the tubes
5, short, oblong, not ciliate, more
than oblong-linear, longer than the fila-
ment. Style glabrous; stigmas 2,
thick. Früper ovate, about 3 lines
long, crowned with the short persist-
tent limb of the calyx. Petals 2,
plano-convex, rather strongly 3-ribbed
on the back, and very uneven with
soft on all projections, which wear
away, seed flat on the inner face, 3-
ribbed on the back. Eten. [at the
base of the hand, allomen]
The foliage and fruit of P. insularum considerably resembles P. elliptica, Ker; but the stipules, the calyx, its are quite different.

Plate

\underline{Psychotria insularum.}

Fig. 26. Fruits, of the natural size. 27, Longitudinal, and 28, Transverse section of a drupe, enlarged.

\underline{Psychotria collina, Labill.}


Hab. Heejee Island; a rare imperfect growing specimen, answering to Sendar's no. 244, which he refers to P. collina, apparently with good reason. I suspect that this no. 254, in flower with larger leaves is of the same species. The fruit is globular and the corolla much shorter than in the preceding species.
Psychotria lepidovacantha, sp. nov.

P. stipulifolius caducus; foliis ovatisulis adrinque abruptis acutis petiolaribus; ramisque glabris; cyma terminata pedunculata effusa decomposita; pedicelis gracilibus floribus brevibus; calycis limbo subintegerrimo cupulato ovario lustinato breviorre; corolla in fundo bilbiliforme mit teut ros prenoso canescens.

Var. B. foliis minoribus oblongis; fructibus subglobois.

Habit. Sandalwood Bay, Narrawa, one of the Feejee Islands; in flower. Var. B. Overland. Feejee one of the smaller Feejee Islands; in young fruit.

Branches slender, perhaps serpentine, glabrous, as in the white plant, except the corolla; the inflorescence obscurely pendent, at least when young. Stipules fallen. Leaves oval and
about 3 inches long, or in the fruiting
specimens from Ovolan, barbel, 2
inches long, and oblong, abruptly acuminate at both ends,
rather chartaceous, dull green on
the outer side, the same three to five
inches long, the 7 to 9 pairs of transverse
primary veins inconspicuous; pedicels half an inch or less in length.
Corolla periclinial, often conspicuously
30°, decomposed, and disperse, the styles divergent branched, many flowers;
pedicels 1/4 to 1/3 line long, filiform,
1/4 to 1/3 line long. Calyx with a
truncate end and nearly entire car
ulate limb, with is rather shorter than
the truncate 2 celled ovary, and about
the length of the narrow elliptic disk.
Corolla 3 lines long, elevated in the bud,
woolly or finely fringed above with
a coating of minute white grains;
limb 5 cleft, the lobes oblong and plane,
throat moderately villous. Filaments short; another oblong, Ovules solitary,
and erect from the base of the cells.
Filament shorter than the style, filiform,
glabrous; entire; stigma 2, linear oblong.
divergent. Immature drupes (in var. 3.) globular, 2 lines long; the pyrene and seed apparently flat on the face, 3 - ribbed on the back.

Mr. MacBride, in the voyage of the Rattlesnake collected at Cape York, Tropical Australia, specimens which seem to belong to this species, but with a shorter and broader, less prominent corolla, and more distinctly toothed calyx.
Psy Matia repens, Linna. (Tab. 1)

Psy Matia repens, Linna. Mutt. p. 204;
Bot. 4 pt. 198.

P. scandens, Hook. & Arn. c.

P. parvula, Gray in Proecd. Amer. Acad.
4 pt. 45.

Ranunculus polycarpa, Miq. Fl. Ind. Bat. 2 pt. 255.

Hab. Ovolan and Muthuna,
Jeejee Islands.

Apparantly a low, small and
straggling or trailing shrub, with
the aspect of P. repens, glabrous;
the slender and obscurely four-sided
or tetrate branchlets very leafy. Leaves
only an inch long, of a cartilaginous
texture, dull, of the nearly the same
line both sides, obtuse, obtuse,
the base almost the same narrowed into
a petiole of about a line and a half
in length. Stipules wholly fallen,
Stigma terminal, short peduncled, small,
loosely many, flowered. Calyx only
slightly protruded beyond the glumes, lobic
late. Liny, the short limb with a very
short and acute teeth. Corolla not seen.
Lamina 2½ lines long, glume, red, very
narrow, 2½ lines wide, almost hemispherical, thin.
Crustaceous, nearly flat on the inner
face, (nearly) 3½ lines long and
very 13 ribs, separated by narrow
interval. Sides slightly concave
on the inner face, strongly 2-3 ribs
on the back.

Having at length been able to
make the requisite comparison, I can
not doubt that these Herjoei specimens
(although the corolla is unknown) are
identical with the species of the
Coast of China (described by Mr.
Mandar in his Chinese Agriculture).
The inflorescence wants
the minute glaucous pruinosity, and
the leaves are much thinner. The albumen
is notuminated.

Plate

Psychotria pyriformis, Fig.,
32. Fruit, ½s, of the natural size. 33. Transverse section of a stigma, magnified. 34.
A pyriformis, and 35, a seed, dorsal views, magnified.
Psychotria leptophylla, sp. nov.

P. glaberrima; ramis gracilissimis; stipulis quadrilateris subulatis deciduis; foliis lanceolatis membranaceis attenuatis acuminatis basi in petiolum an- gustatis; cyma parva terminali pluriflora breviter pedunculata; calycibus limbo expanso crateriformi ovario subquadrangulo s. dentato; Corolla brevi epigastrica intus glabra; fila- mentis gracilibus antherioribus longior- is.

Stab. Namau-leva, one of the Fuejoe Islands.

Apparently a shrub, very smooth and glabrous, with very slender tented branches. Stipules 4, setaceous-sub-ulate, about a line and a half long, barely united into a ring at the base,
hardly deciduous. Leaves membranaceous, and of the same hue as the stem, rather shining, in scars, yellowish-green, lanceolate with a long and gradual acumination, 2 or 3 inches long, a half or a quarter of an inch wide in the middle, tapering into a slender point of 2 or 3 lines in length; the veins transverse, very numerous, inconspicuous. Petiole terminal, half an inch or less in length, bearing a small and corymbose, rather many-flowered cyme. Pedicels short. Flowers 2 lines long. Calyx of the calyx-dilated cups-shaped, rather strongly 5-cleft, much broader and about the length of the ovary. Corolla short, free. Stigma 5-cleft, entirely glabrous inside; the lobes oblong, the apex a little thickened and incurved. Filaments slender, inserted rather low down, considerably longer than the stigma. Linear anthems. Style rather short; stigma 5, obtuse. Fruit unknown.
Psychotria calycosa, Sp. Nov.

P. ? glabra; stipulis caducis; foliis angustis oblongis seu oblongo-lanceolatis subacuminatis basi in petidiunculum brevem attenuatis; cyma terminales foliis brevioris pedunculata con flore planitiellis; floribus pedicellatis; calyces limbo amplissimis foliaceis ea basi in fun- disuliformi expanso 5-lobo; corolla tubulosa in fundisuliformi breviter 5-fido, lobis apice acca- ccalis exae pistillis in ter- teratis.

Hab. Ovolace, one of the Kejje- Island. (A single specimen also collected by Milne, in vol. 1.)

Shrubs with very lepery and rather slender branches, slender glabrous. Stipulis lanceolatae or subulate ? caduc- eras. Leaves of a rather firm texture, narrowly oblanceolate or oblanceolate, ob- tuously acuminate, 3 or 4 inches long, nar- rowed at the base into petidi of only 3 or 4 lines in length, dull, of the same hue.
both sides, the veins not prominent. Peduncle terminal, an inch or less
in length, slender, bearing a small
cyme of about 3 primary branches, each
fascicled, slightly hairy-flowered. Pedicles
2 or 3 inches long, calyptrate, naked.
Calyx with a turbinate adnate tube of
scarcely a line in length, continued into
a dilated infundibuliform and explanate,
filiform, and somewhat recurved. Corolla
limb of about 2 lines in length; the
lips ovate, more or less unequal.
Corolla tubular, funneliform, 5 times
lines long, glabrous except at the sum-
mit; the 5 petals, long lobes, calyces
in activation, conspicuously faceted,
hooded at the tip, minutely and
minute pubescent outside, minutely
densely bearded inside for the
whole length, the throat densely
hairy, staminodia inserted in the
throat of the corolla; anthers long, lin-
ear, longer than the filaments. Style
filiform; stigma 2, short and thick.
Ovary 2-celled, with a solitary ovule
erect from the base of each cell. Fruit
not seen. P. Villarigo, Sim., Cat. in Florida, 1831, p. 276,
Psychotria calycantha, sp. nov.

P. glaberrima, ramis gracilibus foliis sissimis; stipulis ovatis macronatis caducis; folis lanceolatis seu oblongo-lanceolatis large acuminatis chartaceis basi in Petiolum alternate; pedunculis terminalibus filiformibus 1-3 floribus pedicellisque filiformibus; calyceis limbo tuteloso angusto breviter 5 dentato persistenti dominanti fruza ovoidea sub-aequilatera; pyrenis compressis inbas planis dorso uni- vel subtriarumatis.

Tab. Sandalwood Bay, Vanuatu, one of the Kejoeq Islands. Also Tonga-tabua.

Shrub with slender and very leafy branches, glabrous. Stipules small,
Calyx, ovate, mucronate, puberulent externally, caduceous. Leaves rather charadrius in texture, lanceolate, or sometimes oblong-lanceolate, usually very gradually acuminate, and also tapering at the base into a short petiole, of the same hue both sides, inconspicuously veiny, 2½ to 4 inches long, half or three-fourths of an inch wide. Peduncles from one to 3 from the summit of the branches, filiform, an inch or an inch and a half in length, bearing a solitary flower, or commonly from 3 to 5 flowers, at the summit; the lateral ones in filiform 4 or 5 lines in length. The young flower, but exhibited a clavate ovary; surmounted by a free prolongation of the calyx, into a free tube, of double the length of the ovary, of a lacereous texture, and (often more nearly) 5 toothed at the summit. The only one...
(still undeveloped and
amined) was not much shorter than
the calyx, glabrous, except the tips which
were succate or produced as in P. calycesa,
but less conspicuously, slightly bearded
inside. Style 2-clift at the apex.

The specimens are mainly in fruit.
Drupes ovoid, 4 lines long, crowned with
the tubular or somewhat campanulate-
lobe of the calyx, which is often 2 or
3 lines in length, frequently split down
on one side. Pyrene 2. Island convex,
oval or oblong, cartilaginous, strongly
carinata, with a patent
dorsal rib, and sometime with two
smaller ribs. Seed conformed to the
cell, strongly one-nerved on the back,
flat on the inner face, in four
small in hard albumen.

Plate Psychotria macrocalyx, Fig.
29. A branchlet in fruit, of the natural size.
30. Longitudinal, and 31. Transverse section
of a drupe, magnified.
Psychotria filipes, sp. nov.

P. glabra; stipulis caducis; foliis lanceolatis, seu obovato-oblongis acuminatis, basi paullo angustata sepulis subcordatis, longe petiolatis; pedunculis terminatis 2-5 filiformibus; folia subequaretibus cymman effusam plurifloram gentilibus, radicibus 3-4 pedicellisque gracilibus; calycibus limbo crateriformi 4 dentato ovario brevior, corolla brevi 4-fida lancea fere muda; fructu immaturo ovato.

Ital., Leejee Islands.

A glabrous shrub, with rather slender branches, the leaves crowded at the summit of the flowering ones. Stipules apparently ovate, lanceolate, acuminated, very caducous. Leaves men...
nearly 4 in. and nearly of the same height. Bracteoles of 3 or 4 inches long, one to nearly 2 inches wide near the middle, rather strongly acuminate, gradually narrowed towards the base, which is generally although slightly cordate, but sometimes only retuse; the primary veins 9 or 10 pairs, not inconspicuous. Pedicels slender, from these fourths of an inch to an inch and a half long. Peduncle very long and slender, naked, from 2 to 5 in. In fascicles at the summit of the branches, about 2 inches long, to their division into 3 or 4 radii, filiform radii about half an inch long, which are umbellately or symmetrical; pedicels 1 to 3 inches long. Flowers very small, a line and a half long. Ovary turbinate or at length urceolate, with a single ovule erect from the base of each cell, crowned with the conspicuous, but not very large, ovary cup-shaped, thin and rather papery, 4-toothed limb of the calyx. Corolla short, 4-cleft; the lobes oblong, large, flat, glabrous except a slight villosity at the insertion of the filaments. These are inserted partly
low down, and are slender, and twice the length of the anthers. Immature fruit ovate, small. Seeds 85, not seen.

No. 25-3 of Semmanni's Freejoe collection closely resembles our specimen, except that the limb of the calyx is truncate and entire. Its fruit is nearly that of P. platycepa. It is probably a new species, nearly related to P. filipes.
Psychotria apodantha, sp. nov.

P. stipulus longe setaceo-acuminatis caducis; foliis lanceolatis sensim acuminatis basi acutis vel obtusis membranaceis glabris, petiolo primo ferrugineo-puberulo; fructibus (1-3) Terminalibus subsemilibros ovalibus Calycis limbo capsuliformi leviter 5 dentato coronato, pyrenis seminibusque intrus planis dorsi 1-3-attinctis costatis.

Tab. Samoan or Navigators' Islands.

There is only a fruiting specimen of this apparently very distinct species. It is apparently a shrub, glabrescent or nearly so, except a slight ferruginous pubescence on the petiolar and middle when young. The stipules seem to be
P. glabra; stipulis bipdis caducis; folis obvato-oblungis ped. oblongo, lanceolatis, acuminatis basi in peduncum brunn attenuatis chartaceis, supra vividibus subius argenteo-platidiis; pedunculis 1-3 terminatisibus apice 3-5 floribus; floribus brevissime pedicellatis; calycibus limbo parvo et datato; corolla in fundiluiformi breviter simpida instus glabra; filamentis brevissimis; fructibus globoideis (in specie acuto costatis) apice calvis; pyrenesis cartilagineis tenuesibus vinctae planis leviter obtusas coronatis margine acutissimis doto medio 1-3-cristato-alatis; semina triptera.

Loca. Orolave, one of the Sceice Islands.

Of this there are one or two specimens with flower-buds and rather small leaves (the habitat not recorded), and another (from Orolave).
with large leaves and mature fruit. The leaves, somewhat similar to those of the leafy fleshy, are thin as a leaf and look much like

The plant is a true, white, globular, robust, 2-infracalix, short, wide of cilia, much ciliated, very caducea, leaves short,

leaves close to the base, varying from the base, being to clean, lanceolate, more a semi-circular acuminate, 2 to 6 in length, gaping at the base into a pair, 3 to 4 lines in length, primary veins 9 to 12 pairs, clearly, but manifestly, the upper surface bright green; the lower surface dull green, the leaves

shortly ciliate, the frondlets

short, thick, ciliate, appearing 3-angled, and with dorsal walls, a sharp ridge. With leafy ciliate, a three-angled, ventral face flat, nearly 3 lines in length, and broad, somewhat

barbellate, notched.) At the

summit, the leafy ciliate, broad

edges very narrow and acute; the frondale face slightly

ciliate, and in the centre bearing either a narrow and simple

vein, veins, a line in breadth, or else it is thicker and surrounded by 2 or even 3 narrower

veins or thin crests. And

correspond to the cell, thin and

flat, with a salient strong ridge or

rib, at the back.

Hypogynce, Fig.

Note. *Psychotria polyandra*

1. 1 Stalk in fruit, and 2. Manchola with

flower buds, of the mature 5, 2. floral

section, of a flower-bud, 4. transverse

section, of a flower. 5. transverse section of a pair

of flower, 6. flower, and 7. Natural view of a flower. The details magnified.
Psychotria (Piptileuma) cordata, Sp. Inv. (Tab.)

P. glabra; stipulis ovatis, caducis; foliis oblongis, petiolatis, capitulum scape sessili plurifloro, bracteis squamaceis obtusis rotundis circiter 6 caducis involutis, calyceis limbo brevi truncato; corolla labiata, favea cum filo petalis brevissimis, villosa, bracteis fere libris elongatis, pyramidalibus; pyriformibus dorsi, ala oblonga, crista marginibus infra medium angulato-productis.

Not. Mountains of Marthuata, one of the Zeejce Islands, at an elevation of 2000 feet.

Shrub 10 feet high, glabrous, stipules fallen, but probably like the bracts. Leaves membranaceous, 2 to 3½
inches long, 9 1/8 times broad, oblanceolate or obovate, lanceolate with a long acumination and a cuneate base, the veins with conspicuous beneath; pedicel up to an inch or more, or sometimes less, in length, the upper side with a narrow and more or less bearded channel. Flowers rather numerous in a sessile terminal head, in the bud enveloped in about 3 pairs of large bracts, ovate, concave, scarious and chestnut-colored, stipular bracts, making a globose cinnamon-flavored, deciduous as the flowers expand. These are sessile, and apparently not bracteolate, glabrous. Calyx with a truncate almost entire limb much shorter than the tubuliferous ovary. Corolla white, tubular, funnel-shaped, 4 or 5 lines long, with 5 short lobes, calyx in dehiscence. The materials for the investigation of the blossoms are very imperfect. Upon one specimen, there are one or two expanded flower corollas having 5 or 7 lobes, and bearing as many almost sessile linear
long-linear or another in the throat, with a villous ring, the extremely short filaments not being also bearded. Both flowers from another specimen have the throat and the more manifest filaments glabrous. There is probably a dioecy dimorphism in this as in many other genera of Rutaceae. Stipe filiform, cleft at the summit into 2, or sometimes 3, slender lobes or stigmas. Ovary with a solitary ovule erect from the base of each cell. Immature stipe 4 times long, narrowly pyramidal in the dried state, tipped with a protuberant epigynous disk surrounded by obsolete teeth of the calyx. Ovulate 2 ovulate lanceolate in outline. Thin, of a cartilaginous texture, flattened on the inner face and with the margins abruptly angularly dilated below the middle, the back bearing a conspicuous median wing or string and sharp crest which
Vanishes towards the summit, fed flat
on the inner face, strongly hooked on
the back. - Entero, small, in the
lower part of the head albumen.

The present and the two following spe-
cies, and probably *Munnis Cephalis
stipulacea*, compose a group which
might technically be referred to as
*Cephalis*; but as the involucrate
bracts are caducous, no bractlets ap-
ppear among the flowers, and the fruit
is like that of some other Ceanide.

*Psyndria*, I think they should be
regarded as a section of the latter
genus, ranking between Reinwardt's
section *Notopleura* and *Cephalis*, it
self hardly to be genetically distinguished
from *Psyndria*. The name of
The group (from narrow to tall off, and dividua, involucrum), attudes to the decisions involucrum.

Plate A. Psychotria cordata; in flower and fruit. Fig. 1. A flower. 2. Corolla laid open. 3, 4. Stamens. 5. Pistil. 6. Vertical section of the ovary. 7. Vertical section of a drupe. 8. Transverse section of a drupe. The details all magnified.

O. glabra; stipulis caducis; foliis oblongo-lanceolatis; pedunculo posturo oblongo promissor acuminatis, basi angustata subacutis obtusis; capitulo arere sessili plurifloro, bracteis squamaceis caducis involucratos; calyces lirate longissimo truncato; corolla tubulosa 4-6-munera; frutibus oblongis, pyramidalibus obtusis basi quadrangulis, pyrenis 4-8-80 et margine crista et margine crista.

Tab. Ovolan. and Sandalwood Bay, Vanuaco, New Hebrides.

A glabrum shrub, with slender spreading branches. Stipules fallen. Leaves membranaceous, broadly lanceolate or the wider ones obtuse-oblong, 2 to 4½ inches long, 9 to 15 lines wide; tapering upward.
into a conspicuous acumination, and
below into a rather acute or hardly
other base; veins evident; pedicel slender
3 to 6 lines long. Flowers several,
separate in a closely sessile terminal
cluster or capitulem, which in the
bud is involucrate with one or more
pairs of verticillar and concave, mucronate,
scaly, stellate bracts. Linch of
the calyx very short, truncate, entire.
Corolla tubular, nearly half an inch
long, 4-lobed; the lobes short, ovate,
valvate in o serration; the throat, as gla-
borous. Filaments in the flower terminal
inserted below the throat; filiform,
glabrous; twice the length of the linear
along another. Style filiform, 2-locite
at the summit. Drupes 3 to 4 to 5
lines long, oblong-ovate or oblong,
obtuse, the lobes part quadrangular or
obpyramidal even when split. Pyrene
2, oval or round-ovate or circumscip-
tum, flat on the inner face and nearly
so on the back, the middle of which bears a strong, salient, obtuse, or sharp, crest or wing, while the margins are wing-like, sometimes for nearly the whole length, but usually only below the middle, the upper part abruptly contracted. Seed conforming to the cell, being appearing as if 3-winged, at least below. Embryo scarcely half the length of the hard albumen.


- Foliage and fruit, natural size. 10, Transverse section of a drupe. 11, Longitudinal section of a drupe. 12, Ventral, and 13, Dorsal view of a pyrene. 14, Ventral, and 15, Dorsal view of a seed. 16, Embryos. The details variously magnified.
Pyrostria (Piptilema) platycocca, L.Mo.

P. glaberrima; stipulis caducis; foliis oblongis utrinque acute; pedunculis terminatis demumque lateralisbus petiolum ade quantitatis glomerulos 1-3 paniculosis trabsibus caducis primum involucralibus germinibus; fructibus ovatis ellipsoideis, pyrenis doso et marginebus praestantis in ferme acute cristatis.

Tab. Orolae, one of the Beejee Islands.

This differs from the foregoing species in the broader and slightly if at all acuminate leaves (of a firmer texture and with more conspicuous veins, 3 or 4 inches long and an inch or an inch and a half wide, tapering at the base into the petiole), and by the pedunculate
influenzence. The peduncles are half an inch long, solitary or 2 or 3 together, terminal or becoming lateral, compressed, divided at the summit into 3 partial peduncles of about 1 line in length, bearing a few flowers with side flowers, the clusters in whole influenzence and the three small sepals of the disc enclosed in the bed by thin a few thin and scarious bracts; these are only 2 or 3 lines long and are early caducous. Linen of the calyx cupulate, as long as the prominent gl pyramid dish, truncate and entire, fully half the length of the turbinated ovary, the developed calyx not seen. Ovary 2 celled, with a single ovule erect from the base of each cell. Style ovate and somewhat compressed, with 4 minute angles in the dried state. Sepalae 3 lines long and of nearly the same width at the base, somewhat deltoid, ovate in circumference, very flat, the margins gradually dilated or wing-
like downward, the back bearing a thin and sharp wing or crest about a line in depth.

Plate C. Psychotria
platycocca. Fig. 17. Foliage and fruit, natural size. 18. Longitudinal, and 19. Transverse section of a drupe. 20. Dorsal view of a pyramidal anther, magnified.

These are fragments of three or four more, apparently undescribed species of Psychotria in the collection from the Fijian and Samoan Islands; but they are too imperfect to be safely characterized. In King's collection from Ceylon is one undescribed species, probably of Psychotria, but the materials are incomplete.
* * * Philippenses et Australica.

Psychotria elliptica. Ker.


P. Reevei, Wall. Cat. in Nov. Fl. Ind. 2, p. 104; DC. l. c. p. 519.

P. Manillensis, Bentth. in DC. l. c. p. 522, ex char.


Stab. Luzon; in the mountains near Batió, not far from Manilla.

Clearly the same as the Plant of Hong Kong, Lou Choo, and Malayan species. The specimen is in fruit. When the albumen is strongly grooved between the ridges as in the present specimen, the minima is more obscure. It varies so much in this species as to lose all value as a generic mark.

Psychotria longiervicoides, Sieb.

Stab. New South Wales.
Brasilienses.

Ps. Austina alba, Ruiz & Pav.


Tab. Brazil, near Rio Janeiro; the var. tosca. There is Zeaxee Islands.

There is in the herbarium of the American Philosophical Society a small specimen, with mostly unexpanded flowers buds, recorded as from Nanakalea, one of the Aieaee Islands, which in all respects accords with the P. alba from Brazil. It equally has slender filaments longer than the anthers and the style is twice as long as the anthers, more than is usual. It appears probable that this specimen may have been transposed with that from a distant group of South Sea Islands.

2. Psychotria leiocarpa, Cham. Schlcht.

Psychotria leiocarpa, Cham. Schlcht. in Linnaea, 4. p. 22; Fl. Brasil. l. c. 3. Schlcht.

Tab. Brazil, in the Organ Mountains.
3. *Psychotria apregnifolia* sp. nov.

P. glaberrima: foliis oblongis seu lanceolato-oblongis utrinque acuti vel acuminate breviter pedicellatis membranaceis concisis, unis primaris tenuibus angulo fere recto patentibus prominentibus; stipulis brevissimis triangulatis, summis integris, ceteris bipartitis; cymae termini pedunculata laxiflora, foliis brevioribus; bracteis minus minus subtubatis; calyci de- tuse quinque dentato; corolla in fundo biliforme extus scabriuscula intus faveolatum pilosus; stylo hirtello.

*Hab.* Brazil, near Rio Janeiro.

Very smooth and glabrous throughout. Branchlets nearly entire. Leaves in shape and appearance not unlike those of some forms of *Apogynum cannabium*, but of nearly the same
membranaceae.)

Bright green color both sides, (2½ to 3½ inches long, an inch or rather more in width, narrowly oblong or lance-oblung, acuminate, acute at the base, on a petiole of one or two lines in length; the primary veins 10 or 12 pairs, slender but rather conspicuous, transverse, and slightly curved upwards; the reticulated veins is inconspicuous. Stipules shorter than the petioles; the uppermost triangular and entire between the petioles, the lower orbulate-triangular and two on each side, deciduous. Byme ter-

Terminal, many flowers, shorter than the uppermost leaves; the peduncle (half an inch long), and the trichotomous or verticillate branches slender, slightly compressed, the alar flowers sessile, the lateral pedicelled. Flowers about 3 lines long. Calyx short; the cypselate limit obtusely 5-toothed. Corolla a funnel-form, a little inquisitive outside; the oblong lobes more than half
the length of the tube, inappreciably, the throat villous at the insertion of the stamens but not elsewhere. Stamina shorter than the orange-linear anthers. Style bent for nearly its whole length with very short hairs; two-crest at the apex; the stigmas dilated, discs thickish, roundish, and somewhat 3-lobed. Ovary 2-celled, with a solitary ovule erect from the base of each cell. Fruit unknown.

If I mistake not, this is the same as Gardn. no. 5492 of Gardn. Brazil collection, which, however, I do not possess for present comparison. It resembles, but is not identical with a specimen of Gardn. from the Apache Mountains, communicated by the late Mr. Fielding, without a number, and which has rather passive, an almost entire calyx, a rather narrower corolla, the lobes of which are appended on
succent for the track just below the apex, and the style is glabrous, the stigmas slender. Neither of these can well be the P. mitidula of Chamisso and Schlechtendal, although evidently allied related to it.


*Loca*: Brazil, in the Organ Mountains.


*Loca*: Brazil, in the Organ Mountains.

*Hab.* Brazil, in the Organ Mountains, and near Rio Janeiro.

These remain three or four specimens of different apparently of as many species of *Psychotria*, which are probably undescribed or unpublished if they really belong to this genus, but the fruit of all of them is unknown, and the materials are too imperfect for safe and useful description.
Palicourea, Aubl.

1. Palicourea Marcgravii, H. St. Hil.


Habit: Organ Mountains, Brazil, near Rio Janeiro. (Stipules quadrifid.)

Faramca, H. Reich.

1. Faramca Stipulacea, H. C.

Faramca Stipulacea, H. Prodr. 4, p. 447.

Tetracerium Stipulaceum, Cham. & Schlcht. in Linnea, 4, p. 31.

Habit: Brazil, in the Organ Mountains, near Rio Janeiro.


*Hab.* *Brazil*, *in the Organ Mountains.*


*Hab.* *Brazil*, *in the vicinity of Rio Janeiro.*


*Hab.* *Organ Mountains*, *Brazil.*


*Ital.* Organ Mountains, Brazil.

There are fragments of another *Faramnea* from the Organ Mountains, with small sessile leaves, and long-ovate stipules, and small calyx teeth, but the materials are too incomplete for descriptive determination or description.


*Ital.* Vicinity of Rio Janeiro, Brazil.
1. Kudzea lanceolata, Benth.

Kudzea lanceolata, Benth. in Linnae. 23, p. 455.
Coffea lanceolata, Cham. & Schlecht.
in Linnae. 9, p. 232.


Stab. Brazil, in the Oryan Mountains, near Rio Janeiro.

2. Kudzea modosa, Benth.

Kudzea modosa, Benth. in Linnae. 23, p. 457.
Coffea modosa, Cham. & Schlecht. in Linnae. 9, p. 233.

Stab. Brazil, in the vicinity of Rio Janeiro.
(A fragment, with young fruit.)

3. Rudbeckia macrophylla, Bentham.

[Supporting text: Brazil, in the Organ Mountains, near Rio Janeiro. (Flowers fallen, Leaves a foot and a half long.)

A fragment of another species occurs in the collection, possibly a form of R. reticulata, Bentham, but insufficient for determination.]
Uncaria, Schreb.

1. Uncaria Gambir, Koch.

Stab. Singapore. (Furnishes one of the sorts of Catechu in commerce.)

Nankea, Linn.

1. Nankea Calycina, Bartl. in Bl.


non Linn.

N. rotundifolia, Guill. Dephr.

Taut. p. 507. vix Bartl.

Stab. Tahiti, Society Islands.

Savai and Manaia, Samoan Islands.

The specimens are much too imperfect for proper determination, and also variable in the shape of the leaves; but they can hardly belong to N. rotundifolia, Bartl. I to which
Guillenia referred doubtfully to genus (Teer's plant). At least the young flowers of a specimen collected by Moorehead have the slender, clavate calyx lobes of de Candolle's section Pentacorpus.

**Manettia, Mutis.**


Ital. Near Rio Janeiro, a single specimen of each of these species was collected.
Alseis, Schott.

1. Alseis Miersii, Bench. ined.

Hab. Organ Mountains, near Rio Janeiro, Brazil.

A solitary specimen in fruit. Compared with Euphrischea Figez's figure of the original species, it appears to differ only in the conspicuous soft pubescence.

Noigilia, Klotsch.

1. Noigilia australis, Klotsch.

Noigilia australis, Klotsch in Hagen, Anzeig. 14, t. 15, adn.; Walp., Repert. 6, p. 68.

Exostenus australis, St. Hil. Fl. Ms., Mus. 1, t. 3; L. Bl. Prod. 4, p. 361.

Hab. Brazil, near Rio Janeiro; also foliage, apparently of the same but glabrous and shining, above, from the Organ Mountains.
Contareia, Aubl.

1. Contareia speciosa, Aubl.

Hyb, Rio Janeiro, Brazil.

De Candolle and Endlicher omit to state (as Aublet and other early authors do) that the corolla is cleft or unequally ventricose in the bud. Endlicher, so far as I know, is the first to mention the estivation of the corolla, and he gives it incorrectly, viz. as in duplicate; hence Nessel want to the genus among those with valvate or modified valvate estivation, whereas the estivation of it is truly imbricate, although the tube is somewhat frilled. Moreover, in C. Mexicana, R. C. (to this belongs Contheis no. 225 from Limaspan), the flowers are (at least sometimes) pentamerosus.
*Bikkia grandiflora, Reinw., or
No. australis, L., or more properly,
No. tetrandra (Portlandia tetrandra,
Host.) appears not to have been col-
lected in the Expedition. Prof. P. D.
Harvey obtained fine specimens of
this island's plant at the Friendly
Islands. As the description of the cor-
olla has not been recorded, I may
state that it is valvular, as in
Portlandia, but strongly recurvi-
cate, so that the short limb of the
corolla in the bud is strongly cruci-
ately four-winged. The stigma is
bilamellar, the lobes short, oblong,
and thickish. Ovules oblong, hori-
zontal. Immature seeds with the
testa conform to the nucleus.

Balgy tubo clavato; limbo brevi
cupulato s-dentato persistente.
Corolla hypocrateriformis, stabida,
limbo tubum adaequante, lobis
lineari-oblungis ostivatione con-
to-imbricatis (una exteriore), explica-
tis, patenti-recurvis. Stamina 5;
exserta; filamenta filiformia,
ina basi corolla inserta, inferne
villosa; antthera lineares, disco
panillo supra basin affixe.
Stylus filiformis longitundine sta-
минима, ramis brevibus cura
stigmatibus subcapitatis in tres
planis in clavelam congesti-
natis. Ovarium bilocularae.
Ovula in placentis lineari-oblun-
gis crassis, dispositione utrique
insertis. Plurima, anatropa, im-
bricantia, superiora ascendentia.
inferiora Pendula. Capsula clavata, clavata, bicoculata, polyperma, at apice ad basin septipeda, demina ovata, movice alata. Embryo rident alterum carmum, Paulo brevis; radicula flosci cotyle bracteis ovatis longiorae.

Familiae superiores? Fabri, Oceanici; stipulis bracteis vagis nates; pedunculis axillaribus apice foliatis cynosorus plurifloris; floribus albis.

This genus is founded upon the Ophiocorys corinthina of Hassel, & Philippine of Basilius, and specimens gathered at the Hucu Islands in this expedition, as also at the Friendly Islands by Professor Harvey, all probably belonging to one species, from Kava, to which Kauai and Schultes and afterwards the Cono- dalle referred them. They are distin...
guished by the Conspicuo in brie-
fer descriptions. The application of the
s disconnecting the influence
and that. In Widdell's artificial
analysis this genus would stand next
to Cossinia. 
* If a plant of
which the genus is named in
memory of Sebastian Badus, a
Genoese physician, who, in a work
published in 1663, first wrote about
was the first to write upon the
botanical history of Peruvian Bark.

1. Badusa coromforra.

B. foliis oblongis lanceolatis ser.
frutos oblongis utrinque acutis
petiolaribus. supra lucides, pedicel
etis multiformis filio paulli
devincibus.

Var. a. pedicellis nitidioribus;

* For the system of 6, according to Thunberg, &c,
a
only among the plane of this paper,

Pura Pesteras. The characters
of Badusa having been published
in the Proceedings of the American Academy
of Arts and Sciences, 4, p. 308, I am unwilling
to cancel the genus. But it must be
remarked, that, from the very
limiting of examining the flowers of two
species of Cossinia, C. benol, longiflora,
and a Mexican species, closely
related to E. cernuumum, I find that
their costil is not suitable in distinguishing
member of the Valvaria type, as Widdell
(probably following Klein) supposed.
The distinction is decidedly geometrically
instructive. Therefore it may be doubted
whether the species, and more or less
valuable (except in the strictly bifurcate
or inanimate) methods will direct to separate
Badusa from Excorum as anything more than a section. (Jan. 1856)
calycis limato 5a pedo.


Lin. f. 29, f. 5.

Exostemma exotica, Bl., Synt., 1, p. 196.

Exostemma exotica, Norn., Schult., Synt., 5, p. 201; H. Nov. 4, p. 300.

Exostemma Philippica, Cav. 22, 4, f. 329.

Exostemma Philippica, Norn. & Schult. l.c.?

Nervo, Nitiensis: pedicellis, sicrimum, pubes, florebus minoribus (semipetaleis);

calycis limato 5a pedo cupula leviter 5a dentata.

Hal, Mathurata (and Ovolar),

Fiejee Islands.

(These specimens are said to belong to the latter said to be a handsome)
white-flowered shrub, 10 or 20 feet high. The leaves vary from 3 to 5 or 6 inches long, and from one to two inches in width; they are subcordate, smooth, and apparently bright green both sides. Petioles 3 to 9 lines long, Stipules short, combined into a truncate and bidenticate sheath; those of the upper pair most leaves small, nearly distinct, and deciduous. Peduncles axillary, slender, compressed, usually more than half the length of the leaves, rarely almost equalling them, bearing a small cyme of numerous crowded flowers, subtended by a pair of small leaves, the bracts at the secondary divisions also commonly foliaceous. Pedicels crowded, 2 or 3 lines long, in the present plant mostly minutely pubescent, at least when young, as also is the calyx tube and tube
corda, villous - pubescent below the middle. Anthers linear, about 3 lines long, attached a little above the more or less bifid base, at length becoming transverse or versatile, glabrous, the cells closely parallel and acute at the base. Style as long as the stamens. Very slender, clavellate, thickened and 4-6-angled at the summit, but a groove indicating that it is here composed of two branches which are closely soldered together. After maceration they may generally be separated, not without some force! the stigma capitate, stigmatic also coherent. Ovary 4-5, as in the allied plants, the placenta tapering to as long as the cell, tapering to each end. Ovules more or less imbricated, fixed by one end, the upper ones ascending the lower pendulous. Capsule 4 or 5 lines long, smooth and even, 4a
from a cartilaginous texture, pedestral from the apex, deciduous or oblong, a line and a half in length, compressed parallel to the placenta, with a rugoso-contraculated testa, and surrounded by a wing, which is narrow on the sides but extended to the length of the placenta at one or both ends. Embryo slender, but nearly the length of the soft, fleshly albumen.

The specimens which Profess Newen gathered at Nagawa I take to be Horstii, the same as Horstii (our var. a.), and it also accords well with the figure of Bucchara Philippi (13) var. (except that the capsule is not quadangular as that of the latter is represented, perhaps erroneously, as it is not so described in the Lettisseur). The flowers are nearly one third longer, and
the inside of the calyx is more conspicuous and more strongly toothed or cleft. Still I cannot regard the Sujeo Plant as specifically distinct.

I have a specimen, in flower only, of a plant ticketed "Lin- *
china contorta, Hook. "Prince of Wales Island." (which island?) which, if the fruit and said agree, would be referred to the present genus. The corolla is completely contorted in estivation, and the anthers are sparsely nissante.

Calyx tubo cylindrico elongato; limbo amplo cyathiformi seu crateriformi truncato integerrimo variasque sublobato persistente. Corolla hypercraterimopsha; limbo partito, lis oblongis obtusis simis plurinerviis ostivatione contortis. Stamina 4-5, tubo implexa; infra falcem inserta, glabra, A filamenta invissima; antherae lineares, basifixae, adae quae adnata. Stylus bifidus, ramis subspathulatis prosum petaloides dilatatis intus secus costam stigmatos.

Ovarium bilocularum, ovula in placentis elongatis crassis numerosissima, minuta, imbricata.
spermum imbricata, acicularia.
Capsula silicea, formis, fonte, 
longissima, calycis limbo ora
trinominali (trinomini mutatis lati
plenique coronata, demum 
septici da? Semin, ova,
dissimae, dissimae, olerima, 
spermum imbricata, nucleo ovali, 
a, in species utrique in carum 
simplicem longissimam aulna 
putata. Embryo in albumine 
parte carnoso rectus, cotyledonibus ova
ris radicula infera, 
florum brevioribus.
Filiis subulatis, Antiochus 
Nicaesus; 
foliis membranaceis, Agnone recta
peninsularis, umbilis pulchra
reticulatis; stipulis inter se 
membranae foliaceae distincti
obtusis planis plenique ca
ducis; pedunculis brevibus ex
axillis superius, tri-pedicel
flos; calycis tubo corolla flo"
calyx is corolla (albae?) extrus . Apothe.

This genus will rank next to 
Bosmania, especially if that is
to include Bentham's Buena 
macrocarpa*: but the ampleate, 
crateriform, and truncate limbs of the 
calyx, the dilated and branches of the 
estyle, and the very long capsules 
are peculiar. The latter character 
suggests the name, which is composed 
of ὅπης, long, and ἱκός, diminutive 
of ὅπης, a pod.

* In Botany of the Labrador 
Sulphur, p. 104, t. 38. The latter 
[[text not clear]] the activation of the corolla is said 
to be imbricate; in the plate it is 
represented as convolute. The seeds 
in a specimen from Tenders's Clapham 
collection have more or less lacerate 
(ri, articulat), but not two-pointed, wing.
I. *Boli mototium longifolium* (Jaf.)

*Foliis oblongis seu elongato-oblongis utrinque acutiusculatis (2½-5 poll. longis); flore paniculato.*

*Hab.* [Sandal wood Bay, Nama-lova, Taiee Islands; where it was collected by Mr. Milne, in the same, as also at Viti-lova, in 1858.]

The Naturalists of our Expedition gathered fruiting specimens of this shrub, with scarcely the remains of a flower or two. Flowering specimens were recently gathered by Mr. Milne, in the voyage of the British surveying ship *Herald*. These have been kindly entrusted to me by Sir Wm. Hobker, and have enabled me to complete the characters of an interesting *Bor"omaceae* genus. The leaves
vary from 2½ to 5 inches in length, and from broadly to narrowly oblong, they are membranaceous, more or less acute at the base and mostly rather acuminate at the apex, glabrous above, and also beneath in Milne’s specimens, but in ours the midrib and veins sparingly, the veins of the lower surface retain more or less of the appressed minute pubescence which occurs on the mastic foliage and the shoots. Primary veins straight and rather conspicuous, simple; the veinlets all minute, and of uniform size, forming fine, transverse areoles. Petioles 6 to 9 lines long. Stipules mostly deciduous from our specimens, but remaining on some of Milne’s where they are an inch or even an inch and a half in length, membranaceous, oblong, entire, distinct, at first silvery–pubescent,
at length glabrous, somewhat striate-nerved. Peduncles short, axillary or terminal, commonly not longer than the pedicles, 3-5-flowered; bracts pedunculiform. Pedicels short. Calyx-tube and corolla 8 or 9 lines long, slender, thinnest-canescent, constricted with an expanded, ovate-lanceolate, greenish, membranaceous limb, 2 or 3 lines in length, which is truncate and entire, or sometimes irregularly or obscurely repand-tuberculate or lobed, ciliate, thinnest-ciliate. Bracteole apparently white, glandular externally, especially the tube, which is cylindrical, slender, much narrower than the limb of the calyx, glabrous within; the limb 5-parted, not at all spreading, lobes narrowly obovate, obtuse, marked with several delicate parallel veins, contracted at insertion, when expanded.
about as long as the tube.

Hamulus 5, inserted towards the summit of the tube, glabrous; filaments very short; anther linear, obtuse at both ends, the narrows cells opposite and parallel adnate to a narrow connective, intorse. Style shorter than the stamens, 2, erect almost to the middle; the divisions flat with a thickened axis or midrib, thicker centre, petals dilated or alate. Stigmatic from near the apex downward on the middle of the inner face. Ovary 2-celled, ovules innumerable, upwardly imbricated on the long and thickish placenta, subcircular. Capsule 4 or 5 inches long, hardly above 2 lines in diameter, cylindrical, minutely pubescent or sometimes glabrate, crowned with the large limb of the
calyx, which however in some cases falls away before maturity; the epicalyx somewhat flattened; the endercalyx cartilaginous, but thin. Seeds closely packed for the whole length of the cells on the placenta.

Half a line long, with a thin, sutured, reticulated testa, rarely surrounded by a peculiar wing, which tapers nearly equally at both ends into a tubulate appendage, the whole about 2 or 3 or 4 lines in length. Embryo nearly the length of the beady and soft-shelled albumen, minute inferior, about the length of the ovate style.

Plate 1. No. 1. Astilbe elatior, a fruiting branch. Also, Fig. 1, a flowering branch, with the stipules; Fig. 2, two flowers, collected in the course of the field. 2. Astilbe, True open, and an imperfect style; the flower probably stamine. 3. Astilbe, and 4. Ventral, view of a stamen. 5. Astilbe, laid open, and style of a fertile flower, the anthers reduced in size. 6. Are of these authors detached. 7. Summit of the bilamellar style of Fig. 5, more magnified. 8. The whole style, with the epicalyx disk. 9. Portion of a capsule, with a transverse section. 10. Longitudinal section of the summit of an endercalyx. 11. A capsule. 12. Transverse section of a capsule. 13. Longitudinal section of the summit of a capsule. 14. A. 15. The same more magnified, with the anthers divided to show the axis.
2. *Polichnodium latifolium*, sp. nov. (Val.)

*P. foliis latissime obovatis basi rotundatis vel obtusissimis (5-7 poll. longis); flore tetramero.*

*Val.* Ovénau, Kejia Islands.

A single specimen exists in the collection, with full grown fruit and a loose tetrameros flowers, which probably belongs to the species. The leaves are much larger than in the preceding species, as well as of a different shape, and the petiole, midrib, and veins more silky-hirsute; the venation similar. Capsule similar, but more hirsute, 5 or 6 incises long, crowned with a crateriform limb of the calyx which is half an inch in diameter. Seeds, as in the preceding species, the
detached corolla (of which sketches had been made by Mr. Rich) is evidently of this genus. At least, it differs from that of D. blumei, specially in its larger size (the tube fully one inch in length), and in having only four, proportionally, rather narrower segments; the anthers also a little larger. Dr. Pickering refers to the plant in his note, as a new, to put high, with a quadrified corolla. 

Plate 9. Dichotodium latifolium; in fruit. Fig. 1. Section of a part of the capsule. 2. A seed. 3. The same with the nucleus divided, showing the embryo. 4. The embryo detached. 5. A detached corolla, seen, as stated above, p. 7. 8. Anther. The detail.

* Dichotodium longissimum of Dr. Seemann (in the list of his Japanese collection, is probably a good species, but that of Mr. Max Eames's specimen from D. latifolium, and present beneath, the better specimen of both are needed to settle the point.)
Gardenia, Ellis.

1. Gardenia Taitensis, Lc.


Hab. Tahiti, Tongatua, Tafaiva.
Disappointment Island; in blossom.
Nanau-leve, Disappointment Tefoci.
Islands: a small-leaved form; with mature fruit.

The vertical, foliaceous calyx-
lobes, only 3 or 4 in number (or when
five, two of them abbreviated), and
much shorter than the tube of the
Corolla, distinguish this species.

1. If the Titectian specimens also belong
to it, as if mentioned, the mature
fruit is spherical, and about two-
thirds of an inch in diameter. But
the corollas of this, and the fruit of
the Tabicton plant are unknown.
The 25. Taitensis, moreover, is unfortu-
nately named, for it is not indige-
was to Tahiti, but was probably introduced from the Friendly or Navigator's Islands.*

 RANDIA, Houst.

1. RANDIA ferr., DC.

Stab., Organ Mountains, near Rio Janairo, Brazil.

* Seemann's Gardenia nitidissima, although in foliage resembling our keezie, an Aseidenea plant, is very different in the flower, being closely related to G. Thambedia.
   (in DC. Prod. 4, p. 377, p.)
   Hab. Brazil, near Rio Janeiro.

   Hab. Brazil, in the Organ Mountain.

*Pseudoquera*, Subcl.

   Hab. Rio Janeiro, Brazil.
Sabicea, Abt.

1. Sabicea evanthia A. Sc.

Hab. Rio Janeiro, Brazil, (in blossom)

Coccocepselum, Swartz.

1. Coccocepselum aureum, Cham. & Schlecht.

2. Coccocepselum nummularifolium, Cham.

3. Coccocepselum cordifolium, Nees & Mart.

4. Coccocepselum montanum, Mart.

Hab. Brazil: Specimens of these four species (the latter doubtfully named) were gathered near Rio Janeiro, and in the Organ Mountains. The first is probably C. dichroaeasium, Mart.; the last is the same as Miss. No. 4126, and perhaps an undescribed species.
Mussanda, Linn.

1. **Mussanda pumiosa**, Linn.


Apparently not different from the East Indian species, which is variable. Doubtless the same as Forbes's *M. pumiosa* from Tahiti, but without flowers or fruit, whereas no specimens were gathered. The mucronate tips of the lobes of the corolla vary in length. The estimation of the corolla in this genus is probably well known, but is not mentioned in systematic works. It is valvate and usually strongly reflexive, the folds either straight and salient or sometimes plicate-twisted.
Stylocoryne, var.


Hab. Small island in the Soofoo Sea.

The elongated, clavate stigma, in this as in other species of the genus, is separable into two divisions, which are rather conglutinate than connate.

2. Stylocoryne pamphucina

3. foliis oblongo-ellipticiis secu

lanceolato-oblongis utrinque

acutis acuminatisque longius-

culis petiolatis submargina-

eis cum ramis quadrangular-

aribus glabris, venis primarias

14-18 perspicicis; stipulis late

triangularis; cyma terminali

decomposita in seidentes com-
muni brevi densiflorae; calyce obvato-oblungo, saepe brevissimi, rotundato-ciliolatis; corolla grisea, pubera, libris angustissimis oblongis, obtusis, simum adaequantibus, facie struente; bractea glabra, applanate 10-16-spermata.

Coffea pambucina, Fort. Prodr., p. 16; Sprigg, Angil., t. p. 16.
Chicomeca pambucina, Sprigg, 1837, p. 16.

Coffea scopulosa, DC., Prodr., 4, p. 492.

Styphurina pepericarpa, Brid., in Hook. Lond., 2, p. 223.

Lab., Futuna, and Manua, Samoan, or Navigators' Islands; Tongatabu, Kolonu and Nauvao-levee, Aejea Islands; Tahiti and Malia, Society Islands, in mountain forests.

I believe this to be the same species that exists in the Society Islands, Coffea pambucina, and have named...
fore adopted that specific name.
One of its forms with thinner leaves and smaller fruit than
others, is Bangalore, gathered
by Mr. Hind at the Beejee, and by
Mr. Barclay at the Friendly Hand,
is Bangalore stylocoryne, Peri-
carpa. Prof. Harvey also found
it in fruit, at the Beejee Island.
It is a shrub or small tree,
glabrous except a slight canes-
cence of the young branches and
inflorescence.
Leaves 4 to 8
inches long, and from 1 1/4 to 3 1/2 inches wide; in petioles of an inch or less
in length; the straightish primary
veins pretty conspicuous beneath,
especially in the thinner-leaved
specimens. Stipules short, and
broadly triangular, acute, decid-
uous. Flowers very numerous
in a pedicle and thick-stomated, or
a short peduncle and several
decomposed cyme, the ultimate
division crowded and fastigi ate.
Bulb. Calyx less than a line in
length; the limbs very short, not
larger than the head of the summit of the ovary, and rather deeply cleft into 5 broad and very obtuse teeth. Cypripedium moorei with a few rosettes and 1 flower, the 1 leaf about the same length, narrow, obtuse, ovate-oblong, or spatulate-oblong, very obtuse, convolute in aestivation; the throat glabrous or nearly so, i.e., destitute of the beard of D. Velata, &c. Filaments very short, anther linear, with an acute, ciliate base. Style that of the genus, exserted, the stigma at length bipartite. Ovary 2-celled, the cells glossy, ovate. Fruit a spherical berry, of the size of a peppercorn for a little larger, ripening from 10 to 16 angular seeds. Albumen hard, fleshy.
3. Stylonyrhine Coffeoides

1. tuta glaberrima; foliis subcoriaceis ovatis pennis ellipticos oblongis acuminitatis basi acutis breviter petiolatis supra nitidis; venis primaris 10-16 subbas; perispos stipulis triangulatis acuminitatis caducis; cymis axillarisibus (terminalibusque laxifloris folio multo brevioribus; calyceibus limbo brevi truncato dentilato; corolla glabra, lobis oblongis obtusis tubo ad aquanthis, favea bisulcatis; baccam sphaericam polysperma.

Coffea oorata, Forst. Prod. S. 183; Sc. l. c. p. 500;
Ixora oorata, Spring, Syst. Veg. 1, p. 409, ex Chen.

Stab. Ulyss, one of the Samoa or Friendly Islands (also Vanua
and Lipuka, Prof. Harvey). Tahiti, Society Islands.

Branches nearly terete, very glabrous, as is the whole plant. Leaves varying from oval- to lanceolate-oblong, 3 to 6 inches in length, of a firm texture, but hardy con- nected, smooth and shining above, dull beneath, the base contracted into a petiole of 3 or 4 lines in length. Stipules appressed, entire, prin-
ted, Lyrnes axillary (and sometimes also terminal) on very short pedic- eles, rather small, about half the length of the leaves, at length bifurcate or divaricate and loosely-flowered. Pedicels slender, 2 to 4 lines long, Calyx ovate, with a short and cup-like, truncate and barely 5 dentidulate, persistent limb.
Corolla white, in bud half an inch long, externally very glabrous, the lobes oblong or elongated oblong obtuse, conoidate in activation, rather longer than the tube; the throat conspicuously bearded with
flaxier and more minute hairs than is common in the genus. Anthers on short filaments, elongated linear and acute, style not longer than the anthers. The lobes of the corolla, the calarate and acute surmount separable into two plano-curved, linear subulate lobes. Ovary 2-celled, ovules numerous, closely packed on an oblong placenta. Fruit a globose berry (in spec. ed. Harvey), about 3 lines in diameter. Ripening from 6 to 26 seeds. Seeds horizontal, depressed, somewhat angular, testa nearly smooth, embryo small and slender, in dark albumen.

In habit this differs considerably from the following species. I think it cannot be the Phylocampe racemosa of Cavanilles, which came from Manila, the calyx of which is described.
and figured as pretty strongly, is to the, as. Certainly it is not plant described by Suckard in his "Hedra, which may will be about the same as that collected by Charles Wright in the Lord Howe Islands. I suspect our plant to be similar
Coffea odorata, although the leaves can hardly be called white. But Sprague's diagnosis, as
Paradilla plant from an original specimen will apply to our
specimens. All the flowers examined are pentamericus. Prof
Professor Harvey found an allied species in the New Zealand
of which the characters are subject.*

   * Hylocereus Harveyi (M.),
   glaberrima, folio characee oblongis
   acuminatis basi in petalum lan-
   gueulsum contractae, cymis axi-
   tanthes terminales, petalorum
   vit superantes, subtendentes, calyc
   eis versus limbo quadrifido, cly.
   triumelaria, subtubatis tubo vit.

Invierinis; corolla lobis 4 line-
are, tubus longioribus, lancea
insertis. — Leaves 4 to 5½
inches long, 1½ to 2 inches wide, dull;
petioles of the larger leaves an
inch long. Flowers — Corolla
several, 4 lines long, rose color.
Mature fruit unknown. — The long
petioles, and smaller flowers (all
examine tetramerous), with the
corolla naked within, and strong
calyx teeth distinguish this
From Ceylon. 
null

null
placeatis opeiores carmosis alerb
latis oligo pleospermis. Semina
angulata vel complanata, sive
pellata, omné in alvidis
placeatis submunea. Testa
mucro coniformis, tenei erista
ca, pellicula popolata nitidula. Embryo intra alba
man subcartilagineum rectus;
cotyledonibus ovatis parvis va
rícula vix brevioribus. - Forma
ticas vel arboscule insue
darem; foliis margis brevi-
petiatis; stipulis brevisub
subvaginatis; floribus videlis
albidore, cynosus vel sub-
solitariis.

Kaciga spec. (4 et 6), Sham, 4
Schacht, in Limasa, 4, 13
162, 164
Peteria, Prok. V. Am. Mart. Budeh,
Vex. 3, 64, 85, nee
altrum.
The plants for which the above generic character has now been claimed were taken for evergreens by Schamisso and Schlechtendal, and afterwards, quite independently, by Hooker and Arnott. On the whole they appear to be properly associated, although the differences between them are not always important. The first species is a tall shrub or small tree, with caducous stipules which are more or less conceive within the peduncle; the inflorescence, habit, &c. is nearly that of Stylocarpa; the branches of the style are filiform or subulate; and the small drupaceous berry is imperforate at the naked apex. The other is a low, diffusely branched, maritime shrub, with fleshy coriaceous leaves; the stipules distinct, by vaginate, although very short,
and adhere to the base of the pericarpels, which they thus unite, in the manner of Kadma, &c. The flowers are protandrous (3-7) in a cymose or spike-like solitary; the stigmas are thicker and shorter; and the large, fimbriate, whitish, dry papillae bend at maturity, open at the hooked apex by a round hole or a slight transverse chick, through the turgid parchment-like envelope, and discharge the seeds. Wherefore it is not sur-

mising that Chamisso and Schlechtendal refer the species to their genus Kadma, to which, indeed, it is manifestly related, but which is quite sufficiently distinct in character without any species baccaea species. The small, at length nearly obliterated limb of the calyx, and the pellate seeds further distinguish
The present genus, Storke and Smith, never suspecting that these plants had been referred to Kadua, made of them new species of the fictitious genus Petesia; but the latter—a genus which, as founded by P. Brong. and adopted by Linnaeus, is admitted to be synonymous with Randelia, to which Swartz just added a species of Surzaea (for P. Surzaea, Swartz is apparently Surzaea Spicata, DC.); and which, after the younger Gartnerr applied to an Oceanic plant (perhaps an Ixora, or something of that sort) upon which De Candolle founded his obscure genus Ixilachia; and which, at length De Candolle, instead of dropping the genus altogether, made a receptacle for some describers and probably heterogeneity.
Philippine and Mexican species, proposed by Bodding. There is small likelihood that any of these are emigrants of the present species, nor can I refer the latter to any received genus. Heredia, to which they might be compared, like Stylocoryne, has the costa convolute in activation. I dedicate the genus to the excellent naturalist, Augustus T. Guild, M. D., of Boston, the author of the Cyclopedia of this Expedition.

* Polia granida, Bart. P crescere in America abstrusum, Schlecht.
1. Gouldia Sandwicensis. (fide)

G. foliis oblongis venosis; eynmis
confertifloris. terminalibus nunc
etiam lateralisibus, foliis ple-
stipulis subeoccis late praetextatis, acutis
acuti; corolla tala gracili
lobis duplo longioribus; bacis
otro coeruleis panulis glabris.

Var. a. Terminalis: glaberrima;
folis membranaceis basi ple-
branquique obtusis. Ludit eyma
terminatis, nunc sensili vel
leviter pedunculata foliis
multi breviore, nunc pedun-
culata ampliore laxiore
folia aequali vel superiora
raro decomposita.

Petersia? terminalis. Hook. & Am.,

Var. b. coriacea: glaberrima, foliis
coriaceis basi acutis; corolla
tubo saepe posticosa; puber-
ulo; cæt. Var. a. Ludit
foliis magis minusque venosis et venulosis, crannis junio-ribus costa que foliorum subtus nunc
hirtello suberis.

*Petersia* coriacea, Stock. & Sm.,
l.e.

Var. hirtella: foliis pleurisque
coniaceis ovali-ellipticis, pa-
gina inferiori more hirtello.
secatula, costa crassis que
pive costa crassis que jun-
oriis hirtello vel hispid-
ulis, cynmis densifloris heri-
bus terminalibus et axillar-
bus. *Reute foliorum quandoque
eminium.*

*Hab.* Sandwich Islands;
gathered by Menzies; "Maenae, and
most later collectors." "Friendly
Islands." A. Matthews, in herb. Stock.

Var. a. Mountains, behind Honolulu,
Oahu, in forests. Var. B. Kaala
Mountains, Oahu, &. Var. C.
Hawaii, Molokua Kea, and elsewhere.
Kauai; also in the mountains of
Oahu.

Series of forms, intermediate between each of these more characterized, leave no doubt that if they all belong to one polymorphic species, although the extremes differ greatly in appearance.

The species is a shrub or small tree, with leaves from 2 to 5 inches long and one or two inches broad, and petals 10 to 13/4 long in length. The leaves are 2-angled, narrow, acuminate at the point, obtuse at the base, ovate-cordate, sessile or nearly so, and shorter than the leaves to the base, sometimes longer, broader, and on a peduncle an inch long, in some specimens simple and uncompound. Pedicles from one to three lines in length.

Some of the calyx triangular, acute, nearly half the length of the ovary, more or less persistent on the fruit. Tube of the yellowish-coriaceous 3 lines long, calyx lobes, ovate.
in var. B, somewhat pruinose-glan-
dular outside; the lobes oblong,
thick, obtuse, valvate in aestivation: the
throat is beardless. Another linear-
acute, attached inserted by a short
filament into the throat of the
corolla, from which the tips of
the anthers slightly protrude.
Style slender, cleft above the middle
into two filiform acute divisions,
the upper part of which is minutely
papilllose-pubescent or squam-
tose. Ovary 1/8 as in var. A,
but the stigmas less numerous.
Fruit spherical, about 3 lines in
diameter, attaining "dark blue",
drupaceous rather than a true
berry, the pericarp flesh abund-
dant, but the cells lined with a
chaffy exocarp or thin crustaceous
endocarp. Placentae less thick
and springy than in var. A.
Fruit similar in character, each
maturing from 8 to 12 angular-
campanulate, peltate seeds, of propor-
tionally larger size. Testa exo-
carpous, with a cellular papillose
pellicle. In var. B., with firm, coriaceous leaves, the venation is inconspicuous, the veins being obscure, as in the other forms. The primary and secondary veins are more or less conspicuous, and the fine reticulations of the veins are evident under a lens; in many specimens, especially of var. C., this reticulation is strongly marked upon the epidermis of both surfaces of the leaf, in the dried specimens, in so striking a manner that such specimens would be regarded as distinct in species, especially those which are shining, as if varnished; but this characteristic is not constant, and moreover, it is distinguishable in the other varieties.

There is in the collection a single, small specimen from the Mountains of East Maine, with young fruit only, apparently of this genus, but with their much thinner leaves and smaller petals, which apparently indicate a distinct species, yet it may be only a form of P. dasycarpum.
2. Glandia Romanzoffiæsis, G. glabra, numilis, vanosissima; foliis obvatis seu oblongo-ovatis obtusis, cænnosis basi attenuatis; stigmas capitulatibus brevissimis utrinque unidentatis; floribus canescircum cymula terminali brevi varie usque in axillis superioribus solitarìis; calycis dentibus obtusissimis in fructu obtusiis; corolla tubo brevi; stigmatibus subdilatatis; baccae magnis piriformibus albidis, permanièr in vertice piriforme seu verna brevi transfusa perforatis.

Kadua Romanzoffiæsis, Ėlan.
Schlecht. in Linn. p. 162; Ps. Prot. 4. 4. 431.
Petersia carmosa, Hott. in Am. Bot. Beeli. Nov. 1. 5. 64.
Hal. Karaka, Kurick, Mil- 
and, King's, and other Coal Islands.

A maritime shrub, glabrous,
differently much branched, a foot
or two in height, stipules short,
broader triangular and apiculate, uni-
ted at the coriaceous into a very short
sheath, which is adnate with the
bases of the pedicels, so that all
separate together when the leaves are
desicated. Leaves flabelliform,
obovate, oblong-obovate, or in the form
apatulate, oblong-cordate, one or
two inches long, tapering into a
very short pedicel, rounded or very
obtuse at the apex, or else obtusely
mucronate-pointed, the primary
veins more or less visible in the
dried specimens, but not the vein-
lets. Flowers few (3 to 7) in a
small and simple, sessile or short
peduncled cyme, which is much
shorter than the leaves. Expanded
flowers not blossoms not seen, but
the flower-buds only 3 lines long.
Calyx-teeth much shorter than the
very, ovate, very obtuse. Corolla
thick in the half, the tube some-
what funnel-form. The lobes ovate
valvate in vegetation, the throat
is perfectly glabrous, further
linear-oblong, subsessile, acute or
apiculate, attached above the
bifid base, incumbent. Ovary
two-celled: the thickish placenta fixed to the middle of the partition, covered with small peltate nerves. Fruit usually an oblong oval of 2 or 3 lines in length, with pyriform or subglobose, about half an inch long at maturity, "white with a bluish tinge" adhering to a scale of the collecting; the flesh of the cupris is not rather 
strong; the cells lined with a thin parchment-like or almost cartilaginous endocarp; over the summit naked and somewhat truncate (the short calyx teeth being obsolete). The naked vertex perforate at maturity by a round 
foramen through which the 
seed may escape. Placenta 
thick, white, in texture, fleshy, 
each bearing from 8 to 10 seeds, which are angular, depressed, 
and partly immersed in the pits of the placenta. Testa con 
formed to the nucleus, thin, 
crustaceous, blackish, thickly 
and very minutely papillose, Albumen
between cartilaginous and fleshy. Embryo small, little shorter than the albumen; edge of testa scarcely broader than the radicle and almost as long.
Lerchea, Linn.

1. **Lerchea calycina**, sp. nov.

2. foliis oblongo-lanceolatis acuminatis basi attenuatis, junioribus (presens in costis venisque subtus) cum stipulis intertegminis ovatis-lanceolatis contracto-acuminatis spathulatis florisque ferrugineo-sericeis; cynmis condensatis; lobis calycis lineari-spathulatis foliaceis tubo corollae parum brevioribus.

*Tab.* Heejee Islands; Ovalace, in fruit only. Also Niti-lewa, with flowers. "in high, woody districts, inland." Mr. Milne, with flowers, Shrub, from 6 to 12 feet high; all the young parts clothed with a ferrugineous fine, appressed, silky-villous pubescence which remains on the midrib and primary veins of the lower side of the leaves. Branches slender. Leaves pinnatapinnate.
ovate, valvate in aestivation, spreading in antheris, glabrous within; the throat and upper part of the tube within exceedingly villous with long white hairs. Stamens 5, inserted in the throat among the villous beard; the filaments short, slender, glabrous; anthers obtuse, elongated, in a slightly bifid at both ends, inserted near the base, incised, glabrous (destitute of the few small seta represented in those of L. longicauda), their summits along with the dense beard slightly protruding from the throat of the corolla. Style filiform, at length projecting to the length of the lobes of the corolla, canescent with a minute appressed pubescence; stigma capitate, two-lobed. Ovary 2-celled, crowned with a conspicuous epigynous disk, annular or short columnar, externally somewhat 5-lobed, epigynous disk, which surrounds
the base of the style. Placentae
thick, attached to the disjoined, 
covered with numerous, closely
packed ovules. Fruit 25, coun-
ed with the more or less withering
calyx lobes, dry, little more than
a line in length, obvate, discor-
eous. The thin epicanth separable
from the cartilaginous indusia.
or coccis, septal, peltate, the caly
at length opening by their
valvular membrane, many-seeded.
Seeds very small, oval, acuminate
by marginal prolongation, little
being the testa conform to
the nucleus, minutely sarcileolate.

The single specimen, with fruit
only, exact, gathered in our expedi-
tion, had been engraved on plate
under Mr. Reich's superintendence.
I have merely added the details of
the fruit, part of the flowers from a specimen fortunately collected by Mr. Milde (in the voyage of the Herald among the Zeejoe Islands), which was entrusted to me from the Hookerian herbarium. The plant is evidently a near relative of Reinwardt's *Hastophyllum nitricolum* from Java. Indeed, should Blume's character "stipula germate magnete altera" not be incorrect in the latter particular, nothing of any importance would remain in the description to distinguish that from Mr. Bennet's plant in Dr. Jav. Rarities, p. 101). But suppose that the activation of the corolla in Reinwardt's original *Hastophyllum* is imbricated (or rather carinate) as in *Neoflandica*, in our plant it is certainly valvar, so that whether *H. nitricolum* also is to be referred to *Zerchea* (as Korthals suggests), I cannot hesitate to include our plant in that genus, the enlarged and foliaceous lobes of the
Argostemma, Wall.

1. Argostemma uniflorum. Blume

Stk. Luzon, in the moun-
tains above Baños, near Manilla, in fruit only. Either this or an
allied one flovers species; the
leaves are not acute.
Ophiocarpha, Linna.

1. Ophiocarpha pseudoloides, sp. nov.

O. herbacea, pumila, diffusae ramosae; ramis puberulis foliis, foliis parvis sapis 3-5 laminis vel pseudverticillatis spatulatis seu ovato-spatulatis basi lunge attenuatis glabris; floribus sub-solitaris floribus alligatis inclusis utrasque glabris; filis filiferae glabris; filaminibus filiferae glabris; filaminibus styloque exsertis.

Hab. Ovolan, Hoojee Islands; where a narrow-leaved form was collected by Professor Harvey; as also by Mr. Milne, on Nubula River, along the margin of streams.

A singular little species, hardly more than a span high, much branched and lealy; the leaves resembling those of Telesis Portula, or of Ludwigia palustris
or its near relative L. Mathiula, only an inch or even half an inch in length, exclusive of the short petiole and the long tapering base, of 3 to 6 lines in length, which in the narrower form is gradually attenuated in the broader, more abruptly contracted, smooth and palisade ramifications above, pale beneath; the midrib only prominent. Many of the leaves appear to be verticillate in threes or fours, but on the branches they are often plainly seen to be falsely whorled in pairs, mostly 4. The petiole obsolete or very small; flowers terminal, becoming lateral, solitary, or 2 to 3 together; pedicels 2 or 3 lines long; calyx tube, c. 1 line, glabrous, the 5 teeth very small, pilose. Corolla 3 lines long, funicle from rose-colored glabrous externally; the lobes white, valvate in bud; tube in section, as in the genus, the interior not bearded, but very minutely pubescent in the throat. Filaments inserted
low in throat, filiform, and nearly twice the length of the oblong anthræs, which are exerted in anthesis. Style glabrescent, longer than the stamens. Stigma bilamellæ, the lobes rounded. Capsule glabrous, rather strongly 2-lobed, 3 lines wide.

2. Ephisorhiza leptantha, sp. nov.

6. punctosa, fere glabra; foliis utrinque laevo; viventes oblongo-seu elongato-lanceolatis; utrinque acuminatis longa petiolatis; stipulis utrinque binis setaceis; cyma terminali; multiflora puberula; floribus pluribus fuscis subseriatis; corolla alba gracili utroque pollicari, ore turriissimo basato; staminibus inclusis; filamentis anthræs aequilongis; stylo glabro.
Branches woody to the summit, minutely puberulent when young, otherwise glabrescent. Leaves light green both sides, glabrescent, 4 or 5 inches long, 9 to 16 lines wide, adenate, tapering at the base into a slender petiole of an inch or an inch and a half in length. Stipules distinct, petacceous from a slightly dilated base, 3 or 4 lines long. Cyme terminal, compound, more or less puberulate densely many-flowered; the earlier flowers more or less pedicelled, the others mostly sessile or subsessile and second at the branches of the cyme. Bracts pedicellate, petacceous, deciduous. Teeth of the calyx short, argentish. Corolla "white", slightly puberulent exteriorly (under the lens), the tube filiform, an inch in length, or even somewhat longer; the lobes ovate, the white glabrous.
within, except a very narrow and inconspicuous ring of delicate beard (of one-celled obtuse hairs several times longer than broad) at the orifice, some distance above the included stamens. Style very slender; lobes of the stigma oblong, obtuse.

3. Ophiochriza laxa, sp. nova.

O. purpurea; ramis juvenilibus paene fere rigide; foliis oblongis vel subovatis acuminate, luteo-petiolatis; cymis paniculatis plurifloris laxis; floris pedicellatis; corolla semi-patellata; cal. fere parallelo-elliptica, red ramosior, laxior.

Ibid. With the preceding, also Nyssa, Orolua, and Niti-leleu, Mr. Milne, in woods and on mountains.

Of this "slender shrub" our own and Milne's collection furnish...
several forms. I am by no means certain that all or any of them will prove distinct from the preceding species. The structure of the flowers is the same, but the flower is only half as long; the cymes lower and fewer, from often only three to 8 flowers, and with manifest pedicels. The leaves vary from an inch and a half long, with a pedicle of three-quarters of an inch, to 4 or 6 inches long with the pedicle from one to 2½ inches, and in shape from ovate-oblong to ovate-lanceolate. The petalous stipules are deciduous. Capsule nearly as in O. Munzheros.

4. O. Miorhiza subumbellata.

To this I may doubtfully refer two very imperfect specimens, not sufficient for proper characterization from Tahiti (where Fraser,
obtained his O. subumbellata, the other from one of the Samoan Islands. The two agree in having the stipules single on each side, lanceolate, and scarious, those of the South Island specimen tapers into an arm-like point. In this the corolla are short, obovate in the kind, but they seem to be abnormal. It may be noted that Foster's detailed description of O. subumbellata, printed from his manuscript by Gillieson, in his *Rephryritis Fakelensis*, makes it doubtful if the O. subumbellata is really of this genus, since the leaves are said to be alternate, the lobes of the corolla reflexed spreading, and obovate in the middle, the capsule ovate and crowned with the persistent calyx. The stipules are not mentioned. 

* Mr. Bennett, the Curator of the Banksian Herbarium, has obligingly ascertained for me, that Foster's plant is truly an *Ophichneum*, with opposite leaves, although Foster's own drawing, like his description, makes them alternate. The unopened corolla are rather more than half an inch long, but in better specimens from Tahiti, collected by Nelson, they are fully an inch in length.
5, Ophiocline oblongifolia, DC.

_{Lab. Luzon, in the mountains near Baños, An imperfect specimen._}

5, Ophiocline oblongifolia, DC.

6, Ophiocline acuminata, DC. ?

_{Lab. Luzon, in the mountains near Baños. Imperfect Specimen, in fruit only, The latter same as Chambers’s nos. 1579 and 1435._}

Funtella, Fort.

1, Funtella repens, Fort.

_{Lab. Luzon; shores of Laguna near Manila._}
Kadua, Cham. & Schlecht.

Char. emend. Calyx tubo hemispherico vel turbinato; limbo ad ovarium usque quadrisepto, lobis foliaceis. Corolla subovaria, hypocretum florosa, unita glabra; tubo gracilis; limbo quadrupartito paten- lissimo, lobis aestivatione valvatis marginibus pl. m. repul- catis. Stamina a 4, faciei corollae inserta; filamenta brevissima; antherae oblongae vel lineares, dorso infra medium affixe. Stylus gracilis; inferne (et emarginato) tunicam exposita villosa; stigma oblonga sub lineare, filiforme.

Ovarium bilocularum, vertice planum. Ovula in plae...
centis medio dissepimentis
adulis innumeris, amphi-
tropo. Capsula late tur-
binata, curvata, calycis
lobis pilaceis persistentibus
cornata, bilocularis, polyga-
neta, vertice rima trans-
versa, loculi die Miani, sem-
ibento.
Germina orbicularia, com-
pressa (in panicis alata et
marginata), nilo masc tutorials
Embryo intra albumen car-
mosum rectus, cotyledonis
vatis radicula paullo brach-
ites. — Frutices vel sup-
plutes Sandvicenses, faece
adnunci diversi; foliis aut
coriaceis rigidis aut membra-
nacea; stipulis capitatis
bravibus medio utrique
unidentatus; floribus nunc
in cymis stellatis ad
congestis, nunc in axillis
solitariis terminis vel solidariis
pedunculatis, (folios interdum
5-meri vel gynaeceum 3-merum.)

Rauda (excl. spec.) Lehmann,
Schlecht. in Linnaea. 4. p.
157; DC. Prod. 4. p. 430.

Weigmannia, Meyen, "Fl. Z.
p. 139;" Endl. Gen. p. 526;
Matschke, Mem. Meyen, p. 354;
red navi. carp. falsus.

A group of plants, all natives
of the Sandwich Islands. Polynesia.

Though in habit, but homogeneous
in floral characters, with the singu-
lar exception that two species have
winged seeds. These species (E. glom-
erata and K. centranthiodes) differ
so very widely from K. acuminata, and even from K. Mauricieana, that they would unquestionably be generically separated, were it not for K. coriacea, which is completely intermediate in general character and even by its seeds, connects them with the rest of the genus. Although the ovules are amphitropous, the seeds are not flatulate, like those of Bouvardia and Aristenisia, but are attached by their margins, so that the (or margins of the seed when the seeds are compressed, as they mostly are) is presented digenitally to the placenta. The three smaller and hardly supranive species too nearly approach Aristenisia, which, with a long and slender corolla has the capsule and seeds of Oldenia. Even the foliage and perhaps the seeds also of Kariya
Corkiana (which may be regarded as the type of the genus) are not unlike those of Rohania. The more or less succulent edges of the lobes of the corolla and the inflexion of their tips in ostivation may serve as a technical distinction. These tips are much inflexed in K. acuminate and K. petiolaris, where they are long and tapering, but not at all in K. glemnera and K. centranthidea.

K. mariesiana is apparently appears to be more woody than the other species, and to have a thicker-walled fruit, the capsule rather fleshy, somewhat dry inside when young or before full maturity. This led the authors of the genus to refer to include in it two fleshy-fruited shrubs,
of which they possessed incomplete materials. (Nicé de Gaudin, p. 3) Finally, K. aenima and K. ramosa compose a group of peculiar habit and inflorescence, but unsupported by any floral or carpological characters, to authorize the separation suggested by Noottall, who in applying to a specimen in the Botanic Garden at Heidelberg, the generic name of Genera, the name "Carbonaria".

Mayoni Neogermania is evidently K. adorma, and what is described and figured as a single large seed consists of a mass of seeds closely packed upon the placenta.

The winged-seeded species would be referred to the Gaudiniaceae according to the present definition of the tribes, but this is not by no-
means the only instance in which

coniferous plants of the order

differs in this New Guinea plant from

indeed the Rhombopora

ra of Korthals seems to be another

by the artificial

to widely separate Brunsviga

from Acanthaceae. Even the dis-

tinction of the fruitlet between

vacciniaceous, and eapsul-

lar fruitlets in the polypoecorous

Korthals is in many cases so in-

decisive that we may have to pro-

ceed further in this matter. Since

than has supposed, and re-ar-

range the order taking the

primary characters from determi-

tion, placation, and stipulation,
The following are all the known species of Kaena. For new <i>Oldenlandia</i> fotida (Itoptis fotida, Smith, compared by him with his <i>H. coriacea</i>), if the specimen of the Hookerian Herbarium which I have examined be authentic, is not (like a genuine <i>Oldenlandia</i>, as Professor Smith supposed) of this genus; the laminae have extended towards the base of the short tube of the corolla, the filaments being longer than the anthers; and the style entire and pellucide dilated.

51. <i>Coriacea coronaria</i> Echte; corolla purpureus; folia coriacea, in proximis quasi mossata, linear-costata.
1. Radua centranthoides, Kok. & Arn.

K. glaberrima, basi tantum lig.-nosa, superne dissitifolia;
foliis subsessilibus ovato-lanceo-
latis summisse subcordato-ovato-
acuto-acuminatis coriaceis
lineato-renosis, floralibus
parvis; bracteis subulatis mic-
uitis; eynis dense multiflo-
ris Amyroido-paniculatis;

calyceis lobis ovario aequilongis
tubo corolla gracilis multotie
etiam brevissibus; stylo glabro;
capsula turtinata vertice
convexuscula; seminibus mem-
traneo-alatis!

Tab. Hawaiian, Sandwich Islands;
on the coast, and on the crater
Luna Pele, &c.; gathered also by
Macrae and others.

This species is well named from
its likeness to Centranthus ruber
in foliage and habit. Only the
base is woody, and with the stems
rather expanded, sending up simple
herbaceous flowering
shuns or vingate branches, from one
to 3 feet in length, smooth and
perhaps glaucous, as is the whole
plant, bearing from 3 to 8 opposite
compressed or angulate above, and
bearing from 3 to 6 pairs of sessile
leaves. All with the larger internodes
from 4 to 6 inches in length. Leaves
thick, probably fleshy, coriaceous in the living state, conspicuously lirate with 7 to 10 pairs of parallel veins; ovate-lanceolate, ovate or the uppermost and reduced floral ones subcordate, all sharply acuminate; the lowest about 3 inches long, the uppermost an inch or less.

Stipules broadly triangular with a subulate point, connate and slightly adnate to the base of the leaves at their narrowed insertion, rather persistent. Gyres many-flowered, dense and small, terminal (subtending a small pair of bracts) and from the axils of the upper leaves, where they are either subsessile or on slender compressed peduncles; the bracts and bractlets at base minute and subulate. Pedicels longer than the calyx. Teeth of the calyx triangular-subulate, bluntish, hardly as long
as the ovary. (Both a slender tube and an inch long when fully developed; the oval, obtuse, styles 1½ to 2 lines long, much (as in all the species) Valvate in ostivation with the combined edges salient, so as to render the back four-angled at the summit (their summits not perceptibly inflected) in another widely, spreading, nearly oblong-linear, included in the ovary, style filiform, glabrous throughout, 2-cleft, at the apex, or with two linear filiform, obtuse stigmas, which are often coordinate. Placenta fixed to the middle of the partition, covered with numerous amphitropous ovules. Capsule between 2 and 3 lines in length, and of equal breadth across the scarcely convex Summit, (obtuse, slightly grooved at the Partition, obscurely 4-nerved)
thin, cartilaginous, with a mem-
braneless epicarp (calyx-tube),
which wears away after dehiscence,
the spreading persistent calyx-teeth
being less than a line in length.
Seeds extremely numerous, closely
packed upon the rather narrow
placenta, fleshy-firm, flat
the thin reticulated testa extended all round the nucleus into
a distinct and regular annule,
somewhat circular, winged,
inserted at or near one edge.
Embryo in fleshy albumen.

Heli Mountains behind Helu, Oahu, Sandwich Islands, also gathered by Sandichand, as.

Similar in habit and manifestly allied to the preceding species, this is at once distinguished by its many Stamina, erect inflorescence and flowers, villous style, and larger leaves.

*Heliandra coarcescens*

The cauline leaves are lanceolate or oblong-lanceolate, from 4 to 6 inches in length, an inch or rather more in width. The parallel veins or nerves less prominent, the base contracted into a very short and broad but manifest petioles, which are connected with the broadly triangular or stipules. Upper leaves shorter, broader, and gradually reduced to the small floral ones. Cymes or clusters made, the bractlets small.
Linear-oblong, teeth of the calyx fully as long as the ovary. Littis of the corolla oblong, very thick. Stigmas or branches of the style filiform. Fruit not seen; but the ovules after flowers are in the gravid ovary already shewed give indications of the winged seeds.
K. glabra, infima, petiolaris, ramosa; foliis subovariis viribus lineato-venosis, inferioribus
et variorum sterilium obtusis lanceolatis acutis acuminatis in petiolum brevissimum contractis, superiores
minoribus dissortis ovatis cordatis ovatis arcuato-sessilibus, floralibus bracteis conformibus
cymulis glomeratis fulcrantibus; calycis lobis ovato-lanceolatis ovario duplo
longioribus utiam capsula subhemisphaericam.
Vertice planiusculam super excedatibus, seminibus reell-
iformibus, planis.

Rauda cordata, Lehmann ex Schlecht. in Flora, 4, p. 160; Stock. et Bl. l.c.

Wiegmannia glauca, Meyen, Nov. 2, p. 137; Walps, Kel.
Meyen, p. 354, t. 9, Stirp. aspermifolia.

Var. B. Cynmis evolutis, seminis ultimis pecunifloris nudis.

Var. Y. gracilis; folis omniis sessilibus, lucidis, foliis primariis inconspicuis, ramosibus brevibus reticulatis, cynmis pecunifloris parvifloris mediansulis.
Tab. Oahu, Sandwich Islands, on the mountains behind Honolulu, found by Merzies and most subsequent collectors. Var. 3. Mountains of West Maui; a state of the species also found upon Oahu by Nuttall. Var. 4. A single, rather undeveloped and doubtful specimen, from the mountains of Kauai. A form undatable of K. endota, gathered by Perry on Lanzai, with leaves of smaller size may come at it with this species.

More numerous than K. centralis; but the flowering shoots seem to be nearly herbaceous; the leaves thinner and less nervose, the clusters of the cyme involucrate with the leafy tracts. The inflorescence of the ordinary form, and the flowers, &c., are well exhibited in the figure of Neumania.
glance cited above; but its
 cauline leaves are represented as
 narrower and more linear than
 is common in this species. The
 hairy style, the foliaceous ribs
 of the calyx about half the length
 of the tube of the corolla, fully
 twice the length of the ovary,
 and even longer than the same-
 what hemispherical 8-nerved
 capsule; however, there is no doubt
 that Mayen's plant is K. cordata,
 and even this figure shows indica-
 tions of the mistake that was com-
 mitted in representing the whole
 contents of the cells as single
 seeds. The pods, which are very
 numerous, are flattened by mutual
 pressure, and some of them oblong
 winged or margined. The tube of
 the corolla is shorter and thicker
 than that of the foregoing species, the
 lobes broadly ovate.

The specific name is not a
 good one, as seven the upper leaves
 are not slightly cordate.
4. Radua Cookiana, Cham. & Schlecht.

K. gracilis, juncioidea, glabra; cantibus strictis basi tautum lignoscentibus; foliis angusto lanceolatis linearis busse utrisque attenuatis coriaceis nervulis puncticulatis, floralibus bracteis que conformibus; thyrido terminali paniculato; calycis lobis lanceolatis ovarium superlatum superantibus atque longioribus quam capsula la basi turbinata apice libero conica; seminibus angulatis immarginatis.

Radua Cookiana, Cham. & Schlecht. in Linnaea, i.e. ; DC. Prod. 4, p. 431.
Spur. Cahul, Sandwich Islands; on rocks, at Pali, behind Honolulu. Collected by Menzies, and by Chamisso on Hawaii, at the place where Capt. Cook was killed.

The most slender species. Our specimens do not exceed 6 span in height (those of Menzies and of Chamisso are twice or thrice as tall); and their stem and rigid, slender stems are here, lacerated from a lignaceous base and leafy to the top. Leaves rigid, 1½ to 3 inches long, one or two lines wide, nervous, sulcate and undulate, subulate from a dilated base. Flowers few, Myxviv. Bracts and calyx shoves subulate, leaf-like resembling the leaves. Corolla 3 to 5 times long; the lips of the corolla tubes in flexed in estimation.
Stigmae filiforme, linear. Capsule nerved, acute at the base, and
with a projecting, obtusely conical free summit not much shorter
than the body or adnate portion.

Seed very numerous, angled by
mutual pressure, not at all
margined. Often wedge-shaped,
not at all margined.

*K. suffruticosa* (pedalis et utra), glaberrima; ramis gracilibus usque ad apicem foliosis; plus coriaceis utrinque lucidulis conformibus ovato-lanceolatis denticis; inferioribus petiolatis summaris sessilibus venis primaris in conspicuis; flores parce (5-9) in eglulara terminali; calycis lobis lato-lanceolatis tubo cordae dimidio brevioribus; capsula turbinate; vertice subplanæ æquilongis; seminibus angulatis.

*Hab. Low hills behind Wainai, Oahu, Sandwich Islands.*
Stems more or less lignaceous from a thick woody subterranean base, a foot or two in height, branching; the branches very leafy, the internodes from 2 to 5 lines long, leaves about an inch in length nearly uniform, except that the lower are contracted at the base into a point, of a line or two in length, while the uppermost are possible by a broader base, coriaceous and perhaps some green and smooth both sides, the primary veins and the articulating V-nodules obscure, especially the former. Lables of the calyx triangular, calcarate, longer than the truncate ovary, in fruit becoming green enlarging to 3 lines in length and becoming lanceolate, and fibrous, and fully the length of the round, truncate, flat-topped, obscurely nervate capsule. Corolla 4 or 5 lines long.

**K. suffruticosus** (*Pedalis*), glaber-

*rima*, *rannis usque ad egman* *settite multifloram foliosis;* *folis subcoriaceis ovato-lanceolatis (inferioribus lanceolatis) acuta acuminatis plerisque

*branis petiolatis (summis sesiliibus) subtus glaucis pen-

*minerviis; calycis lobis subulatis* *tubo corda graciis multitis brevioribus capsa fus e * *vulce hemisphærica* *appice carpe-

*insula paullo brevioribus; * *eminibus angulatis.*

*Tab. Mountaines of Kanai,*

*one of the Sandwich Islands.*
T. Radua Menziesiana, Linn. 1

K. puticosa, ramosa, foliosa;
foliis coriaceis tenuiter venosis
ellipticis oblongisque leviter
petiolatis obtusis vel obtuse
acuminatis; cymis puberulis
dense paniculatis Myrsin
intempestum angustum scopis
formantibus; efficiensibus;
calyceis lobis ovario brevisibus
e capsula globo-obovata
verte libere protrahenente
denunc deciduis; peninisibus
angulatis. — Novit, foliis
nume ovalibus nume angustae
oblongis; floralibus ovatis sessili
bus; juniores subtus parce
pubescensibus vel glabris; cor-
ollis aut puberulis aut gla-
bris; vertice capsularum aut
convexa aut conico.
Hedyotis coriacea, Smith in Ree.
Noy. Jour. 7, 94.

As. conostyla, Gaudich. Brit.
Schlecht. l.c. p. 160; l.c. c.

Noy. p. 53.

Oldenlandia conostyla, L. Prod.
4. p. 428.

Hab. Sandwich Islands: Hawaii;
at various stations near the coast.

Oldenlandia conostyla, L. Prod.

A variable, but pretty well-
shaped species, deciduous shrub,
probably attaining the height of several
feet. Leaves coriaceous, inclined to
burn dark-colored in drying, one or
two inches in length, generally elliptical.
and an inch or less in breadth, in a
manner divided variety scarcely half
an inch wide, the primary veins very
slender, scarcely more conspicuous
than the delicate reticulation. petals
evident even in the floral leaves, from
e to 5 lines long, stipules short
pointed. inflorescence a contracted
terminal cyme, subtended by a pair of
roundish floral leaves, and usually
with similar sessile clusters in the
axil of one or two pairs of leaves below.

Generally cinereous (as is the calyx
curling often the corolla) with a fine
pubescence. lobes of the calyx triangular,
barbly half a line long, corolla about half an inch long when fully
developed: its lobes broadly ovate, flat length
oblung, the lips in cup in the bud: style
undivided; stigmas 2. shorter than in any
other species. Capsule apparently with
a fleshy sepals when young, which
at length becomes a thin pericarp: pellicle.
globular, obovate, 2 to 3 lines long. The free
seeds strongly convex or obtusely conical,
varying from oval to almost quadrangular to may
half the length of the fruit, ultimately 4-valved
at the top. seeds compressed angles.

the short calyx lobes usually falling away
before the fruit matures, leaving an annular scar.
§ 2. Flores solitarii vel termi axillaries, petiolarie supra axillares, paginulae filiformes, calyx tubi magnum, petalae militante freta, corolla veridula, stern alto; folia septius inaequales, tenuissimae, laxe paniculatae, frutices foliosi.

§ 3. Kadua acuminata, Cham. Yehlech

K. glaberrima; ramis gracilibus, folis chartaceis lanceolatis, serris acutis acuminatis, inferioribus brevioribus petiolaribus, superioribus subsessilibus; calyceis tubosis, dejectis anguste lanceolatis; capsula et Chama.


Itab. Sandwich Islands; in the mountains behind Honolulu, Oahu.
Also gathered by Chambers and by Lay and Collie, Ys.

Leaves of a rather firm texture but hardly coriaceous, broadly lanceolate and tapering gradually into the slender acumination, 2 or 3 inches long, and from half to two thirds of an inch wide toward the base, which is obtuse, the petiole only 2 or at most 3 lines in length. Stipules orbiculate, pointed, as in most species. Peduncles filiform, half an inch or an inch long, solitary, rarely in pairs. Flowers tubular and gently quadrangular as in all the section. Lobes of the calyx 2 or 3 lines long, twice the length of the ovary. Flowers lanceolate, mostly shorter than the tube of the calyx. The latter is white or greenish. Sepals ordinariwise and the tube 4 lines long, not three the length of the recurved spreading ovate-lanceolate lobes, the slender tips of which are strongly in duplicate.
in the bud. We have not the fruit. According to Stokes and Benditt, it is globose, but from the many it should resemble that of the following species. Chamisso describes it as obvoid, tapering into the peduncle, and [4-] nerved, also as drupaceous, the sarcocarps rather thicker than the endocarps, but at length dry and dehiscent. I suspect it does hardly differ in this respect from the following species.

K. ramosa, glabra; foliis oblongo-lanceolatis oblongis subito acutis acuminatis basi pleuris lanceolatis. floribus disco terminis, calycis lobis lanceolatis aequi-longitatis, petalis triangulatis (lanceolatis capitulis turbinatam subaquantibus.

*Jasminum jassimina*, Nutt. in Nut. Nov.

Var. B. *ovalifolia* major; foliis oblongis, venis erosioribus.

*Jasminum ovalifolium*, var. B. *Solanum* m. *Jasminum* ovatofolium. var. B. *Solanum* m. *Jasminum* ovatofolium.
This apparently beautiful species must have been confused with R. acuminata; and indeed is distinguishable from it only in principally by its broader, more abruptly acuminate leaves, on slender petioles, and the broader calyx teeth. The petioles are usually half an inch long when the blade of the leaf is 2 or 2½ inches long; the texture of the latter either thin membranaceous or chabazaceous, reddening to to those or trifid, distinctly papillose above. Flowers turbinate with four acute, ciliate, current angles alternate with the calyx-lobes. Corolla greenish; the slender tube 4 lines long, longer than the oblong lanceolate, acuminate, reflexed, spreading lobes. Style 2-cleft above; the divisions filiform-linear. Capsule 3 lines long, and nearly as broad at the depressed summit, thin-wish, 4-nerved, and with four...
While this approach leads to the
as many 10-foot intermediate
rows, as near the bottom

The preparation was

[Note: The rest of the text is not visible due to the fold in the paper.]

*K.* foliis amplis ovaibus obtusis ovatis ovatisque breviter acuminatis papuiculis penninervibus longis petioloatis, juvenibus ad costam venasque saxius pubescentibus; calycis lobis foliaceis ovato-lanceolatis, capsula late turbinate acute 4-costata eique longis; corolle lobis tenuibus ad equantibus.

*Tab.* Sandwich Islands; in the district of Puna, Hawaii, in fact also gathered by Henry on Hawaii, and a form of it on Lanai.

Apparently a rather large shrub, with stout branches, glabrescent except a fine hairiness which in...
Some specimens occur on the midrib and veins of the leaves. Stipules capitular and forming a short truncaate sheath, which is abruptly cuspidate on both sides. Leaves membranaceous or somewhat coriaceous, 1 inch or longer, from 3 to 6 inches long and 1 1/2 to 2 inches broad, tipped with a short and abrupt acuminate, obtuse or mostly acute at the base, the petiole varying from half an inch to an inch in length. Inflorescence axillary or distinctly supra-axillary; peduncles solitary and single or trifid, 6 to 18 lines long, prodigiously in fruit. Flowers unisexual, 4-meres as in the whole section. Scales of the calyx filiform, mem-

braceous, oblong, ovate or ovate-lancolate, 4 or at length 5 lines long, 3 to 4 times as long as the lanceolate lobes when developed, about the same length. Capsule
I

rug to hemispherical, very broadly turbinate, 4 to 5 lines long and of equal width at the flat summit, acutely 4-ribbed, or when young, 4-angled, and with conspicuous intermedian nerves. Seeds apparently flattened.

Houstonia. Linn.*

1. Houstonia (Austin) Hymenifolia.


H. Hymenifolia, Cav. Lc. b, p. 54, t. 575.

Austin (Eriostis) Hymenifolia, DC. Prodr. 4, p. 432.

Ital. Oltrajillo, Andes of Peru.

* In respect to the characters of Houstonia, Oldelandia, Hedysotes, &c. see Proceedings of the American Academy of Arts and Sciences, Sept. 1859, 4, p.
1. Oldenlandia paniculata, Linn.

Oldenlandia paniculata, Linn. - Blume.
Al, Ind. t. 15, p. 1.; DC. Prodr. 4, p. 442; Miq. Al. Ind.-Bat. 2, p. 194.

O. multiflora, DC. l.c. O. debilis, orth.

Erythēs racemosa, Lam. Ill. t. 52, p. 2; Wright. Lc. Al. Ind. Oct. t. 312.

N. multiflora, dichotoma, Linn.

Cav. 12c. 4, 573, 574.

Erythēs racemosa, Champ. & Schlecht. in Linn.9a, 4, p. 155.

Var. crispa irrationalis, Humile, subflorida, subflora, atrocarneus.

Oldenlandia crispa, Dall.

in DC. Prodr. l.c.

Erythēs racemosa, Champ. & Schlecht. quad.

Spec. n. Bakers.


Somo and Namua-Leue, Feejee Islands.云南. Lomai, near Ma-

zelle, an intermediate form.

The var. crispa is a maritime plant, with smaller and

narrow leaves, few smaller peduncles, and usually larger capsules.

Mr. Milne collected a larger-leaved form of it at Lutana (Fee-

jee Islands), on the sea shore, and Mr. Wright found a similar

form at the Sib Thor Islands. Boardings O. crispa (?crisa) may be

confidently referred to it, and per-

haps to Stee's O. debilis.
2. *Oldenlandia tenella*, Hort.

Hab. Kewa, Hecjue Islands. (Also collected by Mr. Harvey) Calabar, Philippine Islands; a fragment, Rio Janeiro, Brazil.

The specimens are elongated, lax, apparently trailing, sparingly branched; the peduncles all one-flowered; the larger leaves 2½
wide, tapering to each end; the corolla short as in *O. Burmanniana*, except the Indian specimens of which they do not altogether resemble. But it does accord well with the specimens from Rio Janeiro, and with similar ones of *O. Burmanniana* DB. collected by Spence on the Bur- 
aman and by Fendler on the Littorina (the length of the corolla of the latter (in 2 species later flowers) is not affecting any marked distinction.

3. *Oldenlandia Burkmanii*.

*f. Spicata* (Panetta) Burkmanii, DB.  
*Ann. V. 4, p. 433.*

Hab. Rio Janeiro, Brazil. A smoothish and a villose-mentate form.
Hedyotis, Linn.

1. Hedyotis Cratoegonum, Sprung.
   (Cratoegonum Rubrum), Kurnph.
   Fl. And. 6, p. 25; t. 10.
   Oldelandia Verticillata, Linn.
   Mart. p. 40.

Hedyotis Cratoegonum, Sprung.
   Fl. 2, p. 35; DC. Prodr. 4, p. 420.
   Astr. Lab. 1, t. 23.
   H. Nemosa, Kirtte, in Fed. Kruel. l.c.;
   Metabolos venosus; Blume, Bijdr. p.
   491, DC. Prodr. 4, p. 435.

Hab. Kejne Islands (Ovalce); likewise collected by Harvey and Milne;
by the latter also at the Solomon Islands; and by Mc Gillivray at
Cape York, Tropical Australia.

The above synonyms are probably correct, and more may be added.
The leaves, it, resemble those of H.
costata, R. Br.; but the calyx-teeth are longer, erect or connivent in fruit and as long as the latter. They are often 5 in number, one of them sometimes shorter and imperfect, and the fruit, which is very tardy if at all septicidal, is occasionally trilocular.

2. Stedylis Lavigata, Miq.

Stedylis Lavigata, Miq. Fl. Ind. Nov. 2, p. 178

Metabolos Lavigatus, Asott. Fl. Prodr. 4, p. 436. (Selernococcus, Bartl.)

Type, Luzon, in mountains near Manos.

Smooth, or nearly so; the angles of the stem above somewhat ciliate. Teeth of the calyx not half the length of the ovary, oblong, striate-nerved, at length bipartite or fruit. Veins of the leaves slender, curved; the veins not only reticulated.
(Diplophragma)


*Hydrophila* juliis membranaceis
laxe venosis oblongis seu ovalis
lanceolatis acuminatibus basi
subaenatis longissimis petiolaris
junioribus sublitis pilis
centibus; stipulis bracteis
truncatis utrinque in sub-
larvem primato 5-5-fides gland.
ultimis formis appendiculatis
acutis; cymis laxifloris,
floris pedicellatis; calyx
limbo 5-partito; lineari-oblongis sub-
recurvis tubo suo bisnato adque
longis; sinuibus obtusis; costa
brevi quadrifida fave
arachnoideo-villosissima;
dentibus inclusis; capsula
rejecta.
Stub. Luzon, in the Majai
jai mountains, near Manilla.
(Same as no. 937, Col. Cuming.)

Apparently a large herb or
suffrutescent plant; the younger
parts more or less pubescent.

Branches quad-angular, with
the angles rounded and a groove
on each face. Leaves 2 to 4
inches long, 12 to 18 lines wide,
oblance, verging to ovate-lance-
olate with acute, tapering acu-
mination, membranaceous,
loosely veined, at length glabres-
cent and glabrous beneath, but
the middle and principal veins
more or less pubescent. Petiolar
plunder, 5 to 9 lines long, Nago-
minate stipules very short, truncate,
and produced on each side
into a process, about 2 lines long,
furnished with one or two avisiform appendages on each side, and tipped with a gland.

Bynes axillary or terminating short branched clusters than the leaves, peduncle an inch or less in length, pedicels filiform 1/2 to 3 lines long, bracts imbricate. Calyx a lobe and a half in length, the tube lanceolate, the lobes linear oblong, obtuse, foliaceous, not carinate, almost recurved, spreading, fully half the length of the corolla; the corolla almost campanulate, about 2 lines in length, glabrous externally, the ovate lobes valvate in distillation; the throat very villous with long pubescent, white hairs. Filaments inserted in the throat of the corolla; and filaments very short, anthers
oblong. Style somewhat exserted; stigmas 2, oval, flat.
Ovary 2-celled; placenta attached to the middle of the dissepiment, pluriovulate. Capsule
a line and a half long, turbinate, the summit not at all projecting beyond or free,
mature, keeled, crenate with a thin
smooth epicarp, septical to the base, the cocci opening widely down the central suture.
Seeds flat, brown, a projection to the texture which contains
2, 3 hard seeds, hard, apparently
not splitting on the back. Seed
oblong, flat, thin edged, with a
central, slightly
miterated hilum.
The fruit is all old and
dehiscent, the seeds mostly shed.
Or. Valerianaceae.

1. Valeriana, Linn.


Stat. Peru, near Lima, also Otuzillo and Barrios.


a glabrous form. They also contain possibly a glabrous variety, with the stem a little hairless. The capsule is inflated and the pedicel is somewhat inflated. The flowers are in perfect.

5. Valeriana hybrida, Vahl, stems terete, leaves lanceolate, bases petiolate, Nars. 3-5. Folii radicalis striato lineari-lanceolata, bases integerrimo, sternis teretibus, floribus integerrimis.

Ital. Mudas of Peru, near Baños.

This is probably a more variety of Vahl's V. hybrida, with more slender and less divided radical leaves. Some of them, indeed, entire, and the others merely laciniate. The slender, almost naked stem from a span to a foot and a half in height.

*Hab.* Buenos, Andes of Peru.

The leaves are mostly narrower than in Ruiz and Pavonius figure, and the scape is naked. The fruit is ovoid, smooth and purplish; the calyx limb of five plumose scale which are dilated at the base and terminate into a short cup or crown, as in *V. serrata*.

7. *Valeriana psycanthes* sp. nov.

*V. herbacea*, glaberrima, manis, multiceps e candice ovario; foliis carnosis manibus ciliatis, radicibus linearis-stratulatis, carinatis 2

1 vol 3 verticillata; fructus medium 

scapi simplicissimi 1-4-pollicarii.
(Cinnamomum kutchicum
floribus in capituli denuo
separatis. Fructus obovato-
shape.""

Hab. St. John's, Nova Scotia.

This is related to *N. coarctata*, but it can hardly be a more
alpine and depressed variety of
that species. The stick is cyanic,
leaves, and escape are much more
succulent, the leaves are ciliate,
the flowers cramped into a cone
part head, either globose or
at length cylindrical, and
fully half an inch thick. Cauline
leaves a single pair or a clump of three, half an inch long; the
crowded radical ones an inch or more in length.


N. Herbaea, depressa, capito, glabra; calicis crasso; foliis omnibus radicalibus subcarinosis anguste spatulatis vel sublinearibus basi attenuatis integerrimis; scapo modo 1-3-folli cuo capitulum globosum, Scario, bracteatum, genitalibus; acernis ovalibus feneriis; pappo 10-12-radiato, setis basi carnatis. Varius scapo triviriscino.

Ital. "High Stiles of Rome in the environs of Casa Camelia; in the fruit, a form " on the crest of the sides" is more condensed, the scape very short."
Less flabby than the preceding species, the thick rhizome, forming depressed tufts. Leaves about an inch long, including the alternately base or petiole, towards the apex a line and a half broad, thickish but firm, the midrib prominent underneath. Scape mostly slender, and perfectly marked. Bracts of the globose head nearly as in V. psycanthra, the achene broader and flatter, and the long plumose seta of the fru...

*N. glabra*; radice crassa fusiformi- 
resulam foliis post-
latis spatululato, rhombatis car-
mosis, capitulum florum arcte
serride depressum circum dantibus,
cornata; pappo cupulato be-
vissine 5-radiato, radvis danti-
formibus sub conchise in volutis.

High Andes of Peru, "in the
Alpanarea Mountain Peak.
"Succulent and said to be es-
culent; root fusiform; leaves an inch
in length and breadth, obtuse, sur-
rounding a central cake of flowers,
all even at the surface and densely
congested". Pickering, ad. The speci-
mens are scanty and in poor con-
sition, but the principal characters
can be made out. The bracts are
Scariosus and not carnate, the flowers those of a Valerian, except that the petiole of the sepals are reduced to short, tooth-like processes on the border of a cup, like that of many Valerianae within which they are insinuated in the usual manner. Whether they develop to any considerable length in the fruiting state is unknown, but it is unlikely that they become glomerose, so that this species militates strongly against Persoon's genus Phylica, recently restored and extended by Beddell.
G-2. Cytisus acetosae
1. Cytisus, Juss.


An imperfect specimen, the flowers or fruits all faded from the chalky receptacle; but it appears to belong to this species.

2. Cytisus crassifolia.

13. glaberrima; caule (usque ad pedalem) ramoribus adcurrentibus falcatis, carnosis, canaliculis sessilibus pellucide subamplexis, carnosis lanceolatis sericeis latis repando junculatis, capitato breviter pedunculato, involucro subcarnoso, segmentis oblongis; filamentis viridi.
maradolphis; achenies pentactenis; calyces lobis fractus material scarsiforme castellagineis disco caulibus carinatis antus concauinas ramus truncus evo denticulatis demine digornibus, nume late triangularibus ovatis acutis bavaribus, nume ovato-lanceolatis vel subulatis achenium dimidium adequatebus; pa-
lis septicdulis filiis formibus apicem.

Scirrpa crusifolia, Miss in


6 (1860), p. 402.

Hab. Rio Negro, N.W. Patagonia,
in sand on the shore. Malvarrado,
Juncos, no. 1068 in herb. Hook.
A rather stout, succulent, glabrous, branching herb, a foot high; the
root not seen; the branches leafy
to the tip. Leaves very fleshy, one
or two inches in length, 3 to 5 lines
in width, all sessile, and mostly
broadly clasping, sparingly more
or less toothed; the short, patent teeth
rigid or somewhat appressed; the
lower leaves in line to spatulate
or oblong; the upper to line or lanceolate;
the latter acute or mucronate.

Heads solitary terminating the
stem and short branches. Divisions
of the involucre resembling the leaves;
3 or 4 lines long in flowering heads,
as long as the fruiting heads. Tube
of the corolla filiform, about an inch
in length; the limb 5-lobed,
deeply 5-lobed, lobes obovate. Stamens
5; filaments inserting upon the throats
orifice of the corolla, scarcely if at
all more adnate; but their elea-
ated bases glandular. Stigmas at
margin or a little below; these glandular points answering to the five arcades alternate with the stamens, another rather larger than the filaments obtuse. Style filiform, exsert. Stigma obtuse. Calyx 2 lines long, truncate, with five very acute and parallel or winged angles, which are continued into the part of the lobes of the calyx. Calyx lobes are of the same texture as the wing-like angles of the achenes, are concave and convex to the inner face and strongly held in the outer, and vary in different plants, or even in the same achenium, from broadly triangular or dilated acute and one-third the length of the achenium, to ovoid lanceolate and pointed or subulately and more or less elongated, sometimes nearly the length of the achenium, but generally shorter. Exterior scales of the receptacle linear, filiform, the inner almost petallaceus,
with a dilated or spatulate tip, from 3 to 7 lines long, persistent.

Our specimens are mostly in fruit. I do not remember the state of Médicis’s Specimen in the Xeranthemum tuberium, with which ours was long ago compared, but I suppose it too the flower only’s else Mr. Müllers card hardly have referred the plant to Apicapha.

* De Candolle was quite justified in disregarding Romoos qualifiead recommendation to change it's

For the apparently the varieties, and certainly the Athenia, are not at all concerated, and the calyx-lobes are not spinose, but chaffy. I should imagine that Mr. Müllers word, in the whole, have referred it to this genus Acrocarpus.
or else as I have done to Pogonia.

In the views of the more or less

different calyx-lubes, the nar-

rowest become subulate and more

indurate, I am led to think

that even Pogonia will at least

be reduced to a more section of

the original genus Calycera.

2. Acicarpsea, Juss.

1. Acicarpsea Hypoleuca, R. Br.

Hab. Rio Janeiro, Brazil.

Mr. Hooker has adopted Mr.

Browne's very qualified recommen-

dation to change Jesse's name

to Acicarpsea. It will generally be

right; however, that Dr. Candolle

and others have rightly retained

the original name, since Carpe

may as well refer to Calycera.
as to spectacular stuff, while the name Asclepias has no great advantage as respects etymological appropriateness.

Scabiosa maritima, Linn
(S. Africana, Ecklon) was picked up at the Cape of Good Hope.
Ord. Compositae.
Subord. I. Tubuliflora.
1. **Veronica** Splendens, Less.

*Stud. Brazil, near Rio Janeiro:* a glabrate form. Organ Mountains, a variety with the vigorous short-stemmed, ailed, and the indumentum of the younger leaves fermenineous, of the older, silvery.

2. **Veronica** serpensoides, Pers.

*Stud. Brazil, in the vicinity of Rio Janeiro:* several varieties.


*V. (Lepidagathus) scandens:* fine glabra; *ramis foliis* apice subcapsuoides, capitulis fruticos; *foliis parvis ovato-obl.
largis seu ellipticis obtusis
obsolete denticulatis pubescentibus
venis obscuris; capitulis semin-
ibus folio aquilago stipatis;
involutis 10-12 flore squamis
lanceolatis sed linearis
omnibus cuspidato acumin-
atis; ovarii periciis; papilli sec-
vi exteriori brevi squamellata.

Stab. Brazil, near Rio Janeiro.

This is probably common around
Rio Janeiro, and very likely already
described; but I cannot identify
it with any published species.
It is no. 546 of Martius's Stab.
Flora Brasiliensis; it was also
collected by Guettard, and mixed
with his no. 550 F as Vaccinium
Myrtillus. The leaves may be likened to
those of
Vaccinium Myrtillus for size and
shape, but they are pale and de-

tailey cinerous, those of the somewhat

teriploid in flowerence 4 to 6 lines

ing, about the half equal in the

ferile heads. Innere calipunc-

ulate, the coriaceous scales slightly

or at length glabrous, the outermost obovate,

the inner linear, all shap-

pointed. Mature achenia nut brown,

Pappus white; the exterior short and

tamamellate.

4. Vernonia denticulata, DC.

Var. folis tere integerrimis supra

textilis scapula floribunda effusa

or i.

Hab. Maril, near Rio Janeiro.

Although the leaves are entire

and simlish, this seems to be De-

Candollei's V. denticolata, or at least of

Gardner's plant referred here by Banks

in Lindl. Trans. Linn. Soc. 4, 3114.

Stab. Luzon, near Banos, and Singapore: the var. Parviflora (N. parviflora, Rehn, Reh. & Mig.). Luzon near Baldera and Manila; Hunter's River, New South Wales, and Tippina, New Zealand (not noticed in Strother's Flora of New Zealand): the var. Strophyllea (N. cyanophylla, Walp.): a very narrow leaved form of this polymorphous species.

Horstia's Chrysocoma Pustulae belongs to this species, according to the specimen in Tab. Lambert, now in the British Museum.

Cyanopsis, Blume

1. Cyanopsis rubescens, Blume.

Stab. Luzon, in the vicinity of Manila, 45.
Monosia, Sc.


M. fruticosa, laxe ramosa, foliis oblongis acuminatis repando dentatis basi cuneatis inepto
lacinia attenuatis puberulis supra glabris subtilis ad costa
vaginaque cum ramis ad presso-tenentellis; capitis
cornibus; pappi setis rigidis vix denticulatis majoribus
apice clavellatis.

Ital. Tonya and Kejuk Islands.
(No indication of the stations, B.)

A stumpy plant, with
spreading or ramose branches;
the younger ones whitened with a
five and close pressedomentum,
Leaves alternate, membranaceous, oblong, ovate-oblong, or lanceolate, oblong with a slender acumination, coarsely repand. Tothed, Cuneate at the base, 3 to 6 inches long, one or two inches wide, glabrate and green above, minutely pubescent and cinereous beneath, the strong midrib and the rather prominent primary veins tomentum close like the branchlets. Petiole two thirds of an inch in length. Heads usually fascicled in three, or five and rather numerous. In small and conical or simple, naked, convex, coriaceous, or spongy, which are terminal or from the upper axil, much shorter than the leaves, or peduncles of about the length of the petioles. Pedicels short or none. Involucres cylindraceous, the scales imbricated in three or four ranks, or the back and adaxial ridges, glandular pinked, rather obtuse;
the outermost short and ovate, and ranging to the inner oblong, oblong-lanceolate. Flower solitary, at length nearly twice as long as the involucre. Corona purple, the linear lobe as long as the cylindrical tube. Stigmas sagitate in the manner described by Studz, i.e., the filament inserted above their base, dorsally attached to the filament above their base; the basal lobes obtuse and pubescentiforms, as in other Neroniaceae. Style as in Neronia, but its base not at all thickened, and not by a narrow cylindrical neck or disk. Stylarium cylindricke, slightly narrowed downwards, 10-ribbed, glabrous, beset with glan-
dular atoms. Pappus of very stiff and rigid, obscurely denti-
ulate bristles, a few of the outer
most shorter and slender, another
series slightly thickened towards the
summit, the innermost rather
longer and shorter, nearly equalling the corolla, and very manifestly clavate-thickened upwards.

This appears to be a true congener of _Monosia Nightianae_ s.l., the type of that genus, if it stands in nearly the same relation to _Ilymanthes minor_, Cass., that the section _Eremosia_ does to _Nermonia_.

Albertinia, Sprag.

1. Albertinia Brasiliiensis, Sprag.
Albertinia Brasiliiensis, Sprag. Syst. 3. p. 355; Fl. Prov. 5. p. 84; Deles. 20. 4. 174.


Hab. Brazil, on the Corcovado, near Rio Janeiro.

Elephantopus, Linn.

1. Elephantopus decaber, Lin.

Hab. Luzon, near Manila

A softly strigose form, approaching the American E. horontinus.
and yielding confirmation to the opinion of Schultze that the five species of the first section of the genus in de Candolle’s Prodromus are only forms of one.


   Hab. Brazil, in the Organ Mountains, near Rio Janeiro.

   Hab. Brazil, in the Organ Mountains, near Rio Janeiro.

   Hab. Brazil, in the Organ Mountains, near Rio Janeiro.

3. *Elephantopus (Elephantotis) argutus*, J. S. Drue, Swartz
   *Elephantopus (Elephantotis) argutus*, J. S. Drue, Swartz

   *Elephantopus (Elephantotis) argutus*, J. S. Drue, Swartz

   *Elephantopus (Elephantotis) argutus*, J. S. Drue, Swartz

   *Elephantopus (Elephantotis) argutus*, J. S. Drue, Swartz

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   *Elephantopus (Elephantotis) argutus*, J. S. Drue, Swartz

   *Elephantopus (Elephantotis) argutus*, J. S. Drue, Swartz

   *Elephantopus (Elephantotis) argutus*, J. S. Drue, Swartz

   *Elephantopus (Elephantotis) argutus*, J. S. Drue, Swartz

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   *Elephantopus (Elephantotis) argutu...
Paranephelius, Poepp. v. K.


Var. a. Pinnatifidus; foliis bipartitis, pinnatifidus; lobis inciso-dentatis, pagina superiore nume lavo nume bullata.

Paranephelius uniflorus. Poepp.

Var. b. Bullatus; foliis late ovatis, basi truncatis seu obovatis, inaequaliter dentatis supra bullato rugosis nume glabris glabrisque nume pilis viscosis hirsutis, petiolis ad marginem super quam duaque dein tinctuatis.

Paranephelius bullatus. Gray
Nar. N. ovatus; folis ovatis obvatis vel subobovatis inaequaliter dentatis, varius basin basum incisis, supra laevis et glaberrima, petiolo nomine denticulato.

P. ovatus, Nedl. i.e. p. 264, t. 37.

Hab. Andes above Banos, Perú. (t & P.); var. N. also at base banana, and var. B. at Alpamarea in the high Andes.

Mr. Deddell, as well as myself, had distinguished these three forms as species, but an attentive examination of various specimens leads to the conclusion that they are all forms of one, differ
ing only in foliage, petals, etc., and the like. In all the leaves are white, tomentose beneath, the tube of the ligule bisinate; the outer scales of the involucre pataclate, or even obvolute, and obtuse; the inner ones lanceolate or linear and acute. The bullion of the leaves is evidently variable, and the shape of the leaves is not reliable for specific characters, especially where the denticulations of the narrow margins of the petiole show a tendency towards a lyrate leaf lamina. In addition to the stations recorded by Meidell, the typical P. mucronatus was gathered by Ratland on the high Perus in the South-western part of Peru; the var. bullatus at Chacas near Lima, and the var. oculus by McLean (sp. d'took).
1. Liaburnum lyraatum, sp. nov.

2. Herbaceum; foliis supra hirsutis, glaberrimis subtilis arachnoideae, tomentosis, cantilibris hirtis, lobatis, petiolo basi auriculatisque, plerumque connatis, summis seco-silicibus basi dilatata connatis, folio terminali maximó pubicíso et reperiendo densiculato; pedunculo terminali elongato - 3 - cephalo; mono- oligocephalo; involucro dynamis oblongis subtus striatis; pappo e setis paleolisse rigidis in equalibus, exterribus dimidio brachiatis.

Aiburnum liaboides, Less.

Linn. p. 152?
Star. Ochromillo, Anides of Peru.

The character is taken from an imperfect specimen in this collection and from one in the Peruvian collection of Matthews, no. 3057. In both the head are injured by insects so that the whole structure cannot well be made out. I suspect, however, that they may be identical with the Allium diaboides of Lessing, incompletely characterized from fragmentary specimens gathered by Humboldt, and left unnoticed by Knuth. If this be so, the genus Allium cannot stand upon the character indicated. For the papules are apparently greatly similar in the disk and ray, and not really erro-
uniform. And the plant nearly
accords with Dialnia, in the extended
seal, or with Andromachia sect.
Orionactis of De Candolle, except
that the bristles of the pappus are
more stout and rigid, and also
fewer. They are fragile, however,
as well as deciduous, and some-
times break off near the base;
and the margin of the summit of
the achenium, on which the
pappus is inserted, appears somewhat
like a short crown. The bristles
form about two series, the outer
ones more subulate, and barely
half the length of the inner. Bra-
ny minute on the angle. Ache-
mnia obovate, oval, thick, obsolete-
ly angled, smooth, and glabrous,
with a depressed terminal arista.
Whether the receptacle is naked or
finer bifidiforme cannot be made out.
Head solitary or appressed, as long as the leaves, or two or three short-peduncled ones on the pro-
latered and naked summit of the stem. Scales of the involucre in
briated in about three series, 3 or 4 lines long, more or less evi-
dently nerves or striate, the outer
ones oblong and obtuse or acute,
the inner varying to lanceolate
and mostly cuspisate, acumi-
nate. Rays 30 or more:
Two ligules linear, yellow,
half an inch long, toothed at the
exanody, toward the base minute
underneath, as well as their base.
Corline leaves from 3 to 7 inches
long, including the petiole;
the terminal lobe large and
deltoid, acute, serrate, and den-
ticulate, often incised or toothed;
the lateral lobes much smaller,
about two pairs. The uppermost
pair of leaves sessile by the
cuminate, acuminate base, above which
it is contracted, then deltoid-dilated, or camellate, or with a pair of small lateral lobes. Root and base of the stem not seen; but the plant is probably a low herb, about a foot or two in height. The young stem is clothed with a thin, flaccid, and deciduous tormentum, like that of the lower surface of the leaves; under this it is glabrous or near the summit glandular-pubescent.
Piqueria, var., l'ardm.

1. Piqueria artemisioides, H. B. K.
2. Piqueria floribunda, D. C.

Tab. Peru, between Lima and Obrayilla.

Ageratum, linn.

1. Ageratum campyloides, linn. H

Var. B. multicorne; pappi paleis amnisus
multicis obtusi aut 1-2 longini =
his subaristatis.

Tab. Madeira, Rio Janeiro,
Tejuu Islands, Hawaii, Sandwich Islands,
St. Helena, Tristram of
American origin, but now dispersed over the warmer parts of the world. The variety was gathered at Lima, Peru, except in the complete or partial absence of the fruit. As the species it does not differ from some of the common forms of A. longifolius. Regel's A. brachystephanium is probably the same thing.

Adenostemma, Forst.

1. Adenostemma viscosum, Forst.

Adenostemma viscosum
He. Prodr. 5, p. 110.

Lavinia ereta and L. glutinosa, sandick.


Hab. Tahiti, Society Islands, Upolu and Manna, Samoan Islands, Teree Islands, Oahu, Sandwich Is=
... Fosters and de Candolle's A. viscosum is only a form of de Candolle's A. glutinosum with thinner and narrower leaves, probably growing in more shady places. To this common Polynesian species a great number of nominal species are probably to be reduced.


Laureria macrophylla, Blume, 3:3, p. 905. Adenostema macrophylla, Blume, DC. l. c. ?

Ital. Arabia, Zeelee Islands.

This is perhaps only a variety of the preceding with larger leaves (broadly ovate and 5 or 6 inches long), and nearly smooth achenes. It accords pretty well with what I had named A. Californicum from the Siskiyou...
Islands, with "Cunning's no. 1749" from the Philippine Islands, and with a Himalayan specimen collected by Edgeworth and named "Elatophyllum" by Sir W. Hooker.

Stevia, Cav.

1. Stevia trachelioides, DC?

Hab. Peru, near Baños, Cotajillo, 45.

Receives very well with Balandier's plant from Jolulca, except that the leaves are smaller. Perhaps it is also a var. of Stevia lagisca. The pappus is minute.

2. Stevia oligocephala, DC.

Hab. Brazil, in the Organ Mountains near Rio Janeiro.


Notothites melissopetala, Sch. Prodr. 5, p. 186.


S. dodecaeheta, Sch. Prodr. 5. p. 122.


Var. b. glabella; folis basi argenteis, cunatis, punctatis, petiolatis.

Notothites petiolata, Cass. l.c. 12.

Stevia petiolata, Schultz, l.c. 12.
Tab. Olavillla, Peru: The variety with piloseate leaves.

This is evidently the Aristotes petiolata of Cassini, and I presume no more than a variety of this N. latifolia, for which Le Candolle restored the ancient specific name of melissa folia. The brief character and habit of Lagaecia Stevia subecto aristata point to this species; although all except the "pupps 7-9 aristata:  stab.  S. ovata sinillima" of Lagaecia is supplied by Sprengel, probably by transference from S. ovata, on the strength of the asserted resemblance. He states that this specific name, though the Prior one in the genus, is rather inappropriate, as well as sesquispaced, and the area of the pupons being usually ten or eleven, or more; so it will give place to the much earlier Lamarkian name, which has
already been suggested by Schulte, when he erroneously detected a species of multi-anisotoma Stev.  
Stevia S. puberula came from Córdilillo, and is not specifically distinct from our plant, and  
De Candolle's S. doleachata is partly clearly of the same species.

4. **Stevia nativaefolia** Schultz.

_Eupatorium nativaefolium_ Lam.  
_Whites maritimi folia_ Cass. l.c.  
et N. nativaefolia_ Bl. l.c.  
_Stevia multi-anisotama_ Steph.  
_Syst. 3. p. 449, Stock. Am.  
_Hab. Rio Negro, North Patagonia._

Here the identification is perfect, and the older name should be restored.
The anthers, or rather stamens, of the pappus are barbellulate, and vary from 15 to 22 in number; there are often a few shorter and squamellate ones, or short palaeae, and occasionally one of the exterior flowers has a short and paleaceous pappus without any petae. No doubt this and the allied species are inseparable from \textit{S. \textit{Sulcata \textit{Breviflora}}, the remaining species of \textit{Bassini}, is evidently \textit{S. \textit{Aristata}}, \textit{Dav.}, and probably \textit{S. \textit{Memorica}}, \textit{Dav.}, as Hooker and Arnott suggest.

\textit{Conoclinium}, \textit{Dav.}

\textit{1. Conoclinium betonicaforme}, \textit{Dav.}

2. Convolvulinum subglutinosum

C. glabrum; canticus basi suffruticosis; folis longe petiolatis late deltiformes ovatis acuminatis

deltoides ovatis acuminatis serratis membranaceis

tripleri quinqueflorum utramque subglutinososis; corymbo polycephalo; involucris aquanis

bicarinatis dorso subglutinosis bicarinatis; exterioribus ovatis, intimis spatulatis acutis;

acheniis glaberrimis.

Nab. Brazil, near the base of the Organ Mountains.

This may have been described as an Eupatorium, but I cannot identify it. It somewhat resembles Gardner's Eupator-

ium medium, from the same
district. In habit and foliage it resembles E. aestivalis, but the stems are evidently woody at the base, and the receptacle is acutely conical. Petioles blade one or two inches in length, not much shorter than the broadly ovate blade, which is obtuse or truncate but not at all cordate at the base, and moderately toothed. Bracts pedunculate, these campanulate, 2 lines long, a little shorter than the flowers; its principal scales remarkably broad. Flowers 25 or more in the head, corolla white or flesh-color, pap. frns. achenia, ds. as in the genus.
Hebeclinium, S.B.

1. Hebeclinium macrocephalum, var. rivale, S.B.

Ital., Brazil, in the Organ Mountains, near Rio Janeiro.

Campulochlinium, S.B.

1. Campulochlinium macrocephalum, S.B.

Ital., Base of the Organ Mountains, near Rio Janeiro, Brazil, in marshes.

To this species *Campulochlinium domanicum*, Hook. & Arn. in Camp. Bot. Mag., vol. 2, p. 243, is to be referred. Some of the lower leaves are opposite. The receptacle is convex-conical and papillose-serrulate. Some of the pappus bristles between 2-4 mm. and barbellate.
Eupatorium, Town.
1. Eupatorium conyzoides var. Maximilianii

E. Maximilianii, DC. Prod. 5. p. 143.

Tab., Brazil, in the vicinity of Rio Janeiro.

I am confident that E. Maximilianii is no more than a form of E. conyzoides, at least of the species figured by Schrank under this name, to which E. diversissimus, Less. must also belong. The stricto, scales and whitish coriaceous scales with very obtuse subherbaceous tips, mark the species. Of E. Maximilianii it can only be said that it is a form with rather larger heads and usually more numerous
flowers, and with marcescent and
mire serrated leaves. C. cong-
2oides, var. glabrescens, of St. 
in the Botany of the Journals, can-
not well be of this species, but is
near C. obtusatum (notwithstand-
the oblique scales), probably Ceban-
delles var. Dubense.

2. Eupatorium impingnum, v. 263, 
Itab. Rio Janeiro. Brazil. An 
imperfect specimen.

3. Eupatorium persicafolium, H.B.K.
Eupatorium persicafolium, H.B.K., in 
Pers. & Herb. 4, p. 130.
E. compactum, Bercht. in Bot. Mag. 
Syst. p. 112.
Itab. Orazillo and Callenay, 
Peru. Also gathered in Peru by Dombey 
and by Matthews (no. 546), and at Stroman- 
tango by Barclay.
Leaves larger than those described by Knuth, being from 3½ to 6 inches in length, and from one to nearly two inches in breadth, all rounded at the base. Involucre half an inch long. The heads in Bentham's E. compactum are smaller than in Humboldt's plant and ours, but otherwise the same. The species is nearly allied to E. arboreum, H.B.K., and also to E. tubuliflorum, Bentham., which is certainly E. dissectus, L., and probably E. polycirrimum, Lam., but the leaves are not acute at the base, and the involucre is more imbricated.

4. <i>Euasterium</i> <i>Salvia</i>, Colla.


<i>Stab. Chili</i>, in the vicinity of Valparaiso.

Hub. Abraijito, Peru, where it was also gathered by Matthews. (Herb. add.)

The present specimen is an imperfect one; but, with the aid of one from Mr. Matthews, in the Stockerian herbarium, it is clearly ascertained to be De Candolle’s "E.

glomeratum," which I have been told probably gathered in the Peruvian rather than the Chilean Andes. The leaves are all very unequally ciliate at the base.


State, Brazil, in the vicinity of Rio Janeiro. Probably common, as it was collected by Selkov and Bkh, as
well as by H. Gardner. From our specimen one would suppose the stem to be herbaceous.

7. *Eupatorium glabriusculum* L. C.

*Hab.* Oru Mountains near Rio Janeiro, Brazil. A single specimen.

8. *Eupatorium lavei* L. C., L. C.

*Hab.* Vicinity of Rio Janeiro, Brazil; where it is evidently common, having been gathered by most collectors.

Ant, Brazil, in the vicinity of Rio Janeiro, while it was also
gathered by Nanthier, C.W. Burchell, and Gardner as well as by
Baudichard.

As long since remarked (in Plantae Wrightianae, t. p. 87) this
and the nine additional species
Brazilian species described by
Gardner, having pentagonal achenes
without intermediate ribs, are true Euporia. The present
species is clearly allied to E. glabriusculum and E. Nanthierianum.


Lit., Chili, abundant in the vicinity of Valparaiso.

11. Eupatorium sternbergianum

Lit., Peru, in the vicinity of
Obrajillo.
12. *Eupatorium cattlincola*, DC. New, with the preceding. A single incomplete specimen, with accuracy pretty well with the character of this species.


A very imperfect specimen, but apparently the same as the Chilian plant, for which the older name is preferred. A close ally of this, and equally inseparable from *Eupatorium*, notwithstanding the
Labeled date plate of the poppy is E. paradisiaca, Hook. & Arn. &c., the "hottest bachelor's button," Sc.

Mikania (Mill.)

1. Mikania diversifolia, Sc. (?)
2. Mikania umbellifera, Gardn.

Hab., Brazil, near Rio Janeiro.

3. Mikania Laca, Sc.

Hab., Peru, at Callao, Lima, and Yanga.

The panicle is smooth; otherwise the plant accords with De Candolle's character of this species. Some of the leaves incline to spreading, eremate. Probably it is also M. variabilis of Meyer and Walpers.
4. Mikania volubilis, Mill.

It is Luzon, in the mountains near Baños.

This is nearly allied to the North American *M. scandens*, as Mill =
now and De Candolle remark.
Chilistrichium, Cass.


*Aster diffusus*, Forst. Gem. Guett. 9, p. 39, 9


Nat. Orange Harbour, Tiuegia.

A characteristic shrub of Patagonia, Tiuegia, and in the Falkland Islands, where, according to Dr. Hooker, it is the tallest dicotyledonous plant except the rare *Nervinia*. It attains the height of four or five feet, and forms a bushy spot along the banks of streams. The genus differs from *Eu-
Eurybia merely as do the palate
from the epaulette species of Gorethroz
gyne, and the from Diplostephanus,
of the sides, by the same mark,
and by the simple bractes.

Eurybia, Cees.

1. Eurybia (Plinia) furfuracea, Bc.
   Aster furfuraceus, A. Rich. Fl. N.
   Dec. p. 246.
   Eurybia furfuracea, Bc. Prod.
   5, p. 261; Stockf. Fl. N. Zeal. 1,
   P. 117.
   Stactonia furfuracea, A. Cunn. Fl.
   N. Zeal. P. 216.

Hab. New Zealand at Nga-room
Bay. 4.

I believe this is also, in
fact, the Bogedia arborensis of Forster.
(which Selanders genus Steinactis
was founded),

having been confused by him
with the nearly related E. nitida,
Hook. f., or Shania arboreaensis of
Raoul. Both are manifest em-
genues of E. forsteri, Hook. f. (Shania
paniculata, Forst.) which was not
met with by our Naturalists.

2. Eurybia solandri, Hook. f. l.c.

St. Ngarunui Bay, New Zealand.

The achenia, said by Dr. Stokes
to be quite smooth, are not ma-
ture in our specimens, but the in-
mature ones and the ovaries are
sparsely hairy.
1. Aster Nahlii, Nutk. & Br.

Aster Nahlii, Nutk. & Br., in Camp.,
Mt. Mag. 2, p. 49; Stofk. 20. 1, 456
Stofk. j. Fl. Nat. Am. 2, p. 305,
Erigon Nahlii, Gaudich. Mt. Frey.
NVI. p. 135; LC. Prov. 5, p. 295, 17
E. glabriflora, SB. 1, c. p. 287; Eufy. 4, chile. 4, 428
Tab. Orange Nat. Am. 5, chile. 4, 193

Extending to Chili, (One of the species ambiguus between the Alpigenous Aster and
Erigon.)

2. Aster (Anticostam)
Triopodium, Nus.


*Triopodium conspicuum*, Lindl. in DC. Prodr. 5:204; Gray. Fl. Chil. 4, p. 15.

Sant. Chile, in the vicinity of Santiago, Peru, at Callao and Lima.

The root is not perennial, as is stated in the *Horn* Chilena. There were specimens from Lima exactly like those from Chile. But those of this collection have more slender and more slender, glabrous achene, and more numerous and pointed involucral scales.


*Aster subulatus*, Less. in Linnaea, b.p. 120, var. prob. (p. 287)

*Triopodium subulatum*, var. DC. Prodr. 51

Hab. Sandwich Islands; on the coast of Oahu and Kauai.

Erigeron. Lind.*

1. Erigeron chionophilum, var. sericeum, Nedd.


Hab. Andes of Peru above Banos.

2. Erigeron hieracioides, Nedd.


Hab. Andes of Peru, above Banos.
Erigenia spatulata. True, if it be, as I think, a plant of Drumm's, which I formerly examined in Herb. York, is a "Erigenia" of ?. Drummond, i6., and a Cynarea.
Bulleng, 18. A dwarf state of the species: the flowering stems scarcely exceeding the rosetulate radical leaves, the cauline leaves somewhat spatulate and three to three at the truncate apex. Mr. McLean also gathered it in the Peruvian Andes.

3. Brizerra leptosthiza, Lc. B.,


Var. B. canescenti-villoso vel hissitum, caulibus basi ligneo-coriibus decemfuntibus.

Var. V. gracile, hissitum, foliis parvis integris narscere dentatis, imis spatulatis, summis fere linearibus.

Itab. Coast of Peru; var. B. on the island of San Lorenzo; var. at Lima.
Donabe's specimens are young, flowering directly from the seed, and with a slender root. Ours are more submersent, even casuarinina, and with a stouter root. In the var. c, even lignonc, as in the bush of the decumbent stone, but probably of only annual duration. They are older specimens, in duraed by roots. The rhipus is simple. The var. f.

having smaller leaves, much smaller and narrower, mostly quite entire leaves (the radical ones 5-10 lines, the upper cauline 2 or 3 lines, in length), is perhaps a distinct species, but I think not. Both forms were collected at Lima by Cuming, no. 1083.


Stn. Chili; common around Naspa-...
This species is well described by Hooker and Smith, but not by de Candolle, whose character is adopted without correction in the Flora Chiliaca.

5. *Eugemia andreicola*. L.B.


*C. Gayanum*. Penny in Gay. Fl. Chile. 4, p. 25; Medd. Lthl. And. 1, c, 3.


Hab. Andes of Chili, above Santiago. A poor specimen, the flowers all fallen from the solitary heads.

Hab. Oryan Mountains near Rio Janeiro, Brazil.

This is probably not distinct from *E. pulcatum*, B. (not J. Meyer); and belongs to the same section of the genus as the North American *E. speciosum*, &c.


*Chrysa Chileus*, Spring., Less.;
DC. Prodr. 5, p. 378; H. in
П., Add. 4, p. 70.

*E. angustifolia* & *E. grecina* Desf.

Cat. Hort. Par.

*E. Deamii*, f. *Australisiana*,
Mey. & C. c.

*Hab.: Brazil, near Rio Janeiro,
and at the base of the Organ
Mountains.*

9. *Erigenera (Baeulus*) artemisioides,

*Chrysa artemisioides*, Meyen & Malp.

Mel. Meyen, p. 262.

*Hab.: Andes of Peru above Banos.*

Allied to *E. Pinnatum*, Turcz.,
but manifestly distinct. The stems
are decumbent, about a foot in length,
Leaves deeply pinnatifid; the lobes 4 or 6, very obtuse, oval or oblong, margins. Heads forming an interrupted spicate raceme or condensed panicle, the papery involucre. A second specimen was feyni, and consequently rather larger heads, with the papery barely fulvous, much longer than the female flowers, the corolla of which is tubular with a toot: unilatral tip.

9. Erigeron (Candus) Hirtellum DC.

Erigeron Hirtellum, DC. Prod. 6, p. 290; Heing in Gray Fl. Cali. 4, p. 30.
Eryza Larrainiana et C. Andina, Heing in Fl. Chil. 4, p. 71, 73.

Val. Chili, in the vicinity of Valparaiso.
A well-marked, low species, with the stems branching from a ligneous and apparently truly perennial root, bearing a few loosely compitose and rather large heads.

10. Trigera (Candida) limifolia, Thunb.

Coryza ambiguca, S. H. Ill. Fran.


Coryza ambigua, S. H. Prof. 5, p. 387.


Trigera Romanicu, S. H. Prof. 5, p. 257, per part, for


323

Trigera Romanicu, S. H. Prof. 5, p. 257, per part, for


Trigera Romanicu, S. H. Prof. 5, p. 257, per part, for


B. Romanicu, S. H. Prof. 5, p. 257, per part, for


B. Romanicu, S. H. Prof. 5, p. 257, per part, for


B. Romanicu, S. H. Prof. 5, p. 257, per part, for


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B. Romanicu, S. H. Prof. 5, p. 257, per part, for


C. diversifolia, Nimmo, *B. l. c.?*

C. erigeroides, *B. l. c.* p. 378, forma

big linaea?


C. chrysodoioides, *B. l. c.* p. 379?

*Corizera* solidaginoides, Schlecht. in Linnaea, 25, p. 213.

C. *Bromiliensis*, Seem. in *Brot.* 1881, b. 257, no. 267.

Itab. Brazil, at Rio, and Organ Mountains, the last is smoother and with larger heads, like those of *Corizera* floribunda *B. l. c.* also, in the Organ Mountains, a microcephalous form, with lower leaves much cleft (*C. chrysodoioides, *B. l. c.*). Peru,
at Callao, Tahiti, Society Islands, Dr. Harvey gathered a new cephalus form of it at the Friendly Islands, and Dr. Soemmerring at the Pacific Islands. I have not referred all the above synonyms upon the evidence of authentic specimens; but I suppose that they are correctly addressed. If so, the size of the heads varies more than in the C. maxiliformis and C. canadense, to which the species it is about equally related. It is evidently a modification of Dall's C. polychromus, which name might be retained for it, but it is more proper to fall back upon the original specific name. It is not widely distributed over the world, but in warmer climates than C. canadense affects.


E. spinulosum, D.C. Prod. 5, p. 289; Metty in Fl. Chili. 4, p. 29.


E. brevicornis Lindl. Schultze Bip. in Flora, 1855, p. 115, t. 115.

Collected, Chili, near Valparaiso, Rio Negro, North Patagonia; a variety with narrower leaves and smaller heads; E. confertus, Gillies, and the var. minor of Dr. Hooker.

From the habitat and from the mode of figure of Tillanies on which the species was founded, I am convinced that this is the original E. Pammianum, on the margin of the rigid site to which the leaves are collected characteristic. The heads vary in size, but are always much larger than those of E. Canadense, as Dr. Hooker has remarked.

*Sitb, Valparaiso, Chili, Kanai, Sandwich Islands*.

This is not *E. multiflora*, but taken from the Sandwich Islands as has been suspected, that being *Tripolium*, but *Botryx myriophylla* and *E. Bilharziana* of *Remy*, in the flora Chile, are synonyms of *E. Canadensis*, a species which probably did not originally inhabit Canada or any of the Northern United States, but extended from a warmer region, as forests were cleared away and settlements made.
Villadunia, A. Rich.

simplex, ex formis, et setis capsellae, parvis scalis, unipliisserialibus, — supfruticos vel herbae basi fruticosæ, Oceanicae; Cantii —bus variosis plennique foliosis —simis; folis alternis; integris —dentatis; capitulis unius solitari —niis ramosis terminantibus nive —corymbosis; ligulis allis vel pur —pureis.


Vittadinia, Tetramolopium sect. 1, R.


Essentially

Eurybiopsis, and L. C., is truly
identical with the older genus Vitt
adina, and has been referred
to it by Dr. Hooker. The only difference observable is that the faces of the achenia of *Eurybia*issa macrochiza, if I rightly identify the plant, are nerves; those of *Vittadinia* striate-nerved. These must now be added to the genus several Hawaiian species, one of which is strictly an *Eurybiopsis*, another, the type of *Tetramesostephanum*, Nees, differs only in its less cuprous, uniserial papillae and in the shorter, mostly four-ribbed achenia, while others, with coroidose and still smaller heads, have decided pluriserial rays of their figures. So reduced that they are shorter than sometimes even shorter than the papillae or even than their styles, and the hermaphroditic flowers flower in one instance reduced to unity, so that these are to *Vittadinia* proper what the Campeertor *Ergyns* are to *Stenactis* or *Ergynera*. The genus *Ergyns* thus extended, while on the by its larger-flowered species seems and nearly related to *Eurybia* from which, as de Candolle and
Dr. Hooker remarks it technically differs only in its compressed achene and nearly eminuous with the group of Ambigvus Aster designated under the name of Orthoceras by Torrey and Gray, is now seen on the other hand to be the analogue of Erigeron. From the latter, abundantly polyphyly already too polymorphous genus, Wittadia would be well distinguished by its striate or ribbed achenia, and the slender subulate tips of the bracteae of the style, except that, unfortunately, less of the species want the facial ribs nor strike, while some species of Erigeron, as Webbell regards them, have long and slender tips to their and some North American ones have their achene resemble styles. The habit generally is not that of Erigeron, and the achenia and the more imbricated involucres will distinguish those species which might be confounded with the
Eucnide. The short, but always distinct ligules are characteristic of the genus. Most of the Sandwich Is. species are decidedly shrubby plants, those of New Zealand and Australia woody at the base, but there are at least two Australian species which appear to have annual roots; on the other hand, Eriocereus glaucescens of Juan Fernandez, which forms a shrub, is apparently a genuine Eriocereus.

De Candolle assigns uniserial rays to his Eurychrysis and the New Zealand Nittadinia, and bi-triserial ones to the Australian Nittadinia. Dr. Hooker regards them as uniserial throughout. When numerous and with narrow ligules this character has neither definiteness nor significance, either as is well seen in Eriocereus. So both Eurychrysis and Nittadinia De Candolle ar-
enables a "pappus universalis," a term which he seems not always to have employed employed in me and the same sense. In the species known to De Candolle the bristles of the pappus certainly occupy several ranks, just as in Aster. From these there is a gradual transition to the scanty and truly uniserial pappus of Vittadinia, and the smaller-flowered species of the Sandwich Islands.

For the genus as thus augmented, the name of Tetrastephiillum might be reclaimed in virtue of priority, as it antedates Vittadinia by a year. But the former generic name was given to two heterogeneous species, that from the Sandwich Islands, which has long remained very obscure, and that from the Andes, which is Diplostephiillum, with which De Candolle rightly associated it.

(Handwritten notes and corrections are present throughout the text.)
two other of Humboldt and Kunth’s Acts.
The three generic names now brought
together may be retained for sections,
thus:

1. Villadinia Vera. Achenia elongata,
faciebus pluristratiis. Pappus epis- 
orus pluriserialis. Ligula pl. m.
conspicue. Capitula majuscula
solitaria.

2. Corydipsis. Achenia minus elong-
gata, marginato binervia, facie-
bus stratis. Pappus uni-
pluriserialis. Cet. precedentis.

3. Tetramolphium. Achenia breviscula,
quadricostata, mense, costis 2 mar-
ginalibus validis, 2 facialibus an-
gustioribus, his raro in conspicuo,
quandoque geminatis. Pappus uni-
pluriserialis. Capitula super solitaria
ligulis brevi et espati, nume parva
super oblonga ligulis pluriseriales discent
haud superantes. Superibus discis paneis vel paneis
similis.
1. *Vittadinia triloba*, DC.

N. caule erecto e radice quam apice subequilibre cum foliis spatulatis cuneatis. Basi longe attenuatis superne tribulis vel tridentatis (ramulisibus angustis ordines papillos in tegumentis) 2 caulo-pistillis vel kisutis; ligulis purissimis inviter exsertis; achenibus clavatis lineariibus pluristriatis immarginatis subsericeis, maturis involucro atque pappo pluriseriato fulvo equilongis. - Variat, foliis carinatis tripartitis oblis tripedis ovul. calciatis.


*Hab.* Hunter River, New South
Wales.

This is, I presume, truly the Species of Sandichand and of De Candolle, although the stem and leaves are usually more minute or hispid than is described: they vary greatly in this respect, as also in the incision of the leaves. The Spatulate or cuneate limb of the cumbine leaves is generally three-lobed, or furnished with one or two palatate teeth, sometimes cleft into three to five deep lobes, or even bipartately parted or pedate, all tapering into a slender petiole-like base. Heads 5 or 6 lines long, many flowered. Rays uniserial or nearly so: the ligules exerted beyond the cup, purple, 1½ to 2 lines long, shorter than their slender tube. Achene narrow, 2½ to 3 lines long, with no thickened ribs at their margins. Bristles of
fulvous pappus soft, more or less unequal in length, evidently occupying several series. The last in our specimen, as in others collected at Moreton Bay by Mrs. Holland, is mainly annual; which character, joining with the commonly lobed or even dissected leaves, and the rougher pubescence, will distinguish the species from the (not aptly named) N. cuneata of de Blandoff and Hooker (Corymbia gracilis, Hook. f.). To the latter De Blandoff's N. ? dentata (Brachyco- me, Sandich) seems likely to belong.

Another Mueller and Sonder have united the N. cuneata, D.C., and Hook or at least of Hooker, with the Coryb- opsis scabra, Hook. f., now regarded as N. scabra, D.C., under the name of Corymbia gracilis or Vittadinia Hookeri; but Mueller's plant, at least the variety
augustifolia, which agrees pretty well with the character of De Candolle’s
V. zacate, is distinguishable by its less conspicuous and shorter glumes,
and by the stronger perigonal scale, less attenuated achene, being
evidently margined by ribs, smooth
stronger than the radial nerves.
The plant which was generally culti-
vated in European botanic gardens a
few years ago under the name of Viva-
dinie tributa, and which Dr. Smider, mistaking
it for the genuine Australian Plant,
has (in the System. Plant. & Blumenzei-
tung, 12, p. 78) described as Eriogonum
tribulum, is manifestly De Candolle’s
Eriogonum micromatum of Mexico and
Venezuela.
2. Vittadinia (Eurybiopsis) hispidula

V. undique acutro hispida seu hispidula; caule erecto et radice annua stricto oligocephalo;
foliis cantinis linearibus persistentibus
imisque spatulatis fasciis dentatis;
ligulis et pappo leviter expertis; acha
niiis oblatis appresso pistillis obvatis apice breviter acutatis
massive nervo crasso cinctis fasci-
ibus nerviis pappo fere uniserrat
ali brevioribus.

New South Wales, with

New South Wales, with

New South Wales, with

New South Wales, with

New South Wales, with

New South Wales, with

A strict, rough, pubescent plant,
with a strict stem, one or two feet
in height, from an evidently annual
root, both in our single specimen
and in one from Dr. Mueller's Tropical
Australian collection from Gilbert
River. Leaves, except the lowest,
much less tapering downward than in the foregoing, mostly linear, an inch or more in length and 1/4 to 2/12 lines wide, commonly with one or two slender coarse teeth on each margin. Peduncles naked. Heads smaller than in the preceding, 4 lines long; the ray flowers apparently more numerous in proportion (visceral?) and their ligules rather smaller, barely exserted from the fulvous pappus, which nearly accords with Le- Baudet's character of Eurytippis in being nearly uniserial; at least it is much less cypris than in \textit{N. triplora}, or even than in \textit{N. calabra}, Achenia not quite a line and a half in length, flat, ovate with a tapering base, abruptly contracted at the apex into the small epigynous disk which bears the pappus, furnished with a conspicuous callous nectary upon each margin; the faces not at
striate or nerv'd, excepting sometimes faint traces of a mid-vein towards their base. Pappus soft, one third longer than the achenium. N. (Eurybiopsis, Sch.) macrochiza, if De Candolle's species is rightly identified with Dr. Muhl's specimens from "Providence Hill", considerably resembles dryad and very narrow-leaved forms of N. selvatica, but the faces of the achenia are nervless as in N. hispidula. The immature achenia are linear, and nearly as long as the pappus which is more ciliate than in the latter.

3. N. adoxina (Eurybiopsis) humilis, Sp. 8:1

N. supputicosa, 2 basi crassa multifidulis, spinis amplexa; caulibus foliosis immissis; foliis augeae spathulato
latis integerrimis undique hispi-
dis histellisse avenis, costa
pubesque incassata; perm-
culis brevibus politaris vel subum-
bellatis; ligulis uniseriatis flo-
res disci (6-12) vix superantibus
stylis duplo longioribus; achene
muis linearis oblongis spinosatis
histellis estriatis pappo subtri-
seriali inaequali dimidio
brevioribus. — Variat foliis pubes-
tibus vel subglabris, nurce per-
linearibus basi large attenuatis.

Hab., Sandwich Islands, in the
mountains of Hawaii (Mouna
Loa, Mouna Kea, at the elevation
of 8000 feet and more, &c.); also
Hawaii, on the banks of the Crater in
the eastern part of Maui. Collec-
ted also by Henry upon Hawaii.
Stems 4 to 8 inches high, woody, usually very numerous and crowded on a thick woody base or caudex, apparently forming dense tufts. Somewhat hispid, very leafy throughout their whole length, the leaves often almost imbricated on the younger shoots or sterile shoots. Leaves narrowly spatulate or linear-spatulate with a slender base, gradually alternate base, about half an inch long, obtuse or acute, thickish, and rather rigid, glaucous, but with a strong midrib with is paler beneath and impressed above, either densely or sometimes sparsely hispid and minutely hispid, usually appearing cuneiform. Peduncles terminal or alar, about half an inch long, sometimes and inch long. Sometimes hardly any, when developed
Rather foliiform, minutely granular-seafoam, bearing one or two scattered and minute subulate bractlets. Head nearly obconical, 4 to 6 lines long. Flowers about half the length of the disk at maturity. 

The scales nonequal, rather loosely imbricated, lanceolate-linear, acute, strongly one-nerved, minutely granular-seafoam. Rays flowers 10 or 12; the corolla pubescent, the tube 2 lines long, nearly equaling the pupmos; the ligule scarcely more above a line in length, linear-oblong, minutely tridentate at the extremity. Disk flowers 6 to 12, perfect; their corolla narrowly tubular, funnelliform, the summit tinged with purple, at first probably yellow, 5-lobed. Stamens and
Style as in the genus, the tips of the branches of the latter slender subulate. Achenia alike in the disk and ray, a line and a half in length, flat linear oblong and narrowed toward the base, moderately contracted at the apex, minutely hairy or with the faces glabrate. With age and minutely glandular, atomiferous, each margin conspicuously one-nerved, but the faces not at all nerved nor striate. Pappus 3 line long fulvous, not very corymbs, but nearly as in V. Bedrha, the bristles occupying about three ranks, most of the outermost shorter, and some of them not half the length of the inner.

This species manifestly connects the original Z. trilobatum.
with Erythropsis. A depressed and glabrate variety from the district of Waimea, Hawaii, makes the nearest approach to Tetramadipis: tenerissimum, that but that species is well distinguished by its smoothness, its more exserted ligules, uniserial pappus, and glabrous, mostly four-nerved achene; it is smaller in all its parts. Our naturalist did not meet with it. The subjoined character is from a specimen collected by Macrae.*

* Vittadinia (Tetramadipis) tenerissima.

V. appressicalla, glabra, caespitoso multi cantis; folis in cantibus (basissimis seu decumbentibus) eis folis lineari spatulatis lineosis avanis parce hispidulo ciliatis basi laxe attenuatis; pedunculis solitariis gracilibus bracteis pluribus setaceis instrinctis; ligulis uniseriatis discum super抗生素 tubo subaquilongis; achenis ovato-oblongis quadri 4-5 costatis; pappo uniseriato equeali. — Bahn, Chamisso, Macrae.
4. Pittadinia (Tetramethapium) Chamissoi.

V. pumilio, ramossissima, glabella; ramulis fastigiatis congestosis puberulis (foliosissimis usque ad apicem) foliis linearibus lanceolatis seu linearibus basi pensim alternatis et sapios hirsutos ciliatis integerrimis sub-dentatis variose laciniatis incisis crebermis papulosis punctatis latis submem branacis venulosis; pedunculis brevibus filiiformibus compactis olio cephalis capitis parvis involucri squamatis linearis lanceolatis acutis vel acuminate; ligulis 15-20 tubo pubescentiaps. Flores disci 5-10. Viis superan
tibis acheniis stylis plumerisque longioribus; acheniis obovatis oblongis parce hirsutis vel glabratis quadricostatis, costis marginali
dis inter callosi incrassatis.
Facialibus augmentibus sine
fere obsolete \\
prisco geminatis;

duppo uniseriali.

Erigeron lepidotus, Less. in Lin-
naea, 6, p. 502; DC. Prodr. 5, p. 284.
E. paniculatus, Hook. \\
Blech. Nov. p. 87; DC. l.c.

Var. î'carbuscula: folis in ramulis

pecus ramulos ultimos confer-
tissimos rigidioribus augmenti-
obus sine fere filiformibus;
pedunculis abbreviatis; capitulis
paniculatis majoribus.

Itab. Sandwich Islands: Oahu,
in the Kaala Mountains, 3°; collected
by Lemanirix, Macrae, and others. Var.
3. On the north bank of the great
erater of East Macri.
A very shingly shrub, its height not mentioned, but apparently as much as two or three feet; the ultimate branches slender, but even the ultimate ones more or less woody, crowded with leaves up to the short and slender peduncles. Leaves commonly about an inch long, and one or two lines wide, rather membranaceous in texture, glabrous, except the sparse ciliate hairs which fringe the lower, attenuated portion, at least when young, but minutely papillose dotted under a husk which gives them a somewhat scabrous appearance, yet not such as to render Lessing's term "lepidote" at all appropriate. Peduncles an inch or less in length, slender, naked, sometimes somewhat umbilicate or expanded at the summit of the branches, and bearing several (from 2 to 7) heads on short pedicels in a small corymb. "Stead only
two lines in length. Scales of the involucre little shorter than the disk; the narrow scales all acute or pointed, minutely pubescent on the back, or the inner ones glabrous, the margins scarios, or the innermost almost wholly scarios, the margins more or less denticle-ciliate. Distillate flowers in more than one series, ligules apparently white, linear, from half a line to nearly a line in length, truncate and 2-3-toothed at the apex, shorter than its flat tube or sometimes almost equalling it. Disk-colours yellow turning greyish; the limb 3-lobed. Branches of the style linear-subulate, the upper part half minutely bispid. Achenia a line long, flat, each margin bordered by a thick and salient smooth ribs, and each face with a similar but narrower, or sometimes incision
ous ribs, or occasionally a pair of ribs. Pappus of 
Cynara, Barista, universal, but rather conspicuous, ful-

The var. aristoscula would be taken for a distinct species and may prove to be so. It has stouter and rigid branchlets, covered with narrower and more rigid leaves, which are somewhat recurved, not above half a line wide, an inch or more in length. In the dried state most of them appear almost flat form, but they are evidently plane when fresh. The heads are less numerous but decidedly larger, being three lines in diameter. The flowers more numerous, but similar. Figs not layer than in V. Chamissonis, some-
times not exceeding their styles, less
more glabrous or nearly so.

It is not surprising that leaving should have failed to
recognize the close relationship of this species, despite its different name. The species is known for its distinctive flower morphology, with large, showy petals that attract pollinators. The leaves are smooth and elongated, providing a contrast to the more ornate blooms. The fruits are cylindrical and contain numerous seeds, ensuring the species' survival in its natural habitat.

*Villadamia (Elasmolobium) jumii, sp. nov.: flowers, leaves, and fruits similar to *E. jumii, but with smaller flowers and leaves. The flowers are white with a yellow center, and the leaves are elliptical. The species is found in the highlands of the Andes, primarily in the cloud forests of the region. Additional studies are necessary to fully understand the ecological niche and conservation status of *Villadamia jumii.*
V. fruticosa, congloboso, ramosissima, glabella; ramulis usque ad apicem foliosissimis; foliis linear-lanceolatis sublinearis pinnatis subciliatisque integerrimis raro 1-2-dentatis; pedunculis brevibus conglobosis mono-oligocephaliis; capitulis parvis; involucris pusillis subseriali squamis lineari oblongis obtusissimis acrocoyo-marginatis, magnis erubescens denticulato-ciliatis; ligulis plurimis tavo subaequilongis flores disci 2-5-adaquantibus; acheniis glabris quadricostatis f. Chamaissonis.

Itab. Sandwich Islands, in the District of Naimea, Hawaii, and on the mountains of Kauai.
This species very much resembles
Vi. Chamissonis, and may have been
confounded with it. The principal
character is in the involucre, which
in Vi. consanguinea is more intric-
cated, and consists of broader and very
obtuse scales, bordered with a most
definite serrate margin, which is
plunged with thickly set and fine ciliate
denticulations. The heads are not
larger than those of the former
species, but apparently have more
numerous flowers, ligules usually
25 to 30. Ligules white, linear,
larger than the pappus, somewhat
exceeding their styles. Pappus white
in one specimen, fulvous on the
other, uniseria and simple. Leaves
nearly glabrous or very glabrate.
Peduncles short, but slender, minutely
pubescent, corymbed, bearing single
or 2 to 3 heads. - Hooker and Arnot's
Trigern paniciflorus is said to have
the involucral scales oblong, but acute. Lessing's \textit{E. rigidus} is said to have thin linear and acuminate, and I have identified original specimens of both with these bases described above as \textit{N. Chamissonis}.

\textit{N. vitis-alba} \textit{(Tetramerolpis)} xenaria, Spain

\textit{N. suffruticosa}, laxa ramosa, frinula. \textit{Scolopospermum} floribus; \textit{falcis} lanceolatis seu oblongo-lanceolatis basi attenuatis \textit{fistulosis} integerrimis, \textit{apice} mucronatis, capitulis brevioris pedunculatis corimbosis, involucris squamosi linearibus acutis submembrae acceis, ligulis plurimis tubo brevioribus flores disci 5-9 subaequantibus; acheniis oblongis quadricostatis hispidulis pappo uniseriati, setis inaequalibus.
Stalk, Sandwich Islands: Maui, on sand hills, and district of Naima, Hawaii.

Stem apparently a foot or two in height, woody, but the shoots of the season herbaceous, moderately branched; the branches leaf to the top, minutely pubescent. Leaves an inch or an inch and a half in length, 2 or 3 lines wide, nearly acut but with a mucronate point, tapering to the base, plane, nearly membraneous in texture, minutely with short hairs, especially along the margins and nerves. Stem slender and rib, which is pretty conspicuous on the lower face of the veins almost obsolete. Heads forming a small terminal compound, or slender and simple or sparingly branched pubescent peduncles, which are hardly exserted from among the leaves. Two-
here about 3 lines in diameter, nearly glabrous; the scales narrowly lanceolate-linear, acute or pointed, thin, almost membranaceous, their margins scariosus margins ciliolate-denticulate. Distillate flowers 30 or more, occupying several series, figures apparently white, obovoid or linear, about a line long, sometimes nearly as long as the tube, hardly if at all exceeding the five disk flowers. Branches of the style in the latter, as in the genus, slender, subulate and minutely hispid. Achenia as in the foregoing species, but rather narrower, either pubescent or nearly glabrous, a line in length. Pappus simple and rather scanty, white, somewhat fragile.
V. priticosa, ramossissima, cinereo-pubescent, ramulis usque ad epicem foliosis; foliis angusto-lanceolatis basi longe attenuatis integerrimis membranaceis; capitulis minus complanatis, congestis co-symbosis; involucro aequali linearius, pilis plurimis brevissimis pappum uni-serrulatum adequantibus, stylos suis brevioribus, flore hermafroditico, pappus unicus, acheniis parce hirsutulis 2-4-costatis.

Tab. Sand Hills of Maui, Sandwich Islands.

A small bushy plant, at least a foot or two in height, copiously branched, the branches of the season nearly herbaceous, very leafy. Leaves
one or two inches long, about 2 lines wide, acute, with a long tapering base, somewhat hairy with a fine and rather soft pubescence, obscurely three-nerved or triplinerved. Peduncles slender but scarcely exerted from among the leaves, terminal and from the upper axils, branching, and bearing numerous heads in crowded corymbs. Heads only about a line and a half in length.

Scales of the involucres rather few, linear or lanceolate, the scarious margins crenate-denticulate. Pistillate flowers 20 to 30. Ligules obovate, truncate, 2-3-toothed, not half the length of their tube, shorter than their styles, scarcely revolute-cordate after anthesis as in the rest of the genus. Hermaphroditic disk-flower usually only one, rarely two; its style with slender pubescent tips. Achenia as in the related species, but the facial
sibs often inconspicuous or obsolete. Capsules rather bony, in a single series.

By itself this species would be referred to Evigera section Varities, and would seem to have nothing to do with the original Viella and little with the original Letanodoprium. But it is an evident engraver of the preceding species.
Minuria s. l.

1. Minuria leptophylla, s. l.

Hat. Hunter’s River, New South Wales.

The plant is herbaceous, the root only somewhat lignaceous. Rays 16 to 18. Bristles of the pappus in the ray densely dentilicate, almost barbellulate. Pappus of the sterile disk flowers composed of three or four long bristles which are barbellate towards the apex (more so than in Cunningham’s specimens, which are otherwise similar), and of as many short and fascinate laciniate or feathery leaves, all more or less concreted at the base.
Calotis, R. Br.

1. Calotis dentex, R. Br.

Hab. Newington, New South Wales. A somewhat pubescent variety, with many of the leaves laciniate or even pinnatifid.


6. Hirsipilea pubescens; foliis cuneatis seu flavelliformibus palmato-3-serratis. Pedatifidis inferiorae attenatae quasi in petiolum ala-laminae, annulis laminis linearibus abscisse integerrimis vel apice tridentatis; involucro biseriato fere 20-phyllus; acheneis laminis; pappo e palleis 2-4 et aristis 1-2 versus apicem parce subrosum aculeatis.
Hab. Hunter's River, New South Wales.

Turbaecus, a foot or more in height, sparingly branched, set with a rather sparse and strict his-
rite pubescence. Basaline leaves about an inch long, the lower half
marrow and petioliform and dilata-
ted at the insertion into a small
but distinctly auriculate base, and
above expanded into a broadly cu-
meiform or flabelliform blade, which is palmately 3- or 5-cleft about
to the middle, the latter linear to
acute or mucronate, the lateral
ones occasionally two-cleft. So as
to become pedate. The upper leaves
gradually change into a linear coni-
form with a trident apex, or be-
come linear-oblong and entire. Be-
dules 2 to 4 inches long, naked.
Heads rather larger than those of C. dentex. Scales of the involucre 15 to 20, linear-lanceolate, somewhat biserial. Achenes fully a line in length, flat, broadly cuneate-obovate, smooth and glabrous, except some scattered and very minute short hairs especially on the thickened margins. Pales of the pappus either two broadly oblong ones on each side, distinct or partly united, or one very broad one on each side, which is often notched at the truncate summit. Arms one or two, about 3 lines long, or that from the inner angle of the achenium often shorter or obsolete, slender, smooth, except the and the summit, where it is moderately or else sparingly retrorsely bashed.

C. delatata of Cunningham has the arms of the pappus similarly but more sparingly bashed; its leaves are not liked as in the present species, and the basal auricles are more conspicuous.
3. Calotis lappulacea, Bentth.


Hab. Hunter's River, New South Wales.

Brachycome, Cass.

1. Brachycome glabra, Bentth.


Hab. New South Wales near Sydney.
2. Brachycome rhetrophylla Bent, i.e.

Hunter's River and Bunya Bunya, New South Wales, with a minute, sub-glandular flower.

3. Brachycome marginata, Bent, i.e.

Hunter's River, New South Wales, a variety with narrow linear leaves.

4. Brachycome linearifolia, DC.


Sturt, New South Wales, near Sydney.

Our plant is Bentham's Br. linearifolia, and the reference to the figure of Labilardiere shows it to be De Cand.
Dole's also, I tender has, incorrectly as I suppose, referred Dr. Bland's
B. lineari folia to B. radicans of
Tedz (which possibly B. gramine
of Mueller), a less caulescent species
with broader involucral scales; and
Dr. Northc has described a still
different species under this name.

Lagenophora, Cass.

1. Lagenophora Comminsonii, Cass.

Aster medicinalis, Commin.; Lam. Prer,
Calendula punica, var. Fost, in
Commin. Brett. 9, p. 40.
C. punica, Thomas, Ill. Trist. d' Ac.
p. 40, fig.


S. Magellanica, Coss. in Bull. Phil. 1818, p. 199.


The numerous Fuegian specimens of this collection do not differ from Gay's Chilian ones in the manner that those of Commerson do; as many mentioned by Reddel, the involucral scales being either acute or obtuse, though hardly so blunt as those from the Chilian andes. The plant is by no means an annual, but multiplies by slender stolons. It is very uniform in appearance. Neither among our specimens nor in
any herbarium or we find intermediate forms connecting it with L. hirsuta, which we therefore retain as a distinct species.

2. Lagenophora hirsuta, Poepp.


Ital. Orange Harbour, Freigia.

3. Lagenophora fosteri, DC.

Microcallia australis, A. Rich., 


Stab. Bay of Islands, New Zealand.

Lagunophora lanata, A. Brum.

Lagunophora lanata, A. Brum., in 
H. N. Del. 1, p. 126.

and Tippma, 
Stab. Bay of Islands, New Zealand.

The lanata thrives and nearly soaks, 
rosulate leaves, with the long and 
slender smooth scape, small head 
and fragrant much fewer purple rays, 
well distinguish this species from the
Proceeding, it is more like certain forms of L. Billardieri.

5. Lagunophora Billardieri, Cass.

Lagunophora Billardieri, Cass. in Dict. Sci. Nat. 25, p. 331; l. c.; Stork. Fl. Tasm. 1, p. 188.

Native, Sydney and Hunter's River, New South Wales, Muga-rum-bay, New Zealand, according to the ticket.

The specimens all belong to the Grambotis var. media and var.
glabrata, and are well represented
in Billardière's figure of Bellis stipitata,
except that ours uniformly have
smaller heads. They agree with
Sieber's p. 505, which Dr. Hooker
thinks is distinguishable from L.
Billardière by its smaller capitulum.
It is pretty certainly Cassini's Xan-
chus (although the disk is fertile
and the ligules not very long), and it
agrees with specimens gathered by
Billardière at Port Jackson. The
specimen marked ticketed 'Baya, rum
Bay, New Zealand' are not different,
but there may be some mistake about
the habitat in this as in some other
instances. If not the specimen
might fall under Dr. Hooker's L.
petitata, though the leaves have
short petioles.

The Lagurus
from Hongkong, and probably that
of Japan, which has been referred to
L. Billardière is L. Sandana y Miquel.
which is apparently L. latifolia or
L. Fother, which it is known by its
lanceolate achenia, those of L. Billar-
dieri are semi-obovate, not broadly
obovate.

Nov. (Isto. . . )

b. Lagenophora Pickeringii, sp.

2. folisbrisitis juvenisibus primum
villoso, lanatis petiolatos oblong-
atis, glabrisque in petiolum
attenuatis repando; dentatis;
pecoris gracilibus mediis; involu-
eri squamos linearibus fere glabris,
achenis radii oblongos lanceolato-
tis crostratis insigniter costatis
exiguis; disci striatis.

1. Lab. Mountains of Minthunata,
one of the smaller Jeejee Islands,
One of the largest species of the genus the leaves, which are clustered on the extremity of a thickish creeping rhizome, being 1½ or 2 inches long and with a petiole of about half that length, or sometimes nearly as long as the blade, when young densely villous throughout with long hairs, as is the lower part of the scapes, at length only minutely pubescent, membranaceous, obtuse, scabrid or scabrid-dentate. Scapes several from the same rhizome 1½ to 3 inches high, naked, smooth, glaucous. Heads rather small, in fruit only 3 lines in diameter. Scales of the involucre rather short, linear, obtuse, more or less glabrous. Rays in two or more series; ligules apparently white, linear, rather short. Disk-flowers hermaphrodite, but in the
Specimens their ovaries wholly inconspicuous and inane. Achenes of the ray a line and three fourths in breadth, scarcely half a line broad, moderately compressed, slightly narrowed to each end, perhaps a little more so at the summit, which however is not at all prostrate, but terminated by an epigynous disk about the size of the basal calyx, the surface coarsely striated by 8 or 10 strong and salient ridges, smooth, longitudinal ribs, in a manner not known, I believe, in any other species. The achenia of L. Emphysema, Stock. & are equally lackless and somewhat similar in shape, but without not costate.
Gutierrizia, Lag.

1. Gutierrizia paniculata, Gray.


Flac. Rio Negro, South Patagonia. Near Valparaiso and Santiago, Chile.
Grindelia Mill.

1. Grindelia speciosa, Gillies.
   Brit. (Des. grandiflora, Gillies in Herb. Les. foliosa, Hook. & Arn. l. c., forma augustifolia.)

   Ital. Río Negro, South Patagonia; A species with very large heads.

2. Grindelia diffusa, Gillies.
   Ital. Río Negro, South Patagonia; on sand hills.
Hosmer and Arnott, in their revision, refer this to S. GAUDEMENTI, but the identity did not suggest itself upon a cursory view of the specimens of both in De Candolle’s herbarium. It is interesting to notice how some of the peculiar types of the Texano-New Mexican region (such as this and the foregoing genus, Aetinella, Thelersperma, &c.) are repeated in the similar dry climate of an analogous but widely separated district in temperate South America.

Solidago, LINN.

1. Solidago marginella, DC.

Solidago marginella, DC. Prodr. 5, p. 332.

*Hab.* Rio Negro, N. W. Patagonia, *Foliage only.* Very different from *S. odorata*.

*van Paepegijii*.

2. *Solidago* lineari-folia, *Sch. l. c.*?

*Hab.* Chili, near Santiago. *In imperfect specimen.*

3. *Solidago* *Chilenisim*, Meyer.


*Hab.* Chili, in the vicinity of Valparaiso. *Sepaerate specimens.*
Apoloappins, Cass.

Apoloappins (et al. ped. Leonirus & Myrrochata) & Pyrrhroma, St. Brdr.
5, p. 345, 350.

1. Apoloappins pulchellas, St.

Apoloappins pulchellas, St. Brdr. 5, p. 347; Remy in Evag H. Chil.
4, p. 51

Grindelia pulchella, Brit. in Mer., Chil. 1829, & coll.
Diptopappins Donianaus, Stokk. & Brn.
in Comp. Nat. Mag. 2, p. 47.
D. glutinosus Papp. Les. in locaesa, 6, p. 13.

Var. B. canescens: folis canescenti-lancee

ginosis demum glabratis

Diptopappins canescens, Stokk. & Brn. in
Comp. Nat. Mag. 2, 4.
Aploppus uncinatus, Philippi in Linnae, 28 p.

Hab. Chili, near Valparaiso, both the smooth and the even somewhat downy forms


Hab. Chili, on the lower sides near Santiago: a single imperfect specimen.

This is, apparently, both to some of S. glutinosus (Diplopappus glutinosus) Preppig and Lessing, and certainly that of Hooker and Brandegee, and also Pteros Grindelia glutinosa, the type of S. Bertoloni, De C. It must include S. aerophorontilicus, De C. (Diplopappus aerophorontilicus) of S. glutinosus, also S. Diplopappus, and S. valentinus of Penn.) and through S. Brunellia vides, De C., at least of Penn., it probably passes into the following.

*Hab.* Chile, between Valparaíso and Santiago.

The specimens belong to a small-leaved form of *A. macrocephalus*, Del., at least to Pfitzer’s no. 315— and probably to *Aplysopus macrocephalus* of Papepig and Dessing, but not of Webster and Knott. They accord with the *A. incuculoides* of the latter; also with the character of *A. curvifolius*, of Nuttall. It is a dwarf species differing from *A. glutinosus* in the squamose, involucrose, and the most numerous, aristately spinulose teeth to the leaves. *A. gratideloideus* appears to be intermediate.

*Alyssum densifolius*, Keng in Kay. Fl. Chil. 4, p. 53

*A. glabrescens*, Philippi, in Linnea 28, p. 726?


*Not*, pedes abore Santiago, Chil. Ving no perfecto specimine, perhaps very reduced *A. glabrescens*.

5. *Alyssum Paepigianus*, var.

*A. humilis*, patiens, foliis seco, vinoso hirve, emarginatis, anguste lanceolatis, rigidiis, utrinque atteminati cuspidatis inter serrinmis undique seri-
elis; Pedunculitis elongatus
medis parce petaces bacte-
tis monocephalitis; involuci-
squamis hemispharici squamis
lineari subulatis glanduloso-
comberulis, apicibus squarros-
patentibus; ligulis discum
vix superantibus; achenis peri-

elis.

Dipsopappus Depping Poep-
pigianus, Hooker, 

fl., Chih., on the Andes
above Santiago.

The Dipsopappus Depping Poep-
pigianus, of Hooker and Arnett,
in C. C. to 1847, is not so
dwarf as the present
specimens, the involucres is not
squarrose, and the rays are appa-
rently wanting. Otherwise they
are similar, and evidently both
belong to the same species;
which is well marked by its
rigid, entire, lanceolate, silvery-sericeous and bristle-like leaves, crowded on the short and tufted woody branches. Peduncles solitary, 3 to 5 inches long, naked, except a few setaceous bracts. Head rather larger than in A. pulchellus, to which the species is related. Scales of the involucre numerous, narrowly linear-sulcate, pubescent and glandular-viscid, with slender spreading tips. Rays 20 or 30, only 2 or 3 lines long, yellow. Papillus yellowish-brown. Phillippi seem to have found it with rays red, with the involucre and squarrose.

b. *Alopocarpus foliosus*. L.B.
Diplopappus Philippi, in dimida,
Diplopappus foliosus, Hook. &
Theop. C. Opl. to B. M. Mag. 2,
p. 45.

Hab. Valparaiso, Chili.

1. Diplopappus ilicifolius, Remy,
Diplopappus ilicifolius, Remy in
Gray, Fl. Chil. 4, p. 55.
Diplopappus ilicifolius, Hook.
& Am. Comp. B. M. Mag. 2, p. 46 (Phalm. foliosus) sp.
253.

2. mucronatus, Hook. & Am. l.c.
et
Baccharis mucronata, Hook. &
Am. Bot. Beek. Vorn. 30,
(B. Strotheriana, C. B. Proc.
5, p. 414.)

Hab. Chili, near Valparaiso.
The imperfect specimen belongs to *Alopaeopappus micronus*, Hook. f. & Arn., but it appears to be only a form of their *P. ilici-folius*. This answer to Remy's *Alopaeopappus ilici-folius*, the radiate state (of which *P. stellaris* (Pyrrholaema), Hook. f.) seems, Remy is probably a narrow-leaved variety, and apparently to his *Pyrrholaema ilici-folius* and *P. paratilis*, the rayless state.

8. *Alopaeopappus Macraeanaus*.

Remy in *Fl. Chil.* c., p. 63.
R. *Macraeana*, Remy, c., p. 164.3

*Flab. Bides above Santiago*, Chile,
also collected by *Macraeae* (Flab. Hook.)

Distinguished from the foregoing by the narrowness, apparently always...
rayless heads, with more coriaceous and nearly margined scales of the involucre, and by the glabrous achenia. A. parvifolia (Pyrrocoma angustifolia parvifolia, Lb. l.c.), although nearly related, is well distinguished by its smaller leaves and heads, the latter with narrower and much thinner, acutish involucral scales. As the name angustifolia would have little approximateness in Philippines, the present species may take the name of its discoverer, De Candolle A. (Pyrrocoma) Harv. isCourtage for filaginifolia, double from California.

The genus Pyrrrocoma cannot be sustained upon the rayless heads, as De Candolle and Remey have endeavored to do; for besides the fact that intimately related and even identical species
of Dipsopappus are both radiate and rayless, and the original Pyrocheta has rays, as I have long ago shown. The shape and the smoothness of the achenia also fail as characters, and the broader involucral scales furnish no definite distinction. The proper of D. macroganus is sometimes only fulvous, sometimes deeply nutata.

Dipsopappus (Pyrocheta).

Stenkei, D. B. Marsh, ascertained to be Orthopsycne filaginifolia; doubtless it was collected in California.

Neja, D. B.

1. Neja linearifolia, D. B.

Itab. Rio Negro, North Patagonia.

Chrysopsis, Nutt.

1. Chrysopsis (Leucopsis) vestita.


D. sericeus, luct. & Arm. l.c. p. 348.

D. Patagon. s. non Less.

Diploppappus? (Leucopsis) acuminatus. DC. Prod. 5, p. 348.

Itab. Rio Negro, North Patagonia.

This is distinct, as I suppose, from the Chilean Diploppappus sericeus of Lessing, which seems to be the same as oxybed 'op argenteus, Meddles &. Hassk. var. argenteus.

The latter has purple rays, a few geniculate pappus, and rather obtuse
scales of the involucre, and a
close, silky, camescent pubescence.
It is probably specifically distinct
from A. marginatus. The pres-
cent plant is very lanuginous,
has the scales of the involucre acum-
ninate; the rays not longer than
the fulvous pappus, and appar-
ently yellow; and the flat, obvate-
oblance achenia are striate, as
in Chrysopsis multicaulis. An exterior
portion of the bristles of the very eri-
aceous pappus are short, that not signa-
mulate-setose as in true Chrysopsis,
but just as in C. (Lencopsis) canes-
cens. 55, with which it may
very well be associated if the ligules
are really yellow. If not, it is a
Nicetrium, but hardly an Aster.
**Sphaeranthus, Vaill., Linne**

1. **Sphaeranthus microcephalus, Willd.**
   
   *Tab. Luzon, near Manila.*
   *(Heads 4 to 6 lines in diameter.)*

**Dichrocephala, L’Her., DC.**

1. **Dichrocephala latifolia, DC.**
   
   *Tab. Samoa Islands. Probably adventive from Eastern Asia. It has also been picked up at Tahiti.*
Baccharis, Linn.

The greater part of the species of this collection, being well known, need only to be enumerated.

1. Baccharis Lundii, Bb.
2. Baccharis cinerea, Bb.
4. Baccharis montana, Bb.
5. Baccharis trimera, Bb.

Itab. Brazil, near Rio Janeiro, or in the adjacent Organ Mountains.

There is a form apparently of B. montana with glabrate leaves, which is B. semiserrata, Bb. no. 38.
(not the homonymous no. 149),

Chang'd to B. hemiprismodes by Bick, a name which will
hardly be required, which is B. lutea of Gard. B. cinderca, is probably only a variety
of B. trimervis.


Not, Rio Negro, North Patagonia, on the plains. Not in flower.

7. Baccharis juncea, Desf.

Not, Rio Negro, North Patagonia.

This well-marked species, desc.
cribed by Hooker and Hitch under
the name of B. subulata, D.

is truly the B. juncea of Desfontaines, and of De Candolle. The stems in our specimens are rather leepy, and their base so ligneous that the root would seem to be perennial.

Gilliesii,)

8. Baccharis Turdiana (Sp. nov.

B. herbacea e basi lignescente, glabra, humilis; caule ramosissimo; ramis coniobosiis gracilibus striato, angulatis foliosis, ultimis capitulo solitario terminatis; foliis sessilibus leviter unineervis aveniis, linearibus, basi attenuatis integerrimis seu dentes 2-4 patentes gerentibus, lanceolatis parvis angustissimis, involucro campanulato, squamis oblongis obtusissimis coriaceis disco herbaceis
marine tener, scariosis apice lanoso-ciliatis; achenis glaeserrinis; pappo foemino involucrum ter superante.


Tet. Rio Negro. South Patagonia. This also gathered by Tweedie, and at Buenos Ayres by Gillies.

One specimen of this in the Hookerian Herbarium is ticketed 'B. mana Dom., a name which I do not approve, as the stems are a foot high when well developed, although despuculate ones do not surpass three or four inches. Hooker and Knapton, having only male specimens, confounded the species with B. paniculata Dc. From that species it is well
distinguished, however, by its solitary head (not subspirigate or racemose-fasciculate) it can-panulate involucres, with broader and very obtuse scales. The stems and branches are rigid but slender, acp.arious, the larger less than an inch long and less than two lines broad, usually bearing one or two pairs of coarse and satiny white; the upper and ramal leaves 2 to 5 lines long, very narrowly linear or petaloideos pilifera. Heads terminating the branches large for the size of the plant, involucres 2 to 3 lines long, the scales thick and broad. Pappus tawny, tawny or ferruginous, becoming half an inch long in the female heads. Achenes slender and glabrous. P. cordi-folia has clustered and much smaller heads, scales, ciliate leaves.
9. *Baccharis leptophylla*, DC. L.C.

*Var.* *rarifolia;*amosissima; *sama his for Nubakeis;* folis raris
and multis.

*Baccharis rarifolia*, Stock. & Ma. in Herb. Stock
*var. genistifolia*, Stock. pro parte Stock.

*Hab.* *Rio Negro, South Patagonia.* *Also Buenos Ayres, Tiendie.*

This is doubtless De Candolle's
*B. leptophylla* in a leafless, leafless
state, as in our specimens (which
have solitary heads), or sparingly leafy
as in Stocker's from Tiendie. The heads
are larger than in *B. genistifolia*, but
smaller than in *B. aphylia*, also very narrow
and few-flowered, the inner scales elongated
and narrow, no chaff on the receptacle.

Hab. Rio Negro, South Patagonia.

The determination is uncertain, and the specimens are not complete, but they accord very well with the character of the above species, except that the plant is glabrous throughout. The scales of the involucre are lanceolate and very acuminated, and broadly scarious.


Hab. Rio Negro, South Patagonia.

Hab. Rio Negro, South Patagonia.

Seventy specimens were gathered of this and the preceding, both well-marked species.


Heterothalamus spartioides, Hook.


Baccharis spartioides, Ramy in Eng. Fl. Brazil. 4, p. 102.

Hab. Rio Negro, South Patagonia.


From the like

Forms dense tufts, one or two feet high, either leafless or with a few scales, or with some scattered linear or subulate leaves. Heads small, some chaffy scales among the flowers as in certain other species of Baccharis.

Hab. Orange Harbour, Tierra.

A depressed evergreen shrub, well characterized by the authors above cited; except that the heads of the female plant (which alone occurs in the present collection) are terminal, sessile at the summit of the long stalk and very leafy branchlets; at maturity they are nearly half an inch in length, hemispherical, closely surrounded by the leaves. Achene glabrous, papery, tanni, 3 lines long. It is probably a higher developed state of B. Magellanica.
15. *Baccharis concava* C. C. CL


*B. concava* Poepp. f. typ. p. 424.

*B. concava* f. f. Poeppigiana,


*B. Macraei*, Stock. & Am. l. c. p. 32.

*B. intermedia*, Stock. l. c. Stock. & Am. l. c.

*B. tridentata* forma *visinosa angusta*.

*B. Tolieri* forma *angustifolia*.

*B. interna capitata pedunc. pedalis*.

*B. intermedia* l. c. 3.) & *B. thomsonii*.

*B. tridenta* Kunt. in Gay, l. c. Chil. 4. p. 98.

Ital., Chili, in the vicinity of Valparaiso. (The different forms
described under a variety of names.
of which the oldest is "a very bad one, and only tends to mislead," as Storky and Arnott have remarked.


Stab. Rides of Chile above Santiago. (The female plant, apparently belonging to the above species, of which the male only was known.)

17. Baccharis rosemarinifolia, Keng.

Stab. Chile, near Valparaíso, and also at Santiago; also the var. subinserata, from the vicinity of Valparaíso.
The variety, a dwarf state, with pinulate or toothed leaves, may be De Candolle's B. intermedia, but it belongs to the present species. This is very distinct from the following, under which stars, and Knott's place, through some confusion, cited their own much earlier name of B. tamariscina (rightly distinguished in B. Bouchepetria, Jolia as a synonym). The involvement is well intricate, and the papules of the female flowers becomes fully half an inch long.

18. Baccharis paniculata, S.C.

Nat. Chile, in the vicinity of Valparaiso.

Less woody than the foregoing, with a different foliage, and with very ample lax panicles of smaller
heads, a larger involucres. Papules of the female flowers fuscos or ferrugineus, rarely three lines long. It is B. Pingraea of the Floras Chilena, at least in good part, and it is B. linearis Pers. in Am. Bot. Bach. Nov. p. 57 though the leaves are not toothed, where it is confounded with the following.


B. Pingraea, St. Prov. 5, p. 420.

(Baccharis augustifolia, Cass. & St.)
B. Dingrea & B. Pernkata var.
B. (stemphylla), Hook. et Arn. 

B. hygrotobriana, Rung in 
Fl. Chil. 4, p. 90.
B. Pinmilloriana, Rung in Fl. Chil.

It is near Valparaiso and 
near Santiago, Chili, Rio 
Negro, North Patagonia.

Its this common species 
est accords with the original 
Molina linearis, and was taken 
for it by Batters, Poppig, and 
Lessing; it may advantageously 
be adopted now that the synonym 
has to be extended, as above. 
It is an herbaceous or barely 
suffruticose species, with rather 
few and small heads in a loose 
corymb at the stem naked.
extremity of the slender branches. The upper leaves are often nearly filiform; the lower commonly linear, lanceolate, more or less three-nerved, and dentilicate or more strongly dentate with a few patent teeth.


Hab. Chili, around Valparaiso. Var. angustifolia, with elongated linear-lanceolate-linear leaves. The upper narrowly linear, the 13. marginalis of De Candolle. To this belongs B. compactifolia, Bolla, which last of Peru, and B. glauquina of De Candolle.

21. Baccharis Fevillei, DC.

Hab. Peru, in the vicinity of Callao and Lima; also near Cusco.
This is the \textit{Chilca} of 
2.1.37, which De Candolle 
like-wise and \textit{B. glutinosa}. Perhaps it is only the broadest-leaved, as \textit{B. marginalis} is the narrowest-leaved, form of \textit{B. glutinosa}.

22. \textit{Baccharis racemosa}, sub.

Hub. Chili, near Valparaiso and Santiago; truer the narrow-leaved variety, from described by Hooker and Knob (\textit{Molinae racemosa}, Ruiz and Pavon), and the rigid, broader-leaved form (\textit{Molinae sertulifolia}, Less., and \textit{B. rigidia}, Hook. x Rh.).

23. \textit{Baccharis sagittalis}, sub.

Hub. Vina la Man, Valparaiso, Chili, with the leaves minute.


B. genistelloides, B. resinosa, hark.

Bt. Mise., 2, p. 224, t. 94.

B. venosa, DC. l.c. p. 425.

Itab., Bnco., Andes of Peru.
(The form figured by Hooker.)

25. Baccharis floribunda, Bt. B.K.

Itab., Oblajillo, Peru. (Leaves less acute than in Kunth's figure.)

26. Baccharis lanceolata, Bt. B.K.


Molina palicifolia, Ruiz & Pav.

Nat. Peru, between Otuzillo and Bulluay. The same collected by Mathews near Barruchuca.

27. Baccharis prostrata, Pers.

Molina prostrata, Ruiz & Pav., Syst. p. 204.


B. obtusifolia, H. B. K. & Mol.[

Spec. 4, p. 517.]

B. micrphylla (H. B. K. & Mol. p. 55; DC. & C.)

B. micrphylla (H. B. K. & Mol. p. 55; DC. & C.)


Nat. Andes of Peru, between Otuzillo and Bulluay (a larger, erect form), and from Bulluay to Casa Comcha, a depressed spread-
ing and subprostrate forms, doubt-
less, from the character and the
habitat Molina prostrata of
Ruiz and Pavon. Heads larger
than in P. microsperma, and the
pappus of the female tenui-
ous or tawny. (see 636 and 558
of Matthews.) But it perhaps
probably includes that species also.


Molina caspitosa, Ruiz & Pav,
Syst. p. 203

Baccharis caspitosa, Pers. syn.
2. p. 425.

B. alpina & humifusa, Bt. B.K,
Win. Sen. & Spec. 4. p. 48, t. 322,
B. alpina Nutt., Chl. Ind.
1. p. 168, t. 28.
Ital, High Andes of Peru, above Banos, at Casa Bancha, and Alpamarea.

This is doubtless Persoon’s 13, *caspitosa*, Molina *caspitosa* of Nava and Piovan, whose appropriate specific name need not be passed by. It is much Our specimens are all much condensed and caspitosa, smaller in all its parts than *B. alpina* of Kunth, rarely over two lines in length, and much crowded or even imbricated on the branches. They are not to be separated from the smaller forms of *B. alpina* as understood by Medellin, which includes *B. humifusa* as a larger variety.
Coryza, Linn.

1. Coryza balsamifera, Linn.

Hab., Buenos, Luzon, Philippine Islands.

2. Coryza appendiculata, Blume.

Hab., Mountains of Marthaca, one of the Feejee Islands. Perhaps only a variety of the foregoing.

3. Coryza sylvestrica, Blume.

Hab., Ovolau, Feejee Islands. (The determination doubtfull, not having seen the Javan species.)
4. Conyza Missata, Linn. Linn.,
Pluchea Missata, Des. in Linn. 6, p. 150; Bo. Prod. 5, p. 483.
Hab. At Caldera, Mindanao, one of the Philippine Islands.

5. Conyza Indica, Blume
Hab. Philippine Islands, with the preceding.

Pluchea, Cass.

1. Pluchea Chingoyo, Des.

Conyza Chingoyo, K. B. K., Av. Den.
Spec. 4, p. 76, t. 328.

Hab. Yanga, Peru. Common as far as to Pasto, where, according to Mr. Jameson, it abounds, forming a
islands of considerable size and covering large tracts of ground.

1. Pluchea Quitoe, etc.

Stab. Rio Janeiro, Brazil, when it is very common.

Ostrocanum, etc., etc.

1. Ostrocanum angustifolium, etc.

Stab. Vicinity of Rio Janeiro, Brazil, in marshes.

The specimens are of a broad-leaved form, and the species apparently will include both P. interruptum and P. spinatum.

*Hab.*: Callao, Peru.

The original specific name, needlessly suppressed by de Candolle, is an appropriate one, the hoary leaves being entire or barely repand-toothed. It with the species includes *T. canescens*, L., as well as *T. legitima*, L.

2. *Tessaria absinthioides*, L.

*Hab.*: Chili, at Valparaiso (where it abounds), and Santiago.
Eclipta. Linn.

1. Eclipta alba, Hassk.

E. erecta & E. prostrata, Linn.
Mant., p. 216, ete.

Incl. Rio Janeiro, Lima and Callao, Peru, and Sandalwood Bay, Hefzje Islands; the var. erecta
Orland, Hefzje Islands, and Lima near Manilla; the var. prostrata,
Hunter's River, New South Wales; a slender intermediate form.
Blainvillea, Cass.

Blainvillea rhomboides, Cass.

Tate, M. J., Fugon, Cape Verde Islands.

But the typical form and the variety Laccelata are probably introduced from Brazil. The type recorded from the Cape Verde Islands, where B. (Corioecarpus) Sayana is said to abound, I have not the latter for comparison, but my specimens accord with Brazilian B. rhomboides.
Siegesbeckia, Linn.

1. Siegesbeckia orientalis, Linn.

Stab. Society, Samoan, and Frigia Islands: probably adventive.

2. Siegesbeckia microcephala Q.

Stab. Hunter's River, New South Wales: a variety with the larger leaves laciniate-tortuose. A form nearer the type of the species is in the collection (ticketed as from the Bay of Islands, New Zealand, but I suspect it to be Australian.
Eucryphia, Cham.

1. Eucryphia Mitqui, D.C.

Stab. Chile, common at Valparaíso and Santiago.

Polymnia, Lin.

1. Polymnia Siegesbeckia, D.C.

Stab. Brazil, near Rio Janeiro. (A true Polymnia.)

2. Polymnia glabrata, var. angustifolia.

Stab. Peru, near Obrajillo; and at Calluay, the variety angustifolia.

The larger plant is a shrub.
from 12 to 18 feet high, according to Dr. Pickering's notes; the mass annulate clasping at the base, the rays short and yellow. The size of the smaller and narrow-leaved plant was not recorded. Hoek's specimens were probably gathered in Peru, not in Chili.

Baltimora, Linnaeus, Steud.


1. Baltimora recta, Linn.

Hab. Rio Janeiro, Brazil, A native of Tropical America.
Acanthospermum, Schrank.

Schränek. 

Acanthospermum Brasilianum, Schrank.


A. Kanthioideus & A. Missaturn, SB.

Prod. 5, p. 522.

Acanthospermum Kanthiodeus, K.


+ 397.

Hab. Rio Janeiro, Brazil.

Common in tropical America; it has also found its way to the Sandwich Islands.

Acanthospermum hispidum, K. & C.

Hab. Around Callaco, Peru. The only station as yet recorded on the western coast of America. But such lurs are likely to be diffusely wide.
Ambrosia, Tomb.

1. Ambrosia tenuifolia, Spring.

Ambrosia tenuifolia, Spring, Syst. 3, p. 851; DC. Prodr. 5, p. 527.
A. pratensis, var. intermedia, DC. l.c. p. 526.

Hab. Rio Negro, South Patagonia. Also collected at Montevideo by Commodore Capt. King, Isabelle, &c. as well as by Sellers. The stem is nearly empty, but the root is perennial. A. pratensis from Tamaulipas is from de Candolle's A. pratensis from Tamaulipas is from Mexico. The stem is thinner, more stipitate, gray. De Mirothia has collected it at the mouth of the San Pedro River on the west side of the desert. I. Memmia Peruviana, Willd.

Hab. Dallas and Lima, Peru. Unless the root is truly perennial, probably not distinct from A. artemisia.
I am gratified to see the attention given to the business of the Cambridge University Press, which I was honored to preside over for many years. The publication of your book is much appreciated.

Best wishes for the new edition.
including \( \frac{a}{f} \) which belongs to which belongs \( \frac{2}{f} \) M., and \( \frac{1}{f} \) and \( \frac{2}{f} \) \( P. \), to which \( \frac{1}{f} \) refer an undeveloped specimen in the collection from Rio Janeiro.

**Hanthium** (Tourn.)

1. **Hanthium strumarium**, var. *echinatum*

**Hanthium strumarium**, var. *echi-


Garten, Forst. 7, 164.
And, Rio Negro, in the Patagonia, and Hawaii, Sandwich Islands, on the coast. The specimens are just like those of the coast of the United States. I am convinced that it is only a maritime state of *H. americarium*, occurring on the seashore in widely separated parts of the world.

**Zinnia, Linn.**

1. *Zinnia panciflora*, Linn.

*Hub.* Peru, in the vicinity of Otrajillo. (The original species of the genus.)

**Gaegeeria, H. B. K.**

1. *Gaegeeria repens*, H. C.

*Hub.* Brazil, in the Oryan Mountains.
near Rio Janeiro.

Heliopsis, Pers.

1. Heliopsis canescens, H.B.K.

Jute, Peru, at Obrasillo and Banaos. (Probably only a variety of H. calochlalmodae, which, from Dr. Pickering's notes, was noticed at Lima, but is not in the collection.)

Medelia, Jaceq.

1. Medelia Acapulcensis, H.B.K.

Medelia Acapulcensis, H.B.K.,
Nov. Gen. Spec. 4, p. 215;
Steele in Nutt. Voy. Herald,
p.156.

Jute, Callao, Peru.
2. *Nedelia scaberrima*, Brutt.


*Hab.* Chajillo, Peru.

The single head will hardly bear dissection; but the specimen accords very well with Schum-flowers' *Guinea Plant*, although it is likely to belong to some older species.
Mulfia, Becker.

1. Mulfia longifolia, Gardner.


Hub. Brazil, in the vicinity of Rio Janeiro.

Our specimens accord with Gardner's; also with a Brazilian specimen in the Stockholm herbarium collected by Boaz, and another from the Vienna herbarium. I should refer them to M. oblongifolia. No, except that the leaves are so much more than two inches long and seven lines
broad, and the pungent tips of the chaff only slightly recurved. Fruiting heads ovoidal, two-thirds of an inch in diameter. Achene fleshly, drupaceous. Ligules apparently white or ochroleucus.

*Sclerocharpus*, Jacq.


Ital., St. Jago, Cape Verde Islands.

*Ecceelia*, Adams.


Ital., Callao and Lima, Peru. Also (Ganga); two states, one depauperate and the same as *E. parviflora*.
A. B. K., the other Emate, and answering to E. Remontia of Halpers.

An inspection of the specimens, in various herbaria, from those of Drucey, from the male of the present collection, leads to the conclusion that all four species in De Candolle's Prodrumus are forms of one, which varies considerably in the form and size of the leaves, and strikingly in the amount and character of the pubescence or hoariness. For this the specific name Canescens may be retained as being the oldest under this genus, but that of halimioidia precedes it under Pallasia, and Limensis is the oldest of all. Nuttall's C. California appears distinct at first view by its villous involucre and elongated...
ligules; but the Chilian E. elongifolia seems to be truly intermediate. E. hispida of Andersson, from the Galápagos looks peculiar and has much smaller head. E. minia, Butt., of the southern part of California is truly distinct.

**Flourensia**, DC.

1. **Flourensia hirifieera**, DC.

**Hab.** Chile: common in the vicinity of Valparaíso; (Apparantly a true congener of the discoid, North Mexican species.)
Fithonia, best.

Fithonia et Harpalium sect.
Harpalizia, Lb. Prodr. 5, p. 584.

1. Fithonia sericea.

Harpalium (Harpalizia) sericenum,
Lb. Prodr. 5, p. 584.

Hab. Peru, near Yanga and Obrajillo.

A clear congener of Fithonia excelsa, Lb., and still closer related to T. augustifolia, Lb. & Am. I do not know Harpalium mixillae and H. aureum, but H. rigidum is a true Helianthus, with callous pappus.
2. Lithonia pusilla, sp. nov.

I. annua, hispidula; foliis oppositis subalternatis lanceolatis tres integerrimis breviter peti- 

olatis; capitulis unis pedunculatis; involucro squamis 

lanceolatis frisosatis subpau- 

cis; acheneis villosis; pappi pseudo 

leis 4-6 aristasque thinis 

punicis eiformatis.

Tab. Ohajillo, Peru.

The few specimens are perhaps a depauperate state of a larger plant. The stems are barely a span high, from a slender annual root, either 

simple and terminated by a single head or with several numerous branches, sparsely his-

pid. Leaves an inch or less
in length, hispid, on both sides, not cariaceous, nearly destitute of obvious ribs or veins, narrowed at the base into a short or indistinct petiole. Head when in fruit scarcely half an inch long. Rays few, yellow. involucral at most in a single series, erect, with slightly spreading tips, shorter than the disk at maturity. Scale of the receptacle oblong, thin, and membranaceous, striate, macular, cuspidate. Achenie elongated, coriaceous, oblong, 2 lines in length, villous with long erect hairs. Pappus apparently persistent, consisting of two or three pales on each side and two rather stout subulate arms, the former oval or oblong, very obtuse, of a firm texture, sometimes coalescent, nearly a line.
long, laciniate, fimbriate-ciliate at the obtuse or truncate summit, the axes nearly twice the length of the paleae, with fimbriolate-ciliate margins. — The plant has somewhat the aspect of a Limosia, but the characters of a Lithinia.

Niquiera, H.B.K.

A. Niquiera Peruviana, sp. nov.

V. caule picto ad ascendente, foliis alternis ellipticis con oblongis acutatis vel nuncru-natis acute serratis frondibus utrinque cinereis supra hispidulo-secrecis pubibus apppresso-hirsutis basi acutis sub-serratis, involucris aquanisi
oblungo-lanceolatus apice patentibus estus praetextam ad marginem alto crisatus; receptaculo obtuso conico; ligulis elongatis; achene.

pappo 4-2 squamellato hirsuto tato.

Ital. Berne, between Obrajilos and Bulaway.

Stems apparently ascending or decumbent, somewhat hirsute. Leaves the base not seen. Leaves all alternate in the specimen, rather crowded, 2 inches long, one inch wide, or the uppermost smaller, trilobed from very near the base, somewhat villous, cinereous above with a close and fine calcarous hispid pubescence, and beneath with more hirsute hairs, the mar.
gins entire towards the base, otherwise serrate or serrulate.
Heads solitary or short peduncle, somewhat globose in fruit, 5 or 7 lines in diameter, involucres squarrose; the scales imbricated in two or three series, nearly equal, shorter than the proliferous disk, acute or acutish, hispidius externally, or at length only hispidly ciliate. Rays yellow, 12 to 18 lines long. Achenia oblong, fully a line and a half in length, villous, pubescent, crowned with two subulate arms and four short laciniate, fimbriate scales which are approximate to the base of the arms, one on each side, and sometimes partly ciliate. Achenia to them all apparently persistent or tardy, perhaps tardily deciduous. Having a squarrose involucre,
This species would fall under Leigia of Cassini and Solandri, but Gardner has rightly referred that genus to Nigrius. Harpalium, Cass., however, ought not to accompany it, the original species being a good Helianthus, near Harpalizia, DC., unless the genus takes in the perennial and narrow-leaved species of Helianthus also. Helianthus is marked not by the absence of intermediate squamae so much as by the cadaverous character of the white pupae.

I suspect that the present species is identical with a less Cineraria Plant, in Drummond's Peruvian collection, present in the general Herbarium of the Paris Museum, ticketed Helenium decumbens, tis affinis! Pers., but I have not compared the specimens.
Coreopsis, Linnaeus, 1737; var. supposita, Pernianeae (Agaristoidae), var. Dickeringii, sp. 1.

6. supposita, pere glaberrima; ranis apice longe medio mo-
nocephalitis, foliis oppositis per-
loculatis triternatiectis, segmentis
lineari-subulatis rhachi tenui
vix laticiibus, involucro aqua-
mis exterioribus lineariibus.

interioribus oblunquis dimidio-

brevisioribus, ligatis (annis trans-

multis) paleis receptaculi

oblunquis obtusiissimis, exter-

ioribus dorso villosis; achenis

lineari-oblunquis dorso sub-
palea glabris in testa ventre

et proestimins marginibus

villoissimis bi aristatis; arista

villoso.-barbellatis Carla

paullo achenio dimidio bre-

visoibus.
Hab., Andes y. Peru, between Ambajillo and Bullamay; also at Casa Bancha, according to Dr. Pickering’s notes.

Stem woody at the base, one or two feet high, with spreading branches, which are very leathery below, their naked summit forming a peduncle of 3 or 4 inches in length, which is obscurely pubescent next the head. Petiole slender, about half an inch long to the primary division, the divisions about twice three-parted, the edges linear-subulate, 2 to 4 lines long, scarcely half a line wide, acute, rather rigid. Scales of the inner involucre 6, oblong, thickish, with thin and yellowish margins, glabrous, nearly half an inch long, those of the outer very much smaller and
shorter. The ligules have fallen from the solitary head; their achenia sterile. Palea of the receptacle petaloid, scarious, yellowish, striate, coriaceous with the callus of the disk achenia. The latter are 2 or 3 lines long, flat, perfectly smooth and glabrous on the outer face, which is covered by the palea, but villous on the inner face, and very strongly villous on the margins; the truncate summit bearing a pair of erect, rather stout, persistent, upwardly villous awns, which are more than half the length of the disk corollas, but only one half or one third the length of the achenium.

This and some related species of the tribes of South America,
Sandwicenses. (Genipa theca, bass.)

Crepisiss and Bidens are separated by a single artificial, and not absolutely constant character. The Crepisides on which Nuttall proposed to found his genus Dioon to differ from the Platycarpus section of Bidens, which the accord in habit, only in their anthroscally hispid or naked arms or teeth of the frappus; recently specimens of Crepisosa, Michx., if not of a hybrid between that species and some Bidens have presented themselves to me with retroscally hispid arms. The Sandwich Islands present us with a series of species which equally connect the Silbo-capsae section of Bidens with Crepisiss. Some of them, having their acheneia curved or twisted at maturity, have been naturally
enough distinguished as separate genus, Campylototheca, but its adoption, as may be seen from in the characteristic of the following species and of *Bidens Sandwicensis*, would merely give us three limitless genera in the place of two artificially separated ones. The first of the subjoined species is in all respects a good *Coryphi-
sis*. The second differs merely in its elongated achenium slightly disposed to curve or twist. The others are *Campylototheca*, with more or less curved or spirally twisted achenia, either narrowly winged, margined or wingless, but manifestly inseparable congeneric with the preceding species. Their union with *Coryphi-
sis* is suggested both by their wanting the technical characters of *Bidens*, and by the fact that the former contains

C. patetiosa, diffusa, parce
brisata, max glabra; flls
trisectis, ligneis obovatis
vel subcamellatis, inciso-dentatis
num 3-5, partitis seu termini =
nali primatipartito; pedunculis elongatis monoecyphalitis; involucris exterioris phyllis lineari-oblatis interioribus æquari-lobatis; acheniis angusta oblongis modice alatis hand contortis apice bidentat- 

Itab, Maui, Sandwich Isl-

ands, on sandy or dry hills near the coast. Also collected by Keary, the form with more dissected leaves.

A shubby, diffusely branched plant, apparently only a foot or two in height; the younger stems, pedicels, &c. minutely and sparsely hairy, at length glabrate or glabrous. Octiades 6. Leaves all opposite. Octiades 6 to 10 lines long.
leaves occasionally undivided and oblong or oblate, but nearly all the rest trisected; the leaflets oblong or somewhat lanceolate, obtuse or acute, thickish, coarsely toothed or incised. The lateral pair usually, the terminal one petiolate and usually an inch long, sometimes all of them tripod, or the terminal one more dissected into oblong, linear or lobes. Peduncles slender and terminal, slender, 3 to 6 inches long, bearing single head. Involucres 2 or 3 lines long, the exterior of about 6 to 8 linear and obtuse foliaceous scales, some of them somewhat spreading, inner lanceolate, oblong, striate and somewhat colored. Disk flay 7 or 8, neuter, the ligules oblong, many-striate, obscurely toothed at the apex, about 5 lines in length. Branches of the style tipped with an acute one.
Achenia all alike except that the outer are rather shorter and broader than the innermost. Flat, narrowly or rather broadly oblong, striate on both faces, surrounded by a thin and rather broad wing, which is extended at the summit on each side into a triangular or tubulate flat tooth. At the inner edge of which in some instances, a very small smooth area appears to be confluent.
4. *Coreopsis* (CAMPYLOPSIS) macro =

6. *Hebacea*? glabra; foliis pin- natim 5-sectis, segmentis ovatis cuspidato-acuminatis argentissime et esberrime ser- rulatis; pedunculis oligoeleph- alis folia subtus subter- antiis; achenis pro capitulo magno- (subpuberis) lineatis striatis alatis viris tortis sub apice biverticillatis seu bi- corniculatis

Tab. Pacific, Sandwich Islands; on the mountains behind Honolulu.

Base of the stem not pen; the single specimen is a branch, a foot long, rather rigid, smooth. Petioles an inch or more in length, slender.
Leaves uniformly 5, ovate or oblong-ovate, sharply pointed, very sharply serrate with fine subulate teeth, an erect of a rather firm texture, being an inch or a little more in length; the lateral ones nearly sessile, the three upper sometimes confluent. Peduncles axillary and terminal, erect. Heads in flower 3 or 4 lines long, not including the rays. Exterior involucre of 5 or 8 loose and foliaceous oblong-linear scales, equalling the linear-lanceolate and somewhat colored inner ones. Ray flowers sterile but with an abortive 2-crested style and often with rudimentary filaments. Ligule oblong, 2-tubbed at the apex, yellow, 4 or 5 lines long. Flower and style partly exserted. Ovaries flat obovate-cuneiform, one ribbed on each face, plum-
margined, the margin sparingly ciliate, and extended on each side at or slightly below the broad and more or less emarginate summit into a somewhat divergent start and short arm or horn. This is either naked or obscurely ciliate upward with a few small bristly hairs, like those of the margin of the achene. Achenia all alike (except the abuttive ones of the ray), when full grown 9 or 10 long, and a line and a half wide, including the very distinct and rather thin straw-colored wing minutely and sparingly ciliate under a lens, the two erect or spreading arms about half a line long, either apical or often fully half a line below the narrowed apex, sometimes obsolete.
or deciduous. The acheneia, although fully formed, show only a slight disposition to curve or twist; while in the next species even immature ones are much curved.

Plate

Acheneia

...'
5. *Coresopsis* (Campsylotea) Macræ.

The species has a prostrate habit; the stems are slender and the leaves are lanceolate, acuminate or serrate. The flowers are yellow and the fruit is a capsule. The type species is *C. grandiflora* (1863, p. 53).

*Hab.:* Hawaii, Sandwich Islands, Macræ, Kewy.

No specimen of this occurs in our collection. The above character (with the Bandtles in view) is drawn up from a specimen of No. 289 of Kewy's collection in the Sandwich Islands, Communicated from the Paris Museum.
Species does not merit the name of grandiflora (Micrantha) although they are nearly twice as large the size of those of the allied Micrantha involucres nearly as in most of the following. Rays perfectly sterile, 3 to 5 lines long. Style with only the thickened branches projecting beyond the exerted anthers. Ovaries perfectly glabrous, oblong, compressed, destitute of papillae or crown, or some of the exterior with a minute point at the summit. Immature achenia 4 or 5 lines long, a line wide, curved and twisted, with a thick and callose margin of the same consistence as the and bown color as the body of the acheneum.
b. Coreopsis (Campylotlceca) cosmoides s. nov.

Itab, Sandwich Islands, on the mountains of Kauai. Also collected by Remey.

The base of the stem is wanting in the specimen, but the plant appears to be wholly herbaeous. Leaves opposite, the somewhat dilated petiole an inch or two in length. Leaflets, or the similar leaves when undivided, from \( \frac{1}{2} \) to 3 inches long, 8 to 16 lines wide, acuminate, pinately veined, rather thin, sharply and somewhat coarsely serrate, except at the base, which in the leaflets is commonly cuneate, the lateral ones serrate, the three uppermost often slightly confluent. Petioles militia, and simple, terminal, an inch or two in length. Head usually spherical, an inch in length,
Involution: in the specimen from Keny's collection remarkably foliaceous; this in the single specimen of our collection less so, equaling the disk-coriolus in length. Ligules yellow, an inch or less in length, incisely 2-3-cleft at the summit. Corollas of the disk yellow. Anthers brown, wholly exerted; nearly 3 lines long. Styles filiform, projecting to the length of 3 or 4 lines beyond the anthers. Their short branches with thickened and bent with yellow hairs at the summit and tipped with a very conspicuous slender subulate appendage. Mature achenia not seen. The oldest examined are 3 lines long, half a line wide, compressed, marginless, already beginning to curve, glabrous or very sparsely
hispid on the faces, but the margins ciliate with short and ascending hispid bristles, and a closer circle of erect bristles at the apex imitat a setulose erose from papilla. The margins of the achene may bear at or a little below the actual summit, at least outside the setulose erose, an erect spine or rigid seta, either scarcely longer than the neighboring bristles or of twice that length, often as long as the breadth of the achene— which is probably persistent, and is either naked or beset with two or three erect setulae. This is evidently a Campylotochecus, and the largest flowered species known.

Note: Head of 5000.
C. supplantica, plicataque, glaberrima, Corymboso-ramosa, foliis bipinnatis (vel sub-termati) sectis, summis 3-5-partitis, segmentis longis aequüte lineatis, integerrimis; capitulis parvis plurinibus, corollis coriaceis, ovatis, pedunculatis, involucro exterior brevior; acheniis angustissimis, lineari-orbatis-elongatis, glaberrimis apice calvis et rarius de solito uncisetulosis, exterioribus pedunculis sub-latis, maturis leviter flexuosis vel tortis. — Variae, in floribus centis, foliisque superioribus (segmentis nume laciniatis) pl. m. pubescentibus,

[Handwritten text]

...Mountains of the western part of Manu, Sandwich Islands, and a depauperate, somewhat pubescent variety with shorter leaves in the district of Maui, Hawaii. Also collected on Hawaii by Marvin and by Kerry.

...stem evidently woody at the base; the branches pubescent. Leaves all opposite (as in the other species), slender petioles, their divisions in the luxuriant specimens from Maui from 3 to 5 inches long, and not exceeding two lines in width, in Kerry's and other specimens not above an inch and a half in length, and less than a line wide. Common peduncles one or two inches long, bearing numerous corymbose heads. The latter (exclusive of the 4 or 5 rays)
are only about 2 lines long, narrow, and rather few flowered. Ligules yellow, neutral, 3 lines in length, oblong, obscurely toothed at the apex. Disk flowers 7 to 10. Appendages of the style tipped with a subulate point. Ovaries obovate oval, very glabrous, the exterior and inner ones also narrowly winged, margined, destitute of papillae and even of setulae at the summit, except occasionally a solitary one or a pair of minute ones which represent the annules vanishing away; sometimes these are on the wing below the summit. Full-grown achenia almost glabrous, very slender, and ½ to 1½ lines long, or the exterior ones shorter and broader, ¾ or 5 lines long, and with a distinct but very narrow and thin winged margin, incline.
to curve or twist, but much less so than in the following species.

(Tab.)

8. Coreopsis (Bampylitheca) micrantha

6. suffruticosa, glabra, paniculato-ramosa; folii pinnatim 3-7pecti partiti, synmis ramosis indivisis, segmentis lanceolatis seu oblongo-lanceolatis oprosse argute seratis ramosis incisis ramos 3-5-pidis venosis; capitulis parvis plurimis corollis subaequilongis; acheniis
Fancy you, Miriam (Jan. 1860),
who wrote, in 1860, Fanny, and her
change, "Glaucus and Scylla," for
Your Crocketts,而且 you, Fanny,
reduced a mountain (Jan. 8, 1861),
April, Llewellyn Hall.

And don't forget that,
6 of 29, the first, 2st of
23rd, antelope (Jan. 8, 1861),
8th of December, 1859, 27th of
15th, "Seraphim, Thee, and" Manderella, for
and 8th, "We, and Their, to be" 7th,
1st. My. Drake, 1st. 4th,
1st. Another, and their, Limited.

Who and another, one of
who wrote, and another, "Glaucus and Scylla," for
Your Crocketts,而且 you, Fanny,
reduced a mountain (Jan. 8, 1861),
April, Llewellyn Hall.

And don't forget that,
6 of 29, the first, 2st of
23rd, antelope (Jan. 8, 1861),
8th of December, 1859, 27th of
15th, "Seraphim, Thee, to be" 7th,
1st. My. Drake, 1st. 4th,
1st. Another, and their, Limited.
Stems ligulate at the base, apparently from one to three feet high, smooth. Leaves most commonly quinqufoliate, occasionally pinnatifid, with the upper leaflets somewhat confluent, occasionally foliolate. Rarely only trifoliolate or three-leafed.

Leaflets broadly lanceolate or somewhat oblong, acuminate, membranaceous, 1½ to 3 inches long, strongly serrate with sharp teeth, sometimes laciniate or pinnatifid, incised, sometimes inclined to a biternate division, the lower pair commonly petiolate. Common petals one or two inches long, bearing numerous small hairs in a loose corymb, on slender but rather short pedicels. Flowers maroon, 2 lines long, figures 4 or 5, neutral, yellow,
maked at the apex or minutely bearistulate, when mature recurved and twisted into a spiral.

The specimens in the collection belong to a variety with more dissected leaves than in Gaertner's figure, to which Hemsley's no. 285 answers well, except that the leaves are more sharply, almost lacinially, serrate. Lestin must have had before him, in Chamisson's collection, specimens like ours with dissected leaflets, and also some of the foregoing, probably the fruit, said to be "angustata alatum," was of that species.
Bidens, Tour.


13. Anhacca, glabra; foliis membranaceis pluriquite trisectis, segmentis ovatis seu ovato-lanceolatis, alaminatis anguste serratis, lateralibus petiolo latis vel semilibris; capitulis laxe corymbosis, paniculatis, parvis radiatis; involucris phyllis lanceolatis glabris acillis, capitulis alaminateque; bracteis glabris vel majunibus parce hispidulis apice subulatis, sinu caespitatis amplexis; arils subulatis ant noxis aut redorsum hispidulis superatis.

Bidens Sandwicensis, Less. in Linnaea, 6, p. 536.


B. micrantha, var. gracilia, Nutt. in Trans. Amer. Phil. Soc. n. ser., p. 34.

B. peduncularis, Less. in Linnaea, 5, p. 574, non Bid., Voy.

Var. P. heterophylla: caule basi supinito; foliis longe petiolatis plurisquem simplicibus oblongo-lanceolatis acuminé longo int. Gerrimo candatis basi attenuatis, foveis triseptatis segmentis lateratis sublinearis, acheniis plerumque tetraristatis.

Bidentis luxurians, Stark.

Var. P. ovatifolia: caule serbaceo; foliis simplicibus ovatis longissime petiolatis; ovarii corolla petularum superarum tetraristatis.

Itab. Olune Sandwich-Hans.
Var. V. in the mountains behind St. Mo.
No specimens of the ordinary trifoliolate form occur in the present collection; but it (apparently with pyramidal leaves also), was gathered by Chamisso, Collie, Stuttard, Perry, and others. If Gardichaud collected it, as is probable, it was not in Freycinet's voyage; at least it is not the plant described by him, and said to come from the Molucca Islands. Lessing characterizes the species not badly the ordinary form of the species when he compared it with As. to P. lecanatha in general appearance but with much smaller heads, yellow rays, and short arms which are retroflexed only towards the summit. These arms are frequently minutely aristulate or obsolete. But whether armless or armless, the arms (which are not curved nor twisted), are petaloid disposed at the summit, which is not the case in Campylolotica.
micrantha, for which it has more than once been mistaken. When the arms develop completely they are often half a line or more in length, and minutely hispid downwards, either for their whole length or only near their base or summit. So that the plant is manifestly a Bi...{words cut off}

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The var. V. has similar petals, about two inches in length, the lower ones almost as long as the simple, ovate or oblong, ovate, moderately acuminate blade. The achenia are unknown, but the ovaries are like those of the previous forms of states of B. S. Sandvicensis, to which it must less belongs.

B. paniculata. Hook. & Arn. Variety take to be another simple-leaved variety of B. Sandvicensis, with the stems sunder more developed than is usual, and more barked than is usual.

B. angustifolia, Nutt. i.e. is probably another form with dissected and marginal from the character it cannot be Browsers Menziesii.
B. herbacea, glaberrima, caule elato superne paniculato ramoso, pedicelis capitatis, corinibus paniculatis, foliis omnibus simplicibus, large petiolatis oblongis vel ovatis acutis vel acuminatis, astigto serrato, crassiusculis, involucros glaberrimis, phyllis linearis, bus obtusis, ligulis 7-8 elongatis, acheniis anguste lanceolatis, acheniis glabris apice mucro breviter biaristatis, aristis erectis petrosae sub hirsutis.

Hab. Hawaii, Sandwich Islands, in the district of Waima and elsewhere, at the base of Mauna Loa, and near the crater Lua Pile.
A perfectly glabrous herb, with a considerably branched stem, three feet high or more; the branches bearing rather numerous heads in a loose corymb or panicle. Leaves of a firm, somewhat curate or roundish at the base, texture very smooth, and the upper surface often shining, 1/2 to 3/4 inches long, ovate-oblong, varying to lanceolate-oblong or to ovate; the primary veins numerous, rather straight and conspicuous on the lower surface; the petioles of the larger leaves fully an inch long. Heads twice or thrice the size of those of any form of the preceding species; but the involucre very similar; the disk in flower 3 or 4 lines in length, and when the fruit is well developed half fully half an inch long, usuallyflowered. Ligules oblong, bright yellow, 5 to 9 lines
in length. Achenia 5 or 6 lines long, half a line wide, flat, glabrous, or rarely with a few ciliate on the margins, smooth and not at all setulose at the apex; the slender erect achenes at most a line and a half in length, biform with rigid and very strongly reflexed bristles or hairs, with one stout and rigid for the size of the achenes.

Specimens usually destitute of flowers, ticketed as from the Hecjje Islands, may belong to this species.

* On Hawaii Harry collected what appears to be a new Bidens (No. 287), with 3-5-parted leaves, of which my materials are imperfect. Also, upon Kauai or Nihaun (No. 258 bis), B. Shrypanthoides, a form with the involucral leaves not ciliate, not uncommon in the United States, and the same as B. heliantho-

des, H. B. K. of Mexico and of Chili.
Statis metrasum acetosatis.

Var. a. Taitensis: capitulis parvis
(juxtis tamen 3 lin. longus);
achenis parce hispida ciliatis,
axitis brevibus et patulisibus.


Nov. 20th, 1846.

B. pratensis, ramosus, Minutus subependescent; foliis omnibus simplicibus ovalibus oblongis usquevehine serratis petiolatis; pedunculis solitariis monocapsulis foliis subequantibus; m.volutum exterioris phyllis linearibus oblongis discum eaquequantibus ligulis brevibus; acheniis linearis subtetrangularis marginebus apiceque hispidae breviter vel truncine biavistatis.

Var. p. glabrae; magis herbaceae; foliis utrinque alternatis; capitulis subpaniculatis.

Stat. Eimeo, Society Islands; the very imperfect specimen of the doubtful variety from Tahiti.
The above character is drawn up from insufficient specimens of a shrub-like species, apparently well-marked, having a general resemblance to a Santana in foliage and habit. All the young parts are minutely with a fine, rusty pubescence, the older leaves, to, are glabrate. Leaves crowded on the flowering shoots, an inch and a half in length, less than an inch broad, slightly or abruptly pointed, densely and somewhat crenately serrate, rather constrict at the base or abruptly contracted into a petiole of 3 or 4 lines in length. Peduncles solitary and terminal about an inch long. Head hemispherical, about 4 lines in diameter. Scales of the outer involucres thick, linear, oblong, minutely pubescent, 8 or 9 in number. Ligules 5 or 6,
oblong, little exceeding the disk, Asteria 3 lines long, narrow, bisected along the margins and at the summit with rather sparse and rigid, short, bristle-like hairs; half a line in length, often shorter, and sometimes one or both obsolete or evanescent, when present always retroflexed or barbed.

The specimen of the doubtfully variegated variety is glabrate, and with leaves approaching those of the preceding species: the arms of the achenia are sometimes elongated and recurved at maturity. The specimen are too imperfect for proper determination.
4. Bidens pilosa, Linn.

Stab. Madeira, Cape Verde Islands, New Zealand, Tahiti, Fiji Islands.

5. Bidens subaltermannus, D.C.

Stab. Brazil, in the vicinity of Rio Janeiro.

6. Bidens Californica, D.C.

Stab. Peru, at Lima and Callao.

More hairy than Douglas's Californian specimens, but otherwise similar. The was probably transplanted to the coast of California.

Stat. Madeira, Rio Janeiro, Peru, between Lima and Oltraigillo.

8. Bidens bipinnata, linna.

Stat. Peru, near Oltraigillo. A very imperfect specimen apparently not Bidens hispida, W.B.K.

9. Bidens Andicola, W.B.K.

Stat. Baños, Andes of Peru. A hairy form of the species, nearly agreeing with Bidens hispida, W.B.K., which Medell reduct to a mere variety of Bidens Andicola, except that the head is radiate.

10. Bidens scandiciana, W.B.K.

Stat. Baños, Andes of Peru. Apo
Presently the same as the Guatemalan species, but more hairy.

11. **Bidens humilis** R. Br., K.


**Thelesperma**, Less.


*Cosmiderium*, Torr. & Gr. in Gr. Fl. 2: p. 350. 3

Gray, Fl. Mex., 1: p. 86.

*radice perennialis; foliis set segmentatisque fili formibus; capitulis eraviatis; involucro interno usque ad medium octofido exterius bis terve superante.*


*Thelesperma acabiosioides*, Less. l.c.; l.c. & l.c.; Stock. Y Am. in Ann. Bot. 3. p. 319; Gray, l.c.;

*Nat. Plains of the Rio Negro, North Patagonia.*

Good flowering specimens were collected but no mature fruit. The *Thelesperma gracile*, of the Plains of Texas, Kansas, &c., or closely resembles the species of the same country of the Southern Hemisphere.
If they grew side by side, it is not unlikely they would have been specifically distinguished. The leaves are somewhat more slender in the Patagonian species; the principal involucre clasp quite to the middle (the edges of the lobes narrowly beavering in both), and the segments of the outer involucre reach nearly to the sinuses of the inner. That the mature achene is vermicose or tuberculate—roughened on the back, as in the other species, except (although the character is omitted by De Candolle) appears from the detailed description in the Linnaeus, as well as from the generic name. The leaves are for the most part three-parted or divided.
Primarily five-parted; but the uppermost are often simple, and or some of the lower ones sparingly biseriately or interminately divided.

Plate. Thelesperma scabirrhosum. Plant of the natural size, Fig. 1. A Chart of the receptacle, 2. A flower, 3. A stamen, 4. Style and stigmas. The analyses variously magnified.

Glossogyne, Cass.


G. pedunculosa, B. l. e. var.
Pedunculis simplicibus monocephalatis.

Cal. p. 44. t. 45.


C. fammosa, Spring. Syst. 3. p. 514.

Stat. Fijjoe Island; a state with numerous and fascicled heads, the fruit more or less abortive.

Hulke's River, Australia; the normal form, also Woolongong, a form with mostly scapiform and simple peduncles, apparently C. pedunculosa, of De Vaudolle.
Himenesia, Cav.

1. Himenesia meloides, Cav.

Ital. Rio Janeiro, Brazil. (Probably of Mexican origin, now widely scattered. The other remaining species, H. microstera, apparently is not distinct.)

Verbescina, Linn.

1. Verbascina thalictroides D. H. B. K.]

Ital., Peru, near Obrajillo.

This I suspect to be Verbascina helianthoides. The habitat of which is not recorded. The stem, however, is winged below by the decurrent bases of the leaves, and the well-formed achene are generally rather broadened on one side only, the changes both of the stem and of the fruit are inconstant in this genus.
Spilanthes Jacq.


Hab. Brazil; base of the Caja Mountain near Rio Janeiro, in marshes.

In the present, as also in original specimen of this species, the scales of the involucrum are somewhat ciliate. The slender arms of the gynoecium are fully half the length of the achene, and longer than the cypselae which fringe it.

2. Spilanthes Hook.
2. Spilanthes (Acmella) blepharicarpa

Spilanthes blepharicarpa, D.C. Prodr. 5, p. 620
S. helminoides, Hook. f. Ann. in
Jour. Linn. Soc. 3, p. 317

Stat. Rio Negro, Norte Patagonia

A well-marked species, having the aspect of an Acmella; Hooker and Nuttall do not describe the achene. In Decandolle's Character I may add that the long, fringed achenes are rather deeply notched at the summit, owing to the projection of a strong and usually blunt tooth from each margin (the ray achene strongly trigonous) of a strong and usually blunt tooth which bears a slender, pilose, and somewhat deciduous crown. Ligules about 5 lines long, bright yellow. Receptacle
a nearly conical, at length 4 or 5 lines long. Some of the larger leaves are sparingly angular-toothed.

3. *Spilanthes* (Remella) Pfeiffii, DC.

Peru, at Lima and Cudosillo. Forms with the peduncles elongated, probably not different from *S. Mutisii*.


Str. Manila, Luzon.

The marginal achenes are tricuspid and more or less trianastate; but their corolla is tubular, not ligulate, so this is one of the forms which connect *S. Remella* with *S. Pseudo-Remella*, and confirms the union which Linnaeus anticipated.
5. *Spilanthes (Salicaria) alba*, Mill.

*Hab.* Peru, between Lima and Obrasillo. A common Peruvian species.

6. *Spilanthes (Salicaria) ussuri, Jack var.*

*Hab.* Peru, in the vicinity of Callao.
Mollastonia, &c.

1. Mollastonia biflora, &c.

Nerisina biflora, var. 

Nerisina biflora, var. spec. ed. 2. p. 1272. (Pheece Jnt. Malab. 10, t. 40.)

Mollastonia biflora, pendiuscula, (v. M. galosa (pro parte), &c. Prod. 5, p. 54.)

Hab.: Mangsi Islands, and in the vicinity of Manila, Luzon. Also Tahiti, Society Islands; a form with the large leaves rather softly canescent– pubescent underneath.

The five species of the compound cited above may be rather confidently reduced to one, which may be distinguished from the following by the looser and narrower, lanceolate or oblong lanceolate and more or less acuminate scales of the involucres, and perhaps more
incrassated achenia. It apparently includes Franchetian's Nectesima strigulosa and Lessing's Medelia aristata, to which species Forster's *Buphthalmum incanum* and *Euphrasia oligophylla* belongs is uncertain.

2. *Nollastenia forsteriana*, H. C.


*Nollastenia forsteriana*, H. C. Prodr. 5, p. 548; Endl. Zonogr. t. 88; forma *panicea* oligocephala.


*Hab.* Samoan, Tonga, and Eimeo Islands. Also on a small island in the South Sea.
Nearly all the specimens are polycephalous and with amless achenia, the foliage of some of them glabrate but mostly canescent beneath. The shorter involucres, some numerous, oppressed and imbricate involucres, of ovate or oblong and true scales, and the less thickened achenia, distinguish this from the preceding species. The heads are usually smaller.
Lipotrichie, Br. parte. Les. in Dum-
maa, b. p. 510, & Sym. p. 231, &c.
R. Br.
Vesicme, Spec. Gandich. Hook. &
Am.
Lipochata, DC. Prod. 5, p. 610, exel.
Spec. Amer. (i. e. Rexmenia Spec.)
Microchata, Nutt. in Trans. Amer.
Phil. Soc. (m. ser.), p. 450, exel.
spec. Nolastomum.
Schizogyphylum, Nutt. i. e. p. 452.
Aphanogynopsis, En. DC. Gen. Suppl.
2. p. 43.
Sce. n. 28, p. 275, &c. in Trans.
[St. Galap.]) p. 50.
That all the following Sandwicchian species are congeneric notwithstanding their diversified habit, and the complete abscission of the short awns or chaffy scales of the pappus of the latest enumerated one, I have no doubt. Also that Dr. Tucker's Macrea (Andersson's Trigonostemon) of the Galápagos is another species, in which the corona or of the pappus is generally a little more developed, and the awns obsolete, but not always entirely wanting. To merge all these plants in Mollastonia (which shows no tendency to winged achene) would hardly be permitted, although the earlier species would not appear widely out of place there. On the whole it will be more difficult clearly to distinguish separate them groups from Nedecca on the one hand and from Regmenia on the other. Since the last-named genus takes in all the American species of
In Bandel's genus *Lipotribata*, and since the latter was essentially founded upon Linnaeus' *Lipotribata*, and this mainly upon the leading Sand-wrack species, it is evident that (as I have formerly stated) the present group, if maintained, should in strictness retain the name of *Lipotribata*. If the rule of priority be waived on account of the inappropriateness of that name to one or two of the species, the succession would most appropriately fall upon *Macrea*. But convenience alone coincides with precedence in maintaining the same strict rule; *L. hariciifolia* (*Macrea hariciifolia* Hook), and *L. micranthra*, though not very congeners in habit, may be conveniently associated under the sectional name of *Phanophoros*. 
Lipocheata australis.

2. supportica, festella, scabra, vel hispidula, foliis ovatis ovato-lancetatis, 3-5-plinervis acuminatis arguta serratis, nec incisis, nec aut serrilibus aut in petiolum brevi. Marginatum decurrentibus; involucri squamosis ovato-lanceolatis sub-acuminatis.

Lipocheata australis. Less. in Linnea, 6, p. 560.

Var. 1. concinta; foliis sessilibus basi nec angustata, carnatis nec late carnato-porifoliatis amplexicaulis.


Lipocheata carnata, D. B. Prod. 5, p. 611.

Var. B. decursens: folii basi inspetiolum, plicaturque alatum con-tractis, laminae nae ovata
seu rhombica nae oblongo-
lanceolata, in latifoliis sapios
argenteo duplicata vel laciniato-serrata.

Microcheta lanceolata, Nutt. l.c.,
est forma angustifolia.

Var. N. lobata: folii subscinditibus
vel breviter petiolatis basim vasis
utrinque lobatis seu laciniato-
dentatis.

Nubesina lobata, Gaudich. l.c.;
H. J. K. & Sm. & Beech. p. 87;
V. masticata, H. J. K. & Sm. & Beech,
l.c.

Lycopodictyma lobata & masticata;
D. S. Prof. 5. p. 111.

Microcheta lobata & var. Masticata,
Nutt. l.c.
Stah, Sandwich Islands, gathered by most collectors. Nov. 11, in the present collection only from the western part of Maui; and from Kauai. 3. With the preceding forms; also Kauai near Hilo. V. Kaala mountains, Oahu.

The above are manifestly all forms of the polyphroma species, for which, as a whole, catha echinata is an appropriate name. I therefore adopt the nearly as a specific name of Leta. Who described forms with mostly undivided leaves, Papaws of 2 or 3 short chaffy arms or see narrow scales. An epigynous gland at the base of the style of the disk flowers fills the bottom of the tube of the corolla in all the species.

2. Rubarea erecta, cimex, strigulosa, folis attorides suberosatis acuminitatis replicato serratis reliculatis longe petiolatis, petiolis gracilibus; involucris squamis ovalis oblongis oblongis suboblongis.

Hol. Hawaii, Sandwich Islands, on the sea-coast south east of the crater Lua Pele.

Only a single specimen was preserved, and it has not been met with in any other collection. Apparently it is sufficiently distinct from any form of the foregoing species; but its principal character is in the petioles. These are an inch long, slender, and marginless, almost half the length of the blade, which is somewhat cleft or truncate at the
base, with only a slight decurrent portion, not surpassing the depth of the sinus. The heads, ½, are cinerious with a close and slightly beakous striate pubescence; the veins are conspicuously reticulated, the basal lateral ribs rising from just within the lamina. Pedicels slender, the middle are monoecephalos, the lateral tricephalos. I had resembling those of L. australis, rather small; the scales of the involucres hunter, about the height of the disk. Mature achenea not very those of the ray are evidently bi- quetrous, smooth, bilate, minute at the summit, the angles above show the rudiment of a narrow and laminated dentilatel, winging, the summit armed with a pappus of three or four short squamolate auras and some minute setulose intermediate squamella; those of the disk apparently infertile and compressed, mostly biauriculate.
3. Lipocheta calycosa, sp. n.

L. fruticosa, hispidula, scabrida; foliis lanceolatis oblongisve ob-tusis obsolete subscariosis vix trilinerviosis brevissimis petiolaris; involucris aquanis 5-8 valibus seu obvatis obtusissimis foliaceis discum subsuperantibus; falsis receptaculi involutis truncatis.

Type, Diamond Hill, Oahu, Sandwich Islands.

This truly distinct species occurs in no other collection. The stems appear to be more decidedly ligneous than in the other species. The leaves are green, moderately lacinious and varying from oblong or oblong-ovate to lanceolate, 1/2 to 2 inches long, from half an inch to an inch in width, or those of
The branches less than inch long, all obtuse, obscurely perrate or almost entire; their veins inconspicuous; the petals less than two lines in length. Peduncle slender, 2 or 3 inches long, mostly naked and more or less cup-shaped. Heads rather larger than in L. australis; the involucre conspicuously different, consisting of it does of from 5 to 8 rays, more foliaceous, broadly oval or slightly obvovate, very obtuse, equal scales, which somewhat exceed the disk. Rays about 12, oblong, linear, yellow, pale of the receptacle. petals shorter than the disk, 1/2 as in the rest of the genus, in this species remarkably broad, abruptly truncate, and convolute around the achene. Achenes of the disk apparently almost as fertile as those of the ray, the outermost triangular, the inner expanded, all more or less pubescent at the tip, mostly wingless, the two or three
arms nearly equaling the slender tube of the corolla, rather stout and persistent, connected by a crown of pretty conspicuous crown of conical squamella.

4. Lipochaeta Lavarum of Gaudich.

Lipochaeta Lavarum, D.C. Prodr.
5. p. 611.

Hab. Hills and barren mountains near the coast of West Maui, Sandwich Islands. Collected by Perry on Hawaii.

Well marked by its silvery, caespitose (not snarly stigose) leaves. They vary from narrowly to broadly lanceolate or oblong, from one to three inches
in length, the veins and triple ribs conspicuous beneath. Scales of the involucres ovate or ovate-oblong, obtuse, appressed, biserial, shorter than the disk. Rays 8 to 10, elongated, yellow. StylePale of the receptacle obtuse. Achenia all fertile, short and thick, very variable as to the wings. As is usual (in the manner of Nibesimoid genera generally) as to the wings. The radial achenia of the present collection are conspicuously three-winged, the wings widening upwards and extended into a sulcate process as long as the pappus, but entirely free from the latter: the disk-achenes either bare-winged, or winged only from the inner edge, often with two or two small tooth-like processes at the summit outside of the pappus. The latter consists of two or three short, indehiscent,
more or less clavate and blunt-armed, or pedate. Palaeae, about a third or a quarter the length of the achenium, with or without manifest intermediate, intermediate, intermediate, squamulae. In Reny's specimens from Hawaii, the achenia are smaller and wingless or nearly so, but the borders of their flat summit bears often bears two or three tooth-like processes, the arms similar or smaller.

5. **Lipocheta integrifolia**.

_2._ Herbacea e radice lignescente, numifusa, ramosissima, minutum setus _canescente_; foliis subcoriaceis parvis spatulatibus lineari oblongis integerrimis, venis haud perspicuis; pedunculis solitarius terminalibus; involucris squamis liseriatis ovatis vel

Hab., Sandwich Islands: Diamond Hill, near Honolulu, Oahu; and Sand Hills of Kauai, the coast of Maui. Collected likewise by Sandwich and Kennedy as well as by Nuttall.

A close congener of L. lavarum, but procumbent, somewhat fleshy, very leafy; the leaves less than an inch long, varying from obovate to linear, very obtuse, linear-narrow or canescent, the veins hidden or sometimes manifest underneath in the dried state, the variation similar to that of L. lavarum.

Peduncles
equalling or exceeding the leaves.
Head small. Rays yellow, short, or sometimes rather long. Stelidia nearly as in the preceding species, but generally less winged. The stacte or glands of the pappus similar.

Lipocheta praeclara, H. (Nabebina, Hook. & Arn.,) ranges between L. integrifolia and L. australis; like the former it has the habit of Eleipsa. The leaves are not absolutely glabrous, but under a lens show some sparse and minute strigose hairs. It does not occur in the present collection, but Henry gathered it both upon Nihoa and Kauai.
L. suffruticosa, ramossissima, erecta, aspero-hispidula; foliis plurisqu
trifidis, segmentis oblongo-linear
bus seu linear-lanceolatis den-
ticulatis nunc laciniatis vel inciso-
pinatipidis; involucro squamis
late ovatis sopinis acuminatis
disco parum breviovibus; pedne
receptaculo macrostigma.

Folia
nunc petiolata petiolis margina-
tis, nunc connata-amplexicaulis.

Tab. Maui, Sandwich Islands: the less-leaved form found on sand-
hills in the western part of the island; those with dissected leaves on moun-
tains in the eastern portion.

Apparately a low, erect, suffr
these island, crowded with short hispid
substance. Leaves from one to three
inches in length, thin, the lowest
sometimes nearly entire; the others deeply
three cleft toward the base; the divi-
sions in the broader form 3 or 4 lines
wide, obtuse, obscurely toothed, the
middle are much larger, the lateral
ones occasionally two-lobed; in the
other forms the latter divisions are
narrower and acute, and either lacin-
ially toothed or irregularly princi-
tipit and incised. Peduncle slender,
poliarty or compressed. Heads about
the size of those of L. australis, the
involvulus of shorter and broader, and
usually abruptly acuminate scales.
Rays about 10, line are oblong, bright
yellow. Achene pubescent at the tip,
wingless, or obscurely winged near
the summit. Pappus of 2 or 3 very
short and squamellate arms or pales,
which are somewhat coroniflorum con-
cresced at their base. (The dissected)
L. herbacea, erecta, gracilis, ser

glabra; foliis pinnatisectis,
segmentis subquadratis aequans
linearis, semi-filiformibus in

tegernimis; involucro squamos

lanceolatis lacinulatis discum adequar

latis; paleis receptaculi acutatis.

Itali, Oahu, Sandwich Islands,
in the Kaala Mountains, near
Ma'ili. Also gathered on Oahu
by Penny.

Except that L. heterophylla
exhibits some transition, this spe
cies, with its finely dissected and
slender foliage would hardly be

taken for a congener of L. austro

l. But the floral structure,
achenes, and capsules are the same.
The weak and slender branching
stems are from one to three feet in
height, smooth or nearly so, the branches very leafy. Leaves from one to three inches long; the slender
stipules bearing 8 or 10 pairs of narrowly linear or sometimes filiform leaf-
lets or segments of unequal length (the larger ones about half an inch
long), and a somewhat prolonged terminal one scarcely broader than the
stipules. Peduncles terminating the branches, ½ to 1 inch long.
Petals rather smaller than those of L. australis. Scales of the
involucre biserial, about the length
of the disk, broadly lanceolate, acute
or acutish. Rays 8 or 9, rather
short, yellow. Palate of the recepta-
cele almost conical pointed.
Achenia 2-4 angulata, the angles of which
sometimes narrowly slightly
wings or a little produced at the
summit. Pappus of 2 to 4 short and
thickish, somewhat deciduous awns.

L. *Mabacea*, minutum striulosa, caulibus gracilibus ovato-ovatis, diffusis; foliis tenuibus bi-triangularibus, setis subsessilibus, segmentibus parvis sub-ovatis, papillis 2–3 lobatis bi-trilobatis; capitulis parvis, bracteis pedunculatis; involucris squamosis exteriores liripartitis linearis, interioribus oblongis; ligulis 2–3 valvis; fr. disci 5–8; acheniis apetatis, pappo obsolente.


Note: In shady wood of the island, near mountains of Kanai (Kog), near Koldia, where it was previously discovered by Nuttall. Many has more recently collected it on the same island.
A slender, branching, leafy, diffuse habit, in habit resembling the two foregoing species, but with smaller, fewer flowers, and less pedunculate heads (the flowers in none scarcey above two lines in length), and 2-3-pinnately dissected leaves, the cuneate-oblong or ovate segments of which are only a line or two in place of the rectangle oblong acumen. The ovary ovate, emarginate or bifid at the extremity, orbicular or disk-flowered (as in most of the preceding species) with a campanulate or cup-shaped limb or throat raised on a narrow tube, the base of the latter filled by the conspicuous gland or styloepidion. Ovaries pubescent at the summit, as in all the genus, the short hairs, or a part of them, apparently forming a minute campanulate pappus, of which only vestiges remain upon the mature achene. The exocarp of the ray are the most or disk, are the most fertile and lucid, but the central ones are not by no means always
infertile. They are short-obovate, the outermost 3-4 angled but wingless, the inner more compressed or lenticular.

* I have from Remy's collection, supplied by the Paris Museum, a specimen of what appears to be still another species of this group, one which helps somewhat to fill the interval between L. microantha and L. laricifolia.

Lipocheta (Aphanopappus) Remyi, nov. spec.: herbacea, ramosissima, diffusa; cinesa, hirsuta; foliis oblongis petiolatis obtusis, sepalis parce dentatis vel subdentatis, superioarius alternis, capitulis parvis subpaniculatis breviter pedunculatis, involucris glabriis, oblongis obtusis; ligulis 5-7 ovatis brevibus, acheneis radii praesentis ad angulos tuberculatis, sono integro subalato, disci inanibus; pappo obsolete.

Oahu, Sandwich Islands, coll. Remy, 260. — Stern 6 - 10 inches long. Leaves half an inch long, 2-3 lines long, disk flowers perfect, but apparently infertile. Acheneia all pubescent at the summit, those of the ray large.
Flaveria, Juss.

1. Flaveria Contragasta, Pers.

Peru. Vicinity of Lima and Callao. This species is widely distributed over the warmer and drier parts of America, and becoming naturalized in other corresponding parts of the world. F. angustifolia (Pers.) in some specimens appears sufficiently distinct, but others pass into F. Contragasta. F. Australia, Hook. is a name probably only a narrow leaved form of the same species; but how and when it found its way to Tropical Australia? Probably in ballast of Spanish vessels from ports of Western America to some Malay port, where, however, it is hardly now met with.

As to the remaining species of the genus, F. longifolia, Gray, Pl. Tend. p. 88 (which is Gymnospermum oppositifolium, DeB.) is shown by a good suite of specimens in Bailey's collection (nos. 2283, 3173) to be no more than a variety of F. discarca, Lagasca, a native of Cuba, the Bahamas, and East
Florida. The leaves of specimens native from the sea-coast are less fleshy, either entire or denticulate, in the largest forms elongated lanceolate, the margin from a base of 3 to 5 lines in width to an acute apex. A.モノサフィア frantic, from the same region, is a very distinct species of the same group. *Empyrea maritima* is an unknown species.

*Empyrea*, Low., S.C.

1. *Empyrea maritima*, S.C.

Hab. On the coast of Peru at Callao. (Abundant in fresh water. Heads simple and pedunculate in the same specimens.)

*Porophyllum*, vall.


Hab. Brazil, near Rio Janeiro. Nearly the var. intermedium, S.C., and the species robustus includes P. robustus.
Tagetes, Form.

1. Tagetes glandulifera, Schrank.
   Hab. Brazil, near Rio Janeiro. Chile at near Santiago: a common weed in South America.

2. Tagetes graeculus, L'Her.
   Hab. Lima, Peru, among garden plants: a small-leaved form, otherwise similar to the usual specimens collected by Baron, and also by Domby.

3. Tagetes gracilis, D.C.

Tagetes gracilis, D.C. Proc. 5, p. 648
Hab. Olmajillo, Peru.
Guntheria, Sprig.

Polypterosis, Less. in Dimora, b (1831) p. 518, non cath.


(Tab.)

1. Guntheria Megaprotamica, Sprig.

Guntheria Megaprotamica, Sprig., l. c.; Schlcht. in Dimora, b, p. 4.
Polypterosis Brasiliensis, Less. in Dimora, b, p. 518

Var. 3. Scabiosoides; foliis pinnatis.
Partitius secomus sub 3 minu parva bicipinatipartitis.

Cephalophora Scabiosoides, Sprig. in Herb. Stock.

Bercostylis Scabiosoides, Ann. in DC. Prod. 7, p. 293 + Hook.

It is, Plains of the Rio Negro,
North Patagonia.

The Specimens in the present
collection of bare Pinus, mostly
pinnately parted leaves; but among those of
Gillies, Twedde, &c., all grades of
cur from entire leaves, of variable
ucidanto, to incised, sub-pinnatiform,
and bipinnately parted. Spence's
name for the genus, founded like
Lessing's upon Belloni's Specimens
is the earliest by several years, and
nothing stands in the way of
its restoration. The genus is the
representative of the Plains of
Buenos Ayres, &c., of Gaillardia
and Agastisia in the counterpart
region of North America; and the
three genera are very closely related,
in the style "Cenostylis" is interme-
diate between these two genera; from
both it reedes in its want of rays;
from Gaillardia also in the villous hairs covering the achenes instead of forming an involucrate envelope.

Plate 3

Babia, Lag., Fl.


Stahl, Chili, common in the vicinity of Valparaiso; collected first by Dombey.

Villanueva, Lag.

1. Villanueva dissecta, Fl.

Hab. Obrajillo, Peru.

This is probably Lagusca's N.
Alternifolia, but all the lower leaves are opposite. It is doubless
Verch's Vincia dissecta, but both
ray and disk flowers the flowers
both of the ray and the disk are
more than five. The heads are
larger and more pedunculate
than in V. mooretiifolia. The
plant essentially a rayless Bahia.

Cephalophrora, var.

1. Cephalophrora glauca, var.

Nab., Chili, in the vicinity of
Valparaiso.

This, the original, is apparently
the sole species of the genus, Acti-
menta being a distinct genus, an
C. aromatica, Lodd., with probably C. plantaginea, L., being nearly C. glauca. The size of the head is extremely variable.

Galinsoga, Ruiz & Pav.

1. Galinsoga parviflora, L.

S. Chili, near Valparaiso.

To this species, as already intimated (Martii, Hist. Myr. Sulph. p. 120; Gray, Pl. Hands. p. 104, & Pl. Wrightii. 2, p. 98) belong De Candolle's Nervagasia baracansana; also Schaffner's no. 249, from Mexico, referred by Schultze to G. (Vicia) aristicarpa.
2. Galinsoga urticaefolia, Benth.

Rodrigia urticaefolia, H. B. K.  

Sakariae urticaefolia, DC. Prov.


Voy. Bulph. p. 119, forma -

S. urticaefolia, Benth. in Ast. 
Tomus. Cent. Amer. vol. 155; 
forma epiphraga.

Stab. Peru, near Obrajillo.

With more rudiments of puppers, this 
containing 2A G. hispida. with S. urti-
caefolia into one species, which varies 
in the manner of S. parviflora.

Also, a dwarf state, without any 
puppers, near Lima.
Raillardiæ, sandiech.

Char. aut. Capitolium 4-45.
florum, monogamum. Involu-
crem cylindraceum, exquisite uni-
seriate, et squamosis 4-14 fere
valvatis cornutantibus rapiu-
que leviter conduplicatis. Recess-
tacutum convexum seu conicum,
undum, pubescens. Flores et
achenia Deltantia. Dappus
uniserialis, setis 15-20 rigidu-
dis plumosis. - Frutices vel
arbustulae Sandwichenses, en-
festifolii, foliis opposi-
itis, termato, vaticillatis varius
alternis rigidis uni-pluri-
nerviis, ramis praeconsibus plenu-
que fruarii; capitulis panicula-
tatis; floribus altiis et leuithes.

Raillardiæ, Gandich, 187. My. Frya

3, 489, 483; D. P Madonna b. b. 440.
Notwithstanding the filiform rays of the pappus, the relationship of this genus is manifested with Sibbaldia among the Helianthines; from which, indeed, it differs chiefly in the strictly uniseriolar involucre with the scales almost exactly valvate and coirnivent, if not cohering, into a cylindrical or campanulate cylinndro-corneous cup, instead of partially involving the subtended flowers; in the naked instead of paleaceous receptacle; and in the filiform and truly plumose scale of the pappus. The main species of the present collection with pinned leaves strengthen this affinity. Not all of these most striking and most characteristic genera Sandwidian genera contain many flowers as well.
as few-flowered species. The present
collection extends the three described
species of Railliettia to mine, and
there are indications that
still others will reward the search
of future explorers of the elevated
region (between 6,000 and 11,000 feet)
which they principally inhabit.
Most

A. Neomita, Jolia, Penicula, and Alnicum are
very variable, as are so many
of the characteristic plants of
these islands. The known species
may be arranged thus:

A. Neomita: Jolia Penicula antico-
ulata, opposite, dilatata.
1. Venosep with dilated and plane feather-veined and reticulate leaflets all opposite, the pairs distant, the heads very numerous and few-flowered. *R. latifolia*.

2. Uninerved, with narrow, rigid one-nerved leaves, destitute of veins, sometimes rarely showing traces of lateral nerves; alternate, and their margins revolute, the cauline ones recurved, those of the flowering shoots few and scattered. *R. acbra*, terminally serrulate or alternate, and crowded on the branches; plane, or the margins slightly revolute, reflex or spreading. *R. laxiflora*, tomentose or convex below and concave or crenateulate above, apiculate or apressed, often in tufts. *R. ciliolata*. 
3. Nervose; with plane (or somewhat concave) linear-lanceolate, elliptical or ovate, opposite or ternately verticillate crowded, 3-11-nerved leaves.

Leaves narrower, lax and spreading, 3-5-nerved, alternate at the base; head 4-12-flowered. R. linears.

Leaves broader, closely serrate or partly clasping, crowded; 3-5-nerved; head 7-15-flowered. R. Menziesii.

7-11-nerved, ovate-lanceolate, acute; head 10-20-flowered. R. platyphylla.

3-5-nerved, glandular, elliptical-oblong, very obtuse; head 25-45-flowered. R. arborea.

Obscurly 3-5-nerved, oblong-lanceolate, somewhat incised at the base and concave; head 12-20-flowered. R. struthoides.
1. Raillietia latifolia, Sp. nov. (tō).

Oppositis mariis oblongis
R. foliis oblongis angustis subpetiolatis penninerviis reticulato-
violatis pubescentibus subpetiolatis dissis-
tis ramisque elongati paulatim glabrescentibus capitulis in
panicula compresse effuso numerosissimis quadri-(ravi-
us quinque) floris.

Hab. Mountains of Kauai, Sandwich Islands.

"A rambling Shrub," with
long and virgate, glabrous and
smooth branches; the internodes
from 3 to 5 inches long. Leaves
all opposite, plane, 3 or 4 inches
in length, an inch or an inch and
a half broad, oblong, inclining to
wands, ovate, or ovate-oblong, at least, rather than very coriaceous, perfectly glabrous and somewhat lucid, lightly feather-veined from a rather strong midrib, and the cypresses reticulated on both surfaces; the upper leaves reduced to bracts. Panicles from the upper axils and terminal, forming a compound lax thyrsus of very numerous small heads; its slender branchy bractlets, pedicels (mostly shorter than the heads) and involucres cinsenous-pubescent. Involucres barely 3 lines long, clavate-cylindrical; the prominent and lightly coherent to near the summit, a little shorter than the developed flowers. Receptacle, flowers, achenia, as in the genus
generally, in which this most distinct species is very remarkable on account of its ample, dilated, feather-veined and reticulated distant leaves.

Plate Raillia a Latifolia. Fig. 1. A capitulum, with bract and involucre, enlarged. 2. Inside view of the involucre laid open. 3. Receptacle. 4. A flower. 5. An anther. 6. Summit of the style. Variously magnified.
2. Raillardiâ scabra, L. (Tab.

R. Humilis, caulibus floridios (1/2-2-pedalibus) gracilibus, fere pedato superne parce foliatis fere nulaeque e basi fruticosâ ramo deumbente; foliis pluris que alternae line-aribus uninebris supra vel undique hispidae-los, scabris magisque revolutis raro denticulato parce dentatis, inferi oribus emfertissimis reflexis; capitulis plurimis paniculato-corporibus 5-7-floris.

Raillardiâ scabra, L. Pro.N. 6, p. 441.

Var. B. Hispidellos: gracilibus; foliis angusto line-aribus utrinque hispidellos.
Var. V. leiophylla: folis anguste linearibus, caespitis vel superne obsolete marginibusque hispidulo secalis. (Tab. 1)

Hab. Hawaii, Sandwich Islands, where it was first collected by Merriam, frequent on the lava plains, at between 2000 and 5000 feet elevation, and in the environs of the Great Crater, Kilauea, Var. B; District of Hilo, H. V. Ewing of the Great Crater, and Mt. of East Maui.

A well marked species, of which the two varieties indicated are slender forms, the one with more aspera, the other with smoother leaves, connecting forms abundant in the present and in Kauy's collection. It is known by its habit, its naked and polycephalos corolla bo.
cle, and by the narrow leaves
being almost all of them alternate,
and one-nerved, with involute
margins, which are sometimes
sparsely and sharply toothed.
Occasionally indications of a pair
of lateral nerves appear on the
under surface, but there are no
visible veins. The quadrate costa,
as in the related species, is impre-
sed on the upper, and prominent on
the lower surface. The Caínine
leaves are soon recurved or reflexed;
they are from 9 to 18 lines long in
length, and from one to 2½ lines in
width; the ribs 2 to 7 lines long;
Involution 3 lines long, 4 to 5 or
6 narrower and soon separating
deeply, inconspicuous or nearly glabrous
externally. Achene tapering at
the base, but not properly stipitate.
Plate

Raillardia

3. Raillardia laxiflora, Bb.

R. vamis floridus punctuos sepius foliosissimis; foliais latissimis linearibus sece lanceolatis planis (vel margine fusc acaule) parum revolutis crassis uniseriis uniseriis supra lucidis scabulis praelorisc in levigata papulisibus serpibus reflexis densumque teretato verticilatis, superiores rubeae alternis; panicula sub simplici laxe;
capitulis plerumque longe pedicellatis 6-12 floris.

Raillietia laxiflora, DC. Prodr. 6, p. 441.

Tab., Hawaii, on the lava plains near the Great Crater.

This species is intermediate between the foregoing and the followings; two species which no one would venture to combine, from R. Acabra it differs in its more sturdy flowering stems, on which most of the leaves are in threes, its simpler panicle and rather larger head. The leaves are proportionally broader (6-12 lines long and 2-2½ lines broad), thicker, and with the margins and obscurely if at all revolute. On some dwarf specimens
The stem are only sparingly leafy towards the panicle, but they are commonly crowded up to its commencement. From R. ciliolata it is distinguished by the plane, reflexed-spread leaves, with bavily scabrous margins, more open panicle, slender pedicels, &c., yet there are some ambiguous specimens.

H. Raillandia ciliolata, &c.

R. ramossissima; ramis usque ad apicem confertissime foliosis lignosis; foliis lanceolatis lineari-oblungis vel obtusae lanceolato-sub-
ulatis crassis uninervis infra
convexio seu carinatis supra
concavis vel marginitibus (comper
hispidulo- ciliatis acutis ciliata-
tive) leviter involutis lucidis
oppositis vel termis pressisse exeris
seu erectusculitis et ramosum
sterilium imbricatissimum capitulis
paucis subraconiosis 5-12. floris.

Var. 1. laxifolia: foliis patentibus
subplanis minus excis.

Var. 2. juniperoides: foliis minori-
bus involuto-canaliculatis
quasi acerosis confertissimis
imbricatis, capitulis subso-
taris.
Hal. Hawaiian, abundant on the high lava plains, & at an altitude of 5000 feet, collected first by Meurice.

A low, much-branched, rigid shrub, running into many varieties, of which the two extremes are noted above. Between these Meurice's specimen, upon which Delavallée characterized the species, is fairly intermediate. The leaves vary from approximate to dense, closely crowded, from somewhat spreading to erect and imbricated, from terminally veined to opposite, from flattened to strongly campanulate, concave above and campanulate convex below, nearly more than a quarter of an inch (in var. X) to nearly an inch in length. In a few specimens, only, especially in var. B, which approaches R.
Laxiflora, S.B., the leaves are widely spreading. They are all veinless and merely rely on the midrib, impressed mostly close, and the stamens ciliate margins more or less involute, never recurved, involute 3 or 4 lines long, generally containing 6 or 7 flowers, Achene minutely and sparsely hairy or gla\n
Plate

Raillandia ciliata,
A. Nearly the originally described form, with a sterile branch having the leaves more imbricated, Fig. 1.

1. A leaf seen from below. 2. A Petiole. 3. A stem seen from above. B. Var. laxifolia:

3. A leaf, lower surface. 4. Upper surface of the same. 5. A head. 6. A flower. 7. A stamens. 8. Style. C. Nov. juniperoides:

9. A leaf, the upper surface. 10. Style. 11. Achene and papery. The details variously magnified.
5. Raillardiæ lineariæ, Sandich.

R. ramis laxis patentibus, foliis
compositis [recte: pulvinatis] lanceolatis linearisve 3-5 ner-
viis planis panicule obosculata
fruticosæ vel sericeæ, pub-
escens; paniculis compositis poly-
cephalæ medii; capitulis cymuleo-
so-fasciculatis 3-7 (raro 8-12)
floris.

Raillardiæ lineariæ, Sandich. Blot.
Nov. Flæg. p. 469, t. 833 D. c. c.

Itab., Sandwich Islands; on
the Kaale Mountains, Oahu. Also
on Maui, near Monea Loa and
near the Great Crater, and on the
banks of the crater of East Manu.
Shrubs about 6 feet high; the branches slender. Leaves less rigid than in any of the foregoing species, plane, or with the margins when dry a little slightly revolute, slightly 3-nerved at times 5-nerved. From 1 to 3 inches long and from 2 to 4 lines broad. Acute or acutish, tapering to the base. The larger one appearing somewhat petiolar, generally whorled in threes; panicule thyrsoid, constrictose or the summit of the branches; the smaller heads usually sessile in threes, at the extremity of the peduncles or their divisions, rarely very small. Flowers in the specimens from Osaka, and part of those from Hawaii from 3 to 5 in the heads, in others from 10, and in the specimen from Malay, even.
12. The heads correspondingly larger, fewer, less numerous, and subsiding in the peduncles. Sandichard's plate represents this species very well, in one of the narrower-leaved forms. It is among the narrower species the

R. ramis rigidos usque ad apicem
confide foliosissimis, foliis termis
vit oppositis ellipticis seu lanceo-
lato-oblongis arcte sessilibus
planis trinervii (seu latioribus
5-nerviis) seco. Miserabilis num
laxigatis; panicula subsim-
pliæ; capitulis pedicellatis
7-15 floris. — Variat. Folis laxi-
usculis subpeltatisibus seu
confertis fue imbricatis, oblong-
aneeolatis seu ovato-ellipticis.
(latioribus quandoque rarius
denticulatis). Opacis Miserabilis
vel nitidis glabratis, margine
bus frondisolo-ciliatis.

Hub. Sandwich Islands: banks
of the crater of East Maui (road
leaved forms, one of them) answering
to specimens collected by Messrs. on Hawaii. Moma Kea, Hs. Ha-
waiti. Narrow-leaved forms.

Stems 2 to 6 ft. high, rigid. Leaves from 10 to 18 lines long, and
from 3½ to 9 lines broad. Plane, in
the broader forms elliptical and
obtuse at both or rounded at
both ends, or the apex barely apic-
ulate, the narrower ones less
blunt, rigid, even the broadest
often only those nerves. Therein
veinless. Panicle rather small,
open: pedicels 3 to 6 lines long,
rarely one of 5 to 8 scales, exter-

While the narrower-leaved forms
approach R. linearis, the broader
ones are closely.
The forms which I must now consider as all belonging to one species fill the wide interval between *R. linearis* and the following striking new species; some of the narrower-leaved and fewer-flowered heads approaching *R. linearis*, while the broader ones are closely related to *R. Platyphylla* and *R. affinis*.

*J. Raillatiana* Platyphylla, sp. nov.

*R.* framinis validis foliis sinuatis; foliis ternatis vel oppositis ovato-lanceolatis sessilibus pistillatis.

K, ramis validis emphyta foliosis
sinis; foliis oppositis lanceolato
vatis e basi semiamplexicaulis
ad apicem plerumque angustatis
subacuti rariter denticulatis
planis 7-11-nerviosis undique
scabrescenis, junioribus glandu-
loso viscosis; Paniclea rufa;
 capitulis 10-20-floris. Variet
foliis angustissimis et termis
oblongo-lanceolato-terms.

Nab, Maui, Sandwich Islands

"on the summit of the dividing
ridge of the crater crater-
like cliff of Mount Haleaka-
la, at the elevation of about 7500
feet."

Apparently a rather large
shrub; the leaves 2 or 3 inches
inches long, and fully an inch wide, at the broad base, hence tapering gradually to the apex, and conspicuously 9-11 nerved; one specimen or in (a sterile branch), where they are in threes, only 6 to 8 line wide at the base and less tapering, with 7 to 9 nerves, the surface very pubescent to the touch from minute papillae; the young, nascent leaves glabrous, from a fine glandular pubescence. Young branches and the inflorescence minute and glandular, as also the exterior of the involucres. Very few heads remain. The flowers had nearly all fallen from the specimens, but the involucres appear to be about the length and size of those of the following nearly allied species, except that they are narrower and the flowers much fewer.
R. Raillardiæ arboreæ, Sp. nov. (L. 1)

F. caule arboreo, ramis validis em-
\[\text{auscis, ferte foliosis; foliis in-}
\[\text{positis terminis elliptico-seu}
\[\text{elongato-oblongis utrique ob-
\[\text{tusissimis arcte sessilibus planis}
\[\text{3-5-nerviis glanduloso-sagittidis,}
\[\text{junioribus viscoso-squamosilibus,}
\[\text{panicula simplici basi foliis am-
\[\text{involuta, 9-14 phyllo 25-45-
\[\text{floro hissitatis et glanduloso-visco-
\[\text{sisis.}

Hab. Hawaii;" in the high pas-
tural district of Moorea Rea; scat-
ted trees in company with those of Edwardsia.

"A small tree, twenty feet high, with the trunk a foot in diameter," according to Dr. Pickering, Massachusetts,
influence, and all young parts hisurate (as is common in the genus) and also glandular pubescent, leaves green, not very thick, plane, rather spreading, 1\frac{1}{2} to 2 inches long, 6 to 9 lines wide, all entire, more glandular but less scabrous than those of \textit{R. platysphylla}, the base not dilated, sessile by a broad but hardly clasping insertion. Heads rather few or numerous in a somewhat thyrsoid panicle, pedunculate, and, when the influence is compound, pedicelled. Involucres 4\frac{1}{2} lines long, very densely glandular pubescent, campanulate, usually of 12 or 13 scales lightly adherent scales, and containing a larger number of flowers than any other species. Receptacle conical, oblique, lightly obsolete, pubescent. Very sparsely
9. Raillardiad struthioloides, Sp. 2

R. arboreascens; folis termis secus vamnos imbricato, confertis ob-
longo- ser elliptico, lanceolatis
subacutis arcte sessilibus levibus
concavis sub- 3-5- nerviis cines-
hispidulis vel scabris; juniores
minusculi ciliati; panicula seu
racemos simplici; involucro b-g-
phyllum 12-20-floros.

Tab. Hawaii; on Mauna Kea
with the preceding, extending to the
elevation of 11,500 feet.
A shrub, or "at the elevation
of 9,500 feet, sometimes a tree, thirty
feet high, with the trunk nine
inches in diameter, the branches
over-hanging." Leaves, especially
on sterile branches, very closely
crowded or imbricated, erect or at length erect-spreading, 1/2 to 2 inches long, 4 to 7 lines wide, rigid, more or less concave, at least when young and in the dried state, pale and opaque, or sometimes rather lucid; the midrib not prominent, the other nerves mostly obscure or obsolete on the lower surface, but more apparent on the upper surface, in all 3 or 5, the latter for lateral pair indistinct. Branches and inflorescence villous or minutely pubescent, not glandular. Heads or rather slender, at length recurved pedicles, several, in a small raceme or simple panicle. involucres about the length of that of the preceding species, but narrower, and much fewer flowered. Receptacle small,
obtusely conical, pubescent. Achenia sparingly pilose or glabrate.

A striking species, tending in some respects to ally R. ciliolata with the plurinerved species.

Plate

Raillardiaca

struthioloides; a flowering branch.

Fig. 1. Tip of a stunted branch, with young leaves. 2. View of the upper surface of a leaf, showing the nerves.

3. A flower magnified. 4. Ovule and stamens displayed. 5. Style more magnified. 6. Achenium and pappus magnified.
Mircote. Acheneia glabrata, strongly 5-ribbed;

Plate  Raillietia arborea:

a flowering branchlet. Fig. 1. A leaf with the glandular secalinity represented. Shown. 2. A flower enlarged. 3. The corolla and stamens displayed. 4. A stamen more magnified. 5. Summit of the style more magnified. 6. Receptacle magnified. 7. Acheneium and pappus. 8. Acheneium transversely divided. 9. A scale of the pappus more magnified.
Debaunia Sandichii.

Plantaginifolii; ramis terebilibus, murmillos minutis, vetustatis cicatrictibus annulatis; foliis oppositisconfertis rigidiis basi angustata amplius canalis chartaceo ovariceus meminitis, capulis fasciculatis paniculatis, floris flavis vel purpuras centibus.


The best published description is that of Lessing, who rightly attributed to Dr. Plantaginacea a couple of balceae on the receptacle. These, although overlooked by Hooker and Arnott, and thercfore perhaps...
omitted by Le Baudouin and Endlicher are generally, if not always, present whenever the flowers are more numerous than the scales of the involucre, subtending those flowers. In a new species of the present collection, with many more flowers in the capitulum, each flower is subtended and its acheneium encircled by a scale, much a pala. The flowers in all are apparently pale yellow turning orange or purple with age.
1. SubstantiaPlantaginea

D. foliis glabratis glabris et elongatis lanceolatis sensim acuminatis basi modice angustatis plurinerviis; capitulis parvis 7-10 floribus numerosis similibus in ramis divergentibus foliis breviusculis Paniculae Thyridae magno congestis receptaculis parvis paleis 1-3; corolla tubo gracili limbo adaequante abrupte Campanulato supra pagidiis longiorae rappri foliis palpebus aristiformes setiformes barbellatos subsuperantes propter caeruleam tectam

Itali. Sandwich Islands, on the mountains of Bahia, where it was collected by Sandrich, and, though iso., of., but Penny has gathered it also on Eitten, Hawaii.
The leaves, as Dr. Dickering remarks, strikingly resemble those of Plantago of the same island (P. princeps); they vary from 4 to 5 inches in length, and from 6 to 15 lines in width, their dentations minute, the surface dull. The heads do not exceed four lines in length. The smooth tube of the corolla, elongating with age and usually curving outward 2 equals or exceed the pappus. In Sandwich and's original specimen the panicle influence is undeveloped, so that the published figure gives no idea of the ample thyrsoid compound panicle, with divaricate branches, the lower branches often five or six inches in length, and on which at the base for half that length, these and their ramifications continued by leafy branches. Moreover, the leaves extend only at the base far more than in Sandwich's plate.
2. *Dubautia Lepigata, sp. nov.*

D. foliis oblongo-lanceolatis densis
longe attenuatis quasi petiolatis
utra media argentea serratis
laxe incisicrur plurinervis mitidis
ruminisque glaberrimis; *Panicula*
A thyrsiformi pedunculata 

in *Hub, Sandwich Islands, in the
mountains of Kauai.*

A single incomplete specimen
only was collected, with withered in
fluorescence, from which the flowers have
long fallen. It may prove to be
only a variety of the foregoing species;
but apparently the stem or branch
is less woody, the foliage less con-
ded, and the small *Panicule*
long pedicellis and naked. This is
softly pubescent, while the stem being
and the leaves, are very glabrous. The latter are lucid, especially their upper surface, rather shorter but broader than those of D. Montaguana, their nerves similar but delicate and inconspicuous, scarcely stronger than the intermediate reticulated veins; the narrowed base more petioleiform. The heads, as appears from the persistent scales of the involucres, are hardly larger than those of the foregoing species, the receptacle similar.


D. foliis glabratis vel strigoso-Hispidis obtusis lanceolatis variisve ovali-oblongis antice angute serrulatis acuminatis dein sum longe attenuatis laxe nervatis.
capitulis parvulis, in cymulonem.

Solanaceae

digestis 10-15 floribus, floribus
intrivibus repissimae, paleatis;
corolla pappi (sepe rufi)
palleas subulato-aristiformes
serato, fimbriolatae, calyce, tubo
glandulosum.

dubiantia laxa, Hook. & Arn. Brit. Birds,
Nov. p. 87.

Hab. Oahu, Sandwich Islands,
on the mountains behind Honolulu.
The broader-leaved and strigose-hispid
form was also gathered on Lanai
by Kerm.:

This species is not well named,
the inflorescence being less lax than
that of S. montagnae i in fully
developed specimens. The inflores-
cence is quite different from that
of the above-named species, being a
short, rather simple or sparingly compound, corymbose cyme. The heads, as seldom numerous, are solitary or in threes at the summit of the peduncles; they are sometimes scarcely larger than those of D. Plantaginea, but sometimes twice as large with more numerous flowers (as in the former race) as if three or more heads were crowded into one. All, or nearly all the flowers are subtended, and partially embraced, either by a single scale of the involucre or by a receptacular palla. The corolla scarcely if at all exceed the frappes in length, its tube being much shorter than that of D. Plantaginea, and also more or less glandular instead of smooth and matted. The frappes, which generally reddish or purple,
consists of simple, but less barbellate, cistis from pale, their surfaces more or less pilose, but the perigees margins rather serrate-fimbriolate. The leaves are very variable in form, but generally shorter and almost always proportionally broader than in \textit{D. platycarpa}. They vary from 1½ to 5 inches in length, and from half an inch to an inch and a half in width; rarely glabrous, they are commonly mispied with short appressed hirtus, at least on the lower surface, sometimes strikingly on both sides, especially those of young shoots.

\textbf{Plate B.} \textit{Steventia laxa.} Fig. 1. A branchlet of a form with larger capitula, of the natural size. 2. Receptacle with one remaining inferior flower and its subtending chaff and two marginal flowers with their subtending involucral scales, magnified. 3. One of the narrow glumes of the pappus, more magnified.

D. folis strigosis, hispidulis oblongo-lanceolatis utrinque parum attenuatis, subtenuissimis, capitulis multi-(12-30) floris compris, panicis magna magnis, receptaculo elevato, stilisque paleis glumis glabris, corollae tubo puppis paleis lanceolatis margine croceos denticulosatis superante, fanece vix ampliata, limbo s. partito.

Itab. On the Mountains of Kanai, one of the Sandwich Islands.

Base of the stem unknown. Branches very minute, as also the inflorescence. 1/2. Leaves 1/2 to 3
inches long, from 5 to 8 lines broad, not acuminate nor much nar-
mored at the coriaceous clas-
sing base, minutely and densely
hispid on both sides with short
strigose hairs. Peduncles terminal
and from the uppermost axils,
short, bearing from 3 to 7 or 8
compound heads, which are larger
than in any other species, being 5
or 6 lines long. The scales of the
involverse broader, externally stri-
gose-cinereous; the flowers gener-
ally numerous, from 20 to 25 or even
30, but in one single specimen
only 12 to 14. The receptacle
in the many flowered heads is much
elevated but narrow; each flower
is subtended by a palea similar to
an involucral scale. The tube of
the corolla is elongated beyond the
buds, and after anthesis cur-
ved outwards, as in S. Plantaginea, but the limb is more deeply cleft, and the throat scarcely at all dilated. Anthers, style, and acheneia similar. But the pyramis consists of lanceolate or lanceolate-oblong, armed, not aristiform, pubescent, proportionally short, and with merely crenate-denticulate or somewhat laciniate margins. — The species is a most distinct and remarkable one.

Plate A. Subantia pa-
leata: Branch, of the side of nature.
Fig. 1. Section of the receptacle, bearing two marginal flowers and two terminal and an interior one with its surrounding scales. — with 3 flowers remaining and the surrounding scales and style.
2. One of the scales displaced. 3. A flower. 4. A stamen. 5. The style. 6. A scale of the pyramis. The details variously magnified.
Milnesia. No. 52.

(Sandwicensis
ciliatis. — Arborea.) (Uvce-
formis; osea caule simplici
oeyali, seu biogyali, foliis
linearibus; vil superioribus lan-
ceolatis coriaceis exsere nerv-
losis proter margines tomen
(tosso-ciliato glabris; per-
vaseos in verticillos propin-
mos polyphyllitos congestis
et per Caescos pl. m. coarctatis
pedunculis gracilibus glandu-
losis 1—5 cephalis et axillis
fol. supr. utis paniculam
ampulum laxam efficiuntibus;
capitulis fasciatis post an-
thesin mutantibus; frunitus et
visibus p.)

(Tab.)

(Nide Legg in Proceed. Amer. Age,
Sci. Ann., 1849, p. 343, & in Pro-
ceed. Amer. Acad., 2, p. 160, & 56, p.)
Hale‘iwa, Kauai, one of the Sandwich Islands, "along the lee-ward side of its tabular summit, at the elevation of about 3700 feet."

The simple stem of this very striking arborecens Composita, according to Dr. Pickering's memorandum, is simple, from 6 to 14 feet high; the leaves not crowded (as in Argyroxiphium), distinctly verticillate, or even serrated for an inch or more, and smooth, with a white woolly margin. How far the stem is ligneous is not recorded. The flowering summit is herbaceous or nearly so, with a large pith. The lower leaves preserved are a foot long, only 4 or 5 lines wide, apparently many in the vertical, their bases coalescent for two inches. The leaves...
in and below the panicle are lanceolate, from 3 to less rigid, from 3 to 5 inches long, 6 to 9 lines wide, from 6 to 12 in a whorl, and more or less united by their bases, the whorls half an inch or an inch apart. Peduncles about 6 inches long, slender, glandular-pubescent, naked to near their summit, where small bracts subtend two or three slender, at length nodding pedicels, bearing each a rather small naked head. Involucres half an inch long, and of somewhat greater breadth, not bracteate, of a thin and annately glandular, otherwise rather foliaceous texture, gla-

...
similar to those of *Dubautia*
and to the disk flowers of
*Argyrocephalum*, the papules
that of the former, the recepta-

cle as in the latter.

Being one of the most stri-
king as well as botanically re-
markable of the Plants Discov-
erd in the by the South Pacif-
ic Exploring Expedition, this genus
will very appropriately bear the
name and commemorate the
distinguished scientific services
of the Commander of the Expe-
dition, Capt. Charles Wilkes,
the author of the Narrative of
the voyage, its Meteorology, and
its Hydrography.

Since the character of *Wilkesia*
were briefly indicated, in 1849, I

the discovery that the Balsa

underwater.
disk and the ray in Argyreia
phium are gamophyllous, demon-
strates the close affinity of this
genus with the latter. From
which, indeed, it differs only in
the regular pulvinius pappus,
and in the entire absence both
of the ray, flowers and of their
subtending bracteole.

Plate

Wilkensia gym-

arxiphium; flowering summi, of
the size of mature, Fig. 1. One-
line leaves; 1, 2. Vertical section
of a head, 3. Involution displayed,
4. Receptacle, 5, 6. flower, 6. Stamens,
7. Summit of Pistil, 8. Anthecium
and pappus, 9. 1, pala of the pop-
plus. The details variously mag-
fied.
Argyrocephalum, L.C.

Char. reform. Capitulim hish. 

Nogarum, multiformem; floribus radiis uniseriaticis ligneslatis fremineis, discis hermaphroditis tubulosis. Involverum uniseriaticis, squamos numerosis (tot quot lignulae) angustis discum subsequentibus. Convolventis acheniis radiis involventibus. 

Receptaculum convexum, conicum, inter radium et discum seriis pales uniseriales gamophyllas, ceterum nudum, lignulae breves, plurimum tridentatae. Corollae pl. herm. 

glabra, e tubo gracili susum ampliata, 5-identatae. Antereae scandala: filamenta sub apice articulata. Styli rami lin-
cares, pl. herm. caro complana-
to hispidulo superati. Aechmia
elongata, glabra, 4-5 angulata
angulis prominentibus costa for-
mibus, radii incusa, aut
omnia prater cornulam
caulis (lvs) calva, aut disci
pappos e paleis panicis valde
in equalibus sub concretis, super-
ata, plantae Montacensi,
tri-septalae, sigmas, extrin
caele, percrasso foliis linear
pugiones formibus rigidissimis
plurimique sericeo-argenteis
imbricato-confertissimis plumi
mundique hirsute. Panicula
amplex laxis foliata termin
nato; pedunculis viscoso-pre
tescentibus; capitulis muta-
tibus; floribus praeformatis centihis;
radi interd se co roso-purpureis.
Argyroxyphium, &c. Pro. x. 5,
The involution of the scales of the involucres around the ray achenia is represented in Hooker's figure, above cited, but not in de Candolle's, who however represents these achenia as incurved. The interval circle of paleae interposed between these and the disk flowers was published by me in the year 1849, along with the characters of a new species and of the foregoing nearly allied genus, and the close affinity with the Madricea suggested indicated. The union of these marginal paleae into a cup (which, however, is fissile with age), as in several Madricea was noticed later. These
Characters, and the want of extreme reduction of the pappus in the ray, are conclusive as to this relationship, with which even the habit is most incongruous. The glandular-glabrous inflorescence, &c., is almost universal in that group, several Californian species of which have appressed-silky radical leaves. These plants, therefore, are the princes of a race (the Madrean), which belong are otherwise restricted to the adjacent coast of the American continent (from Oregon to Chili); and while Wilkesia — an Argyroxiphium — wanting the ray-flowers and their involucral bracts, with Distauzia — and a sort of gigantic Lasthenia — and Raillardia — together composing the characteristic Composite of the Sandwich Islands, have also —
only American affinities. Moreover, the two species of the present genus differ from each other in a manner characteristic of their American relatives, namely, *Laethemia glabra* from *Laethemia proa*, *Barnelica* (Bacca) *Argyrostea*, *Po* (Otiloncosid) *calva*, in the presence or absence of pappus. See Plantae Wrightianae, t. p. 123 for a list of analogous instances, which could be still further extended.

1. *Argyrostea* *Sandwicense*, Be. (Tab.)

2. *A. ligulis* *longiusculis* 12-16; *stili* 7; *disci* rami *in obtuseque appendiculatis*; *papposis* *achernis* *disci* *in aequaliter pulateo*.
Argyrophyllum Sandwicense, DC. & c.; Hook. & c.
Argyrophyllum Douglassii, Hook.
in Camp, 1st. Aug. 25th, 1833,
in Chin. Har.

Isle, Hawaii, on Mouna Kea and Mouna Woa, at the elevation of from 6300 to 12000 feet.

Heads rather less than an inch in diameter. Scales of the involucres lanceolate, a cuneate, and glandular villous externally with viscid hairs, ligules 5 or 6 lines long, line or obtus or somewhat cuneate, sometimes emarginate, as in our figure, sometimes trilobed at the apex, as represented by Hooker and De Bower. Their color not recorded, apparently rose or purple. Receptacle barely

...
Half an inch broad convex, glabrous and naked, except at its margin, where it bears a circle of about 24 lanceolate pubescent which are united by their edges to near the summit into a externally viscous-pubescent, membranaceous at length the fish-like cup. Branches of the style are in the hermaphrodite flowers narrowly linear, minutely hairy externally, united within with strong stigmatic lines, tipped with a short and obtuse minutely hispid cone. Achenia glabrous, with four or sometimes five saliently costate angles, about 5 times longer, terminated by a short or conic and coriaceous formula, which in the ray is truncate, or tall would seem from Beandonville's analyses, produced on the posterior side into a strong tooth.
or auricle, but in the disk is extended into a manifest populus of four or five or more carinae. Palae more or less corniform emersed, and irregular, the outer side of the leaf, or one or two of the outer palae being considerably elongated. Leaves dagger-shaped or bayonette-shaped, 8 to 16 inches long, 2 or 3 lines wide, in some young plants much smaller and narrower, very densely silky and slightly silver, with a coat of appressor villous down, a part of which often wears away or becomes detached with age, leaving a fine grayish silky pubescence, or at times is some deciduous from the uppermost green and floral leaves, which are viscid. Pubescence, like the peduncles and floral involucres, about 2 or
3 inches in diameter, tapering into the panicle with a large bract, and a thin woody zone; the whole phalaeceous, rather than phalicose.

Plate B. Vertical section of an involucrescence and receptacle, showing a ray-flower, its achene way involved in the subtending involucral scale. 2. Similar section, showing the involute scales of the involucres outside of the cup of two glands, phyllaries plicate of the margin of the receptacle. 3. Receptacle. 4. A ray-flower with its involucral scale, more enlarged. 5. Style from the same. 6. A disk-flower. 7. Summit of the style of the same. 8. Achene in and pupus of a disk flower. 9. Pupus and summit of achene of another disk flower. 10. Achene of a ray-flower. — Vaginally magnified.
2. *Argyroxyphium macrocephalum*, Sp. ind. (Tab.)

*A. lignis* 20–30 brevibus; *styli* 7, *disci* ramis cono acuto superatis; *pappo nisi com. ula brevissima disciformi nullo; receptaculo conico.

*Argyroxyphium macrocephalum*

Gray in Proc. Amer. Acad. l. c., p. 160.

Hab. Maui, in *Alasana Haleakula*; extending from the elevation of 9000 feet to within thirty feet of the summit.

In general appearance this must closely resemble the *A. Sandwicensis*; for so acute an
observer as Dr. Pickering did
not distinguish it from the
Hawaiian species. But the
head are larger, an inch and
a half in diameter; the ligules
are considerably more numerous
and shorter, only three or four
lines in length; the receptacle
is conical, its height equaling
the breadth of the base; the ap-

tandages of the style in the
hermaphrodite flowers are like
those of Delavantia and Raillandia,
and the bappuses in both ray and
disk and ray is reduced to a very
narrow entire formula. Other-
wise the structure is the same
of partially exerted organs of a
plenty of the recent
plant. Lobe rays deep pink, the disk yellow.

Pickering mentions another
species, on Mount Haleakala
at a less elevation, between 5500
and 9500 feet "with the leaves
green and smooth". Of this
only three or four leaves are in the collection. They are 9 inches long, less than 3 lines wide and delicately & tenderly glabrous beneath, silky pubescent above and on the margins, and probably indicate a new species either of this genus or the preceding.

Plate A. Aegyptium macrocephalum; leaves, and portion of flowering summit, representing a few out of the very numerous (50-100) heads of the panicle, of the natural size. A distant view of a whole plant in the background, either of this or the preceding species, from a sketch by one of the artists of the Expedition.

Plate A. Fig. 1. Head with peduncle and bracteal leaf of A. microcephalum. D 2. Natural size.
section of the receptacle, circle of united scales, and involucre, 3. A small portion of involucre and united scales transversely divided. 4. Receptacle. 5. A ray flower with its involucral scale. 6. Summit of Style of the latter, 7. A stamen. An hermaphrodite flower. 8. A stamen. 9. Summit of the style of fig. 7. 10. Antherichium of the ray. The details variously magnified.
Madia, Motina.

1. Madia sativa, Motina.
Hab. Chili; common around Valparaiso.

Cotula, Linn., Gaertn.

1. Cotula coronopifolia, Linn.
Hab. Sydney, New South Wales.

A species now so widely scattered on the temperate parts of the southern hemisphere and some parts of the northern, that it is hard to guess at its original home. It is not found in Eastern North America but it has been met with in California.
2. Cotula (Strongylasperma) australis

Anacyclus australis, Jick. Fl. Exsicc. no. 331; Spaff. Syst. 3, p. 447.
Cotula microcephala & sororia, SB. Prod. 6, p. 79.
C. Cunninghamii, Stock. J. in hook.

Nat. Sydney and Hunter's River, New South Wales.

Leptinella, Bass., Stock. J.

1. Leptinella (Scariosa, Bass.

L. pinnata, Cass. l.c.?

St. Mary's Orange Harbour, Færegia, on rocks near the coast.

Dr. Hooker has identified, extended, and illustrated this genus in a manner which leaves little to be desired. It may be noted that Penny has taken the view that the present species is not Bassini's L. scariosa, but this opinion, no less than Dr. Hooker's, to the contrary, rests upon circumstantial evidence. At least I could find no specimens at Paris named by Bassini.
1. Leptinella ptericaea, Stock. f. &c.

Hab. S. Auckland Islands, on banks near the sea, Dr. Holmes.

A single, but well marked specimen, mingled with those of the following species, of which it seems more likely to be a form than of the preceding, to which Banks refers it.

3. Leptinella lamata, Stock. f.


Hab. S. Auckland Islands; abundant on rocks overhanging the sea.
Abrotanella, Cass.


Gerratella, Trineuron, & Selerolema

N. Real. & Tasm.

1. Abrotanella emarginata, Cass. &c.

Stab. Orange Harbour, Zuegia;

Small specimens, resembling a spitted corn, entangled among those of the following species, and of Nassauvia pygmaea.

2. Abrotanella (Ceratella) Bryois

Sp. N. W. (tab.)

A carpestina crespitosa, depressa,
folis orbiculatis acutatis
2. Abrotanella (Beratella) submarginalis

foliis erisatis lineariobus et basi erecta patantibus sursum leviter calluso-marginalis truncato; basis vel setasis; capitulis solitariis subumbilicibus paucifloris; involucris squamatis subeminervis; acheniis obsolete 3-4-nervatis angularibus inferne hirsutulis et superne pappo corniformi et pauci aristulatis.

Hab., Orange Harbour, Florida.
Plants (which certainly look very different, their general appearance very like Curatella americana, Hook. f.) but the leaves smaller and narrower. These are about three lines long, the base scarious-margined and appressed; the upper half squarrose-spreaing, short-linear, thickish, somewhat obscurely cartilaginous-margined, obtuse, truncate, or barely retuse at the tip. Heads and flowers nearly as in S. marginata, but the acheniae are somewhat hairy, especially below, and常务 with a rather conspicuous, atia and pappii, consisting of a thin scarious corolla, which is irregularly toothed, or more commonly extended into 2 to 4 petiolar arms, their length equal to the
breadth of the achenium. The pappus is about the same in both kind of flowers, but the central or subterranean/friable ones are apparently in futile. A reduced nothing is less distinguishable, at least generally, than other seta, founded upon the presence of a palaeocen, creniform, or other reduced form of pappus, and its absence. Unless genera are to become completely artificial and almost innumerable, it would appear from that this and the following species demand the reduction of Dr. Hooker's Geratella, Princenina, and therefore |cella, |a conclusion for which the former is evidently prepared.
lineari foliis, Sp. Nov. (Tab.)

3. Abstandella (Botryella) parvifolia


Phalaris b-8 style flexum, b. sp., b. glabrum, ovario sparsissine fertilibus, acheneis glaberrimis elagato- Oblatis apice cuneo 4-costatis apice subcontractis praepro obscure cupulato sub 4-dentato truncato mune sub-4-dentato mune plane 4-auriculato superatis.

Tab. Orange Starbun, Huglia
This little plant, with the \text{Spathulata}, aspect and foliage of Dr. Hooker's \text{alpinum} at somewhat smaller scale, \text{Immera Spathulaturn}, has the floral characters of \text{Ceratella}, except that the floral appendages are \text{staminifera}, flowers are truly \text{hermaphrodite}, their stigmas more or less bifid, and apparently as fertile the one or two marginal ones, which have a more slender corolla and only vestiges of stamens. The action corollas all have the same purple or crimson hue; the are excised beyond the involucrc, which barely equals the full growth achenia. The latter, in our specimens have the pappus represented by a spatulate capsule, which is prominently or obscurely four-toothed therefore intermediate between 

\text{ Hooker's...}
Berrettii and his Joleveiuna, but the summit of the achenium, under it contracted into somewhat of a neck! But the flowering specimens exhibit four decided, rather unequal, subulate arms in place of the obtuse teeth, i.e. corresponding with the ribs of angles or rather ribs of the achenium, in length mostly exceeding the width of the ovary; the central and the marginal flowers all alike in this respect. Leaves rather fleshy, crowded on the short stem, but lax, obtuse, nearly half an inch long, a line or less in width, wholly destitute of callous markings. Peduncle when well developed 2 or 3 lines long, much more than a line long, the scales oval, very obtuse.
punctioned with Scarus margins, and two thickened nerves, the mid
nerve more between them than else.
Centipeda, Linn.

1. Centipeda minuta.

Cylindra minuta, Forst. Prod. p. 57;

Muhl. Spec. 3. p. 2163.

C. cuneifolia, Muhl. l.c.

Artemisia minima, Linne, Spec. 2. p. 1190; Burm. Fl. Ind. p. 177, t. 58.

Centipeda orticularis, Linn. Fl.

Boeh. 2, p. 602; Mig. Fl. Ind.


Myriogyne minuta (M. elatina

vid.). Less. in Linnaea, 5, p. 219;

S. Prod. 6, p. 139; Stock. Fl.

N. Real. 1, p. 130; Fl. Tasmania,

p. 144.

Sphaeromorphaea, Centipeda, S.C.

Prod. 6, p. 140.

Not. New Zealand, Haurae Islands,

Society Islands.
2. **Centipeda Cunninghamii**.

**Myriophylla? Cunninghamii**, J. B., _Prod. 6, p. 139._

_Hab._, New South Wales, on Hunter's River. Specimens of this and the next are in the collection ticketed as from the Bay of Islands, New Zealand, but I have reason to suppose that they were gathered in Australia.

3. **Centipeda Petiolaris**.

*Spharmaphae petiolaris*, J. B., _Prod. 6, p. 140._

_Hab._, With the preceding, and at Sydney.
Asteriscia, Tourn., Lin.

1. Asteriscia australis, Less.

Var. a. *Schachtoriana*: foliis adultis subtilis canescensibus supra glabrescentibus, lobis foliorum planis sepium parce incisis.

Asteriscia australis, Less. in Linnaea, 6, p. 522; A. Prodr. 6, p. 106.

Var. Schachtoriana, Less. Prodr. no. 7, ex DD.

Var. B. Mariensis: foliis utrinque incanis, retusissimis supra glabrescentibus, partitionibus lobisque pleuroque filiformibus integerrimis.

Illus. Sandwich Islands. Var. a. *Kaua Mountains, Oahu* (also collected by Chamisso, Seemann, &c.), and on Kauai, a mere fragment. B. Eastern Part of Maui, at the base of the crater.
Specimens of
the ordinary state of the species accord with those collected by Chamberlain. The variety might naturally be taken for a distinct species, the white fleings of pedicles, &c., being as silvery, shrivelled as in A. frigida, and the divisions of the leaves filiform, but the vestiges of leaves on some older branches show a manifest transition. Both forms are decidedly shrubs.
Caloccephalus, R. Br. (gen. nov.)

Caloccephalus & Leccephyta, R. Br.
in Linn. Trans. 12, p. 105; Cass.;
Lesq., P. C. Prod. N. 8, p. 15-1, 15-2;


Caloccephalus citreus, Less. l. c.; R.
Brongn. Prod. Nov. Log. 1, 60, p. 191,
Ic. l. c.

Site: Hunter's River, New South Wales.

DeBandeille to some extent en-
founded this with Pygemosaurus glo-
boseus; at least, the plate which
he communicated to the Paris Museum
under the present name is a Pygeo-
mosaurus.

The union of Brown's two genera
now appears to be unavoidable. Dr.
Stokes indeed recently states that
Leucaphyta" differs materially from Calocephalus in the alternate leaves, in the glomeruli being subtended by short leaves, in the bracts scattered among the capitula, in the more numerous involucral scales in the pedicellated achenea, and in the larger, more cypriae and plumose pappus. But the involucral scales in Calocephalus lacteus are about as numerous as in C. (Leucaphyta) Brownii. The achenea of C. citreus are much pedicellate as those, while C. (Sanderi, H. Mueller, ind.) has alternate leaves, of which the uppermost form a general involucre to the glomerule, and the petal or rather pulea of the pappus plumose (although rather sparsely) for their whole length. All the species accord in habit and form a good natural genus.
Pyrenosorus. Bentli.

1. Pyrenosorus globosus, Bentli.

Pyrenosorus globosus, Bentli. Fl. Arg.-
el. p. 63, adfr. Sander in Linnaea,
25, p. 491.
Calypsoella citrina, Sl. in Nat. Mem. Par. "ix Div."
Nat. Hunter's River, New South
Wales.

Distinguished from the preceding
 genus by the lanceate receptacle,
 the few and thin involucral scales
 shorter than the flowers, and these
 accompanied by the aching style;
 these
 I could detect in no neutral flower,
 but often an infertile or less
 developed hermaphrodite one in the
 centre of each capitulum; and
 therefore modified Bentli's
 character in this respect, in Flora
 Ind. Brit. 3, p. 99. Dr. Sander has
 recently will characterised the genus
 a new, and added a second
 species which is unknown to me.
The two specimens of the present collection, differ from Mr. Bentham's, and from all others examined, in having the bristles of the spurs of almost all the flowers concreted for one third or for half their length— a character which is not likely to be constant.

Specific or constant, Bentham did not notice any such concretion in the specimens upon which he founded the genus. Turner remarks that the setae are united at their base.

*Graspedia* var. 1.

*Graspedia* Richea, Bess.

*type*, Sydney, New South Wales, a slender form.
Ammobium, R. Br.

1. Ammobium alatum, R. Br.

Ital. Near Sydney, New South Wales.

Cassinia, R. Br.

1. Cassinia rosmarinifolia, R. Br.

2. Cassinia quinquefaria, R. Br.

Ital. Near Sydney, New South Wales.

 Özothamnus, R. Br.

1. Özothamnus rosmarinifolius, S. B.

2. Özothamnus ferrugineus, S. B.
Hub, near Sydney, and Woolongong, New South Wales.

3. Orthmannus Vanvilliersii, Hort.


Hub, Lord Auckland Islands; very common, Fr. Holmes.

Leptorhynchus, Less.

1. Leptorhynchus hemisphaericus, H. & A.

Hub, Hunter's River, New South Wales.

Podolepis, Labill.

1. Podolepis acuminata, R. Br.

Hub, Hunter's River, New South Wales.
Heliocrysum, Naill., &c.

1. Heliocrysum obconicum, &c. &c.
2. Heliocrysum melanophthalum, \\
   f
   Hab. Madeira, on rocks, &c. along \\
   the Coast.

3. Heliocrysum vestitum, Less,
5. Heliocrysum cymosum, Less.
6. Heliocrysum parviflora, &c.

Hab. Cape of Good Hope, in the \\
vicinity of Cape Town.
9. Helichrysum leucopsidium, L.B.
11. Helichrysum molle, A. Cunn., var.
12. Helichrysum bracteatum, Mill.

Not. New South Wales; all from Hunter’s River, except H. leucopsidium, which was gathered at Sydney, and which accords with the Tasmanian species. H. molle was collected only in a narrow-leaved variety; the species differs but little from H. scoprioides.

Chrysocephalum, Wallp.

1. Chrysocephalum apiicalatum, Steud.
   in Linnea, 25, p. 516.
Helichrysum apiculatum, L. B. Prov.,
212.

Stud. Near Sydney, New South Wales: a form with rather small
heads and leaves.

2. Chrysocephalum semiappossum,

Chrysocephalum helichrysum, Nata.
in Linn. Soc., 14, p. 503
C. helichrysum, semiappossum, L. c.
stud. l. c.; Hook. f. c.
Graphium semiappossum, Labill,
l. c. t. 187;
Helichrysum semiappossum, R. B.
l. c.; Hook. f. l. c.

Stud, Hunter's River, New South Wales;
also imperfect specimens of
var. as-

persum, with somewhat glutinous leaves,
the marginal female flowers usu-
ally have a pappus of one or two styles,
similar to those of the homalophrum, which are
from six to ten in number.

*Helipterum*, D.C.

1.* Helipterum* 

*Helipterum punctatum*, D.C. l.c.; Sand. in Linnaea, 25, p. 519.


Hab. Hunter's River, New South Wales. (The two Sandullean species rightly joined by Dr. Hooker.)

*Achyrocline*, D.C.

1.* Achyrocline satunensis*, D.C.

Hab. Rio Negro, South Patagonia, Rio Juncosa, Brazil, var. flaccida.
Lessing apparently with good reason referred $\text{Macrophantium faccidum}$ to $H. (\text{Achyrocline})$ $\text{patuvaroides}$, Lam., and it seems evident that $\text{Badnell's}$ $H. \text{patuvaroides}$, $\text{Varragiana}$ $\text{faccida}$, $\text{rupescens}$, and perhaps $\text{matthiolaeolia}$, are merely forms of one species, which ranges from the northern borders of Patagonia to New Granada.

2. $\text{Achyrocline Varragiana}$, DC.

$\text{Nai} \text{, Rio Janeiro, Brazil. (Distinct by the narrowly decurrent leaves.)}$
1. *Grapholium*, Linn.

1. *Grapholium* luteo-album, Linn.

*Not* Madagascar; the common and a low, diffuse form; St. Helena, Sydney; New South Wales; Bay of Islands, New Zealand, Peru, at Lima, Callas, Lima, and Otrafigilo, Chile, in the vicinity of Valparaiso (*G. Vitalis*, viva, Mol., 6*). Sandwich Islands, on Oahu, Maui, Kauai, and Hawaii; this, the *G. Sand-*

vicinum of Sandwich*, occurs under a variety of forms, but all are, I believe, referable to *G. luteo-album*. It ascends to the mountains up to the region of Chiloe.

2. *Grapholium* cheiranthifolium, Linn.

*Not* Rio Negro, North Patagonia.


Chili, in the vicinity of Valparaiso.* To this species may be referred *G. Citrinum*, St.-Pete., Ams., and *G.* Sandel album of the gardens, and perhaps *G. Puleonatum*, 6*.
4. *Graphophilium Gauchichandianum*, P.C.

*Not. Rio Janeiro, Brazil.* (The *Graphophilium decurrens* of Schrank's *Pl. Nat. Gen. Mem. 4, 84, doubtfully referred here by De Candolle, and also to his *G. puberulum*, is manifestly a *Sterocaulon*, judging from the original drawing, in my possession.)

5. *Graphophilium lanuginosum*, K.K.

*Not. Andes of Peru, from Obrajillo to Baños, Cultura, &c. Probable in *S. Bombeyana*, D.C. Occurs under a variety of forms, some of the smaller approaching the following,


*Not. Alpamarca and Casa Cancha,
in the high Andes of Peru.

7. *Graphphallium lacteum*, Meyen


Hab. High Andes of Peru at Alpamarena, Casa Bandera, Bo.

One specimen only shows the milk-white scales of the involucre to which this little species owes its name; in all the others they have turned fusceous. The plant forms depressed tufts only an inch or two in height.

8. *Graphphallium cymatoides*, Kunze

Hab. Chili, near Valparaiso. Also (except unless the ticket have been misapplied) Rio Negro, Norte Patagonica.
9. *Graphalium* (Euchitona) involucres

Hal. New South Wales near Sydney.
Bay of Islands, New Zealand.

To this species most of the species of De Candolle's section Euchitona may be referred, and also Thunberg's *G. japonicum*.

10. *Graphalium* (Euchitona) collinum


Hal. Bay of Islands, New Zealand.
A single specimen collected is doubtless of this species, which, however, among the involucral leaves are in chasimica and the plant connects this species with the same chasimica.
11. Symphalium (Gamocheda) pur.

Symphalium purpureum (Lam.), spicatum (Lam.), falcatum (Lam.),
stachydictum (Lam.), Americana (Milt.), Pennsylvanicum (Mill.),
spicatum (St. H. K.), consanguineum (Gaud.), affine (D'Urv.),
Chapinorum, Besterianum, filaginum, floccosum, etc. P. C.,
Prod. 6, p. 232-235.

Gamocheda Americana, Wett.
Biol. And. 1, p. 157, 229.

Stcb. Rio Janeiro, and in the
Organ Mountains, Brazil, the S.
spicatum, Lam. Rio Negro, South
Patagonia, referable to S. falcatum,
Lam. Chajillo, Andes of Peru, the
S. spicatum, St. H. K. Valparaiso,
a very depauperate S. Besterianum, de.
Rio Negro, with Patagonia and Orange Harbor, Eregia, the reduced Antarctic variety, S. can- 

digneana, Sand. Bankschea 

Americana, var. alpina, Nudell.

These diverse forms belong, as we are constrained to believe, to one polymorphic species, which ranges from lat. 43° on the eastern coast of North America and from California on the western coast, to the northern extremity of the continent in a considerably higher latitude. The Ereignian forms are lax and florealest, like the most nor- 

therly ones, but are still more reduced in size, the smaller less than a span high. Without a series of intermediate forms the reduced, Antarctic varieties would
to the fully developed and typical subtropical type of the species, represented by G. spicatum. In the United States, the linear and G. pinus are manifestly to affect this transition, and I think with Dr. Hooker and Meddell, that the extreme southern forms are not specifically distinct from G. pinus of the Southern United States a plant which Mr. Charles Wright, in the North Pacific Exploring Expedition, collected at Hong Kong, and the same thing was gathered by Dr. Thomson on the plains of Upper India, and has distributed as a variety of G. avicenum. The latter species has the bistles of the Populus distinct to the loose.
established for this group, upon the union of the bistles of the puppiae at the base into a ring, should probably be adopted; but the species so nearly closely approach \( A. \) indicum, \( B. \) on the one hand, and \( A. \) involucratum and its allies on the other, while the sole technical character seems almost valueless in \( A. \) indicum, \( B. \) that the way to its adoption is not yet clear.
The genus Lucilia, correctly
ordered to the Diptera, by
Kenny (in Ann. Soc. 3, 12, p. 180), is
rightly described as in the Pappus
by Beddell. Belloa seems to
slightly distinguished by the pap-
illosae instead of silky, crenulated,
and Merope, by the spreading, instead
convenient scales of the involucrum.
In some they appear neither
to spread nor to conivere.
At all its Sphæanthus depressed,
course of the leaf.
sum, described from Richima.

Specimens of Prof. James's collection (no. 642 and 57) is not the
L. radians, N assess, the L. (Munia)
kruthiana, but apparently L.
convexa of Dr. Call, or near it,
though larger,
1. Lucilia quauphaloides, Less.

Lucilia quauphaloides, Less. in
Limnea, 5, p. 363; Del. l. c.
Bst. Mag. 1, p. 102; Del. l. c.

Hab. Rio Negro, N. S. Patagonia.

This is certainly, Stokker and B.–
nettis L. argentea (which, by a ty-
ographical error, in DeBande–
Rothman’s Prodromus said to be ‘three’ (instead
of thirty) flowered), but the earlier
L. quauphaloides is evidently
found in a depauperate form of
the same species.

2. Lucilia (Merope) pistoletensis, Meig.
Itab. High Andes of Peru, between Calcam and Casa Canccha.

The specimen are more trifid and the sterile shoots apparently more carnoscent than appears to Middell's Plant (also from the Peruvian Andes) appears to be, the sterile shoots leafy throughout, the leaves squarrose-spreadin, somewhat as in L. recurva, about two lines long, oval-obovate. 

Heads solitary, nearly 3 lines long; the scales chestnut-scarlet, conic-verticillate in fruit, at length recurved. 

3. Lucilia (Meryx) Schultzii.

Morphestium exacoides, Schltr.

Hab., Andes of Peru, with the preceding species.

A minute, depressed species, with the habit of Silene acantina. The leaves of the sterile shoots sometimes two lines long, including the base. The leaves nearly plane; those of the fertile densely tufted sterile stems densely intricately, half a line long, channelled or partly emarginate. The dried specimens, I read 2 or 2½ lines long. Achenia glabrous.

4. Lucilia (Menpe) Pickeringii, sp.

2. Cano-temerata, milli epic, de-pressa; calatibus confertisuncialibus
foliatis; foliis spathulatis, seco obvatis obtusis planis 
duarum undique lanuginosis; capitulis subulatis sessilis 
cylindraceis, involvente 
intermedia 
squamosis linearisibus oblustis 
ascendit radix discum 
equantibus; acheniis minu-
tim papillosis.

Var. 3. minor, condensata, 
plane appressa; capitulis 
minuibus aggregatis.

St. R., Andes of Peru, between 
Banos and Alpanarea. Var. 3. 
Between Casa Cancha and Bul-

This, an inch or two in 
height, numerous and tufted from 
a perpendicular root, leafy though
out; the leaves much crowded around the sessile head, spatulate-obovate, from a third to half an inch long including the narrowed base, soft, densely clothed with lax white wool. Heads 3 lines long, half immersed in the tuft of leaves. Exterior scales of the cypselae cones involucre oblong and woolly; the others linear, glabrous, dark chestnut-brown, scarcely exceeding the capillary pappus, curving after fruitification, at length spreading. Achena minutely glandular. — The double variety is more condensed and capitrustose, smaller, with a closer or appressedomentum; the heads more numerous and smaller, but there is an intermediate form.
$^{5}$. Mniodes, — Plantae andicoleae, densissime pulvinato, e sparse, musciiformes, cinereo-lomentose, foliis obtusatis squamine formibus cerebrinis arcte imbricatis; capitulis in apice rami lateribus inter folia sessilibus fere absconditis: divica.


$^{15}$. foliis singulato-subcuneatis fere truncatis vel rufatis ubi que pilis longis cerebris villosis-criminis; involucris squamosis linearisibus obtusis; acheneis glabris; pappis setis

$^{20}$. Intemaria, Gaertn.: n. sp.
P. muse, apice obtusae

Capitatio incrassatis, valde elavata, incrassatis.

Icub. Alpamarea, on the high Andes of Peru. (Also collected by Oakes, vide T. A. Schutt, trip. can.)

Plant forming dense and cushion-like perennial tufts, in the manner of Diapensia or of Leucobryum; the stems only about an inch high, branching; the branches compactly appressed, apparently truncated, exposing only their summit, thickly clothed with the very densely imbricated leaves, or below with their decaying vestiges, leaving the tips of the basal side of the individual leaves, becoming somewhat glabrate, only visible distinguishable through a lens. Leaves from 1/2 to 2 lines long, scale-like, with rather 2 carinæ.
but gradually becoming obscurely toward the base. At the truncate very distinctly rounded, sometimes reflexed, summit, from which it gradually narrows downward to the broadish base, very entire, obscurely one-venered, closely appressed, both faces thickly clothed with long and straight villous hairs, which are easily detached. Heads 2 lines long, cylindraceous, terminal, solitary, immersed in, or the summit a little projecting beyond the compact mass of foliage. Dioecious; those of each sex about 12-flowered. Exterior scales of the involucre or ultimate leaves, (more properly the latter) resembling the proper leaves but narrower and more scarious, truncate, the others, or true
involucral scales few, in a single series, rather broadly linear, obtuse, not narrowed toward the base, glabrous, thinly scarious or hyaline, the tips fuscous, as long as the disk, not radiate. Flowers as in *Antennaria*. ovaries and achenes glabrous. Bristles of the pappus crenated into a ring at the base, somewhat polyadelphous; those of the male flowers rather scanty, obscurely denticulate under a lens, very strongly and abruptly thickened, or elavately capitulate, at the apex; those of the female flowers more copious, more evidently polyadelphously aggregated, rather rigid, capillary, denticulate.

(*A. aristoides*), *Baccharis articulata*
tioides, Schulte Bip., Menzies are-
tioides, Nedd., Cohl. Md. 1, p. 164, t. 25), which I knew only
from Meddell's description and
and from Schulte's figure of the plant sent to
figuring is evidently a near
relative of our plant, inhat-
ding the high Peruvian sides
a little further south. But
this appears to have more ob-
acute, less truncate, and much
less villous leaves, a slightly
different involucre, papillose
sterile ovaria (the fertile plant
likely of the
umbellata), and the male pappus
very gradually and moderately
thicker, upward. The habit is
so peculiar that I had designated
our plant as the type of a genus;
it the flowers racem with Antar-
maria.
Chevrelia, Cass.


Hab. Brazil, in the Organ Mountains. (Peduncle sometimes very short, commonly elongated.)

Metalasia, R. Br.

1. Metalasia aristata, H. B.

2. Metalasia divergens, Don.

Elytropappus, Bass., Less.

1. Elytropappus Rhinocerosatis, Less.


1. Stoëbe alopecuroides, Less.

Ital., Cape of Good Hope, near Cape Town. "Rhinoceros-bush," set of the pappus sparsely plumose almost to the base.

Ital., Cape of Good Hope, in the vicinity of Cape Town.
Serephium, Lin., Less.

1. Serephium plumosum, Lin.

2. Serephium fusca, Lin.

Hab. Cape of Good Hope, near Cape Town. The latter species with the glomerules mostly elongated into oblong spikes, and the foliage less coriaceous.

Perötriche, Bass.

1. Perötriche tortilis, Bass.

Hab. Cape of Good Hope, in the vicinity of Cape Town.

Trichogyne, Less., Hand.

1. Trichogyne laricifolia, Less.
Itar. Cape of Good Hope, near Cape Town.

Neither Lessing nor De Candolle mentions the character which doubtless suggested the specific name, viz., that the fertile achene is beset with very long and lax, woolly hairs. The prepuce of the staminal flowers consists of four or five bristles, which are lamellate, penicillate above; the staminal spines also bear a few long and delicate hairs.

Leyssera, Lin.

L. Leyssera renella, Fl.

Itar. Cape of Good Hope, in the vicinity of Cape Town: the var. pubescens.

*Hab.* Brazil, at Rio Janeiro. Distributed over the American continent from Canada to Paraguay.


*Hab.* With the preceding; from which it is distinguished by the slender petals, smaller heads, and violet-purple petals.


*Hab.* Lord Auckland Islands.
Var. β. glaberrima: indique glabra et laxis, foliis cuninis sinuate-pinnatifidis, ramulibus parce ductatis.

Cresciles praenarthoides, Tuck. f. 
H. Antiare, 2, p. 544.

Var. V. glabrata (Tuck. f.): indique glabra; foliis sinuate-pinnatifidis; asperulis.


Var. I. hispidula: putamenosa, vel pilis; crispulis cinerca, vel cuna, ramulis presatim foliis hispidulis vel asperulis. 

Dunt, foliis linearibus, lanceolatis, vel oblongis, denticulatis, incisis, vel pinatipalatis lobis incisis.


L. c. & lat. Astrv. p. 92, t. 34.
S. squarrosus, Rich. in J. Linn. Soc.

E. aspera, R. Br. in med.

Erecrinitis hispidula, glandulosa,

Richardiana, DC. l. c.

E. hispidula, E. augusta var.

aspera, Hook. f. l. c.

Nav. c. ternisecta: glabra, laevis,

nisi folis sub lento minutiis

sine aculeolis, plevisque bi-

pinnatis partitis, lobis angustis,

sine linearis

Tab. Nav. 3, Lord Auckland

Islands. Y. Sydney, New South

Wales. J. Hunter's River, New South

Wales, a form with narrow and

incisedate leaves (E. glandulosa, DC.),

another with pinnately parted and

incised leaves, i.e. E. Sydney, New

South Wales.
All the above, with $E.$ spectabilis, praeclardia, &c., and perhaps others, must be regarded as forms of a very polymorphous species. The dilatation of the apical border of the achenium, bearing the pappus, cannot be relied upon to distinguish sections in the genus as attempted by De Candolle, nor for the discrimination of species as endeavored by Dr. Worster. As to the foliage, nothing can be more variable. Our var. semi-insecta would have the strongest claim in this respect, but it is connected with the others through a remarkably primitive bilabiate and rough form, intermediate between $E.$ hispidula and $E.$ arguta. Many of these plants are ascoses when young, but soon very glabrous,
as is common in Senecio. Dr. Hooker characterizes this E. from
anthoides, as perfectly smooth and glabrous, but Dr. Buddle
writes "Canis glabriscuscos" and "folis puttius arenosis", which ac-
cords with some Australian spec-
cimens. The New Zealand spec-
cimens I have seen belong to E.
chooides (Senecio plankoides, A.
Rich.), probably only another state
of the species.

5. Exechites quadri dentata, DC.

Senecio quadri dentatus, Labill.
Exechites quadri dentata & C.
tenuiflora, C. E. Prod. 6, p. 285,
1796.

Ital. Hunter's River, New
South Wales. (C. tenuiflora is only
a glabrate form.)
Gynura, Cass.

1. **Gynura sarmentosa**, Bc.

† tab. Luzon, in the Majájai Mountains near Manila.

Emilia, Cass.

1. **Emilia prochifolia**, Bc.

† tab. Luzon, in the mountains near Baños.

(Werneria. H.B.K.)

The interesting and now somewhat polymorphous Andine genus, like its analogue *Seneio* either radiate or discoid, the rays either yellow, white, or rose-color; the branches of
The style either truncate, or, in a few species, tipped with a setiform appendage. In one remarkable species, the receptacle is also oblata, in general. The leaves of the branches, or some of them, are opposite. In several species there are five abnormal nectaries to the corolla, occupying the axis of the lobes, as in De Candolle's Mesogranum, but this is of little consequence or constancy.
1. *Wormeria nutigera*, K. B. K.

*Wormeria nutigera*, K. B. K.

New, Gen. Spec. 4, p. 193;

New, Ackl. Andr. 1, p. 80, f. 16

excl. var. s.?

*W. nutigera*, disticha, f. graminifolia, K. B. K., l. c.

Cor. Cusa Bucha, in the

hut, Almacarca, high Andes

of Peru.

The specimens belong to a

small form of the species, nearly

Kuntzhi's *W. graminifolia*, but with

nearly any "*W. cornual,*" the leaves

1½ to 2 lines wide. Pappus (as figured by Kuntzhi) a little more strongly

deciduate than in the *W. disticha.*

Ovaries silky, villous, as in the species; in this respect the

plant differs from Kuntzhi's descrip-
tim of *M. graminifolia*, which a
glabrous ovary is figured and
described. It is not so in Nel-
dell's figure of *M. multigena*,
who does not allude to this char-
acter in the text under any spe-
cies. Although the achene are
not villous in the genus generally,
as De Candolle supposed, they
very much are so in the present species,
at least in *M. disticha*, that
its most developed form, in
all the rest so far as I have
examined, they are glabrous. - The
lobes of the disk-cordae occasion-
ally exhibit a mid-nerve, of which
there is no trace in other flowers.
This is so in most of the species,
misprinted *M. frigida* to *de Candolle*,
*M. rigida*, H. 723, R., is
clearly the larger form of *M.
frigida*, H. 13, R.

Var. *breviradiata*: involucrata lae cinis 10-14 ligulas breves, folis repis integerrimis ad quantibus; (Tab. 4.)


*Hab.* High Andes of Peru, near Casa Quercha, Peruvian Andes, McLean, in Herbt. Stock.

White plant glabrous, no mold whatever on the shizoma (which is creeping and elongated) nor on the bases of the leaves. The latter, although numerous and clustered at the base of the scape or flowering stem, do not form a rosette. These leaves are in our specimen about two in.
chis long and entire, in a layer
one collected by McLean 3 inches
long, including the long attenu-
ated base or petiole, and most
of them more or less decidedly
three-toothed at the obtuse apex.
in all they are narrowly spat-
ulate in form, of a thick and
rigid texture, and of a dark hue,
apparently they were fleshy, cori-
aceous in the living plant, their
margins, particularly toward the
below the middle ciliated with
minute small salient denticulations. The
scape, also, is mostly shorter than
the leaves, 5 to 12 lines long, or
in McLean plant 2 inches long,
bearing a few leaves, the upper-
most reduced to line or bracts, the
volum e campanulate or some-
what turbinate, of the same firm
texture as the leaves, the lanceolate
divisions as long as or longer than the tube and very slightly scarious on the margins. All these characters plainly point to Medullo's *Orbignyana* which was collected on the sides of La Paz in Bolivia. But our plant differs from the character of that species, probably not specifically, in its mostly smaller heads, the involucres reduced (from about 20) to 14 or even to 10 lobes, and in the shorter scarcely rays, which seldom surpass the involucral divisions. Their color is uncertain, probably not yellow. Receptacle convex, obscurely alveolate. At base corolla of the disk flowers commonly 10-nerved, the interca- lated or false nerves extending from
The tips of the lobes to the insertion of the stamens. Branches of the style truncate, minutely hairy at the extremity, otherwise naked. Achenes short, stig, glabrous. Pappus shorter than the disk corolla, minutely denticate.

Plate  
A. Vernonia Nebbedelli. Orth. gyana, var. oreviradiata; natural size. Fig. 1. 1. ray flower; 2. corolla, and stamens, and style of a disk flower; the former laid open. The details magnified.
3. Veronicia villiata, Sp. Nov. (Tab.)

U. rhizome repente, caule florifero gracili simplici usque ad capitulum parce folioso villoso-lanato; foliis angustissimis linearis primum villosis max glabratissimis, invasis summis fili formatis capitulum bracteatisibus ser in volucreatis, radicalibus obtusis denseum alternatis, basi dilatata; fruticis fulvo-crinitis; involucro 12-15 fido, lobis lineari lanceolatis margine scearios; ligulis erectis; styli ramis tr. satio apice truncato penicillato to hispidis; acheniis glabris.

Itali, high Andes of Peru near Alpamareca.
Whitman a horizontal and more or less creeping, rather slender, clothed with the decaying vestiges of the bases of leaves and their hairs, their extremity crowned with tufts of erect leaves and extended into a flowering stem of two or three inches in length. The stem, young leaves, and internodes are clothed with lax and somewhat villous woolly hairs. Radical leaves one to 2½ inches long, a line wide towards the obtuse summit, then tapering downwards so as to become nearly filiform, then dilated into a serrated base or sheath, which is ornate with long and straight fulvous hairs (instead of implexed wool). The rather scattered cylindrical leaves linear, filiform
Coriolute, (Great-like and several of the uppermost crowded around the base of the head, rather shorter than the involucre. Cups of the involucre somewhat turbinate, 3 lines long, the divisions 3 or 4 lines long, linear-lanceolate, with broad recurved margins. Rays numerous, linear, (of uncertain color) considerably longer than the involucre.

Disk-cord as usually 10-nerve in the upper part. Branches of the style in the perfect flowers linear, semi-cylindrical, glabrous except at the edges near the tip, and at the broadly truncate summit, here bearing a tuft of short hispid hairs. Achenia short-oblong, glabrous. Sepals white, dentate, as long as the disk-cord. Receptacle flatish, obscurely arenate.
This should be compared with Middell's W. statice, especially with the variety cellmisioides (W. cellmisioides, Schultz, Kip.), but that, besides these differences, is said to have the branches of the style in the perfect flowers subulate, also papillose for their whole length.

Plate B. Nerminia villosa; natural size. Fig. 1. Ray flower. 2. Summit of its style. 3. A disk flower. 4. Its corolla, stamens, and style displayed. 5. Summit of its style. The details variously magnified.

W. *Phyllostoma*, Kerry in Bay, (J. Choi. 4, p. 215, t. 47.

W. minima, Nath. Ref. Meyen, p. 27.


W. *brachyphylla*, Sherleriodes, *&c.*


Itah. Andes of Chile, at the snow line, also of Peru near Casa Bancha.


Ind. High Aride of Kern above Bainos; in which region it was long ago collected by Humbrey, but only just now published by Reddell. From the character of the foliage I had named it *N. acicularis*.

Plate 1. *Nermeria caespitosa*. Fig 1. G leaf enlarged. 2. Head enlarged. 3. A seta of the pappus magnified.


*acaulis;* *N.* caespitosa, var. nudique glabra; rhizomate cresso fer lighvoro ramoso, folius conjuntissimis linearisibus vel spathe latis brevibus* intellimis
obtusissimis carnosis capitulis sessilibus hexaquanti bus, involucro 12-losto, lobis tubis parum brevisibus apice ciliolatis, lineari-oblongis obtusi apice ciliolatis, nigulis nullis, acheniis glabris; antheris luteis.

Hab. High Bridges of Pen, near Casa Carache.

Plant apparently forming dense tufts, only an inch high; the leaves clustered on the summit of the branches of thick rhizomata, which bear no root or hair. Thick,apparata. Leaves fleshy, glabrous, about 4 lines long, those of fertile tufts spatulate, the blade about a line and a half wide, of the fertile tufts linear, very obtuse, not narrowed towards the base, the thin edges
of which are absolutely ciliolate, dentate, stead subserice, 4 lines long. involucrum glabrum; the divisions rather shorter than the tube, of the same thick texture of the leaves. The alternate mostly exterior ones broader than the inner ones, which are linear and with scariosus margins, which the exterior ones scarcely exhibit. ovaries glabrescent, branches of the style smooth, except the abruptly truncate and minutely spinose hispid summit. ovaries glabrescent. In most respects this accords nearly with Reddell's N. melano-
andrus, from the Bolivian Andes. But in the beauty specimens the leaves are all quite entire, the involucres not cleft beyond the middle, and its the lobes of all very obtuse, and the anthers yellow, not dark colored in the least.
Nervoria strigosissima, sp. 1

V. capitata; rhizomatæ crasso repente; foliis rosulatis bruni tus spathulatis integerrimis capitulum sessile fulcrantibus cum involucro 16-18-fido strigosissimis; ligulis erectis; stili ramosi apice hispidulo-panicellatis et appendice setato auctis; achenio frutescente; pappo rigidulo.

N. (Tab. 5)

V. capitata; rhizomatæ crasso repente; foliis rosulatis brunius spathulatis integerrimis capitulum sessile fulcrantibus cum involucro 16-18-fido strigosissimis; ligulis erectis; stili ramosi apice hispidulo-panicellatis et appendice setato auctis; achenio frutescente; pappo rigidulo.

Tab. High Andes of Peru, near Casa Bancha, near Ama-

A depressed plant, rising barely an inch above the surface of the ground. From the rhizoma thick, branching, excepting some-
what lignum, the older parts clothed only with decayed vestiges of the bases of former leaves and with straight villous hairs. Leaves crowded in a tuft around the sessile head, which they slightly exceed, spathulate; the blade from 3 to 4 lines long, about 2 lines wide, obtuse, perfectly entire, tapering gradually into a short or sometimes elongated petiole, both faces thickly clothed with long and straight, flatish, tapering, rigid bristles or rather strigae. These remarkable bristles are a line or two in length, sword or fuscos, and themselves the tissue of ventriculate under a lens, or some of the more prominent ones rise recessing above into slender hairs, involucral about 4 lines long.
campaunulate, externally hispid with bristles like those of the hairs, but less stout, cloth about to the middle into 10 to 14 lanceolate lobes, their edges scarcely at all scarios. Receptacle naked? Rays exerted (their color not recorded), a narrow annulus in convex to the linear-oblong ligule with the slender tube. Disk-ovolves narrow, serned, the lobes short-linear. Branches of the style of the disk-flowers glabrous or nearly so except at the summit, which is panicleate with short and rigid bristles and furnished with a setaceous appendage or stiff pointed bristle, which is often sometimes deciduous or perhaps obsolete. Achene short, minutely silky-pubescent.
Pappus cyprinae, the equalling and afterwards exceeding the corolla of the disk, composed of more rigid or coarser bristles than in other species.

A most remarkable species, apparently somewhat related to Meddell's W. glandulosa; to the peculiarity of the style we have an approximation in the following species.

Plate A. Vernonia strigosissima; natural size. Fig. 1. A leaf enlarged. 2. One of the branching hairs magnified. 3. Involucres laid open. 4. A ray flower. 5. Summit of its style. 6. A disk flower. 7. A disk flower with full-grown achenium. 8. Summit of the style of a disk flower. 9. Section of the achenium. The details variously magnified.
8. *Nannaria ciliolata*, sp. nov.

*W. capitolosa, ramosisima, de =

pessa, glaberrima, ramis con-
futissime foliosis; foliis subcar-
mosis (sepe oppositis) lineari-
bus subcomplicatis vel canalic-
ulatis acutiusculis subcar-
mosis subtente spinulosis ab-
isolatis; capitulis sessilibus;

involucro cylindraceo pluris-
costatus 8-fidus, lobis trian-
gulato-lanceolatis obtusis
subcariosis, costa valida;

ligulis paucis brevibus;

style ramis truncatis apic-
ulo brevi vel obsolete; achenis
glabris.

Tab. High Andes of Peru, with the preceding and succeeding
at Alpamarea.
Plant with the habit of the following, but with slenderer stems, apparently not so fleshy, and only an inch or two in length, the older ones naked and free from wood or hairiness, as is the whole plant. It probably forms small dense tufts on the surface of the ground. The numerous and crowded branches are thickly clothed with leaves. These are many and thin, opposite with their bases very close together and not vaginate. They are about half an inch long, and about six times as wide at the base, slightly narrowing to the apex, thickish and apparently more or less fleshy except at the base, a short midrib prominent beneath the upper surface more or less channelled, the edges thin and sharp.
and ciliolate with minute and salient spinulose denticlessations. Terminal flowers on branches, heads slightly exserted from among the leaves. Peduncles 4 lines long. Cylindrical caespices, campanulate, ribbed with about 24 salient nerves, of which those which form the axis of the lobes are the stronger, cleft less than half way down in to \[\text{?}\] broadly lanceolate, or somewhat triangular, but obtuse, lobes 9 / sides of which are thin and somewhat scarious or petaloid (yellowish?) except the axis of sturdy midrib. Receptacle flatish, naked. Ligules apparently about 8, short, in the sector. Specimens not exceeding the involucre. Disk-cells 5-8. Branches of the style (in the ray flowers mostly sim-
car to those of the disk) truncate and somewhat capitulate at the summit, where they are which is minutely hairy, also printed with a minute apiculation, which, however, is often obsolete. Nymphaea perfecta, glabrous. Papillae soft, dentate.

Plate A. *Nymphaea albidula.*

natural size. Fig. 1. Upper side face of a leaf. 2. Lower face and section of the same. 3. The style. The details magnified.
Nomenclaria digitata, Mdd. 

W, capitis osa, ramosisima, carnosos; ramis addentibus superne confertissima, foliosis glabris; foliis glabriuscentis apice (limbo) curvato, dilatatis tridentis, laciniae crassae conglomeratis lineariae, oblongis integris vel 2-3-fidis, 2-3-labatis primum parce lanatis, capitulis sessilibus radiatis, involucre campanulato 13-20-fido, lobis lanceolatis, margine acris, style ramis apice penicillatis latis et appandice setaceo-sapine acris, acheniis glabris; receptaculo valde convexo nudo.
Stub, High Andes of Peru at Alpamarea.

A scanty specimen of this interesting species was collected, along with the following and the preceding. It appears to be Meddellia \textit{M. digitata}, but with some minor discrepancies. The leaves bear some wolly hairs, their lobes are somewhat increscata, though less so than in the following species and are very blunt instead of acute. Some few of the leaves appear to be truly opposite. The involucre is costate or nerves as in \textit{M. ciliata}, but less conspicuously; the divisions in our specimens are fewer than in Meddellia, and are scarcely if at all longer.
Than the tube. The disk corollas are 10-nerved. The branches of the style, as well in the way as in the disk flowers, sometimes conspicuous, bear a slender, setiform appendage (either naked or with a few sparsingly thin, setulose); sometimes this is even obsolete or not distinguishable from the coarse disk hairs of the truncate-obtuse summit.
10. Vernicia dactylophylla, (Kreb.)

W. dense caspitosa, ramosissima
emossa; ramis adscendentibus
fasciculatis; foliis in apice
ramorum escherrine imbricatis
supra lanatis rursus glabris
parvis apice. Petiolo
curvato. Bracteatis dilatatis tripli-
lacinii 2-3 lobatis lobulis
valde incassatis obtusis
enclavatis; capitulis semilibris
radiatis; involucro campanulato
10-15 fido, lacinis lobis oblongis
lanceolatis se magis acuminosis,
valde costatis, stylo precedentis; acheniis gla-
bris; receptaculo planiusculo
et alveolato.

Vernicia dactylophylla
Schulze, Bip. in Benglandia
4, p. 53. 1864. Holotypus. And. No. 007.
This extraordinary species was first detected by Dr. Hooker in the Peruvian Andes, doubtless in the district visited by the Naturalists of this Expedition. Bay and Leuschner have also detected it farther south, and Bentland near Illimani in Bolivia. Like Dr. Schultze, I was disposed to view it as the type of a new genus, and to dedicate it to the rival geologist, the founder of the Pleistocene theory, regarding it as sustaining to Gymnocalycium the relation which Nymphaea does to Senecio. But the shape of the stem is inconstant and variable, and the absolute receptacle is wanting in the nearly related W. Digitata.
In our specimes the receptacle is not only profusely alveolate, but the alveoles are in regularly extended, thin and thin among the flowers, into scars as fine thills, some of them half the length of the disk flowers. But in a head from one of Sempère's specimens which I was able to examine, the receptacle is only moderately alveolate, either disk-cells only 5-merced or Achenia cylindracea, strongly costate with several palisade ribs.

Plate 15. Navariera dactyl-

Phylla: two forms. Fig 1. Upper face of a leaf. 2. Summit of another leaf, with the lobes more incurved. 3. Head. 4. Re-
cuptacle, deeply alveolate. 5. A disk co-

Ma expanded, laid open. 6. Style. 7, 8.
Anther: Staminus. 9. Leaf of the lower form. Dis-

played. 11. Ray. flower, and 11, disk flowers of the same.

2. Culeximum Jucarkei, Méd.

Add. 1, p. 139.

Stbl. High Rides of Kern, above
Banos, near Alpamare area, 45. 115, collected in June by Mr. McLean.

This well accords with the character given by Meddll, it differs from C. minare in the assigned particulars (except that the resolution of the margins of the leaves, or the want of it, affords no valid discrimination), also in a disposition to the branching of the flowering stem, above, and its commonly bearing two or even in specimens only three, four in the high three heads. C. minare is not safely dicotyledon.

3. Culex luteum longifolium, Jurez.

Var. B. tenue: foliis tenue viridibus, scape gracillimo subpedato, bracteis panicis subulatis instructis, to 3-4 cephalo, capitulis minusibus.

Ital. high Andes of Peru near Casa Canced. Var. B. above Banos.

The larger specimen is the same as a plant of Prof. Jameson's collection, apparently that on which Burzmannus founded his 6. longifolium. I cannot doubt it is likewise Meddell's specimen culttivides. Admittedly there is no good line of demarcation between the two genera, but this is purely a congener of C. minuta and is as good a Coleschlüsse as is 6. adscendens.
Hardly more than

The variety forms is a much attenuated and depancreatic form of the species; the leaves not rigid, the glabrous stem almost leaffless and filiform, the heads one third smaller.

4. Buleidium numile, DC.

Buleidium numile, DC. Prodr. 6, p. 325.


Hab. High Andes of Peru, at Alpam area.

The leaves are sometimes quite entire, and often prostrate or incli- 

The species cannot well be generically separated from the two preceding and their immediate
Senecio, Linn.

* Patagonici et Hegiani.

1. Senecio subulatus, Don.


Stu. San. Hills of the Mouth of the Rio Grand, North Patagonia; the varieties elatius and macranthus.

Stems shaggy at the base. Leaves fleshy, subulate, linear or pointed, mostly entire, sometimes trident or sparingly pubescent. Heads pretty large; the ligules little extended. Achene minutely ciliare; the short hairs when moistened emitting a couple of spiral threads, as
in many other species, and then when dry appearing velvety or fuzzy, a point to be kept in mind in collecting the descriptions of various species. *S. jpistochloa* DC. and *S. pinnatisectus* Poiret. (*Cineraria Megarum*, Lam., *Spring*) are probably states of this same species with more pinnate leaves.

2. *Senecio allocanthus*, Stock. & Sm. c.

*Ital., Rio Negro, North Patagonia, with the preceding.*


*Antarct. 2, p. 314.*

*Senecio Arnottii* Stock. 1865 var. 1.


*Senecio Arnottii* Stock. 1865 var. 2.

*Ital., Orange Harbour, Luegii.*
This has narrowly linear, lanceolate leaves which are sharply 2-4-toothed near the summit, or some of them entire, pedicels an inch or two in length, and is intermediate between Dr. Hooker's S. Bracteolatus and S. longipes, which he rightly conjectured to be only varieties of the same plant species. The var. longipes was collected by Emmerson.

4. Senecio Leucomalus, sp. nov.

1. punctatus, ramulos, undique albo-lanatus; panicis 1-3-cervatis ad apicem usque foliolis; foliis spathulatibus integerrimis (denticatis glabris aveniis); capitulis breviter pedunculatis; involucro lanosissimo, bractedis linearibus, subtulis 2 quannas primis sub
Quantibus; ligulis nullis; achene glaberrimum.

Var. B.

Var. B. incisus; canthibus laxis adscendentibus; foliis pleurisque apice 3-5 lobatis vel inciso-denticulatis.

Stab. Orange Harbour, Freget.

This is related to S. Patagonicus, Hook. et Arn. (of which S. Andersensoni, Hook. f. and S. Danguesii, Tombr. & Jack, are forms), but is very densely white woolly, has larger heads, short pseudocymes, oblong and spathulate or somewhat cuneate leaves. When the dense wool is detached, the leaf is left glabrescent and vinaceous; when alive perhaps flesh-
5. *Seneecio candidans*, DC.

*Seneecio candidans*, DC. *Prodr.* 6, p. 412; *Hook. f.* *Fl. Interc.* 1, p. 312.


*Hib.* Good Success Bay and Orange Harbour, Zucia.

6. *Seneecio Smithii*, DC.

*Seneecio Smithii*, DC. *Prodr.* 6, p. 412; *Hook. f.* *l.c.* p. 316.

*S. verbascifolius*, *Hook. f.* *Reg.* *l.c.* t. 12.


*Chrysanthemum Verbascifolium*, *Comms.* in *Hook. f.* *Musc.* *Bar.*
Stab. Orange Stabur and Good Streets Bay, Zanpia.

This stately plant has much the aspect of the preceding, except that the leaves are mostly more oblong, and the rays are present. These are ochreous or almost white and commonly conspicuous, but in some specimens very short, as mentioned by Dr. Stooker. The corynbs can be called 'stigmocephalae' only in de-passposite specimens; in the larger ones it bears as many as fifty or fifty heads. The larger petals are naked above; the others are broadly wing-margined.

L. Senecio acanthifolius, Stab. &

Senecio acanthifolius, Jacq. Post.
Var. Pate bed. f. 11 Virk. J. A. C. p. 318.


A less prevalent form of this well marked species than that characterized by Dr. Hooker; the leaves of rounder outline, rather rounder cordate-ovate than oblong-ovate; the lower petals sometimes five or six inches long and with one or two lateral appendages above the middle, the numerous heads of the summit considerably smaller. The sub-capitate truncate tips of summit of the branches of the style bear a subtulate apiculation.

E. Linnaeus
8. Senecio Websteri, Stock f.

Nar. B. sub discoides; ramos adsum dentibus; foliis flabellatis pisso crenato-dentatis, basi pumice late truncata pneumonia cuneata, glulis panceis pannis tubo brevibus.

Hab., Orange Harbour, Florida.

This is probably a variety of Dr. Hooker's S. Websteri, formed on a single and insufficient specimen from Staten Island. The stems are much branched, apparently spreading or declined, a foot long, the branches ascending, the older parts glabrate, the younger, like the petioles and the lower face of the leaves, clothed with a loose, amnose
wood. The leaves, though thin in the dried specimens, are evident by succulent. They are mostly a little broader than long, less than an inch in diameter, faintly flat-let, either truncate or very broadly cuneate at the base (but none of them cuneate). Their entire, the rest of the circumference cut into from five to 8 coarse and blunt teeth or crenatures, the upper surface glabrous, the white margin revolute. Petiole about the length of the blade, slender, stands few in a short and nearly sessile cluster. Involute campanulate, 3 lines long, scarcely 1/3 actate; the scales lanceolate, acute. Rays flower several, not exceeding the actina disk, the ligule not half the length of its tube, shorter than the style truncate. Branches of the style of the
Disk. flowers capitellate, Achenia glabrous.


Senecio Darwinii, Stock et An.

Var. 3. eradiatus; parumus, condensatus; foliis parvis; ligulis multis.


The specimens represent various, more or less condensed forms, among
which the most condensed, and
smallest-leaved, and most glabrate
specimens want the rays. I
cannot think them specifically
different from the others.

10. Senecio Eightii, Hook f. subsp.

Stab. Good Success Bay, Islay,
the variety of Dr. Hooker (Itl. Atripar,
I. c.), with lax or decumbent stems,
more leafy flowering branches, that
peduncled heads, in fact the
more luxuriant State of the
species. Also, perhaps, a form
among a thousand more,
of S. Darwinii, and a good case to
appeal to in favor of the Darwin-
ian hypothesis of the differentiation
of species through variation and
natural selection.

Tusitalago trifurcata, Fock. in Comm. Geoff. 9, p. 38
Senecio Magallanicus, Fock. in herb. Mrs. Par.
Belis folis apice incisis, com.
mas. in herb. Mrs. Par.

Stab. Orange Harbour. Tasmania.

This is well figured by Dr. Stokes, who has represented a young
stolon of one specimen. These stolons,
although not mentioned in any published
description, are sometimes very conspicu-
ous. They occur in one of Baker's
specimens. The scape is from 2 to 5
inches high.
**Chilenescs.**

12. Senecio simpatilbus, d.c.

*Hab. Coast of Chili, in the vicinity of Valparaiso.*

13. Senecio glaber, less.

*Hab. Near Valparaiso and Santiago, Chili.*

14. Senecio Bridgesii, Hook. f. m.

*Hab. Chili, in the vicinity of Santiago. Flowers and scales of the involucrum more numerous than the character assigns; differs from the foregoing mainly in the glabrous achene.*


*Tab. Chile*, in the vicinity of Santiago.


*Tab. Chile*, in the vicinity of Santiago.
above Santiago, with some incomplete specimens having entire and linear leaves and rather smaller, subulate heads, which may be S. Lastarriianus, Kenty.

17. Senecio Montthianus, Kenty

Senecio Montthianus, Kenty in May, P. B. L. cit. 4, p. 158; McD. in
Clav. Ind. 1, p. 120.

S. glandulosus, K. and in
Kenty, Kenty.

Tab. Mades of Kenty, on the
first Cordillera above Santiago.

A well marked species, the
branchlets of its leaf set with rigid
glandular points, the involucre thick.
glandularis; sed the scales four
than the character ancient, only
seven or eight in our specimens.

*** Peruviarii.


a. puticosus, scandens, glabriusculus; folios membranaceos oblongi,
ovalis, cordatisve crassato-dentatis vel expandidis subtilis, minus
villoso-lusorum, seque tormenti us centis, petiolo longissimo panicu
vel suprimum basi acuto dilatatibus, corollis axillaris et
terminalibus subspaniculatis laxis; involucro glabro parce
caleculato 8-12 phyllis disco
breviore; ligulis 5-7; fr. disci 18-
20; acheneo pentamer.

Hat. Near Callao, Peru.
Collected also by Lombey and by Matthews.

Leaves 2 or 3 inches long, thin.
Anthers of the pistils, when present, small, more or less toothed.
 Heads half an inch long, hair as yellow.

19. Sanecio leptotrichodes, sp. nov.

C. Hooker. co
19. Senecio subaphyllum, sp. nov.

S. herbaceus vel basi fruticosus, late arenosus, lanatus; cauliculus desquimpidatus, max glabrato exerto, apice crassoquadrato, foliis membranaceis, canaliculis oblongis ovato-subcordatis vel subellipticis, grosse duplicato-crenatis obtusis supra glabris subtus tenuis inde caninis, petiolo papillis alatis; capitulis in corymbo 3-9 laxe pedicellatis; involucro circiter 20-folliço glabrescente (squamosis linearis) basi luteolis viridis subulatis, parce calycetum; limulis elongatis, acuminatis serratis-puberulis. Samenta foliis sinuatis et in

Var. B. minor: caule subaphyllum obigo cephalo; foliis luteo-pini...
matipidis seu fumatis parti-
tis, petiolo basi supinus
stipulatis appaeridentiatis.

Chile of
Hubb., Peru, in the vicinity
of Obrasilla. Also collected
on the crest of Carruchuca
by Matthews, and in some
part of Peru by Pavana.

Plant a foot or two high;
the stems perhaps a little nodal
at the base, mostly branched;
the achenes wool Cadicopes, then
glabrous, teste, faintly striate.
Basaline leaves 2 or 3 inches in
length, including the petiole, only
the uppermost sessile, varying
from deltoid-subcordate to oblong,
obtuse or sometimes acute;
coarsely and finely exinate-toothed,
sometimes sinuate incised and
rather gradually contracted at the
base into the toothed or lashed wing of the petiole, but mostly abruptly contracted into an entire wing or margin, which is scarcely if at all dilated at the base. The upper surface glabrous or nearly so; the lower whitened with a close asperoseomentum. Corymbs naked. Pedicels an inch or two in length, bearing a few petaceous bracts. Involucres cylinodraces, half an inch long, the apressed calyculate bractlets only one or two lines long. Flowers yellow. Ligules linear, 5 lines long, disk flowers about 40. Branches of the style capitate-elliptic-truncate. Ova
cries silky, cinerescence. - The var. β. has simple and more reeded stems, the smaller only six inches high, more hairy (hit
yngior, Heads, and Prunmatified lower leaves, mostly with stipulifrons, rudish and incised or toothed appendages at the base of the foli.,

20. Senecio gracilipes, sp. nov.

S. Herbae us, pruinosa-fimbriatus, cana erecta, simplici pedali parce foliatis; foliis gracillimis petiolatis membranaceis, inferioribus longissimis gracilibus petiolatis ovatis subtrunclusse sinuato-scapulatis, lobis dentata-lobatis, superioribus parvis parce pisum pruinatis petiolo basi aurito-dilatatis, capitulis longissimis spadiceis capitulis discoidis, involucro parce trich.
Calyc, culato 20, phyillo, squamis
lineari-lanceolatis dorso histellis,
a cheniis minutim histellis.

Tab. Andes q Perù, in the
vicinity q Abrajillo.

Stem simple, from 6 to 16
inches high, from a perennial root;
the larger bearing 3 or 4 carmine
leaves having slender petioles of
about four inches in length, the
lamina 2 or 3 inches long and about
2 in. wide, pinnately 5-7. lobed
and or sinuate, nearly truncate at the
base. Above the smaller specimens
are leafless, the larger bear one
or two smaller or reduced
leaves, the petioles shorter and
annulate, dilated at the base.
Heads 3 to 5; peduncles an inch.
or two in length, naked. Five
lines 7 times or 8 lines long; the
scales linear-lanceolate, carinate
towards the base, beset with small,
short, crisp or point hairs, like those of
the stem and foliage, but more
conspicuous. Rays more. Disk-
flowers 60 or more. - A well-
marked new species; but the specimens
were poor and scanty.


Senecio Myosoridifolius, Webb,
Chlor. And. 1, p. 108.

Italy, Near Banos, Andes of
Peru; a truly cephalo-sac specimen.
Near Baza Bancha in the high
Andes; a dwarf, stout, maro cephalic
flora form, only a span high. Mr.
Matthews also collected this specimen
Pascoc.
S. Nebracens, glaber; calule ex to gracili apice comprimato polycephalo; foliis angustissime linearis quam plerumque laciniacis vel primatipartitis; capitulis parvis discoideis pedicellatis; involucro parce minus utinique bacteolato 12-13 obtusangulo phyllo, squamis lanceolatis acuminis aristellis.

Var. p. foliis lato oblongis, lobis lanceolatis, calule pale floribus vannis patentibus.

Stab. Andes de Peru, in the vicinity of Otrojillo.
Busc of the stem unknown, probably wholly herbaceous.

The specimens consist of the upper part of five flowering stems, over a foot in length, slender, leafy to the summit where it divides into a loose compound. Leaves not dilated at the base, nor distinctly petiolate, one or two inches long, sparingly pinnatifid or the smaller ones entire. The Rachis and leaf segments at most a line and a half wide, often much narrower and almost filiform. Pedicels 6 to 16 lines long, slender, minutely bracteolate at the summit. involucre barely 3 lines long, shorter than the disk, glabrous, as is the white plant, the calyptrae bracteoles few and very short. Flowers between 40 and 50, yellow. Ovaries
minutely hairy. — The variety
is the summit apparently of a coarse
plant and more branched plant
with broader leaves. It was,
I believe, collected likewise by
Matthews at Callwa, and is
probably of a different type dis-
tinct.


Hab. Andes of Peru in the vic-
cinity of Obrajillo. Also gathered
near Pasco by Matthews.


Hab. Andes of Peru


*Tab.* Andes of Peru in the vicinity of Baños. (Not wholly conforms to the character, but probably of this species.)


*Tab.* High Andes of Peru, at Alpamarca or near Baños. A low shrubby succulent plant.
26. Senecio spinosus, DC.

Hut, High sides of Pat, between Buenos and Rosarma, (well described by Noddel, &c.)

27. Senecio Pickeringii, sp. nov.

S. punctuosus, ramosissimus, glaber; ramulis brevibus rigoris; floriferis capitula 1-3 subpedicellata sepius mutantia gementibus; foliis eretris lineariibus; sese lineari-oblungis sessilibus; subcarnosius grosse pinnati-fido; dentatis variaeque integris; bracteolis calyculi ovatis seu obovatis; squamis involucris late oblungis; testa parte triente breviaribus; ligulis nullis; acheniis...
VAR. B. | foliis minus carnosis | capitulis minoribus | bac- 
| magis in eis, involucro | todis squamisque | involucri 
| angustioribus. | 

Itab. High Ridge of Peru, be- 
tween Casa Bancha and Bullnai. 
VAR. B. Near Buenos.

A low, rigid shrub, totally glabrous, with more or less fleshy, short leaves (half or three quar- 
ters of an inch long), and nodding 
head (4 or 5 lines long) either solitary 
or usually clustered at the 
extremity of the short and spread- 
ing branchlets. The species is re- 
markable for the calycellata scale, 
which are several in number, re-
markably broad, ovate or sometimes oblate, thin in the one specimens (perhaps rather fleshy when fresh) with carinæ and somewhat coarse denticulate margins, a little shorter than the proper involucral scales into which they seem to pass. The latter are similar in texture and appearance, but thinner, more scarious, and oval or oblong, very obtuse, as long as the disk. Flowers 40 or 50, allinema — Mandrite, Acanthia, perfectly glabrous. Pappus of slender and almost barbellate bristles. The calyx in size and form resembles that of Middellis S. glacialis, but the proper scales of the involucres are much broader. Indeed the whole might well be described as an indica —
ted involvulose. The materials of the variety are insufficient; the narrower scales of the involvulose and its calyculus appear to separate it, but there is no intermediate specimen.

28. Senecio Daniei, sp. nov.

cespitosa. suporticulatus, depressus, gla-
broatus; foliis brevis carnosulis
linearisibus atque inciso-3-5-
dentatis subprimatipidis vel in-
tegerrimis primis cum caule
lanulosis apice subaphyillo
monoccephalo lanulosis; capit-
ulo mutante discoideo; involu-
ceri squamis 14-16 lato-line-
aribus obtusis cum bractedis
calyculi dimidio brevioris
Cynoglossum pubescens. Achenes glabris, cinesco, pubescentis.

Stems depressed and branching, apparently forming matted tufts on the surface of the ground, the flowering summits rising to the height of one or two inches. Leaves 3 or 4 lines long, crowded, or rather scattered on the flowering shoots. Starchish, at first thinly woolly-pubescent, as is the stem, some glabrate, apparently a little viscid, mostly bearing a few short and blunt teeth or lobes. Head single or rarely a pair, nodding on the slender and pedunculate summit of the stem, 5 or 6 lines long.
about 60 flowered; the involucre and the few and lax lanceolate bractlets villous-pruineous with dark-colored blackish and somewhat glandular hairs, at length rather glabrate. Achenia minutely brown-pruineous.

It well marked alpine species; dedicated to the distinguished geologist of the expedition.

29. Senecio Numillimus, Hedd.

Seneecio Numillimus (Hedd).

Chlor. Ind. 1, p. 704, t. 19.

Stab. High Rides of Peru at Alpamareca. x x x x x x x x x x

A very depressed, erectrose species. Plant, agreeing with the typical form characterized by Heddle, but
with the involucres about 10-12 cm.

30. Senecio evacoides, Schultz Bip.

Senecio evacoides, Schultz Bip.
in Bojondersia, 4, p. 525.

Hab., High Rides of Peru at
Alpanarca and Casa Buncha. Also
collected in the Peruvian Rides by
Matthews and by Lefèbvre. Our
specimens well accord with the char-
acters except that the bristles of the
pappus are indistinctly if at all
barbate at the apex.

31. Senecio declinans, Medd.

Senecio Declinans, Medd. Chlkr.
And. 1, p. 105.
The female plant of this species, which only was known to Reddell (from a specimen collected by Dondey) also occurs in Peru and was also gathered in the Peruvian Andes by Medland (in hab. stock). Our own very scanty specimens comprise both sexes, or subspecies, for the female flowers have imperfect anthers, the stamens are a pistil like that of the female, only the branches of the style are minutely papillose hairy externally, as in \( T. \) cistophorus. The female styles in the female flowers, instead of resembling those of the hermaphrodite blossoms of Senecio, generally imitate those of the
ray flowers of this genus. The male heads are rather broader than the female ones, and the anthers are exerted. From analogy we should expect this tendency towards a separation of the sexes in every degree; and Reddell is doubtless right in setting this species, with his S. antennaria, in Senecio. I add the following to the group, although the indications of misandrogy are less pronounced.

32. Senecio pettitus, Sp. nov.

S. manus, herbaceous, succulent, acaulescent, nudique pilis longis sericeis dense crinitus.
(vel subinternis
foliis rosulatis obvatis integerrimis sub-3-5-nervis in peciolum brevem attempressis, 2 capo brevi vel subnullo monocephalo; involucro 20-phylllo e calyculo; ligulis minutis; floribus ( anthemaphroditicis) ex berrimis; styli ramiis obtusis (nee truncatis) hirtulatis; achernis glabris; pappo rigidulo.

Hab. High Andes of Peru, near Casa Bancha.

Creeping rootstocks or stolons slender, bearing at their summit a rosulate tuft of leaves, their blade half an inch long and almost as wide, obtuse, entire, obscurely 3-5-nerved, densely clothed, as is the involucrums, &c., with a coat of long, straight, soft and
silky, villous, smooth at apex, fulvous hairs, the base abruptly contracted into a short pistil. Head sessile, or raised on a scape of less than an inch in length and bearing one or two linear leaves or bracts. Involute 6 to 8 lin. long, shorter than the disk; the scales about 20, linear, lanceolate, with scariosus margins, very silky, villous on the back externally. Disk cor. bossed with a slender tube and a more or less elongated, narrow, which is sparingly set set towards the base with some minute hairs. The flowers are structurally hermaphroditic in the specimens; but the anthers seem to be imperfect, although they bear some pollen. The branches of the style, like those of the preceding species,
are compressed and obtuse, not truncate, capitellate, or at all appended at the summit, the outer face minutely hispid for nearly the whole length. Papillose white, rigid for a stem, the bristles gradually thickened at the base, cuspidate, in two or more series, longer than the flowers, half an inch in length.

33. Senecio arachnostratus, Radd.}

lat. Anodes of Peru, near Sanuros; an insufficient specimen which may doubtfully be referred to this species.
34. Senecio macrocephalus, Nees.

Hab. Alpamarea in the High Andes of Peru. - Insufficient specimens, allied to S. pulchra, but the foliage glandular-villous, with some lax deciduous wool beneath, the involucres nearly glabrous and gamophyllous at the base. The same plant, I believe, was gathered at Pasco by Matthews (no. 648, in Herb. Hook.).

35. Senecio repens, Scb., var. caraxicifolius.

Hab. High Andes of Peru, near Caza Bancha.

The beauty and form specimens so nearly accord with S. repens, &
the shades further north (which is well illustrated by Medwell), that I can regard them only as forms belonging to a variety of that species with irregularly and deeply pinnatifid leaves, which apparently are not so rosulate and smoother.

3b. Venecio vernerioides, Medd.

Venecio vernerioides, Medd. Chlor.

Abb. 1, p. 128, t. 19.

Var. B. exscaposus: capitulum inter folia rosulata sessili e rerninum pin- matipedo dentata sessili.

Var. N. acaposus: L'apso multilibacte- ato folia spathulata simpliciter dentata subaquee.
Stab. High Andes of Peru: var. 3, at Alpamarea, Y. Between bulluadai and Obajillo.

This well-marked species has recently been published and figured by Meddell, on his specimens, collected in the Andes of the Southern part of Peru, which are intermediate between our two strongly marked varieties—one, destitute of any scape, the head sessile among the leaves, which are just like those of Meddell's figure, except that rather more inversed: the other, a more evolute form, has less involute leaves, from 3 to 5 inches long including the petiole, and only simply repand-tottled. Scape one and a half to three inches high, furnished with many slender linear bracts. Head
Hemispherical, 7 to 8 lines high. Leaves of the involucre ennate at the base. Very many-flowered. 1. Papery soft and white.

The allied *Lobizovia phalas*, described by Moldenke, was discovered by Matthews (no. 124, in herb. Stock.) at Casa Bancha.

Plate               Senecio hermosi-
vides. A. var. 4 escapos. Fig. 1. Ray-
flower. 2. Disk-cordate, 20 stamina, and
style displayed. 3. Summit of the style.
B. var. 2 escapos. Fig. 4. Ray-flower.
5. Disk-flower, flower. 6. Summit of the
style. The details variously magnified.
*** Nae Zealandici, et Ausraliani.


*Senecio glastifolius*, Hook. f.

*Senecio glastifolius*, Hook. f.

*Solidago arborescens*, A. Cunn.

Prof. J. von Banks Island, 1779.

*Etel.* Bay of Islands, New Zealand.

A good *Senecio*, although the bristles of the pappus are somewhat more rigid than is usual, and the branches of the style are compressed and obtuse instead of truncate or capitate, both characters occurring in other species of the genus. As to the achenia, they are linear,
38. Senecio (Brachyglottis) Forsteri, Hook. f.

Senecio (Brachyglottis) Forsteri, Hook. f.


Brachyglottis repanda, Forst. Fl. Chir.,

8. P. 41, t. 46, B. C. Prod. 5,


Hab. Bay of Islands, New Zealand.

and without flowers.

* * * * * * Australianii, etc.

35. Senecio (Tripartitus, A. Rich.)

Hab. Hunter's River, New South Wales.

The three divisions
Many of the Caroline leaves are simply primates; the division filiform is nearly 20s and the species perhaps 10 or 20, I. capillifolius.

34. Senecio jacea filiformis, R. Rick. Hub, New South Wales, with the preceding species.

35. Senecio lividus, Lindl. was picked up at St. Helena and Madeira.

36. Senecio roseo-marinafolius, Lind. var. bergianus, B. C.

37. Senecio pubescentus, B. C.

38. Senecio pinaculatus, Thunb., from the Cape of Good Hope; along with Cupressus abrotanifolius, B. C., and
Othaea bipunctata, Sc.

The Byneareae of the collection are so unimportant that they need only be enumerated:

Calca rita Maderensis, Sc., was picked up at Madeira.

Osteospermum moniliferum, Lin., at St. Helena, introduced from the Cape of Good Hope.

Osteospermum lacteum, Sc., Cape of Good Hope.

Cymbonidus Lawsonianus, Gardich, at New South Wales.

Cullenia petosa, R. Br., Cape of Good Hope.

Carynia salicifolia, Less., Madeira.

Centaurea Melitensis, Lin., Rio Negro, Patagonia, and Hunter River, New South Wales.
Cyprara cardunculus, d.m., Rio Negro, North Patagonia.

Larrea australis, Sandwich.

Opuntia, New South Wales.

Subord. II. Bilabiati flore.

Chuquiragra. Juss.


Chuquiragra oppositifolia, Sill. & Don in Edin. Phil. Mag. ann. 1832, p. 332;


Hal. Andes of Chile above Santiago. — Throat and tube of the corolla not bearded inside, as in the succeeding, but glabrous.

2. Chuquiraga spinosa, Don.

Chuquiraga spinosa, Don in Linna. Trans. 16, p. 285, S. B. l. c.; Remy, l. c.; Medd. l. c.
Bacaria spinosa, Ruiz & Pav. Sept. 1, p. 188.

Hal. Andes of Peru above Santiago, and of Peru between Casa Blanca and Bulluac, the Chilean specimens exactly like the Peruvian.

*Hab.* Andes of Chili above Santiago; an imperfect specimen.


*Hab.* Rio Negro, South Patagonia; plentiful.

*Hotovia*, Spring.


*Hab.* Peru, in the vicinity of Chajillo.

From the description our Plant
must be Neoddell's F. ferrugino-
sus of the Bolivian Andes, although
the divisions of the corolla are
glabrous except the outer face
at the summit, which is bearded,
and the flowers seem to be here-
maporphite. The slender pods
are an inch or an inch and
a half in length; the spines
centrally tipped leaves about the
same length, or the uppermost
shorter. Heads compound-fasci-
cled, 1 or 7 lines long, about 12-
seed. Anters linear, equalling
the lobes of the corolla, ecandiate,
as in Dasyphyllum, which is
rightly reduced to this genus by
Neoddell. Style exerted, glabrous.
Achene villous.
2. *Platonia excelsa*, DC. l.c.

*Piptocarpus excelsa*, Stock. 

*O. excelsa*, Stock. 

Itab., Chili, in the vicinity of Valparaiso, where alone the species is known to occur. But the Flora Chilena excludes the plant from the Chilean flora.

*Onoseras*, DC.


Itab. Olraojillo, Peru. Collected in Peru by Née, Romberg, McClean, Matthews, and, according to the latter in Part. Stock, by Ruiz and Pavon. But the peduncle is usually bracteate, the bracts small and setaceous.

*Leysera odorata*, Neiret & Dar.

*M. et Don

*Crosieris odorata* (Blanch., forma Squamosa, Stock),


*Cussonia Peruviana*, Neill, in


*Hab.* Olavillo, Peru.

An annual herb, a span or less in height; the primary stem erect; the lateral, radical branches often decumbent. Scales of the involucre very variable as to the succulent tips.
The receptacle is bilabiate. Bristles of the pappus, said by De Candolle to be biserial, are better described by Don as in a triple order. The interior (five or six) layer and much shorter, the outermost very short. The receptacle is firm.

*Trichocline, Cass.*


*Hab., Rio Negro, North Patagonia: de florata.*
Barnadesia, LINN. F.

1. Barnadesia Tombeiana, less.

in Linnaea, 5, p. 246; H. Bod. 7, p. 2.

B. lanceolata, Spinosa, Lam.

H. t. 660, p. 1, non Linn. f.

B. lanceolata, Don. in Linnaea. 16, p. 2775; H. l. c. p. 3.

Hal, Obrujillo, Peru, where it is said to be common, and an ornamental shrub, four to eight feet high, with large purple flowers.

Writing the two nominal species, the slightly posterior name of Lessing is preferred to that of Don, since the leaves are not hardly lanceolate.
I. *Barnadesia reticulata*, DC.

Hab. Olujillo, Dem., at the cascade.

Said in Dr. Pickering's notes to resemble the foregoing, but have corymbose heads. There is a more fragment in the collection, destitute of flowers, the leaves glabrous or glabrate, veiny, not ribbed.

*Mutisia*, Linn. f.


Hab. Brazil, in the vicinity of Rio Janeiro. (Involucres an inch and a half long.)


*Jat. Near Abrajalillo, Peru,* where, according to Dr. Dickins' notes, an ornamental privet-leaved species abounds, but no specimen is preserved. Mr. Buckshans gathered *M. Victoria* at Abrajalillo.

3. *Muntingia latifolia*, Sm. l.c.

*Jat. Chili,* in the vicinity of Valparaiso, leafy branches only.

Mutisia Mathewsiii, Hook. & Arn.,
in Camp. 1st May, 1910,
9 a.m., Medd. f. ehlor. And. 1, p. 19.

Hab. Andes of Peru at Banaos.

The specimens have a more
persistent floccose wool, their—
especially on the lower surface
of the leaves—than the form charac-
terized by Hooker and Grant.
Middel has completed the character
of the species, which was over-
looked by De Candolle, Walpers, &c.
The minute appendage which
almost the tips the upper is usually
enveloped in the small tuft of wool
which adheres to the apex, and often
falls away with it, so that these
really appear to be very obtuse, and wholly
inappreciable. Figures 10 or 12.
S. Multisia Mastata, Cav.

Var. Peruviana: foliis angustioribus, alis samulemono in dentis acussimis ala fractitis fere divisis; involucri squanis superioribus vix appendiculatis.

Tab. Andes of Peru, between Cuzco and Obajillo.

Although the M. Mastata described and figured by Barrow, came from the Chiloe Andes, yet he adds (what subsequent authors have overlooked) that he had it also from Peru, gathered by Nee. This is confirmed by our specimen, which accords with the figure and description of the species, except...
that the leaves are smaller (2½ or 3 inches long, and 4 or 5 lines broad at the sagittate, hastate base) and the upper scales of the involucre are inappandicate, or bear a very small and deciduous appendage. The ligules are 10 or 12.

b. Mutasia subulata, Ruiz and Pav.

Hub., Chili, in the vicinity of Valparaíso, and to the Cordilleras.

7. Mutasia linaria f. folia, Kany

Mutasia linaria f. folia, Kany in Gray Fl., Chile, 3, p. 2715, Medd. Chili. And., 1, p. 19.

Stiftia, Mikan.

1. Stiftia Chrysanthia, Mikan.

Hab. Rio Janeiro, Brazil, collected in the Botanic Garden.

Moquinia, P.B.

1. Moquinia Polymorphia, P.B. var. elaginifolia, Less.

Hab. Brazil, in the Organ Mountains near Rio Janeiro.
Gochnatia, J.T.B.K.

1. Gochnatia (Pentaphyllum) foliacea.

Pentaphyllum foliaceum, Don in Linn. Trans. 16, p. 269.
Penny in Gay Fl. Chile, 3, p. 290.

Hab. Chile; near Valparaiso, and on the heights above Santiago. All separable to the var. rigida. Those specimens from near the coast, with broader leaves, although sparingly dentate, approach Ben...
lerrd no. 389, which I take to answer will to Don's original Pantaspnos foliolosus. Those from the sides above Santiago, with lanceolate leaves, some of them strongly denticate, others quite entire, accad with Don's G. rigida) and with the G. fascicularis of de Candolle and of Penny. But Don's G. fascicularis, I believe, is different, and it is said to have "numerous florets in the capitulum." In any case, the specific name for closa takes precedence for our plant.

Cyclolepis, Don.

1. Cyclolepis genistoides, Don.

On the plains at the mouth of the Nino Negro, North Patagonia, nearly desolate.
The materials are insufficient for any investigation of this genus. The tails of the anthers, in some flowers from a specimen out of Gillies' collection, are not lacerate, but sparingly set with villose hairs.

*Hyalis. Don.*

1. *Hyalis argentea,* Don. (*Tab.*)


*Tab.* Salt plains and marshes of the Rio Negro, North Patagonia; the var. *B. Stork.* 7th Ann., with the valve obtuse, and surceles involucral scales
Besides the recorded collections, this plant occurs in those of Bacle from Buenos Ayres and of T. Orbigny from Patagonia. It is hardly worth while here to draw up a revised character of the genus, but our figures and a few notes will furnish some emendations. As to the receptacle, I cannot verify the "fine-brillies callosis singulo praefecto achenio singulo" of Hooker and Arnott. The receptacle is naked, with broad aeciae for the insertion of the five or six flowers, between which one or two minute setulose are often, but not constantly found. I have not observed one for each acheneum. The achenia are silky-pruinose, but somewhat
Glabrate

1. At maturity, especially near the narrowed base, when the ribs become conspicuous. The bristles of the pappus, which are copious and pluriserial, are no more connate at the base than in all the allied genera, they are nearly equably barbellulate or denticulate. The bristles of the anthers are long and stout, and not lacerate, but rather plumose with long, cobwebby hairs. Style not bulbous at the base, gradually thickened towards the summit, the branches very short, thick, and obtuse, naked. A more remarkable peculiarity, is which rather mitigates against Meddell's group of *Platicea*—is found in the cor-

- These...
uniform and bilabiate, as described, but not rarely in our specimens with the limb equally five-parted in one or more of the flowers, perhaps) the central one, the lobes revolute, in this as in some other respects showing indicating an affinity with Reddell's Asphyllochaeras.

Plate  Styalis argentea, branch

of the natural size.  Fig. 1. Receptacle.  2. A flower.  3. Corolla & corolla regularly cleft.  4. Stalk.  5. Summit of style.  6. Achene and pappus.  7. Portion of a bristle of the pappus more magnified.

Proustia, Lag.

1. Proustia pyrifolia, Lag.

2. Proustia baccharoides, Don.
Hal. Chile, the former in the vicinity of Valparaiso; the latter near Santiago.

**Brachyclados, Don**

1. Brachyclados lycoides, Don.

*Stems.* Rio Negro, Nth Patagonia; the ordinary form, and one with shorter branches and larger heads.

The sterility of the ray flowers is hardly constant or complete; the proper scales of the involucre vary from five to nine, and the bristles of the pappus are perhaps barbellate, but not properly plumose.


Hab. Chili, in the vicinity of Valparaiso; a single specimen.


Hab. Andes of Chili; above de Santiago, flor. et al., etc.
3. *Chatanthera serrata*, Kunze (Pav. var.)

*Chatanthera tenuifolia*, Gill. - Don

*Ch. crynogigodes*, Gill. - Don, l.c.
*Ch. spinulosa*, Bass. - Opusc. 2, p. 143?

*Itab. Chile*, in the vicinity of Valparaíso.

The *Chatanthera serrata* of Kunze and Pavon, being earlier than Willdenow's *Perdicium Chilense*, has to be adopted. Remy was rightly referred to this species Don's *Ch. argentea*, and Mr. C. *tenuifolia* may be added. The plant figured under the latter name in Delessert's 'Icones, however, is *C. mouch*
icoides, Less.

The Chaetanthera villosa of Gillies and Don! is the Carne-
tita formosa of C. G. Gay, well fig-
ured both in the Flora Chilena
and the Chloris Andica.


C. annua, diffuse ramosa;
foliis lineari-cuneatis vel espa-
thulatis versus apicem spin-
uloso-dentatis, vel villosis max-
gladsatis, summis pavo circa capi-
tulum conflatis (augustioribus);
involutis squamus subturiosos
setosis, exterioribus ovalibus,
costa in appusadum filiaceam.
Plume folioformem 1-3-
dentatum, Plume folioformem
products, interioribus linearis oblongis papyrace mucronulatis, ligulis linearibus glabris in volucrunum vix superantibus, labio interiori parvo brevi apice bidentato.

Hab. Rides of Peru, between Baines and Casa Cancha.

The genus Chatanthus, as now limited, is said by Meddell geographically to be restricted to Chile and not to ascend the Rides to the alpine region. Here, however, we have a species from the Rides of Peru, in the alpestrine if not in the alpine region, probably not in the former. There is in the Hookerian Herbarium a degenerate specimen, I believe of this.
species, labeled "Santa, Peru," taken from the same district. This species much resembles
"tenella," and has similar foliage, pubescence, &c. Apparently it is more branched from the
base and diffusely; the involucre is decidedly different; the scales
being all very obtuse and mostly
rustic or campanulate, the in-
nermost with a delicate, some-
times obsolete, awn; in the
shallow notch, some of the
middle ones with a filiform or
narrowly linear, more or less
foliaceous appendage, the outer
most bearing a broader, often
toothed foliaceous appendage, so
passing into the leaves which sub-
tend the head. The ligules resemble
those of "tenella," but are less
hairy on the back and not so much
toothed at the apex, while the inner lip is minute and barely
visible. Anthers in the ray flowers, the styles notch ed at its apex. K - style bifid.
All the flowers fertile. Achenes papilllose. Bristles of the pap-
pus not coalescent at their base.

*N. americana.* J. C. S. 3, p. 50, t. 25; *Webb.* Chlor. And. 1, p. 29, t. 9.


Hab. Roads of Chile above Santiago; a single specimen, detected among specimens of the following species.

The good figures given by *Webb.* since our illustrations were prepared show the identity of our *Plant* with *Oriastrium pusillum* of Poepp. The details of our illus-

1. Oriastrium, Poepp. & Endl. (Tab.)

*N. americana.* J. C. S. 3, p. 50, t. 25; *Webb.* Chlor. And. 1, p. 29, t. 9.
The genus *Oriastrum* includes species with a modified character of the achenia of the disc, instead of those of the ray. These are said to be glabrous, with the ray, instead of the disk, papillate and fertile and effete. The fruitlets of the fertile flowers compose more than one series of bristles, which, being united at the very base, fall off in a ring, but soon easily separate.

**Plate A. Oriastrum pusillum:**

creating the genus to Tylloma.

Plate.

Aldunalea, f. 7.

2. Oriastrum Chilense, Redd.

Tylloma pusillum, Dr in
Erict. Phil. Mag. i.e. p. 391.

C. Phil. 7, p. 321.

Chasternosa (Tylloma) pusilla,
Stock. Jour. in Cornp. to 13th
Mag. 1, p. 106.

Aldunalea Chilensis, King in

Griastrum Chilense, King Redd.

C. Phil. 4, p. 30.
Hat, Anodes of Chili above Santiago. This interesting little plant is now well illustrated in the Flora Chilena. I have only to add, that the pappus of the generally two or three corollas is, however, sometimes wholly wanting.

The fertile acheneia are pyriform, the pappus is finer and softer than that of the original species of Orthastrum, but it is not at all worth while on this account to keep up Altenacea as a section.

The fertile acheneia are pyriform, the pappus of their surface, when soaked, swell into a jelly, and then the acheneia appear to be glabrous.

Plates B. Orthastrum Chilense:

natural size. Fig. 1. A leaf. 2. Head detached. 3. Ray flower, without pappus. 4. Disk flower. 5. Embryo. — The details magnified.
3. Oríastrum cochlearifolium, sp. n. (Jfl. )

O. pulvinatum, late arachnoideae, lait 

natum; foliis in caulis brev 

is confertis imbri-catis sessi- 

bass obiusissimis multis dor-

so max glabratis, intus sub-

marine incura carcavis lau-

guna, inferioribus oblongis, su-

perioribus spathulatis capitu-

lum sessile arcte rorulato-

cingentibus; involucro squamis

omnibus acariosis, apice radi-

ante colorato ovato-lancea-

to acute rigide ori; pappi

setis capillarisibus rigidis basi

versus parce barbellulatis su-

perne laxibus.

Tab. Alpamarea in the
High Andes of Peru.
A remarkable and very distinct species of this genus, Stem, 
and interesting from its extending 
the range of the genus further 
or radical branches, 
Stems as in its con

genes, usually several in a clus-
ter from a slender annual root, 
barely an inch long, densely 
elothing with appressed leaves, es-
pecially towards the nearly in-
cluded head, around which they 
are closely imbricate-clusters. 
The leaves are thick and proba-
ibly coriaceous, fleshy consistence, 
merous and veined, blunt 
and muticous, and with a some-
what incurved callous margin, 
some glabrate on the back, 
but the inner face lanuginous 
with implexed cobwebby wool, 
those toward the base of the 
stems are only 2 or 3 lines long,
and oblong in shape, and strictly sessile; the upper ones gradually become 3 to 5 lines long, and spatulate, but the more or less narrowed lower portion cannot be termed a petiole. The head resembles that of *O. Chilense*; the triangular radiating tips of the scales of the involucres considerably exceeding the flowers; the flowers being young it is uncertain whether the female ligulate flowers are sterile; perhaps they probably are, although their style appears rather more normal and is manifestly tridentate at the apex. Their corolla has a linear ligule, which is absolutely tridentately ciliate at the apex, and at its base on the inner side two minute teeth represent the other...
lips. Disk-flowers as of the genus but the ovaries apparently glabrous. Pappus nearly the same in ray and disk, of about two series of slender, capillary, but rigid bristles, which slightly cohere with each other at the base, the lower part delicate, a little thicker and delicately and sparsely barbellulate, the upper not at all dilated, smooth or absolutely denticulate under a good lens. Receptacle plane. Mature achenia unknown.

Plate 6. Ericastrum cochleani

folio: a plant of the natural size. Fig. 1. A leaf, inside view. 2. A scale of the involucre. 3. A ray-flower. 4. A disk-flower. 5. The same dish displayed. 6. A stamen. 7. A bristle of the pappus. The details variously magnified.
Levia, 1836.

1. Levia mutans, 1836.

2. Levia integrifolia, Coss.

Itab. Brazil, in marshes at the base of the Organ Mountain, near Rio Janeiro.

Maerachenium, Stock. f.

1. Maerachenium gracile, Stock. f. (Sabl.)

Maerachenium gracile, Stock. f.

Itab. Orange Harbour, Transvaal.

This rare plant, before known only from a single...
specimen, collected at Port Famine by Capt. King, on which Dr. Hooker founded the genus, was gathered abundantly and in good fruiting condition by our Naturalists. There is little, however, to be added to the account of the genus. The flowering stem and radical leaves rise from a rather slender, scaly, and perhaps, creeping rhizome, and is slender and scapiform, simple or sparingly branched at the base, above which it commonly bears one or two alternate leaves, the long upper portion naked, monocephalons. While surface of the plant floccose-lanate, but the upper surface of the leaves glabrate, the lower fulvous, canescent with the woolly coat. Stalks of the radical leaves slender,
3 to 6 inches long; those of the cauline leaves usually margined or winged, often dilated and clasping at the insertion; the blade oblong or ovate, oblong in outline, deeply sinuatised into from 5 to 13 lobes, which are oblong or oval, obtuse, entire or nearly so, or the lowest bearing one or two lobes or coarse teeth. Scales of the simple involucres 12 to 14, linear, gradually acute or acuminate of the exterior shorter, Flowers numerous, all perfect and alike. Receptacle strongly convex, naked. Corolla 5 lines long, the tube nearly filiform, the lips short, a little more than a line in length, the outer lip oval, obscurely three toothed, the inner parted into two
narrowly linear divisions. Stamens borne on the upper part of the tube: filaments short, slender, smooth; tails of the anthers rather short, nearly naked. Style filiform, the branches half a line long, oblong-linear, flat, obtuse, naked; the margins obscurly papillose, the anthers in appendiculate. Achenia slender, from 3½ to 6 lines long, the central ones longest, terete, glabrous, many-ribbed, moderately tapering to the summit, but not rostrate, the cell extending to the very apex. Pappus of about 35 slender plumose bristles, in somewhat in two series, rather longer than the achenia, fulvous.
As the style of this plant is rather that of the Mutisiaeæ than of the Passerüviææ, and the relationship to Chabrea is hardly manifest, I should refer the genus to the former group.

Plate

Macra merium grandi
cile: 1, of the natural size: 2, with a full-grown achene;
capule: 2. A flower: 3. Corolla and
stamens displayed: 4. A stamens. 5. Stamina
unit of the style: 6. A bristle of the frutesc. Variants.
The detail [sic] magnified.
Chabrea, D.C.

1. Chabrea lanceifolia, Medd.

Chabrea lanceifolia, Medd. Pl. Chil. And. 1, p. 35, cum deo, Dorn. C. laciniata, Medd. l. c. p. 34.

Chabrea lanceifolia, Dorn. in Linna. Trans. 15, p. 35.

Nab, High Roads of Peru, between Casa Bancha and Bullay.

The specimens so completely accord with this character of Ptilurus lanceifolius, except as to the bristles of the fruigins, which are not imbricated (but connate) at the base, that I do not have little hesitation in referring the
Discrepancy to an error of observatin, and in preferring the original specific name.

Jungia, Linna. 7.

1. Jungia fennigiana, Linna. 7.

Bot. Abajo, Peru.
Junigia, Lin. f., Less.

1. Junigia Paniculata, butticosa,
s2. foliis subitos, tomentosis, top-
mento albidum impinulo; capit-
ulis tympanosis, plenisque pedic-
latis multiploris, involucris
squamosis in tenuioribus
paleisque floribus frappoque
subdimidio brevioribus; achen-
nis pilosisculcis. - Varietat peti-
olitis quasi stipulatis vel nudis.

Pulexilica Paniculata, Sc.

Men. Lab. p. 14, t. 16; Bap.
Opus. 1, t. 12.

Junigia ferruginea, Bon. in Lin.
Trans. 16, p. 225; Less. in Lin.
nea, 57, p. 375; Sc. Prod. 7, p.
54, mar. Linn. f.

2. spectabilis, Less. Syn. p. 415;
Sc. Prod. l.c. Linn. f.
Stub, Chachajlolo, Peru; in vicinity of which it was collected by Mr. Northcote, and by Matthews. Gathered also in Peru, erected by Joseph Lassher, and by Dumbey, whose specimens in the Paris Museum are, however, marked "Chile."

"A shrub, from three to five feet high," according to a memorandum of Dr. Bescherel, the petioles not stipulate or appendaged, in which respect they accord with Don's description and with Cassini's figure. But such appendages are inconstant. Although nearly related to *Sanguinaria* ferruginea, yet I suppose that Don was wrong in referring the plant he has named described to that of the younger Linnaeus, also, that the original character
of Juncus is not so incorrect as has been thought. I presume (although I cannot now verify the supposition) that Linnaeus received the Island Iris Juncus ferruginea, along with most of the plants from "America Meridionalis" in the Supplement, from Mutis, thence probably from Santa Fe de Bogota, whence we have from Mr. Wolse what is manifestly the Linnaean species. I have the same species from the base of Dichincha, gathered by Mr. Bentham, and I think that Dr. Jameson has also sent it to Sir Wm. Hooker. In this species the individual heads contain from five to ten flowers only, and these are commonly so closely clustered in fascicles as to explain, if not to excuse, the view taken by the
Younger dimensions of a compound capitulum. The fruit being scales and paleae more strictly involute than in the Peruvian J. paniculata, and longer, so that the pulp barely exceeds their summit. De Candolle's Drum. Lessing and De Candolle's (but not Louis) J. spectabilis is the same as De-

* Juncia ferruginea (Linn. f. suppl. p. 58, 330): Scanderis vel ser-\n\n\nmentosa, foliis 5-9 lobatis subtilis\n\n\nPennaro-villosis; capitulis 5-10-\n\nfloris glomerulatis, glomerulatis in\n\nconnivis paniculatis thyrsoso\n\ncongestis; squamis involucris inter-\n\n\n\n\nintris paleisque articulatis involu-\n\n\n\n\n\n\n
Flores Papposmusque et Pappum\n\n\n
subaequantibus, acheniis glabris.

*Dumerilia axillaris*, Lag. ex DB. Mem. Lab. p. 72, 1815.

*Jungia axillaris*, Spreng. Syst. Veg. 5 (Burm. Post.) p. 301. DB.

*Jungia axillaris*, Spreng. Syst. Veg. 5 (Burm. Post.) p. 301. DB.

Hab. Peru between Chivay and Lincah. Heads often solitary at the end of the peduncle terminating the branchlets. Corollas "purple" or rose-color, as they evidently were in a glabrate form of this species collected by Gay in the department of Cusco.
Perezia, Lag., Less., Med.
Clarionea & Tonomianthus, DC.
Mem. Lab.
Perezia, Drovia & Platycheilus
Acontia, Clarionia & Tonomianthus, DC.
Perezia & Dumerilia, Less.
Perezia, Clarionea, Tonomianthus,
Acontia, Dumerilia, &
Prusia sect. Thelecaprea, DC.
Prodr.
Perezia, Gray in Pl. Hook., p. 111,
& Pl. Wright., 1, p. 126.
Trixidis spec. Schulte Bip.

I cannot at all agree with
Dr. Schulte, who refers the Mexi-
can and North American species of
this extended genus to Trivixis. The
involucres, habit, &c., will distinguish
The latter, Trixis has a uniseriate involucrescence, the scales all of the same length, with or without a circle of spreading, mostly foliaceous bracts at the base of the head. In Peresizia even the fewest-flowered species have a gradually imbricated involucrescence; the exterior scales and the achenia are not rostrate.

1. Peresizia Magellanica, Lag.

Peresizia Magellanica, Lag.ower, 1, p. 31; Borr., Less. in Linnaeus, 5, p. 23; Stock. in Camp. Bram. May, 1, p. 34.


Hab. Orange Harbour, Tierra.


Pereria lactucoides, Less. in Linnaea, 5, p. 22, T. ym. p. 413.

Periderium lactucoides, Nahl, l.c., p. 10, t. 5.

Aster Magellanicus, Linn. Ill. 1, 1681, p. 3.

Almania lactucides, in indiain TRANS. 16, p. 206.
Abanthera magellanica, spring.
Syst. 3, p. 503.

Travianthus magellanensis.
Deb. Prod. 7, p. 15;ストック。

Ital., Orange Harbor; with
the dwarf and the tall states,
and intermediate specimens.

3. Perséria Doniana, Less

Perséria Doniana, less c.e.;
D. Beckii,ストック.
Bot. Mag. 1, p. 34.

Claronia recurvata, Don in LINN.
TRANS. 16, p. 206, excl. SYNS.
Horsianthus Beckii,ストック.
F1. Doniana, Kenny in Gay Fl. Phil. 3, p. 422.
Hab. Sand Hills at the mouth of the Rio Negro, South Patagonia. Sterile shoots only collected with a single deflorescent head.


*Clarionia* carthamoides, Gill.; Scrip., H. P. Prod. 1, p. 61; Seles, loc. Sel. 4, t. 93.

Hab. Andes of Chili above Santiago.

5. *Peregrina* virens, Stock & Krn., loc.

Hab. Andes of Chili above Santiago, with the preceding.


*Notab.* High Andes of Peru at Casa Bancha.

Heads borne in the crown of leaves, about the size of those of *P. pinnatifida*, of which it is probably a more condensed and smaller variety. The state of the specimen does not permit an examination of the receptacle.


*Var. B.* foliis pinnatifidobatis vel simulato dentatis sublyratis.
Itab, High Andes of Peru at Alpamarca. Leaves much less deeply lobed than in Pin. nivulata, nor even deeply pin. annudifol in the beauty specimens, but otherwise the plant accords with the characters of Pin. nivalis.


Itab, Andes of Peru near Banos, dwarf or depauperate specimens.


Itab, Andes of Peru near Obrajillo.
Trixis. P. Browne.


*T. caecalioides*, Don in Lin. Trans. 16, p. 187; Sc. C. c.


Ital, Peru, in the vicinity of Lima, Yanga, and Chapiillo.

Lessing has, I doubt not, taken a correct view of the extent of *Trixis frustrans*; but his distribution of the forms is not so good. The
typical or original form, examined in the West Indies, is glabrous or nearly so throughout. If variezes, as the pubescent form (of which the principal synonyms are given above) with entire or serrulate, acute or obtuse leaves. The two run together, and both into from lanceolate-leaved forms; the smooth one into the var. augustifolia, Dr., the silky, pubescent or pubescent one, into towards the northern geographical limits of the species, into the forms which, in the second part of Flora Miúliana, I had confounded with T. augustifolia, Dc.

This mixis augustifolia, Dc., which is probably a narrow-leaved form of the other T. corymbosa, Dc., is known by its linear-lanceolate leaves of the involucre gradually tapering to a point.
The margins of the leaves are commonly entire and revolute (as in Berlandier's no. 1284 and 1353, Gregg's no. 566 (while his no. 840 is T. frutescens var. pubens, with obtuse scales), and Wright's no. 413); but they are plane and sharply denticate or serrate-toothed, as well as broader, in specimens of Thunder and Schott, which were referred to T. frutescens in the Botany of the Mexican Boundary Survey, p. 103.

Tripis obvallata, Stock, et Am., is probably not different from T. longifolia, Dow.
Nassauvia, Commas., Nedd.

1. Nassauvia traceolens, Hill.
   Stab. Grand Harbour, Jamaica; on the mountains.

2. Nassauvia vaniousissima, de B.
   Stab. High Andes of Chile, above Santiago. (This, rather than the last should be Rogers' N. traceolens.)

   N. pyramidalis, Meyen, Reise 1, p. 356; Walp. in Nat. Mag. Meyen, p. 288; McD. ex Rchb. Fl. Ind. 1, p. 57.
   N. macra canthia, de B. Prodr. 7, p. 44.

Sib. Chilé, in the Andes above Santiago.

4. Nassauvia (Mastigophyllum) Remyna.

Nassauvia (Mastigophyllum) Remyna.


Sib. Andes above Santiago, Chilé; a single, imperfect specimen mingled with those of the preceding species.

N. 2.

5. Nassauvia (Mastigophyllum) pygmaea, Hook.

Nassauvia pygmaea, Hook, f. Fl.

Antare, 2, p. 319.

Hub. Orange Harbour, Florida.

Two forms; one with the leaves slightly, the other strongly striate curved.

b. Nassauvia (Panargyrum) cuneata ooigo cephalata, Nedd.

Nassauvia (Panargyrum) oligo cephalata, Nedd. Ceblov. And. 1, p. 53.


O. oligocephalum, DC. Prodr. 7, p. 54; Pamp. in Fag. Fl. Chili. 3, p. 367.

Hub. Andes of Chile, above Santiago.
Triptilium

Triptilium, Ruiz & Pav.

1. Triptilium spinosum, Ruiz & Pav.

Hab. Chili, in the vicinity of Valparaiso.

Strongylophora, DC.

1. Strongylophora axillare, DC.


Acanthophylldium axillare, Hook.f.


Polycyclus, Lagesca.

Polyacanthus sphaerocephalus, Don
Polycyclus sphaerocephalus, Don in Linna. Trans. 16, p. 230.
P. echinoides, DC. Prod. 7, p. 53.
Polyacanthus sphaerocephalus, Hook.

Tab. Andes of Peru below Call.

Tab. Andes of Chile above Santiago.

Tab. Andes of Peru below Calca, in the same district where it was collected by Turkshanks (from whose specimens it was illustrated by Sir W. Hooker).
and probably by Ruiz and Pavón, and by Dombey, although specimens of the latter's collecting in the Paris herbarium are ticketed as from Chili, as is the case with many of Dombey's Peruvian plants.
Subord. III. Lignuliflorae

Tolpis, Adams., Sp.

1. Tolpis (Schmidtia) filiformis,

2. Tolpis (Schmidtia) fruticosa, Schrank.

3. Tolpis (Schmidtia) macrostoma, Sp.

Stab. Madeira; the latter on Pico Ruivo.


1. Hypocharis radicata, Linn.

Stab. St. Helena; doubtless introduced from Europe.
1. **Hypochaeris glabra**, Linn.

*Hab.* Bay of Islands, New Zealand; probably introduced from Europe and very local, as no other collectors in New Zealand have met with it. Also, which is equally remarkable, a single and depauperate specimen was picked up at Hunter's River, New South Wales, upon the excursion from Sydney to Hunter's River. It can hardly be said to be *moschus australis*, for the exterior achenia are beakless. The species seems to affect the southern hemisphere, having also established itself at the Cape of Good Hope.
Achyrophorus, Scep.

1. Achyrophorus arenarius, Scop.

Hypocheris arenaria, Gaud.

in Ann. Sci. Nat. 5, p. 103, 4

A. minima, D'Ur. in Mem.

Arc. Lin. Par. 4, p. 609.

Achyrophorus arenarius, Scop.

Prod. 7, p. 95; f. urk. f. 6
Art. 2, p. 323, f. 112. frut.

A. Nellii & A. cornispilus,

Schulzi Bip. Hypocheris,

A. microphyllus, Reg. in

Var. simplex, monocephalus,

involucro nigraente apice
que scapi pilis tenuiss.

nigraeque hispidis.
Ital., Orange Harbour and South Africa Bay, Specimen: The variety with dark, hairy involucre. Stip. linear, obtuse, obtuse at base, with simple involucre, nearly sessile. Stip. which is obviously an agamospermous plant, with many fruits. The specimen certainly belongs to S. ericifolius. Specimen: The species was often simple and monoecephalous, as in the case with all of ours. To the synonyms adduced, A. tenuifolius may probably be added.

2. *Aepiplanum apargioides*, Schult. & Less., *Scha. 244. 1832*.

*Corolla apargioides*, Less., *Scha. 244. 1832*.

*G. apargioides* & *apargioides*, Schult. & Less., *Scha. 244. 1832*.

Small reliance can be placed upon the beak of the achene, especially of the marginal ones, and less upon the hairiness or smoothness of the filings and involucres. In the specimen of the present collection the marginal achenia are smooth, pale, fine-grooved, short and thick, the apex abruptly contracted into a very short beak; but all the inner ones, although tabescent, are long-beaked, like those of Lessing's and of Remy's A. aspargioides. Remy's A. beneficius may also be referred to this species.


Asparagia chilliensis, A. B. K.
Nov. Gen. V. Sp. 4, p. 3.


Stab. Brazil, in the Omaha Mountains near Rio Janeiro; in marshes.

Probably distinct from any of the forms comprehended by Lessing and by Hooker and Arnott under their Brasilicus. Most the species need a new character; for our specimen, which compared well with Gardneri, have slender beaks.
achenia, and short, petioled or even sessile leaves. These are nearly all radical, and vary in different specimens from linear or to oval, from dentate or serrate to pinnatifid, from sparsely hairy on the midrib to glabrous throughout. Heads 6 to 8, little long, marcesc. involucre minutely tomentulose, pubescent when young, at length glabrate; the scales nearly all marcescent, obtuse. Beak of the achienia filic. from, 2 or 3 lines long.

5. Achyrocephalus chondrioides

6. glaucescens uniuque glaberrimus; caule foliaceo stricte to mono- oligo cephalo; pedunculis elongatis; foliis sub-carnosis lineari lanceolatis
gregshila Chandilloides, De Muyer. 7 in Ital. Stock.

Hab. Rio Negro, North Patagonia, in saline soil.

Our plant is just that of Gillies from the clades of Montevideo, and of Rights from the Patagonian coast, and it appears to be a very well-marked species, host fusiform. Seen from one to three
fairly high, more or less leafy to the
branches or peduncles, sometimes
simple and monocephalous, but
commonly dividing into three or four
peduncles or nearly naked branches
from 3 to 9 inches long, terminated
with a rather large head. involus
ese 8 or 9 lines long; the outer
scales triangular, lanceolate, acute,
the inner linear lanceolate from
a broader rather, tapering from the
base, as long as the disk. Ache-
oria not seen. Leaves 3 to 5 inches
long, 3 or 4 lines wide, thickish,
glanecescent, nearly veinless; the
levermost tapering to both ends,
the uppermost broadest at the
apartly clasping base.
b: Aechyphorus sessiliflorus.

Hypochaeras sessiliflorum var. vegetia (protoceph.) fom = chooides, B. B.K. \textit{Ann. Soc.}}

Sp. 4, p. 2, t. 301.

Oryphiila sessiliflora, Shm in Limn. Trans. 16, p. 178.

Aechyphorus sessiliflorus, Shm chooides, B. B. \textit{Proc.}} 7, p. 95.


Var. B. \textit{Barbatus}; minor; in volu-

eri foliis exteriis phyllis ex-
terioribus superaes pt. m. selonis.

A. \textit{Barbatus}, Schult. \textit{Rev. Cit.}

Ital. West of the Andes at Alpamarca, Peru. Vars. 3. V. F. (with rhombic ovate leaves) in the Andes above Baños; and a specimen of the latter with tomentulose involucres between Casa Bancha and Bullcay.
From a view of numerous specimens of various collections I cannot doubt that all the above are forms of one species, which varies greatly in the size of the head, and the breadth, &c., of the involucral scales. I suspect that it includes A. Mayerianus, and perhaps even the following is an extreme variety.

7. Achiropithorus stenocephalus


Stub. High Andes of Peru at Casa Caricha, collected in the same district by Mr. Leane and by Matthews.

Apparently common in the high Andes of Peru and Bolivia; distinguished by its small heads, with a narrow, cylindrical, and comparatively few-flowered in comparison with the leaves very few dentate to mucronate. The ligules, according to Niedt, are pale blue or white.

The specific name of Megane, which Niedt, perhaps accidentally, changed to Taraxacifolia, which is the original specific name of Megane, which Niedt and Schlitt cite under A. Meganeanus as well under the present species, showing some confusion, to avoid which I have retained the far more appropriate name I had originally imposed.
Picris, Linn.

1. Picris Hieracoides, Linn.

Hub. Bay of Islands, New Zealand; the P. attenuata of A. Cunningham, with a Sester form, Hunter's River, New South Wales; the P. barbareum of Lindley and P. squarrosa of Steetz.

Helminthia aculeata, Dc., and Minicia hispida, Roth, were collected at Madeira. The ray, achenia of the former are incurred, embraced by the subapically scalie of the involucre, and smooth.

Taraxacum, Staller.

1. Taraxacum densus-leonis, Desf., var. livigatum, Roth, f.

Hub. Orange Harbour and Good Success Bay, Zululand, with both deeply and obscurely runcinate leaves.
Picroria, Don.

1. Picroria longifolia, Don. (Tab. 1)

Hab. Rio Negro, South Patagonia, Andes of Peru near Baño.


The pappus is fulvous and soft, not fragile, and the nearest affinity of the genus appears to be with the North American Sympopogonpsosis.

Stamen, 3.

6. Embryo.

Plate - Picroria longifolia. Fig. 1.

Conchus, Linn.

1. Conchus olivaceus, Linn.

Hab. Lord Auckland Islands, Bay of Islands, New Zealand, Rio Janeiro, Rio Negro, South Patagonia; doubtless introduced from the Old World. Seemann found it at the Fueje Island.

2. Conchus asper, Vilm.

Hab. Sandwich Islands, in the vicinity of Honolulu; doubtless imported.

3. Conchus tenerrimus, Linn.

Hab. Banos, Peru. The same as Nuttall's & Kennedius, from California, probably doubtless introduced from Spain.
4. *Siphurus squamosus*, C. B.

Hab. Madeira, east of Funchal.
Siphurus minutely striate, rugulose transversely.

Microsiphurus medicans, Less., and *Rhabdophora spinosa* Moll. were picked up at St. Jago, Cape Verde Islands.

*Myrtula varia*, Lowe, in several of its marked varieties, was gathered at Madeira.

**Hieracium**, Linn.


*Hieracium rigidum*, Murr. ochlo.

Hab. Aides y Peire above Otayllo, desperate specimens.


Hub. Andes of Peru above Bānos. Also collected by Matthews. This is referred to *H. anianthum*, Meisn. by Schultze Bip. in Born. Blumen. for 1851, p. 173.
Hitchia, Hook. f.

1. Hitchia mutans, Hook. f.


Hub. Tahiti, Society Islands, at the elevation of 3000 feet; a single specimen gathered by Professor Dana.

This most noble and curious arboreal Cicioraceae was known only from Elizabeth Island, lat. 26°, long. 125°, about 25 degrees of longitude distant from Tahiti toward South America, where it was detected by Mr. Bunming. The capitulum (which is fully two inches in diameter) being made in one single specimen, as in that of Bunming,
...adds nothing to Dr. Hook's illustration of the genus. The female plant is a desideratum. Professor Dana's memorandum mentions that the plant is a tree, with yellow flowers. The two sets of the pappus of the sterile achene, are better called arieta.
The following Composites need only to be mentioned:—

Magnolllis saxatilis, Chrysanthemum
parfitidiun,

as picked up at Madeira.

Draeopis amplificadus, bass, was gathered at Rio Janeiro, surely an escape from gardens.

Anthemis arvensis was gathered in the Rio Negro, South Patagonia, and near Valparaiso; an adventure European need.

Marata Cthula: Bay of Islands, New Zealand; "introduced, in waste ground, but rare." As Dr. Hooker does not mention it in his flora of New Zealand, it is probably a new comer, but one very likely to estab-

lish itself, as it has in the older United States, where it is the very commonest weed.
Stylide
Gondwanica
Gampasmalica
Oclinaecae
Ord. Stylidiaceae.

1. Stylidium, Swartz.
2. Stylidium graminifolium, Swartz.

Hab. New South Wales, near Sydney, &c.; two familiar Australian species.

2. Forstera, Linne, f.

1. Forstera muscipula, Mill.

Hab. Orange Harbour, America; where it abounds, in moss-like felt.
Ord. Goodeniaceae.

1. Goodenia, Smith.
   1. Goodenia bidentifolia, Smith.

2. Goodenia stelligera, R. Br.


4. Goodenia pinnatifida, Schlecht.

5. Goodenia hedracea, Smith.


Stab., Sydney, Woolowring, and
Hunte's River, New South Wales,
- To S. Hallyera Mr. G. Amorica
folia of Sieber and De Candolle as
pears to belong. The S. Hallyera
is the true plant, from which S.
lauret is apparently distinct.

2. Selliera, Cav.

1. Selliera radicans, Cav.

Selliera radicans, Cav. 2c. s.p.
49, t. 474, De Vriese, Goepp. p.
1635 Stock. f. 74. Fascic. 1/p.
231.

S. repens, De Vriese, b. c. p. 130.
Goepp.ia repens (Labill. Fl. Austr.
1. t. 276) & S. radicans, DC.

Prodr. 7, p. 576.

New Zealand, Moreton Bay, New South Wales.

(Velleia)

3. Velleia Smith.

1. Velleia Paraduxa, R. Br.

2. Velleia Hyrata, R. Br.

Nab. New South Wales; the first at Sydney, the second on Hunter's River.

4. Dampiera, R. Br.

1. Dampiera Oblongata, R. Br.

2. Dampiera Stricta, R. Br.

Nab. Sydney and Hunter's River, New South Wales.
5. *Scavola, Linn.*

1. *Scavola (Merkhuisia) suaveolens* (R., Br.)

2. *Scavola (Merkhuisia) microcarpa* Cav.

3. *Scavola (Merkhuisia) hispida* Cav.

Hab. New South Wales, at Sydney, Nundah, and Hunter's River.


*Scavola Karzigii, Nahl., Symb. 3, p. 36; R. Br., i. e., etc. S. Lichtenstein, i. e., R. Br. Prod. 7, p. 506.*

Hab. Coast of the Fuegian, Samouan, Ferga, and of all the Coral Islands.
5. Scavola revicela, Hout.

S. plumarioides, Nutt. in Trans. Amer. Phil. Soc. n. ser. 8, p. 232. (Var. foliis ampliss. fere glabris.)

Tab. Fregg. and Samoan Islands, Nake Island. Sandwich Island, on the coast of Hawaii and of Oahu; the latter with nearly glabrous leaves.

6. Scavola coriacea, Nutt.

S. prutica, de cumbens, ayillis revissime barbatis; foliis parvorum, carmoso-crassis obvato praetulatis in petrosum brevem, alternatis avantis parte rotatis.
pedunculis axillarisibus uni- (raro tri-) floribus; calycibus limbo truncato vel obsoeo quinque lobo; corolla lobis lineari glan-
ceedatis, alis augustis.

Var. c, cineseo-puberula vel glabra
folis integerrimis; corolla extus glabra vel pilosa, intus lobis intus pil-
oso, barbatis.

Scarola coriacea, Matt. in Flora
Amer. Phil. Soc. n. ser. 8, p.
253.

Var. d, corolla intus imberbi extus
foliisque glabris:

Var. v, foliis cineseo-tomentulosis
apice 3-5z denticalatis; corolla
extus pubescente, lobis intus
glabris.
On the shore of Kauai (Kauai), Niihau, and on the sand-hill of Maui. Var. B. Niihau, and var. Y. Molokai, Kenny.

A well-marked species, although varying as to the frutescence, which even in the flowers is inconstant in the other species of the Sandwich Islands. Leaves an inch or less in length, inclusive of the petiole or, alternated base, thick, fleshy, and veinless, even the midrib obscure, rounded or retuse at the summit, peduncle about half an inch long, or in var. Y. much shorter, corolla slender, stigma 8 or 9 lines long, the stamens infuscate in duplicate margins or wings of the lobes narrow and entire or some times obsolete, drupe baccate.

To this perhaps belongs the
Sandwich Island specimen, collected by Asturicand in the voyage of the
Monite, seen by Delrio and described as
epita, membranaca, and referred to
mountain, but Labille and Cuvier's
species is a tall upright plant
with well-developed lobes to the
calyx.

7. Scavola. Gandichand, N. W. Y.

1. J. patens, erecta, glabra, ax-
illis breviter barbatis max nudis;
foliis oblanceolatis vel spatula-
labor, oblongis in petiolum atten-
cuatis per rarius, denticulat-
tis et carnosulo, erassus dentis
breviis obsolete, pedunculis brevis
francifloris; calycis limbo trun-
cato obscure quinquelobato; corola


S. Aenแนวิana, var. glabra, Cham. in Linnaea, 8, p. 223;


Hib. Sandwich Islands, Duke Gaudechand, Macrae (no. 27), 15.

Marie, Kerry (no. 304); a form with narrow and sometimes, rather, pinnate leaves, answering to the character by Gaudechand, Kauai, and on the southeast coast of
Hawaii, also on the ascent of
Mouna Loa; broader leaved
forms.

No specimen of Sandrichard's
original plant could be found in
the Paris herbarium, but Macrae's
and Kihei's plants, above cited,
clearly answer to it. It has
a less developed inflorescence, and
Bracteae narrower, somewhat fleshy-
thickened, nearly as quite veinless
and more entire and smaller
leaves than the following. Of
which polymorphismous species, however,
I expect it will yet prove to be
an extreme form. The corolla
is more slender, usually glabrous,
but sometimes, sparingly pubes-
cent. The flowers of this and the following
species are white, not yellow as described in the
Dc. Vireo's genus Thermis,
is said to differ from Scavola
in the inflorescence not being expose
nor the filaments bearded, nor
the fruit fleshy (baccate). But not
one of these distinctions is valid.
It would be difficult to find a
more purely cypresse influence
than in these species when the
primumcle develops several flowers,
the filaments are equally beard-
less in the original and perhaps
in every known species of Acacdia.
and the mature fruit of the
Sandwich Island species, referred to
Demminckia, is a baccate drupe.

8. Scavola Chamissoniana, Gaud.

Scavola Chamissoniana, Gaud.
J. & A. Voy. Freyc. p. 461, t. 82 (f
form. a corolla pubescante). York.
Dian, Cham. in Linnae. 8, p. 226;
S. cordata, glabra.
S. Menziesiana, Cham., l.c. p. 217. 2 stripe parvifolia, glabra et pubescentes.
S. ornith., p. 506.
S. ligustrifolia, Nutt. in Tracy, Amer. Phil. Soc. l.c. 4 forma foliis minoribus subintegerrimis.
S. pubescens, Nutt. l.c. 3 forma foliis parvulis pubescentibus.
S. pubescens, Gaud. ind. in Nutt. Mus. Par., foliis minoribus subtruncatis et inflorescentia multipliis pubescentibus; corolla extus pubescente.
S. in the middle, Gaud. ind. in Nutt. Mus. Par., foliis lanceolatis fere integerrimis glabris, corolla glabra.
S. Brilliana, Gaud. ind. l.c. 5 forma...
oval-oblong and subsessile leaves, minutely and appressingly pubescent beneath, the axils unarmedly bearded. The above are evidently forms of an polymorphous species. It has thinner and more veiny leaves than the foregoing, mostly larger and more hexasporous. The lobes of the corolla broader and broadly wing-marginated, the pedicels usually slender and sometimes several-flowered.


Terminicia mollis, De Vriese, Good. p. 127, 7, 2.
Hub, Oahu, on the mountains behind Honolulu, where it was collected in Beechey's voyage, also by Sandiford in the voyage of the Beagle. On Kauai, Nany gathered specimens with the leaves somewhat less shiny.

Well marked by the soft and dense, carmine-red pubescence or closeomentum of the lower surface of the (large, oblong-lanceolate) leaves of the short-peduncled inflorescence, and of the exterior of the corolla.

The latter has not a particularly long tube, nor are its lobes unusually prominent.

10. Scovida (Camphorusia) glabra

Hab. Mountains behind Stono-leucie, Oahu, where it was detected in Bache’s voyage, also by Gandischaud, &c.

The large solitary flowers, with the corolla over an inch long, yellow, glabrous, and of a firm texture, give this species a peculiar aspect; but there is nothing of generic consequence. The line of the corolla is nearly equally five-lobed. Cleft, though some of the divisions are apt to be conglutinate at their base. The anthers are nearly normal for the genus. The calyx tube is similarly produced in the following species, and in S. montana as figured by Labillardière.
Scavola floribunda. Sc. & L. 

S. pratensis; ramis pennatis puberulis axillis puberulis axillis glabrescentibus axillis puberulis axillis puberulis axillis glabrescentibus axillis puberulis axillis puberulis axillis glabrescentibus axillis puberulis axillis glabrescentibus axillis puberulis axillis glabrescentibus axillis puberulis axillis glabrescentibus axillis puberulis axillis glabrescentibus axillis puberulis axillis glabrescentibus axillis puberulis axillis glabrescentibus axillis puberulis axillis glabrescentibus axillis puberulis axillis glabrescentibus axillis puberulis axillis glabrescentibus axallis glabrescentibus axallis glabrescentibus axallis glabrescentibus axallis glabrescentibus axallis glabrescentibus axallis glabrescentibus axallis glabrescentibus axallis glabrescentibus axallis glabrescentibus axallis glabrescentibus axallis glabrescentibus axallis glabrescentibus axallis glabrescentibus axallis glabrescentibus axallis glabrescentibus axallis glabrescentibus axallis glabrescentibus axallis 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Stub, Zeega Islands, at Orolau and Kewra, in clearings, also collected in the same island by
"Flower 3 feet high, wood, glabrous except at the summit, the younger axils somewhat beaded, the leaves thick, serrate, but apparently neither fleshy nor coriaceous, from 2 to 6 inches long, smooth and green both sides, the margins undulate or repand, toothed, or entire. Flowers in small pedunculate cymes from the upper axils, and in a compound and very manyflowered terminal one, which when well developed exceeds the leaves, the whole forming an ample thyrsoid panicle. Corolla half an inch long, hairy, whitened externally, smooth within except the upper part of the tube, which is villous, fleshy, tipped with a blunt appendage. Fruit capsularis."
Ord. Campanulaceae

1. Wahlenbergia, Schrad.

   1. Wahlenbergia linearivides, A. DC.

   *Hab.* Chili, in the vicinity of Santiago.

2. Wahlenbergia gracilis, A. DC.

   *Hab.* New Zealand, and New South Wales at Sydney, Moreton, 18.

3. Wahlenbergia Sieberi, A. DC.

   *Hab.* Strathis River, New South Wales.

3. Wahlenbergia Peruviana, sp. nov.

   *Hirtella, Musschulalbus, Humilis, candidus*
ramosis diffusis; ramis usque ad  
epicem folioseis; foliis parvis spatulatis subintegris respiribus,  
eminis flore albo partibus luteo-  
antaribus; calycis tubo hemisphaerico  
nutato lobis oblongis brevi-  
ortibus; corolla lutea campanulata  
ultra medium quinquefida;  
capsula semi-infera, parte libera  
conico trivalvis.

Habo. Indies of Peru above  
Baños.

Plant only 2 or 3 inches high,  
diffusely branched, close to the ground,  
appearly from a perennial root;  
the herbaceous branches apparently  
rather fragile, slender, very leafy,  
up to the flower, solitary, terminal  
flower, slightly hairy. Leaves only
3 lines long, oblong, spatulate, sessile, entire, unarmed, veinless, sparsely and minutely hispid, especially on the margins. Flowers rather large for Tribe of the Calyx hemispherical or broadly obconical, about a line dense nearly two to two and a half in length oblong, obtuse, less hairy, in fruit fully two lines long. Tube of the corolla considerably shorter than the lobes of the Calyx, which the oblong divisions somewhat exceed. Filaments subulate, thin, anthers oblong-ovate, Style short, stigma 3, oblong-linear. Capsule 3 lines long, ovate-conical, the elongated the summit nearly equaling the lobes of the Calyx, and loculicidal. Seeds oval-oblong, very smooth. - The specimens are
in fruit, only a single flower remaining, but they suffice for the determination of this interesting addition to the genus Flahertisia.

*Caela ciliata*, Linn., was picked up at the Cape of Good Hope.
Ord. Lobeliaceae.

The principal interest of the collection in this order is related to the arborecent, shrubby or fleshy-stemmed Lobeliaceae of the Sandwich Islands. The species are numerous and peculiar, but difficult of investigation, in herbaria, owing to the imperfection of the materials in collections, and to the injury from insects to the attack which these and other lacercent plants are particularly liable. There are moderately good materials extant of ten or eleven species, and in perfect specimens or indications of as many more, and still others are probably to be discovered in our own materials, which have generally been ignored with those in the Otterian herbarium, and
with those of Sandwich.\footnote{In Paris, the Museum, have been recently supplemented by a set of the duplicates of M. Kerney's excellent collection. Excl. (and nominal species of these)

Exclusive of these species of Heliconia,

and of a striking new "Sunsar," (the latter known only in Kerney's collection,\footnote{30\% dark from Kauai or Niihau},

The known species of the Sandwich Islands may all be referred to Sandwichia's genera Heliconia, Heliconia, and Clermontia. The only essential character of this genus Heliconia, viz. the adnation of the staminal tube with one side of the tube of the corolla, is, I suppose, a mistake. At least this does not occur organically in the plant which accords with the specimen of Heliconia lanciflora (now flowery) collected in Schouten's voyage, you
which Baridivand founded this
 genus, may be "think (though our
 flowers are too much injured to
 have) under the observation certain
 in that which equally answers to
 this R. crispa, the more miserable spe-
cimen of R. crispa. The former
 species is a good Delissa, the latter
 having larger and somewhat foliaceous,
calyx-lobes, is one of the species
 through which Delissa shades off
 into Gyrania. To the latter genus,
 I confidently refer Briel's Mascro-
 chilus (Lobelia ? suprema, Cham.),
of which the calyx-lobes are probably
 incorrectly said to be imbricated in
 new and estivation, and also at most remarkable
 arborescent species, which by its
 extremely long and apparently pre-
aloid calyx-lobes approaches (men-
1. Delissea, Gand.


1. Delissea lanceolata.


R. montana, Gand. e. e. De, 1. 74; folia superiora diminuita.
Hab. Oahu, Sandwich Islands, on the mountains behind Honolulu, where it was first collected by Gaudichaud, and afterwards by Macrae, Lay and Collie, &c.

Gaudichaud's solitary and original specimen, preserved in the Paris Herbarium, accords with his character "folis magnis", these being 1 foot and a half long. His plate well represents the lower portion of the much leaves; but the others are much too small. The large-leaved variety of Stokes, and of La Baudotelle (blue), the true lanceo-lata. The flowers in size and shape answer correspond with Gaudichaud's figure, but the staminal column is wholly
place, as De Candolle has noted, sometimes sticks fast in the dried specimen, where it comes in contact with the upper side of the corolla.

To this species perhaps belongs no. 301 of Penny's collection, from Hawaii, with apparently smaller flowers, and almost entire leaves more attenuated below.

Gaud.

2. Delissera cleromontcioides)

Delissera cleromontcioides, Gaud.
Bot. Nov. BR, 1, 47.
D. grandiflora, Gaud. in sched.
Ver. Mus. Par.
Kollmannia Ferdinandiana, Gaud. c.c. 1, 76.
Hab. Oahu, Sandwich Islands.
In the mountains behind Honolulu.
A single, insufficient specimen, which appears to agree with the specimens and the figure of the Gandiandra's B. clemantiodis, of which no description has been published. The specific name probably indicates a resemblance of the leaves and flowers to those of Miss. authors Blermania macrocapa, part of the calyx, the calyxes of which are small, only a line and a half long. The corolla is externally pubescent in the bud. I may be the same species? [p. 77,] suspecting Blermania Humboldiana also.
3: Delissea Deléssertiana.

Rollanda Deléssertiana,  
Island, Bnt. Voy. Bonite,  
t. 75.

Var. ? Pinmatiloba: folis profunde  
sinuato-pinnatifidis, lobis  
ultrixque 5-7 obtusissimis  
integerrimis.

Hab. Mountains of Kauai,  
Sandwich Islands.

This is said to be a noted as  
a shrubby plant, with few branches,  
the deeply pinnately-pinnatifid  
leaves a foot long. Flowers not  
seen; so that the determination  
is wholly doubtful.
4. Delissea coriacea, sp. nov.

D. pulicosa, glabra; foliis amplexis (pedatis et ultra) oblata, lanceolatis coriaceis repando-seriulatis basi acutiis largis usque petiolatis, venulis, coriaceis reticulatis, racemis pluriis floribus petiolum hauri superantisibus; calyce limbo obtuseto seu dentibus 5-eminulis; corolla pollinari subcurvata.

Var. B. foliis spatulatis, lanceolatis in petiolum breve inaequalibus, attenuatis, calyceis dentibus

Hab. Sandwich Islands, Kauai, Honi, no. 302; the type of the species in flowers. North face of
the crater of East Atlantic
the var. B., in fruit.

The materials consist of a fine
flowering specimen from Vandyke's
collection, received from the Paris
Botanical Museum, to which I
have ventured to join an imperfect fruiting specimen of our
collection. The character, exclusive
of the variety, is wholly from the
former. Its leaves are evidently
erected at the summit of a thick
erect stem; the stout pedicles are
4 or 5 inches long; the blade fully
a foot long and 3 inches broad, and
smooth; of a leathery texture,
with a very strong midrib, the mar-
gin rather obscurely serrulate.
Peduncles axillary, one inch or two
length long, and with the equally
short axis of the raceme about
the as much longer. Flowers
rather numerous and crowded. Pedicels an inch or less in length. Tube of the short, fleshy, the limbs so obsolete that the rather fleshy corolla appears in the bud to be a continuation of it, but the junction may at length be discerned and usually five stamens or minute bodies which represent the limb of the calyx. Corolla an inch long, rather slender, moderately curved in the bud, becoming straighter, more deeply cleft or fissile on the back; the five lobes linear-lanceolate, equal, or the two upper ones at length more separable. Staminal column usually free from the corolla, glabrous, or nearly so, as are the anthers, two of the latter strongly bearded, penicillate at the summit.
The leaves presented of the supposed variety from Maui are smaller, a foot long including the short petiole, into which the blade very gradually tapers; the fruit is a globose-ovoid berry, of the size of a garden cherry, its summit showing the vestiges of more evident calyx teeth.

5. Delissea obtusa

1. supracina, ramis junioresbus floribusque undiqui pubescentibus, foliis membranaceis oblongis serrulatis, apice vel ab initio obtusis subtus parce pubescentibus; racemis plurifloris petiolum gracilem habens supra periantibus; calycis limbo fere
obsolèto; corolla gracili sub
pollicari incurva.

Var. B.3. mollis: caule crassiori;
foliis elongatis (subpedalis)
oblata. flores elongatiis bæi in
petiolum breviusculum attenuatissima supra puberulis subhis
mollitis pubescentibus; \( \text{flos} \) 
pollicarisibus crassiusculis cænæ.

Ital. Sandwich Islands: The

type of the species in the mountains
of Maui. The doubtful

variety in the forest on the side
of Moroa Kea, Hawaii.

The plant from Maui has the

leaves scattered along the upper

part of a rather slender stem;

the membranaceous blade 5 or 6

inches long by \( \frac{1}{2} \) or 2 inches wide;

elongated-oblong, minutely and rather
Spanily pubescent beneath, nearly glabrous above, all rounded at the summit, but sometimes with a minute point, either rounded, obtuse or acute at the base; the slender petiolar 1/2 or 2 inches long. Pedicels, pedicels, calyx, and even the slender corolla beset with a close and fine pubescence.

The Hawaiian plant, which for the present may be appended as a variety, has more prominent and elongated (9 to 12 inches long), and less blunt leaves, more tapering at the base, in shape like those of I. lanceolata; and, judging from Dr. Dickering's memorandum, the "blue" corolla is not so slender. In the specimen the flowers have been consumed by insects.

It is quite possible that both these pubescent varieties of the following page...
V. V. V. X

1. Delissea acuminata, Gaud.

Delissea acuminata, Gaud.
B. N. V. Freyc. p. 457, t. 76;
Cham. in Lam. 8, p. 219;

Nov. 3, Augustifolia; foliis eematis lanceolatissimis, ant Augustifolia ant
lanceolatissimis.


Ital. Cahu. Sandwich Island,
in the mountains behind Honolulu;
the lanceolate-leaved form, which
was also first collected by Kennedy. V. S.
Doubtless D. augustifolia (to which all the specimens in the present collection belong) is merely a narrower-leaved form of D. acuminata. The elongated lanceolate leaves vary from 8 to 9 inches long (coth besides the petioles 3 to 5 inches long) and from one to two inches broad; they taper to both ends and are finely and evenly serrate. Calyx teeth sometimes evident and subulate, often obsolete. Corolla an inch or an inch and a quarter in length, slender, glabrous.

7. Delissaea undulata, Sand.
Haleakula, Oahu, Sandwich Islands.

In the mountains behind Honolulu, the rare subcordata,

in combining the two species

of Sandwichland, I prefer the name

undulata is preferable, while some

leaves are subcordate others, on the

same stem are either rounded, obtuse

or acute at the base. The flowers

are glabrous, but the calyx, as

in other species, is sometimes more

or less pubescent. The corolla in

our flowering specimen is unusually

large, i.e. being one and a half to two

inches in length. I have observed the

small protuberances represented by

Sandwichland upon the corolla of D.

undulata, but they are inconstant.

No. 300 of P網頁's collection exhibits

three varieties of this species, all

from Kauai or the adjacent island

Nihoa, viz., D. undulata, Sand., with

lanceolate or deltoid lanceolate

leaves, and a very thick, fluffy,

scarified candy; the cor. subcor.

data, with broader, subcordate leaves

and a still thicker, fluffy candy; and

a form with a much less

thickened stipe, and prepand toothed

leaves much attenuate at the

base.
5. *Heliscus*? *Platyphylla*, sp. nov.

9. *Caile* fruticoso angulii pe

bolisque tubercolis et

enicis multitubus obitios; foliis

sesqui-bipedalibus obvates ob

longis sepandialibus glabris; po
dunculis axillaribus brevibus glabris

crassis paniculiferis; lobis calceis

serrissimis subulatis.

State, Sandwich Islands, in

forests of the district of Puna, Hawaii.

This is recorded as having a

simple stem, about five feet

high, beset with short and soft

spines or tubercles which are so soft

that they almost disappear on

drying. The angle leaves are

five or six feet long and 7 or 8

inches broad, smooth, membranacea,
and veiny, the midrib and larger veins beneath bearing a few small and weak prickles. The flowers are not seen, but a short axillary spur or bract. Much peduncle, like that of some species of Delissea, bears two or three turbinate, forming fruits, evidently fleshy. The truncate broader furnished with five very short calyx teeth, on which account I refer the plant to Delissea, although the fruit is evidently rather that of Cyanea, and the resemblance to Guamichla and Chondrilla cristata not remote.

A very similar species was observed in the forests of Mauna Kea, but with less ample leaves and no peduncles. The materials were insufficient for description.
2. Cyanea, Sand.


Nov. 3, étrilli folia; foliis tipin.

matipartitis, lobis segmentis

sinuatis, caule aculei, conici

et teres nunc proinde.

Isb. Sandwich Islands; on the

mountains of Oahu, Nov. 3. Ha-
waii, in the forests of Mowina

Poa, and Mowina Kea.

The corolla, instead of blue, as

originally stated, was marked by Sam-
dichard, in his note upon the speci-

mens gathered in the cruise of the

Bronte, as bluish rose-color, and is

said by Nuttall (in Trans. Acc. Phil.

1844, t. C. p. 252) to be “white, externally

striped with dark reddish-purple.”

In our specimens the unexpa-

nded corolla is more curved than
in Gaardichaud's Plate, and the
leaves of the calyx are much narrower, linear, a little over an inch long and two lines broad, valvate in the bud, with the margins slightly redundant and plane. But in other specimens from which the corolla has fallen in winter, only 9 or 8 lines long, broader, and with the margins more or less crisped as represented in the published figure. The foliage is so variable that for the present the Hawaiian specimen must be deemed to be only a variety, although its blossoms are unknown.
2. Gymnea aspera, Sp. Sm.

6. foliis oblongo-ovatis acumina\-

tis denticulatis pubis ad venas

venulasque fusco obtusae. Sin-
tellis utrinque velutis basi

papillosis asperatis, petiolo

muricato; calyceis glabri lobis

ovalibus fuscis anthemia accresce-

fusciaces auburn elongato thomi-
cum aquam albibus; corolla 2/1-\pullici

ri curvata.

Hab. Sandwich Islands; in

the mountains of Oahu, behind

Honolulu, at the elevation of 2000

feet.

The single specimen is so greatly

injured by insects that I can only

barely verify the meromandia of

Dr. Pickering. I cannot doubt

that it is a conyza of Gymnea

cissimianca, although with undi-
vided leaves, and it seems to be related to the three species from
Chamaecys from Cebu, which Biesel and LeBaudot have attached
to Delissea. The leaves are
9 or 10 inches long, 4 or 5 inches
wide, thickish, the very conspicuous
rays veins and veinslets of the lower
surface beset with short yellowish
brown hairs and also aculeate,
as is the upper surface generally,
with yellowish pointed lateral appies
short reddish dilated conical base;
the midrib beneath and the thick
pretend are still more aculeate,
as probably are the branches, in the
manner of . . . Grimesiana. Every
5 or 6 lines, large, acute at the base;
the broad leaflets appear apparently
of about nearly the same length, or
becoming so. According to the memorandum
the latter are short and obtuse, subse-
quietly ending or becoming foliaceous. Corolla apparently as large as that of C. grimesiana. Leaves more adpressed than allied species, without flowers but substitute of prickly points.

3. Oxyarea pilosa, sp. nov.

6. P. canadensis, foliis (subpetalibus) membranaceis obvati, ultranque acutis vel acuminate, coronae cretoso-crescatis pilis brevibus, motibus hissitatis, racemis brevibus in pedunculo hissitissimo paniculatis; floribus "parvis griseo-candulis" pedicellisque glabris; foliis calyceis linearibus foliaceis ovario oblongo equilibrifus.

Tab., Havaei, Sandwich Islands, on the windward side of Moomau, Kea at the lower margin of the forest. Described from an imperfect specimen, having only a few young
flower buds, aided by Dr. Pickering’s memorandum. This species, like the preceding, is evidently allied to Chamerion’s Stelia calycina, am-
bignea, and Pinnatifida, referred by Chest and De Brandt to Delissea, but which by their foliaceous calyx-
lakes, seem to affect a transition to Gymnea. The present species and the next seem altogether am-
bigneae. It must be left for better materials to determine the proper characters and limitation of these
genera.


6. fruticosa; foliis sesqui-tri-ped-
latis, obovato-lanceolatis, basi
inferne longe attenuatis basi
inter petiolis membranaceis.
fere glabris margine semilat- 
tis umbilatis vel integerrimis; 
pedunculo petiolum adequatu 
supere fructeat /puncta = 
floros flexibles cinesco-pelma- 
tis; calycis lobis oblongis 
ser lanceolatis foliis oblongis 
avario oblongo equilibriis 
corolla sesquispollicarii; frut 
pyriformis pollinarii.

Rollandia crispae, Gand, 
Lobelia calycina, Cham. in 
Linnaea, 8, p. 222?

Ital. Oakes; on the moun- 
tains behind NDolalii.

A comparison of our speci- 
men with the imperfect original 
one shows this to be Gendrichaud's 
Rollandia crispae, which specifi-
name, however, would mislead. Although the lobes of the calyx are small, the affinity of the species is evident with the following species, although the lobes of the calyx are smaller. They are almost foliaceous and persistent, but only about three lines in length. The corolla is minutely pubescent externally, the and within free from the staminal column. Fruit about an inch long when full grown, cinescent or crenescent, obovate-pyriform. Although this does not accord throughout with the description, it may prove not specifically different from Camissono, Lobelia calycina.


*Hab. Hawaii, Sandwich Isl. and, in the forests on the side of Mauna Kea, at an elevation of 3000 feet. One of the great leaves and one or two families and flower buds.*
of this striking species are preserved in the collection. The fruit is unknown. The habit of the plant is that of the following species: the simple stem or trunk rising to the height of six feet, and bearing a crown of the ample leaves at the summit. The flowers are said in Dr. Pickering's notes to be "crowded at the base," probably in axillary clusters. The pedicels are an inch long; the calyx, tricuspid or oblong calyx-tube or ovary 7 or 8 times long; the calyx-lobes an inch long, rather less than two lines wide, acutish, valvate in aestivation, cleft down to the ovary, apparently persistent, corolla slender, curved about 3 inches long, externally more thickly pubescent and cinereous than the calyx, in anthesis ap-
Partly at once separating almost to the base into three long and narrow divisions, the middle one a little broader than the lateral ones, its summit after seemingly entire, consisting somewhat except for and slightly the costa; filaments minutely pubescent; another over half an inch long, the two shorter ones strongly penicillate at the summit.

6. Ceyanea superba.

Cebelia superba, Cham., in Linnaea, 8, p. 223.


Stat. Oaxaca, on the mountains behind San bolivar, where it was discovered by Chamisso.
It is much to be regretted that the specimen of this striking species, consisting of a leaf and a single inflorescence, presenting only withered flowers, and much injured by insects, though sufficient to identify the species, adds nothing to Chamisso's incomplete account of it. Dr. Pickering notes that the woody stem is eight feet high, the leaves 2½ feet long, including the petiole, oblong-lanceolate; the rather small flowers crowded in a sort of wolly capitulum at the end of a long, foliaceous, bracteate, nodding peduncles. The foliage is the densely canescent-hairy exter-

orally, split down the back, five-lashed at the summit. Probably, the lobes of the calyx are not indistinct in restoration, as indicated in the allied species, but valvate, as in the allied species,
7. Cyanea electrobata, sp. nov. 

c. glabra, foliis ad apicem caulis arborei simplicis con- 

fertis lanceolatis subcordatis imbicatis (bipedalis et ul- 

tra); racemis reviviscens em- 

fertilluis calycis segmentis 

praelongis angustissima lineari- 

bus et basi lateri palantibus 

corolla gracili longioribus 

persistentiibus. 

Upper edge of the forest, on the 

Tabular summit of 

the Sandwich 

Islands; at an elevation of 37000 

feet. 

A most remarkable spec- 

ies, evidently a congener of the 

foregoing, but with extraordinarily 

drag and narrow calyx-likes. Its 

crown of long and narrow leaves 

each two feet or more in length,
2½ inches wide, nearly sidente and entire, smooth, and rather eniacous, surrounding a thick arborean stem of 8 to 15 feet in height, gives the plant a Palmlike or Dracaenaoid aspect. The racemes are short and capitulate, clustered in the axil of the leaves. Bracts and bractlets filiform linear, pedicels less than an inch long. The gravid ovary or young fruit 5 or 8 lines long, fleshy, pear-shaped, oblong, acute at the base, glabrous, as is the whole flower, its truncate summit bearing the five divisions of the calyx, which are fully two inches long but less than half a line wide, except at the and near their insertion, apparently of the same texture as the calyx, but more persistent, perhaps remaining in the fruit. Corolla an inch
and a half long, smooth, rather slender, clef to the middle on the back, the five lobes equal and narrow. Column as long as the corolla, slender; two of the anthers penicillate at the summit. The inflorescence preserved of past anthesis, but the organs all remain, although the corollas are withering, and partly. This species makes an approach to Bler-

Note:
3. Clermontia, Gaud.

1. Clermontia grandiflora, Gaud.

Var. a. brevifolia: foliis membranaceis ovalibus leviter oblongatis ovatis seu oblongis utrique angustatis vel acutatis modice serratis 2-3 bi-triplostichinis, petiolo gracili pollinarius.


Var. B. oblongifolia: foliis oblongis seu elongato-oblongis sepe oblongis tenuebus, eorum alternatis separatis 4-6 bi-pollinariis, petiolo bi-triplostichinis.

Clermontia Persicaefolia et C. oblonga...
giglia, l. c. l. c. t. 71, 72;

Var. 1. longigiglia: foliis subcoriaceis sericeis super membranaceis oblongo-lanceolatis sem aeguste oblongis esculentissimis serulatis 3–9 polllicibus in petiolum 1–2 polllicem attenuatis.


C. macrophylla, Nutt. in A. Nutt. in U. S. A. Phil. Soc. 1. 3. 1842, p. 6, p. 251

C. macrocarpa, Gand. Bd. 3. Bd. 2. 49

C. veridis, Gand. in H. R. 12. Ed. 49.
Hab. Sandwich Islands; the var. a, on Oahu, Molokai (Renny), and on the western division of Maui, where our naturalists collected it. Var. b. Oahu, on the mountains behind Kaahumanu, and (foliage only, intermediate between this and the next variety) on the mountains of Kauai; Var. c. Oahu (Muyer, Puttall), and Hawaii, at various stations.

Without question Gaudichaud's three original species are all forms of one. The flower of this b. grandiflora is exaggerated in the figure, at least it is rather larger and much broader than in this specimen. As to the separation of the lobes of the calyx, due to the ovary, in this b. oblongifolia, this often occurs, with age, in other forms. The
plant forms a shrub or low tree, 8 to 16 feet high, with green or greenish flowers two or three inches long, and bright orange-colored berries, which, according to Nuttall, and to Gaughrand’s Plant, when full grown, are as large as a cranberry, at least in the last-named variety. This form, seen in isolated specimens, might claim to be distinct, but it passes into the others, and must, I suppose, be regarded merely as a variety of a polymorphous species.
2. Clermontia parviflora, Gaud.

C. prutiosa, glabra, foliis membranaceis lanceolato- vel subspatulato-oblongis breviter acuminatis ebracteatis sepando-serulatis, petiolum gracilem angustatus, pedunculo parfioro pedicellisque breviter petiolum siuand superantibus floribus fere pollicariibus leviter curvatis caeruleis calce breviter quinquedeto corollan mine atti fissum aequante.

Clermontia Byronii, Agrippula,
ser parviflora, Gaud. miss. in Arb. Mus. Par.
Hab. Hawaii (and Fahn?)

Macrae, G[.] Rickard, A. [in the forests on the slope of Atorea Kea.]

This is noted by Dr. Pickering as "a branching shrub, 10 feet high, with small, blue, axillary flowers. The size of the latter, hardly an inch long and proportionally slender, well distinguishes this species. The leaves are thin, 3½ to 5 inches long, the base narrowed into a slender petiole of an inch or an inch and a half in length. Immature berry ovoid or globular, 3 or 4 lines in diameter.
4. Sclerotheca, A. D.C.

1. Sclerotheca arborea, A. D.C.


Hab. Tahiti, Society Islands; in mountain forests.

The specimens, consist only of foliage and some fruit, and therefore allow for additional light upon the genus. The leaves of these specimens are not "Oval-lanceolate" as stated in Faber's Prodromus, nor "Oval-acuminated", as stated by A. Léveillé, but more nearly "Oval-lanceolate" as in Faber's description printed by Guillaumin, in fact they are Oblong-lanceolate, with an acute base, and from 5 to 12 inches long, not "dentate" but dentillate and some of them "absolutely serrate." Capsule on half an inch long, truncate, of a hard texture, abruptly and conspicuously pointed by the persistent and undecurated base of the style, at the side base of which each
cell tardily opens by a small pore. Seeds very numerous, globular; the reticulated testa muricate raphes. The fruit in Host’s specimens is globose.

Colensoa, Hook. f.


Colensoa physaloides, Hook. f.,

Tel. N. Z. Nat. 1, p. 156.

Ledelia physaloides, A. Brun.


Ital. Bay of Islands, New Zeal.

and: in fruit, exhibiting the bacca characer.

Pratia, Sand.

1. Pratia repens, Sand.

Ital. Orange Harbour, New Zeal.; very common.

Stab. High Andes of Chili above Santiago, and near the snow line.

To this species, judging from Meddell's description and figure, belongs *P. oligophylloides*, Medd., of the Bolivian and Peruvian Andes.


Stab. Nayaritum Bay, New Zealand.

Also, var. *asperata*, Hook. f. (*P. asperata*, Hook. f. Fl. Antarc. 1, p. 41, t. 29). Ford Auckland Islands, both with nearly sessile flowers, as figured by Dr. Hooker, and with pedicels equal to or slightly exceeding the leaves, half an inch or more in length.
1. Parastranthes, Don.

2. Parastranthes folius, F. DC.

3. Cape of Good Hope near Cape Town. Also "Sydney" New South Wales! The latter in the specimens, somewhat different in aspect from those of the Cape, and, although not so noted I imagine the specimens must have been cultivated.


5. Centropogon Surinamensis, Presl.

6. Vicinity of Rio Janeiro, Brazil.

7. Lobelia, Linn.

8. Lobelia Euvca, Linn.

9. In the mountains near Santa Maria.

1. Lobelia Brinas, Linn.

2. Lobelia convoluta, Linn.

3. Lobelia Nigrella, Linn.

4. Lobelia Pennisetula, Linn.

5. Cape of Good Hope, in the immediate vicinity of Cape Town.

Hab. Hunter's River, New South Wales; often with toothed or somewhat laciniate leaves, the L. simplicicardis of H. Brown.

7. Lobelia purpurascens, R. Br.

Hab. Hunter's River, New South Wales.

8. Lobelia gracilis, R. Br.

Hab. Sydney, New South Wales. Also collected from New Zealand, but probably through a mistake, as has occurred in some other instances.

Hub, Wood-gong and Hunter's River, New South Wales, Bay of Islands, New Zealand. It ranges from the Cape of Good Hope round to Chili.

10. Lobelia Mapovidea, Schott.

Hub. Brazil, in the Organ Mountains, near Rio Janeiro. The raceme is fully two feet long. The seeds are flat, orbicular, smooth and wingless.

11. Lobelia decumbens, Cav.

Hub. Chajillo, Peru; the
Name, B. A. B., Prof. W. with the
Calyx minute.
12. Lobelia macrostachya, Hook.

Lobelia macrostachya, Hook. A. Br.,

Mt. Brees. Nov. 19, 85; Sand,


Hab. Sandwich Islands: on

the mountains behind Honolulu,

Oahu, at the elevation of 2500 or

3000 feet; where it was detected

in Breech's Voyage, and by Sandi-

chard in that of the Bonite.

Also Hawaii, in the vicinity

of the crater in a Pool.

The tall strow branchs the

branches terminating in a vingate,

some rather leafy-nodated racem-

ate of the calyx white-ovate, rather than the

hemispherical or nearly

from 6 to 12 in this long, 0.15 mm.

when developed. 2 to 3 in value.

according to Dr. Pickering, while the young leaves with a

rather slender, recurved, pointed, the

other slender, narrow-linear. The
mature fruit and therefore the dehiscence are unknown. But the thin-walled frericaps evidently indicates a capsule. Gauri-
chand's figure exhibits flower-
buds only. Full-formed flower-
buds in our specimens are
an inch and a half or two inches
long, and mostly recurved.

13. Lobelia Gaurichandii, A. DC.

Lobelia Gaurichandii, A. DC.,
Nov. Monite., t. 45.

Var. B. Kalgensis: racemo sub-
benulo; calycis viscosi lobis
brevioribus, labio
paulli longioribus.
Hut, Sandwich Islands; mountain chains of Oahu, with the proceeding, not flowering. Vol. 3, Mountain, p. 145.

The very good figure of this striking species which Sandwich has given, as to the Oahu plant, that the thick stem, covered with cicatrices, is a foot high; the leaves crowded at its summit are coriaceous, linear or lanceolate, from 4 to 6 inches long, nearly veined; the narrowly revolute margins entire or obscurely dentate; the midrib beneath often strigose; minute. Some of these hairiness is represented in Sandwich and's figure.

The capsule is dehiscent at the conical base summit.

The variety from Kanai
produces leaves a foot long and an inch or more wide; the raceme, compressed, unicipital pedicels and flowers like those of L. xandichandii, except that the former pubescent, and the lobes of the "viscous" calyx are shorter and proportionally broader, being triangular-oblong and 3 or 4 (instead of 5 or 6) lines long, the taller than the shorter, they are deciduous from the forming fruit. The "showy, broad, and curved corolla" is said to be "pale, with pink veins."

14. Lobelia jociefolia, sp. nov.

L. caule fruticoso crasso me- nella raro; foliis confluentes dun-
gato, linearisibus, nitentibus angus-
latis in petiolum alternatis coriaceis transversae vaginae marginis integerrimo revolutis supra glabris pubibus inanis, radice virgata densi-floso, tractis calci lobisque calycibus pubulato-setaceis, corolla rectiuscula camilla.

Hab. Sandwich Islands; on the mountains of the East Division of Maui, also on the mountains of Kauai, according to Mr. Pickering's memoranda. The L. terebinthifolia of Moris being a synonym of L. or Tupa salicifolia, that name is free to be used for the present remarkable species. The plant evidently has a thick stem or erect candex, like that of L. sandihami, but its size is not recorded. The leaves are a foot or less in length, only 4 or 6
lines wide, of a firm texture, veins in the manner of Nerium, the lower surface whitened with a fine and close-pressed down. The virgate raceme sometimes has a short pitiful axis. Bracts about an inch long, mostly exceeding the flattish pedicels, setaceous or nearly so. Lobes of the calyx setaceous and subulate, larger than the tuberculate tube. Corolla an inch long, narrow, "deep blue," rather slender, clef{t} 

in the manner of the genus, the two upper lobes at length nearly separate, narrowly linear, two at least of the anthers bearded at the tip. Capsule tuberculate, 3 lines long, rather longer than the chief, persistent calyx-lobes, three dehiscing through the short, obtusely conical
vertex, at length length partly four-valved, seeds oblong, compressed, smooth, wingless. - The fruit-bearing raceme of the collection is of a former season; another, in flowers, has unfortunately been almost consumed by insects. The leaves, although vastly larger, bear considerable resemblance to those of L. pseudomarinifolia Bosc, Siphoneura pseudomarinifolia, Don.

15. Lobelia (Tuapa) salicifolia, Sweet.

16. Lobelia (Tuapa) polyphylla, Hook. f.

[illegible] [illegible], in the vicinity of Valparaiso.
10. Siphrocanpysis, Pohl.

1. Siphrocanpysis betulaefolius, Don.

Hab., Brazil, in the Organ Mountains near Rio Janeiro.

11. Isotoma, Lindl.

1. Isotoma seneeosides, A. DC.

Hab., Hunter's River, New South Wales.

In Kew's Sandwich Island collection (no. 30966, from Kanai or Nihan) is a wholly new and striking Isotoma, with fleshy stems and large oblong entire leaves, which will probably be described by Mr. Parisian botanists.
The italicising marks in the English descriptions in this work are to be disregarded by the compiler.

The Sandwich Island means to be read in accordance with the notes printed in Diodorus, Ann. Academ. 1867-8.
Order: Ericaceae.

Section I. Vaccinium


1. Vaccinium Madeirensis, Link.

Native, Madeira; at the elevation of about 3000 feet above the sea.

This species and the allied V. Arctostaphylos, enumerated by Bleisch, in Linnaea, 24, p. 65, among the "non halis pauper," having simply five-celled berries, unarmed and then, and at length campanulate corollas, must be referred to the section Nitis. Itea, notwithstanding their deciduous leaves. The tubers of the anthers are remarkably long.

2. Vaccinium cereum, Forst.

V. foliis conforetis rotundis obalbicios, mucronatis callosi, serreis, nervis reticulatis, venis, glabris, pedunculis axillariis, foliis brevioribus sub media, debitatis, calvis, fruticos, floribus cylindricis, actinangulatis; fructibus baccis minutis, mucronatis, frondibus tubulis, seminum loculis paulli.
Vaccinium cereum, Linn. in Hook. Fl. Brit. Ind. vol. 1. p. 48; prope Smith. in Rees Cyc., p. 156. Schlecht. in Hook. 2o.

Andromeda cereum, Linn. J. S. Lif, 1. p. 235.

Metagonia cereum, Nutt. in Flora Am. Phil. Soc. 1. p. 257.

Nab. Tahiti, Society Islands; on mountain ridges, from 1000 to 4500 feet above the level of the sea.

Plant "2 to 5 feet high", glabrous, or the angular branches and young parts minutely pubescent. Leaves crowded on the branches, very short-petiolate, an inch, or occasionally an inch and a half in length, rounded, oval, or elliptical, rarely ovate, to oblong, coriaceous in texture but not very thick. Indurate. Very abruptly tipped with a rigid membranous point, finely ciliate, serrate, glabrous; the upper floral ones occasionally reduced to tracts. Peduncles auxiliary to 6 lines long, often appearing racemose at the summit of the branches, where the crowded leaves are reduced as it were to tracts of 5 or 6 lines in length, incurvate below the middle; the bractlets linear, 2 or subtulate, 1 or 2 lines long, rather persistent. Cypselae ovate, lanceolate, 3 or 4 lines long, 5 celled, becoming cylindrical, with an unequal, contracted cleft orifice, the 5 short lobes recurved, very acute, persistent, much shorter than the body, the body of the cypselae more than the body of the cypselae, recurved, 3 to 4 lines long, not much exceeding the dorsal nerves, which are about half a line in length. Every five-
called. Berry five-celled, with no trace of false partitions, globose, black; the cells many-seeded, seeds angled by mutual pressure, impressed-pruniate.

This appears to be specifically distinct from the common species of the Sandwich Islands, which Chamisso and Schlechtendal, and afterwards Sir W. Hooke, have referred to V. cerasum. The Vaccinium of the Society Islands, besides its more sucroseate corollas, has shorter and bi-bractedate peduncles, very acute calyces, the anthers irregularulate at the base, and their tubulae, horns not much surpassing the dorsal arms, all characters which are foreign to Vaccinium.

Webb's genus Metagenia is equivalent to Eleutheria's sections Macropelma (of the Society and Sandwich Islands), Eristigma, Neurodesia, and a part of Vitis. Idea, including a variety of species, which, however, distributed into groups, cannot properly be named from Vaccinium. The dorsal arms of the anthers in the section Macropelma are not always erect; in V. cerasum they are sometimes (perhaps abnormally) reflexed.
3. Vaccinium reticulatum Smith

V. foliis carnosis cor plumagine

coriaceis obvatis, substantiis obtuso-

cylindracea 3-4 plo brevioribus, an-

nae basi punctatis, tubulis quam

loculi laginiibus aristas dosales

multum superantibus.

Var. a: foliis rigide coriaceis ob-

vatis vel aeviulatis sepe glaucis

et glaucescentibus varo nitidulis

durgo semevelatibus glabris vel nudo

pedunculis, ramulisque pubescentibus; peduncu-

lapissimine folio brevioribus, in 
dunit

1. folio illudulatis crassis integerrim- 

mi, variove sevulatibus apicis rig
Vaccinium reticulatum, Smith in Rees. Cyclo. no. 30; Sm. Syst. 3. p. 857.

V. cereum, Cham. Schlecht. in Linnaea, 1. p. 527; Horn, F. e. Pl, 87.


Vaccinium calycinum; foliis elatis, laxum, sylvicolum; foliis terminatis, novelliis membranaceis, adultis chartaceis vel suberis, ecis aegide serulatis; aristis antherarum papillis naviformibus quondamque vel fere obsolentis.

V. dentatum: foliis argutissimis betaco- 
me serrulatibus vel serratis obtusis 
oblunghis plus minus cornoceis, 
corola brevissima magis superba 
pannulata calycis lobos 2-3-plo 
tantum superante.

Vaccinium dentatum, Smith, s. c., 
no. 31.
V. cerasum W. Horki, f. c., Phil. c. c., vendu 
in De. Pm. T. p. 575.

V. l. lanceolatum: foliis 
laticinescente lanceolatis etc. 
for V.
Nah, Sandwich Islands, chiefly
in the mountains, chiefly at high elevations and around the
crater, but also in exposed places
at a lower level; the Var. B. in
the forest region; Var. S. in the
sabulous summit of Kauai; foliage
only, in that it may prove to be
a distinct species or a variety of
the following species.

The Ohelo of the Hawaiians is
an extremely polymorphous plant,
varying from a "a shrub of medium
size" to "sometimes even twenty feet high
with a trunk three inches in diameter"
in the forest region, often "epidemic
in the branches of trees in the deep
forest of Mauna Kea", to a prostrate
or spreading shrub, a few feet or
only a few inches in height at the
elevation of 9,000 to 11,500 feet; the
flowers greenish and reddish; the long
globular, or nearly ovate-acute, about 4 lines in diameter, purple, red, yellowish, or glaucous-blue, "astringent" or "agreeably subacid" 5-celled, many-seeded, crowned with the conspicuous persistent calyx.

I detect no stable characters for separating any of the various forms as species, and there are forms which, refer to var. 2, by their authors, throw doubt upon the distinctness of the most species. Of Smith's three species, the name N. sclerocalyx is adopted in preference to N. calycinum, which belongs to a thin-leaved forest-gran form, which future botanists may perhaps find reason to distinguish, although I cannot.
4. Vaccinium penduliflorum, Linn. *, oblongis, glabris; foliis luteis, lucidis, coriaceis utrinque reticulato-venosis acutissimis serratis, pedunculis axillaribus etsque staminibus minus robustis vel accurulis pendulis folio longioribus; calycibus lobis ovatis, lanceolatis acutiusculis corolla cyllindraceo-campanulata parvis vel dimidio brevioribus; antheris basi calcarato-cuspeditatis, tubulis quam loculi equilargis aristas dorsales, 2-3 fere superantibus.

Spinulosa setacea is pulcherrime pectinata; pedunculi foliis hard viri, ex extremis.
Sandwich Island,
Nov. 3. T. Macie, on
North flank of Mauna Hualakake, at the elevation of 6700 feet. "Also
on the mountains of Oahu behind
Hakalau", where Sandichand
collected his N. pendulaeflora.

Apparently a low and spreading
shrub. Remarkable as is this plant,
our plant for its Barberry-like,
pectinately spinulose-toothed and very
reticulated leaves, yet a form of N.
reptation var. dentatum from
Mauna Kea too nearly imitate it
in these respects and even in the
shortness of the corolla, I place
more reliance, therefore, upon the
spur-like caps, or strong process
of the base of the anthers, and this,
although not mentioned by Sandi-
chair in his brief character of N. Baudouin, is plainly represented in figure 4 of his plate. The little serratures of the leaves of this latter plant are not elongated as in our plant.
1. Gaylussacia, N. B. K.


*Hab.* Rio Janeiro, Brazil. (Bult. in the Botanic Garden.)

**Subord. II. Foriciner.**


*Hab.* Orange Harbour, Georgia. Very abundant. A shrub of sometimes 3 or 4 feet in height; the berries large, purple, and edible.
1. Pernettya pumila, Stock.

Arbutus pumila, Linn. J. c.; Stock. J. c.

Nov. P. empetrifolia, Stock. J. c.

Arbutus empetrifolia, Linn.

Hab. Orange Harbour, Fuegia: common in the mountains.


1. Gaultheria microphylla, Stock.

Arbutus microphylla, Stock. in Comm. Spec. 9, p. 32; Mill. l. c.
A. perphylla, Linn. Dict. 1, p. 228.


Hab. Orange Harbour, Fuegia: not uncommon.
2. Gaultheria antipoda, Fost.


G. antipoda L. = floribulus, A. Brum. Bot. N. Zel. 26

Lab. New Zealand, at the Bay of Islands. (With a bacate and with a dry calyx on the same specimens.)


G. folis ovatis utrinque acuminatis, supra glabris puberulis, submutatis a ramiisque novilibus parce striatis hispido-dis; pedicellis fasciculatis petiolo longioribus; bracteis carnatis ostiiculatis.

Lab. in the Majapai Mountains, Luzon. (A fruit)

This appears to differ specifically from either of the three described Japanese species. D. japonica, Blume, or Amphiophyllum latifolium, Blume, as described by Flaschke. Fl. Jap. 1859, p. 469, is said to have very glabrous leaves; pedicels only 2 mm. long, not equaling the petiolo; and ovate acute bractelets. In our plant, the oval leaves (2 to 2½ inches long) are conspicuously acuminate and also tapering at the base, rigidly veiny, glabrous above, sparsely striate-broadly underneath, as are the young branchlets. The fruit forms
peduncles, in fascicles of 4 or 5, are half an inch long, and much exceed the petals; they bear at their apex a pair of small, carinate stamens and Staminal bristles. Corolla and stamens not seen. In fruit the 5-clawed calyx is bracteate and invests the pericarp, which indeed appears to have been itself somewhat fleshy in texture; it dehisces, however, only irregularly into 5 valves, which are rather fragile and thin when dry; the sepals are thin and transparient, leaving a central column with the thick susbident placenta. Seeds ovate angled; the thin and shining testa conform to the nucule. The presence or absence of arms to the anthus appears to be far more important in the interested anth in Vaccinium. The North American, Eumasththera Hypsitis, North. Has not only several anthus, but Species of Eumasththera.
5. Clethra, Linn.

1. Clethra arborea, Ait.


Nat. Madeira.

2. Clethra Brasiliana, Cham. & Schlcht.

Clethra Brasiliana, Cham. & Schlcht. in Linn. xx, 8, p. 5903

Nat. Brazil; in the Organ Mountains.
1. *Erica desperaria*, Linn.


2. *Erica arborea*, Linn.


Stat. Cape of Good Hope, in the neighborhood of Cape Town.

5. *Erica mammusa*, Linn.

Stat. Cape of Good Hope; with the preceding species.

Type: Cape of Good Hope, in the neighborhood of Cape Town.

7. Erica corinthioides, Linna.

Type: Cape of Good Hope.

8. Erica tenuifolia, Linna.

Type: Cape of Good Hope. (Institute of flowers.)


Type: Cape of Good Hope, near Cape Town.

10. Erica pedunculata, Handel.

Type: Cape of Good Hope; with the preceding.

11. Erica manifesta, Linna.

Type: Cape of Good Hope.
12. Erica persoluta, Linn.

Stat. Cape of Good Hope.


Stat. Cape of Good Hope.

7. Simocheilus, Linn. Benth.

1. Simocheilus depressus, Benth.

Stat. Cape of Good Hope, in the neighborhood of Capetown.

8. Salaxis, Salisb.

1. Salaxis Sieberi, Benth.

Salaxis Sieberi, Benth. in L.B. Prov. 7, p. 711.

Stat. Cape of Good Hope.
9. Empetrum, Linn.

1. Empetrum rubrum, Vahl.


The genus may best be considered, in accordance with Jussieu's views, as an apetalous Ericaceae.
Ord. *Epacridaceae*


*Hab.* New South Wales, in the vicinity of Sydney.

2. *Astroloma*, R. Br.
   1. *Astroloma humifusum*, R. Br.

*Hab.* Near Sydney, New South Wales.
3. Melichrus, R. Br.

1. Melichrus rotatus, R. Br.
2. Melichrus urceolatus, R. Br.

Note: Hunter's River, New South Wales; the latter without flowers or fruit.


1. Gyathodes acerosa, R. Br.

Note: New Zealand, at the Bay of Islands (in fruit.)

2. Gyathodes
2. Ctyathodes Romanae. H. M. V.

C. fruticosa, erecta; foliis subpatulis oblongo-linearisbus, inaequalibus majore integerrimus. 

Stipites glabri multinoctilibus, longiusculis antemotoribus; sepals bracteis subulatis subciliatis; corolla tubo calycebus bis superante, lobis incurvis; style subulato ovario 5-7 loculari trapt.

Ntab. On the mountains of Tahiti, Society Islands.

A shrub, apparently 2 or 3 feet high and upright, very leafy; the younger branches round but minute, puberulent. Leaves rather spreading, scarcely whitish, 4 to 6 lines long, one to 2 lines wide, abruptly emarginate-pointed, smooth, green and shining above, glaucous-white underneath, and many-nerved underneath, the (7-13) nerves more or less forked or branched (at least the exterior ones) towards the apex; the acute callous margin entire, and smooth, except near the apex, where it is minutely serrulate. Sepals 5, more or less, ovate, obscurely nerved, minutely and inconspicuously ciliolate. Calyx solitary in the axils of the upper leaves; the very short peduncle imbricated with bractlets which resemble the sepals, except that they are somewhat smaller. Petals 5, more or less, ovate, obscurely nerved, minutely and inconspicuously ciliolate. Corolla with a cylindrical tube (2½ lines long) of about twice the length of the calyx; the 5 subulate, triangular, lobes bentless and glabrous, spreading, about half the length of the tube. Filaments short, inserted below the sinuses of the corolla; another linear-oblong, fixed near the summit and pendulous, pollen manifestly emarginated.
Disk: revolute in the calyx, cymathiform, five-toothed. Corolla 5-7-celled, the ovules solitary in each cell, tapering into a thick and pubescent style of about its length; stigma terminal. Base: Trumpe globose, 3 lines in diameter, dark red; the petalum 5-7-celled, or by suppression of several cells. Seed.

Dr. N. Dickering notes this plant is either one
cell or not distinguished from the specimens gathered
in Eimeo, and also on Tahiti, which does not
differ, so far as I can see from some forms of the
variable Hawaiian c. Janinianum. The present plant
has larger flowers as well as leaves, the tube of the
corolla extended beyond the calyx, and a larger style.
Mr. Brown long ago mentioned (Pol. N. H. Ill. Vol. 1
p. 539) that there is a Tahitian species of the genus;
but the plant seems to have been unnoticed from
the time of Cook's voyages to our own expedition.
Probably this is the plant referred to by Mr. Brown.
Belongs to the following species, which is apparently
not rare near the coast, rather than to the present
species having been found in habit, which probably belongs
to the higher mountains. It is
remarkable that no Cyathodes was collected either by Butler or
Moorenport, or at least none is mentioned by Guelden
in his Zephyritis Taitensis.

The "Queen's Island"
Species having been named in honor a celebrated King of those
islands, the present species may be said, the nearly less autonamous
of Pomare, queen Pomare,
3. Cyathodes Tameiameiae, Cham.

C. fruticosæ; foliis satulis oblongis cuneatis, dorso persistente, apice mucronati, margine ad apicem ciliilatis, subtus glaucis, multicornitis, nervis superiores, sepalis bracteatis, ovatis, ciliatis; corolla tubo calyce com pressed; stylo crasso ovario 5-8 loculari vis longiore aquilango.

Var. a. Chamissoi: corolla lobis intus plus minus barbatis.


Var. b. Brownii: corolla lobis imbervibus.


Societatis; corolla lobis intus parcellissime barbatis; foliis plerisque limbaribus.

Var. r. Tarentinii: corolla lobis intus parcellissime barbatis; foliis plerisque limbaribus.

Hab. Sandwich Islands; a. On the mountains of Oahu, where it has also been gathered by Nelson, Merrie, Chamisso, Ray & Böllie, Macrae, Barclay, &s. B. Montane of Oahu, Hawaii, Maui, and Kauai, and especially of
Hawaii; also gathered by Nelson, Menzies, Macrae, vs. vs. N. Times and Takini, Society Islands.

—or in the forest Grimlium attaining 15 feet in height according to Dr. Pickering—of a foot or two in height. Very leafy, much branched, the younger branches hairy-pubescent. Leaves spreading, or on the older branches often reflexed, on the younger shoots sometimes ascending, varying from linear or oblong to cuneate-obovate, thick and coriaceous, persistent, serrate-petiolate, 3 to 5 or even 6 lines long, from one to 2½ lines wide, mostly obtuse and abruptly mucronate or mucronulate, sometimes with a more conspicuous crest; the thin and more or less callous margins ciliolate towards the apex, at the least when young. Otherwise entire and glabrous; the upper surface green and nearly hairless; the lower glabrous and usually very white, striae with numerous nerves, which, except the central ones, fork or branch more or less above, especially in the broader and the obovate leaves. Flowers solitary in the axils of the leaves, small, half the size of those of the preceding species, on short pedicels imbricate with bractlets. Sepals, like the bractlets, oblong, very obtuse, minutely ciliolate, about a line in length. Corolla white, apparently white, about a line and a half long, the tube included in the calyx, about the length of the spreading triangular and acute lobes; these, in var. a (the original S. Tameia meine), are bearded inside with either a dense or sparse. Short, minute pubescence, which in some specimens from Oahu is almost obsolete, while in all the Hawaiian speci
(Var. B. of A. Macdanna, &c.)

mass of the beard is wanting. Brevity. Rarely the corolla exhibits 6 lobes; the actinum, as in the
tribe Valvata. Staminas inserted just below the
sinuses of the corolla; filaments about the length
of the linear gland anthers, which are fixed near their
summit. Disk cyathiform, 6 lobed. Every 5-
5-celled, pointed with a thick and tapering or conical
style of about its own length; stigma obsolete. Ovules
politary, more or less, Drupa globose, 2 to 3 lines in di-
dameter, red or purple; the perianth thick and long,
about 6-7-celled; some of the cells often abortive.
Seed oval, with a very thin testa.

The specimens of var. B. from the Society Islands,
from Hawaiian states of this species; although the leaves
are mostly narrower and more linear; each side of the
corolla usually bears for 2 to 4 or 5 minutes in
place of beard. Probably this, rather than the fore-
going species, is the Tahitian Plant mentioned by Dr.
Boenn. (Prodr. fi. H. vi. 1806. p. 539); and to our var. P. is likely
to belong both the Sandwich Island species to which he
alludes. The foliage is so polymorphous that different
forms would at first sight undoubtedly be supposed to
be referred to different species, but I have no doubt that they are here justly combined,
and that the beard of the corolla in this case furnishes
no reliable character.
3. Gyathodes Tamianum
4. *Cyathodes Douglasii*, S. M.

_C. fruticosa; foliis suberectis oblongis acuminatis cuspidatis, margine plumosae bistripendulae ciliatis subtus pallidioribus glaucis 5-9 meribus, nervis papillis simplicissimis, sepaliis bracteisque atros othosis ciliatis, costa tuto calyceum aquante, lobis in tibus barbatis, style subulate ovario serboculare amplius bis terre longiore._

**Nov. 3.** *Struthiolaides; foliis erectis lanculatis acutis oblongis; sepaliis acutis._

_Nob. (Sandwich Islands, Douglas.)_ On *Mona* Loa and *Mona Kea*, Hawaiki, and in the mountain of the eastern part of Maui. On *Mona Kea*, in the region of butterflies and in the mountains of Hawaiki (the latter without flowers or fruit).

A low shrub, apparently either upright or diffuse, resembling some forms of the preceding species; but the leaves (3 to 5 lines long, and a line or a line and a half long) are more erect, or sometimes oppressed, and imbricated oblong, tending to ovate or lanceolate, but not to obvolute, thickened, and acuminate into a conspicuous bristly crest, or almost armed; the acute margin ecabrous-ciliate or minutely hispid-ciliate throughout, at least when young, or above the middle; the lower surface pale or glaucous, but not so white as in the foregoing, 5-9-nerved usually 7-nerved, the nerves simple and straight, or the
exterior ones occasionally branched. Flowers axillary and terminal, about twice the size of those of S. lanceolata. Bractlets and sepals ovate, obtuse, or the latter inclining to acute, finely ciliate. Corolla about 3 lines long; the hyaline trunciuous tube as long as the calyx; the limb ciliate. Many lobes beaded inside, usually 3 or 4, as also is the throat. Stamens disk, 5, as in the preceding. Filaments free, tapering into a puberulous style of twice or thrice its length. Style glabrous, or somewhat deflexed, red, 3 or 4 lines in diameter, some of the cells often suppressed.

The var. P. is apparently lower and more slender, with the leaves commonly more appressed, and the sepals acute. Of the corolla only vestiges remain on the summit of the fruit; the lobes or the throat more or less beaded. It appears to pass insensibly into the ordinary forms of the species.

Some of the specimens here combined accord with the S. Banksii, so imperfectly characterized by Benth., and suspected to be closely distinct from this S. Macrantha; for, although the leaves are more or less erect and the glaucous white beneath, they are scabrous much ad ciliatae or serrulatae ciliatae on the margin and the purplish spots mostly very conspicuous. The nerves also are commonly simple; but this character is not constant. Still the larger flowers and larger style should distinguish the all forms of this from the preceding species, unless that is even more polymorphous than I have supposed it to be.

The above M. = B. indica var. Hele光辉 in Borneo, sec. 32, No. 10 (1859).
5. Lissanthie, R. Br.
1. Lissanthie subulata, R. Br.
2. Lissanthie daphnoides, R. Br.

Sth.B. New South Wales, in the vicinity.

b. Leucopsogon, R. Br.
1. Leucopsogon Richeri, D.B.
2. Leucopsogon multicus, R. Br.
3. Leucopsogon ericoides, R. Br.
4. Leucopsogon virgatus, R. Br.
5. Leucopsogon microphyllus, R. Br.
7. Leucopsogon compressus, R. Br.

Sth.B. New South Wales, in the vicinity of Sydney, Wolleming, 85.
7. *Leucopogon appressus*, R. Br. & C.

Hab. Port Jackson, New South Wales


Hab. D'Urquhart Islands, New Zealand.


Leucephorion Vitimensis, sp. nov.

1. glaberrimus; caule forticoso erecto; folis lanceolatis

utrinque attenuatis, calloso-apiculatis, concoloribus leviter

nervatis, margine levibus; spicis axillarisibus, bracteosis

paniculatis; sepals traequilisque nudis; styllo glabro;

drupa obtusa 4-5 loculari, disco crasso excavata

formis imposita. Demum elarum (285, vir Labill.


Tab. Fiji Islands, ut Labill, Sandalwood

May.

A shrub, 6 to 8 feet high, erect, glabrous throughout;

even the branches in inflorescence scarcely pubescent. Leaves
crowded throughout the branches, 1/2 to 3 inches long; char-

taceae, coriaceae, lanceolate, tapering toward both ends,
especially toward the apex, which terminates in a slender callus

joint which is often obovate-cordate, pale green, of the same

hue both sides, but dull underneath, minutely nervose-

striate under a lens, and marked above with 5 evident

impressed nerves, which are seldom apparent underneath.

Plum or nearly so, the margins smooth and entire.

Spikes axillary, very short (the squamous rhachis 1/2 to 3

lines long, 3-6 flowers, sepals and the pair of bract-

lets naked and smooth; on the margin very obscusely

ciliolate, broadly ovate, persistent. Corolla scarcely

twice the length of the calyx; the lanceolate oblong lobes

as long as the tube, Valvate in ostivation, villous-tipped)
inside. Stamens 5, included, inserted in the throat of the corolla; filaments nearly the length of the stamens; anthers ovary ovoid, 5-celled; style glabrous, short. Drupes obvate, dry, 4-5-celled, or by suppression one-celled, with a single seed in each cell; the disk and receptacle becoming enlarged, fleshy and clavate, so as to raise the mature drupe beyond the persistent calyx.

The species of this genus, \( L. \) *hypophylla*, latera, inhabits New Zealand, while another occurs in New Zealand.

This is the only truly Polygynous species known, excepting \( L. \) *cymbula*, Latr., of New Caledonia. Three species are known in New Zealand; one in Borneo, another in Malacca; the rest, about 100 in number, are all Australian.
7. Monosteca, R. Br.
1. Monosteca elliptica, R. Br.
2. Monosteca septaria, R. Br.

Hab. New South Wales, in the vicinity of Sydney.

8. Trochocarpa, R. Br.
1. Trochocarpa Laurina, R. Br.

Hab. New South Wales, in the vicinity of Sydney.

1. Epacris pulchella, Cav.
2. Epacris microphylla, R. Br.
3. Epacris longiflora, Cav.
4. Epacris obtusifolia, Smith.
Itar, New South Wales, near Sydney. Of the last named these are two forms in the collection; one with broader ovate-oblong or oblong-lanceolate leaves; the other with narrowly lanceolate leaves and smaller flowers; apparently quite distinct they are united through the ordinary states of the species.


Hab. New Zealand, at the Bay of Islands.


Hab. New South Wales, probably from the neighborhood of Sydney.
10. Sprengelia, Smith.

1. Sprengelia incarnata, Smith.

Hab. Hunter's River, New South Wales; the ordinary form, and the var. longifolia.


1. Primula americana, Hook.

Primula americana, Hook. f. p. 96, t. 30; Hook. f. ed. i. p. 103, t. 53; pub. 1849.


Hab., Orange Harbour, Zangia, growing on the base of the trunks of trees on which the plant creeps, ascending to some height.

The only American representative of Euphorbiacea; and said to imitate true Eriocaceae in its two-celled anthers, as well as Byrsonima staminata. Although the flowers of our specimens are too far advanced for deciding the question, I suppose that the anthers are bilocular rather than normally bilocular.


1. Dracephylleum secundum, R. Br.

Hab., New South Wales, in the vicinity of Sydney.
2. Dracophyllum latifolium, A. Cunn.

A. Cunn. t. 67; Hook. f. t. 184.

Habit. Bay of Islands, New Zealand.
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R. C. 1100 for your market, March 15th and 16th Inst.

M. C. 1 case to L., March 31st, 1857.
 brag }
Symplocos, Jacq.

(Var. ----)

1. Symplocos (Hypea) spicata, Roxb.

Var. B. subintegerrima: spicus sepe contractis; folis plerunque sub-integerrimis, formos in partifoliais 2-3-polllicarisbus, in grandiolis 6-7-polllicarisbus.

Hub, Hecjoe Islands, at Sandalwood Bay, 45.

This was also collected by Dr. Seemann, and both with nearly entire and with serrated leaves, so that he without question refers it to the Indian, Smith, Chinese, and Archipelagic Symplocos spicata. I see no sufficient differences to justify a contrary opinion. But our specimens are mostly entire leaved or nearly so, and like Seemanns incline to have
abbreviated in florescence. They show a great variety of forms, of which the best marked are: 1. One with ceniaea less-veined leaves only 2 or 3 inches long; 2. Histo longer, thin membranaceous, entire leaves, and the florescence rarely exceeding the petiole, probably growing in deep forest; 3. Histo large, oval, scarcely acuminate, subcoriaceous leaves, from 5 to 7 inches long. These three forms were figured by Mr. Rich, who probably regarded them as distinct species.

Plate 1. Symplocos spirata, Rich. var. subintegrifolia, Form 1.
   A. Form 1.  B. Form 2.

Plate 2. Form 3.
1. Symphysor (Stipea) candida, Wall.

Hab. Luzon, on the Magaipai Mountains. Accords well with Drs. Tricker and Thomson's specimens from Khasia and Chittagong.
Navicula, Berth.

Char. auctus. Calyx 4-7 fidelis. Labri triangulares, ovatis, estivatione leviter imbricatis. Petala labri calycis numero aequalia, hypogyna, digerulata, ut longa, utrique serico pubenta, estivatione contorta imbricata, decidua. Stamina numero petalorum dupla rapae, vel popus trippla, aut tripula, ab is libera; filamenta plana, linearia, basi glabra in tubum, disco hypogyno exulpi formi teneri ad natum, moladels pha, suprapetala libera in tubo barbato villosisima, apice alato, antheram bi locularem (loculis longitudinalibus, dehiscentibus) introrsam feri basi fixam gescentia, Pollen globosum. Ovarium ovoidum, basi lata sessile, 3-4 locularis: Style columnaris: stigma pollinato apice depressum, 3-4 radium. Ovula in loculis gemina, angulo centri prope basim insita. Collateralia, ad ascendente, subaequalis, microphylla supera. Baccar globosa, 3-4 locularis. Semina in loculis abortis pilariis, varias bina, pollinat; adnexa undentia, postea levi chartacea; hilum lineari chalaza magna basilari proximo; Maple brevisima. Albumin nutatum. Cotyledones carnosae, planae, convexus, subovulares, sinu profundo cordatae, radiculam gracilem superam profuso includunt.
Arbuscula globella; folius simplicibus integris, alternis oblongo-ovatis, angustiore lanceolatis; stipulis multis; pedunculis axillarisibus multo floribus, fructibus cymosis, fruticosus forte polygamus.


1. Navara Amicorum, Berth. (Tab. 1)

Two specimens from the Fujiu Islands, mostly in fruit, having been placed by Mr. Rich in grey, and figured apparently as a species of that genus, had escaped my attention until after the publication of the first volume of this work, in which this remarkable plant was described. The new material, although scanty, afford the means, so much desired of completing the character of Navara, which, as revised, are accordingly given above. As respects the flowers, the only thing to add is, that in these borne by a small cyme in an otherwise fruiting specimen's branch, the stamens, mostly 10 in number, are only twice as many as the petals, and are nearly of uniform length. These specimens are otherwise so similar that I cannot suppose them to belong to a second species; but, as the anthers are smaller and contain little pollen, it is quite probable that there is at least a polygamous tendency in the flowers, and that these belong to the same fertile plant. The fruit is a globose, apparently rather dry berry, of 4 or 5 lines in diameter, stipite by
the small persistent calyx, 3-4 celled by their dissepiments, which probably are sometimes fertilized, 3-4 seeded, or by abortion even one-seeded; sometimes two seeds are fertilized in the same cell. Seeds oval, 3 lines long, smooth, destitute of any arillus, ascending from near the base of the cell, sessile, the linear hilum attached directly to the axis of the fruit, without any funiculus; testa chartaceous, or perhaps somewhat fleshy, its base occupied by a large circular chalaza, which is connected with the hilum by an extremely short stalk; the hilum extending from near the base almost to the middle of the seed. Inner integument of the seed a little fleshy? Albumen more. The embryo seen is apparatus, not quite full grown; it consists of a pair of broadly oval or almost orbicular, plane, convex, fleshy, plane, petiolate estylobous, which have a deep sinus at the radicular extremity; the slender and rather long radicle wholly retracted within the sinus, superior, remote from the hilum.

The whole structure of the seed and embryo (corresponding with those of most Trichiliaceae) manifestly con-

firms the relationship of this genus to the Meliaceae; and the discovery that the stamens are sometimes only double the petals in number, reduces the flower to the type of that family. The hypogynous disk equally


Plate Navarre Anicinana.

[Signature and the Plate]
Ord. Sapotaceae.

1. Lucuma, Molina.

1. Lucuma Valparadisoa, Molina.


Hab. Chili; in high ravines near Valparaiso.

(\textit{in flower}).

2. Sapota, Plumier.

1. Sapota Parviflora, Apt. S. B.


Hab. Phillippine Islands; in the mountains of Bani, Luzon.

The leaves are rather broader than in Cunningham's specimen, and more rather Coriaceae; indeed they are hardly membranaceous in Cunningham's plant.
L. Sapota? pyrulifera, sp. nov.

L.? glabra; folis oblongo-lanceolatis utrinque subacuminatis subcoriaceis pallidiis transversim venosis; calyce quinquangulato; fructu pyriformi fere plano pedicello paullo longiore semine unico robusto turgido repleto.

No. Ovalau, Heeje Islands.

The specimens bear fruit only. The leaves, as also the branches are entirely glabrous, oblong lanceolate, somewhat pointed at both ends, 3 to 5 inches long, barely an inch and a half wide, on petioles of 5 or 6 lines in length, pale, rather coriaceous, entire, transversely veiny, with slender and inconspicuous nearly straight veins, the veins to minutely reticulated, at the margin confluent into a manifest false vein. Pedicels about 4 lines long, minutely fimbriate, mostly solitary in the axil. Flowers not seen. The persistent calyx, barely 2 lines in diameter, five-parted; the segments ovate, incised, ciliate. Fruit pyriform, half an inch long, the pericarp fleshy but thin in the dried specimens, succulent, and filled with the single turgid ovulate seed. This is erect, 5 or 5½ lines long, the sides somewhat flattened; the testa very thick, long, smooth and shining; the base acutish; the elongated and somewhat oblique hilum occupying nearly the whole central face of the seed. Embryo in the axis of fleshy albumen, cotype dors broad and thin; radicle inferior.

*P. glabra; foliis oblongis sero obtusato oblongis obtusi vel subsecus basi in petiolum longissimum alternatis subcoriaceis reticulatis; fructus subsecius globosus 3-4 sperno.*

Tab. Ovalum, Fejee Islands: along the coast.

This is said to be a "Marble, about 12 feet high, with a large, open, pessile fruit." The flowers are unknown; even the calyx has disappeared, fallen from the base of the fruit. The leaves resemble those of the preceding species, but are larger (4 to 6 inches long and 1½ to 2½ inches wide), either oblong or obtuse-oblong, obtuse or rounded and retuse at the apex, the base tapering into a petiole of an inch or more in length, the somewhat shining surfaces more reticulate-veneared. The fruit is spherical, bacca, about an inch in diameter, and (three-four-seeded) seeds oblong, somewhat compressed, the smooth and shining long testa scabrid with a linear sulcate hilum occupying nearly its whole length. These examined are empty, the plant is referred to *Sapota* from its resemblance to the preceding and the following species.

On Vanuatu-lene, another of the Fejee Islands was gathered a specimen, apparently of another Sapotaceous plant, with oval and obtuse, coriaceous, obscurely transversely veined leaves, and short pectiform peduncles as long as the pedicel (an inch or more in length), and vispid of an oval, apparently 2-seeded fruit. The genus is not determinable.

1. foliis elliptico-oblongis oblongis, basi acuti, segmentis transversum venosis et reticulatis prorsus glabris, novillis ramosissimis patelliformibus seu abidio transeuntibus tomentosis, petiolo gracili prorsus dicellis languide; floribus pentameris; corolla glabra calycem lobis crassis acutis supersonibus pedunculis ad staminibus stamillibus spatulis lato-lanceolatis cum fructibus subinclusis; ovario 5-loculari.

- Var. a. foliis obtusissimis 3-6-pullicariibus, petiolo sericeo sesquipullicari.

Var. b. foliis 1½-3-pullicariibus sericeo acutiusculis.
Hab. Sandwich Islands, a bush on the Kauai Mountains, where it was also collected by King, in fruit, as are our specimens, Var. B. Lavaui and Hawaii (the latter mostly with acute or acutish leaves), in flower and with young fruit, King.

A tree said by our collectors to be 30 or 40 feet high; the nascent shoots and foliage finally terminate close, with the close and fine down either reddish firm-glaucous or whitish, usually the former; this wholly deciduous from the older leaves, which are glaucous, and the upper surface shining, the texture coriaceous, but thin. In the large lead form, the variation in the manner of S. costata but with the primary veins less strong. Pedicels solitary or fascicled in the axils, 4 to 6 lines, or in fruit an inch in
length. Calyx 5 parted; the divisions ovate-oblong, rather obtuse, minutely pubescent. Corolla campanulate, glabrous, 5 cleft, entire. Anthers ovate-sagittate, mucronate. Ovary surrounded by long villous hairs, and above clothed with a finer pubescence, 5-celled, with a single ascending style in each cell; style short and thick. Fruit a globose berry, resembling a small apple, an inch or more in diameter, ripening two or more thick seeds; the scar broad and occupying almost the whole length of the ventral edge; testa very thick and hard. Embryo in the axis of the fleshy albumen, which is almost divided by the broad and foliaceous albumen; radicle inferior.
It is possible, but not probable, that the smaller-leaved specimens, which have supplied the floral characters, may be of a different species from the larger-leaved and frutiferous ones. The plant butt forms mentioned in Dr. Pickering's printed notes belong pretty clearly to the same species.

* The plant from Kauai, mentioned in Dr. Pickering's notes (Distribution of Plants, p. 403) in connexion with the preceding, proves to be a Hylaea, which was likewise collected on Hawaii by Hrn. F., Sandesi, etc. In Gray in Proceed. Amer. Acad. 5. p. 188, most probably it is a mere variety of H. marstedii of Tahiti, connecting with H. orbiculatum.
Sessalia, R. Br.

1. Sessalia glabra, sp. nov.

D. folis ovatis, oblongis basi attenuatis, coriaceis glabris, venis reticulatis; pedicellis in axillis fasciculatis petiolo supple lungoibus, corolla calyci subsericea, pubescentia longissime campanulata quaque fissa glabra, lobis retinundatis filamenta sterilia subulata multo superantibus style gracili equalibus aequilongis.

Hab. New South Wales, near Worthington.

There is a specimen of the same species in the Stockerian herbarium gathered by Backhouse; and a related one from Fraser, which is perhaps the Sessalia laurifolia of A. Rich. The description as well as one from Cunningham, named Allomusca mossirioides, which may be the same thing. In the present plant, the leaves are oblong-oblong or elongated-oblung, from 2 to 4 inches long, either somewhat pointed or obtuse, sometimes cuneate, tapering at the base into a short petiole of 2 or 3 lines in length, rather thin, but coriaceous, reticulate-virgin, somewhat shining, glabrous, as are the branchlets. Pedicels 2-3 in axillary fascicles, 2-3 lines long, minutely hairy. Sepals 5, particularly strongly imbricated, two of them exterior, minutely silky-pubescent, 2½ lines long, or Corolla campanum, little shorter than the campanulate glabrous corolla, the broad and rounded lobes of which are scarcely half the length of the tube, two of them exterior in aestivation, the innermost smaller than the others. sterile filaments 5, alternate with the lobes of
the corolla, much shorter than they, inserted just below the sinuses. Fertile stamens, opposite the lobes of the corolla and inserted lower; filaments subulate, rather shorter than the subsagittate mucronate anthers. Ovary villous, five-celled, much shorter than the columnar and slender style which is glabrous and as long as the corolla. Stigma truncate, obscurely five-lobed. Fruit not seen.

1. *Isomandra* : Richii, sp. nov.

!; undique glabra; folis chartaceis ovatis apice

acutius acuminatis; petalis lanceolatis acutis; filamen-

tis glabris; calyce quadrifido.

Hab. Tangutana.

The imperfect specimen is named, "Bassia

retusa, m. sp." by Mr. Rich in the collection. Then

only a single and imperfect corolla is extant, with

which to determine the genus. As that appears to be

four-crested, like the calyx, and with fertile stamens

in the sinuses as well as before each lobe, and there

are no appendages, I refer the plant to *Isomandra*

notwithstanding the bearded filaments. The rather

thinner leaves are about 3 inches long and 1½ to 2 wide,

transversely veiny, in petioles of 6 or 8 lines long.

Flowers fascicled, apparently not crowded; the pedi-

cels (4½ to 5 lines long) and the calyx glabrous. The

latter is four-crested to the middle, and two of the

lobes are wholly exterior and a little larger than the inner ones. Corolla probably little

larger than the calyx. Style after flowering half

an inch long.
1. *Bumelia excelsa*, Affl. & C.


*Nat.* Brazil; on the coast near Rio Janeiro.


11. *Bassia Amicorum*, sp. nov.

13. foliis obovatis plano ovalibus petesis glabris viridibus; pedicellis elongatis; corolla glabra ex parte; calyce brevissimo plus duplo longiore; stamina 18; filamentis subulatis filiformibus anthoris linearis- sagittatis cuspidatis subaequilongis.

*Nat.* Tongatabu, Friendly Islands; on the shore.

The materials consist of loose flowers and leafy branches; the former probably picked up under the bee. Leaves glabrous, as are the stem branches, 3 to 6 inches long, and with pedicles an inch long. Inflorescence, oblong or nearly oval, with an acutish base, and a rounded, more acute apex. Vining, loosely reticulated, light green, rather
drill, entire. Pedicels 2 inches long, slender, silky-pubescent, as is the calyx. Pedicels 6, in two series, round, acute, scarcely half the length of the six-petaled, glabrous corolla; the segments of the latter lanceolate, half an inch long, destitute of appendages. Stamina 18, all fertile and of about the same length, but those answering to the sinuses of the corolla inserted rather lower down. Filaments puberulent, filiform, anthocyanous, linear-sagittate, cuspidate, pointed. Style hairy, about 3 lines long. Style filiform, an inch long. Ovary silky-pubescent. Fruit unknown.

Mr. Rich supposed this to the Fosteri's Brevia, or Doveta, from Jamaica. But on a careful comparison of specimens I find that Fosteri's Plant has the leaves less winged, more tapering at the base, and somewhat pointed (instead of rounded and retuse) at the apex; the pedicels shorter; the flowers much smaller; and the corolla, probably much more narrow, six-lobed, is pubescent on the externally.
1. Minusops Tolengi, Linn.

Hab. Mangri Islands, in the Solom. Sea.

2. Minusops dissecta, R. Br.


Hab. Tongatabu.

The specimens, mostly with forming fruit, furnish an addition to our knowledge of this species, nor do I find that any notes were made on the living plant; which is undoubtedly the same as Forstes.
Minusops subsericea, Mart.


Not. Rio Janeiro, Brazil. (With young fruit.)
Euphorbiaceae.


1. *Diospyros maritima*, Blume

2. *Diospyros saposta*, Roxb.?

*Hab.* Small island in the Pacific Sea. Notta in fruit only.
3. *Diospyros Samoensis* P. M. Verdcourt

*D. ramis puberulis*, six puberulis; folis glabris obtusis oblongis, obtuse acuminatis basi acutis; pedunculis masculis 3-4 floris, femineis stelariis unifloris pedunculatis in aquae subaquantibus, calycis quadratis, frui puberulis, libris obtusissimis, femineis staminatis inter basi et quasi coronatis corolla fructu quadrifido equilibrii; staminibus, ovario hispatis peltocarvi, fructu globo.

Nat. Tutuila and Savaii, Samoan or Navigators’ Islands: “in woods and also sometimes planted.”

A middle-sized tree, the branches pendulous when quite young, from glabrous. Leaves ovato-oblong or oblong, alternate, 3 to 6 inches in length, 1 1/2 to 3 inches wide, chartaceous in texture, rather thin, the base loosely veined, conspicuously but actually acuminated at the base; the petiole nearly half an inch long, male flowers either in threes at the extremity of a peduncle of the length of the petiole, or in two or three fascicles of three or four partial peduncles, borne on a common peduncle of an inch in length. Pedicels short. Calyx form a cleft nearly to the middle, 2 to 3 lines long, silky-pubescent, the lobes very obtuse. Corolla silky-pubescent outside, about twice the length of the calyx, form a cleft; the lobes contorted in estimation, “yellow.” Stamens 8, anthers slender, cuspidate; filaments glabrous. Female flowers solitary on short peduncles of nearly the length of
the petition, considerably larger than the male flowers; the lobes of the calyx reniform, somewhat auriculate at the base, as long as the tube, which is produced into a short and rounded process or cornu before each lobe. Cilium nearly as in the male flowers, but apparently not larger than the calyx. Stamens 8, as in the male flowers, but smaller. Ovary minute, eight-celled, with a solitary ovule suspended from the summit of each cell. Stigmas very short, 4 or 5, slightly two-lobed. Fruit globose, an inch in diameter, short-peduncled. Seeds 4 or more, perhaps 8, smooth, half an inch long, convex and slightly one-grooved on the back, the sides flattened, the inner edge acute. Caryopsis about more than half the length of the albumen, hard albumen: the radicle longer than the flat cotyledons.

In aspect this species a good deal resembles P. Philippinensis. Apl. DC., but it is quite distinct in its characters. I have only a single female flower to examine.

1. Mata elliptica, Fort.


Not Friendly or Tonga, Samoan or Navigator, and Fijiian Islands.

Dr. Pickering recorded but one Mata at Tongatabu, and that the same as the one from the Samoan Island. I conclude therefore that M. major is probably one of the forms of M. elliptica, with a larger fruit. This species varies with breadth, leaves broadly elliptical or oval, narrowly elliptical or oblong, to lanceolate, oblong and acute or even acuminate.
The latter, gathered by Brackenridge on Tutuila, is noted as perhaps a second species; but the male plant which alone was collected, does not otherwise differ. Our plant from the Feejee Islands is (so far as can be determined from a specimen in fruit only) differs only in the entire want of pubescence even of the most patent leaves. Dr. Seemann's no. 295 is the same, with slight traces of the caducous pubescence, and I suppose his no. 296, is a broad-leaved form of the same species; which may also include his no. 297. But Dr. Pickering's notes indicate other species in the Feejee Islands.

M. folis emunctis lato-ellipticis utrique nitidatis basi cuneatis invisa sem sepolcatis glabatis, ramulis cum ramulis fructibusque oliviformibus ferrugineo-tomentosis pedunculis fructiferis brevibus uni-trifoliis, calycce tribul.

Hab. Muthnata and Ooluna Feejee Islands, in deep woods, at the altitude of 2000 feet.

A shrub, 10 to 15 feet high; the branches densely leafy, fuscous (mentose when young, leaves an inch or little more in length, 9 or 10 lines broad), rounded or even subulate at the summit, cuneate at the base, the sinuses as deep as the very short pedicel, so that they appear as if
3. \textit{Maba Sandwicensis, A.B.}

\textit{M.} foliis lato-lanceolatis obtusis, sen ovatis, auriculis eviracis, pullidis usculoso-reticulatis glabris,无数
\textit{M.} ramulis floribusque extus sericeo-pilososis, floribus in axillis subsecundulis, masculis 15-17-anthi
alto foliis calyce subglabris, floreis \textit{M.} fructu ovale calyce breviter triloba
\textit{M.} stipitate, \textit{M.} foliis aut none
utrique acutiusculis vel obtusiusculis, nume basi retusatis, nume utrique aut undatis, basi retusis.

Maba Sandriiensis, A. DC.

Prof. 8, p. 1242.

Scleropomma diurnum, Nutt. in Herb. Stock.

Stuf., Sandwich Islands; in the mountains behind Honolulu, Oahu, Lay and Cuttie, Sandichund, (no. 470) Mulato, Kine, 45. Hawaii, Kine, a variety with remarkably rounded-oval or ovate-oblanceolate leaves not use at the base.

Our specimens have fruit only on a large-leaved form, and I have examined male flowers buds from specimen collected by Schumann and Penny (470); the female flowers are still a desideratum. The leaves vary greatly...
 singly in shape, and in size from 1/4 to 4 inches in length. Flowers (male) either single or 3 to 5 in a nearly spirally axillary cluster, silky-fissitate; the divisions of the sub-globose calyx broadly ovate, obtuse, imbricated more or less in aestivation. Corolla in the bud not exceeding the calyx, and, three-parted, the divisions imbricated in aestivation, or in some flowers I believe coalescent. Stamens 15 to 17, hypogynous, short, surmounting the villous rudiments of an ovary; anthers oval, flattened, maginate at both ends, almost imbricate. The fruit accords with Berkeley's description; it is silky, hispitate becoming glabrate, the thin pericarp filled by a single, oblong and tendril seed, embryo not half the length of the hard albumen; cotyledons oval, much shorter than the slender steeper radicle.
Embryos not half the length of the hard albumen. Styles longer, not much shorter than the slender superior radicle. The ovary is the fertile flower is still a desideratum.


Stam. An a small island in the Torres Sea.

The specimens, in fruit only, have rather larger leaves. Cunningham's plant is described as having, the persistent pedicules are much shorter than the three-lobed calyx. Fruit globular, about 5 lines in diameter, three-seeded. Seeds oblong, triangular, with the back rounded. Styles very much shorter than the slender radicle. It is perhaps M. formata, R. Br., and too near M. brisipedia.

3. Cargillia, R. Br.

1. Cargillia australis, R. Br.


Stam. Sydney, New South Wales.
Ord. Loganiaceae

1. Spigelia, Linn.

Schlett.

1. Spigelia Beurlachiana, Blume.

Stab, Brazil, near Rio Janeiro.
A single and very imperfect specimen.


1. Mitrasaceme Capillaris, Wall.

2. Mitrasaceme alsinoides, K. Br.

3. Mitrasaceme polymorpha, K. Br.

Stab. The first was gathered in Luzon, near Marinduque, the second at Hunter's River, and the third at Sydney, New South Wales.
3. Buddleia, Linn.

Of this genus four well-known species were picked up, viz. Budleia Americala Linn. at Lima; B. globosa Lam., at Santiago, Chili; B. Brasilicensis at Rio Janeiro; and B. Madagascanicus, Lam., at St. Helena.

4. Geniostoma, Hort.

Blume is, the only author who (long ago, under the name of Haemospermum, Reineck, and more recently, in Mrs. Bot. Lugd.-Bat.) has correctly described the internal structure of the fruit in this genus. I have not seen the Mauritian specimens, but all the Polynesian species examined have their seeds immersed in the pulpy placenta. The pulp dries up after dehiscence, so that
The seed, come to view although still covered with a pellicle which confines them in a mass; and when soaked in water, the pulp swells again, and conceals them. The fruit, yet when detached must have made the appearance of that of Oelasmus, which is said, when the seeds are concealed in the pulpy ovillo, had Mr. Bentham noticed this he would have remarked.

* From the supplementary remarks added by Mr. Bentham to his review of the Loganiaceae in the first volume of the Journal of the Proceedings of the Linnean Society. I learn that Mr. Buscar has noticed and illustrated this structure in his inaugural thesis dissertating upon this group of Plants. I have not seen this dissertation, I do not find any regular stellar-like-like expansions of the placenta or separate or illiform portions surrounding the separately enclosing each seed (as in the case in Podophyllum), but rather a general pulpy development of the placenta, filling the cells of the fruit.
...and that it occurs in activation. Not absolutely, however, the difference between excitability and excitability. Activation is no more constant in this genus than in many others. It occasional flowers of the species have one side of the corolla wholly external, as in De-...
This species is pretty well distin-
guished from S. repastre by its
 sigmoid stigma, or pair of capi-
tate stigmata, and its more or
less triangular and pointed (instead
of directly truncate) stipules. The
sepals of the calyx are narrower, and
usually more pointed, but this is
a variable character, as also is the
villosity of the corolla. The petal,
are more slender, the blade of the
leaves from 1½ to 2½ inches long.

Plate. | Description a ligustrum

num. | Fig. 13, Unexpanded flower, from a
cultivated specimen. 14, Longitudinal section of
an expanded flower. 15, 16, Stamens. 17, More
magnified vertical section of the pistil, with the
calyx. 18, 19. Fruit, of the natural size.
19, Placentae with the imbedded seeds, after soaking.
20, Transverse section of the same. 21, A detached
seed. 22, Vertical section of the same. 23, The
embryo. | Variously magnified, except fig. 18.
2. Geniostoma rupestre. Fast. (Tab.)

6. stipulis recte lanceolatis, stylo
nume brevi nume elongato, stigma glabro, demique obovo-
inte
cratero, fructu ovali. St. var, et glabra, foliis 1/1-3/1, pollie glabro, ped.
capo: lanceolato, stylo distincto. Geniostoma rupestre. Fast. & dianies
Cam. 7, 12 (passimum), 4 Pr. D. 1717; Hwang. Bug. il., p. 181, 88,
i.e., Memb. i.e.

Var. B. ellipticum: glaberrimum,
foliis elliptico-ovalibus seu
labo-oblongis utrinque oblongis
vel oblongissimis nume evanies
nume submembranaceis, fructu
ovali-oblongo vel seu ovali-
subgloboso,


Testim. Var. B. glaberrimum
ex d. H. Sander. Insul.
Var. V. Macrophyllum: glaber-rimus; foliis ser membranaceis, 4-6-plicariis, ovati-secu-tato, oblatoque pl. in acuminatis; calyceis lobis setis latioribus bevisibus obtusis; stylo stigma-tate glanduligine; cat. var. 3.


Var. S. Puberulum: ramosis junieribus costaque foliorum (inter-dum variis pagina inferius) refu-

sem fuliginoso. Puberulum; foliis setis pappitissine oblique-lanceolatis acutis vel acuminatis basi obtusis vel rotundatis 3-6-plicariis; stylo ramoso brevi murro bevisissi-

mo; fructu ovoideis.

Strenuissimum arboreum. Strenu.
*Blume, Big Dr. p. 1018*

Semionoma Homospernum, Blume, Bot. in Neud.; 16, c.c.; Blume's, Blume, Bot. Leg.; Bot. 1, p. 238; Mieig. 2d. 2d. 2d. 2d.

3. crassifolium, Branth, c.c.

form. crassifolia?

*Cardiocala, Blume, Mus. Bot. c.c. p. 468.*

1st, Feejee Islands (var. a.) Var. B. Sandalwood Bay, Vavava, level. Tonga table, Mountains of Tutuala. Samoan Islands. V. Samoan Islands.

S. Vavava, level. St. Feejee Islands; also gathered at Patsima, Friendly Islands. By Prof. Harvey.

These widely diverse forms cannot be distinguished as species, but must all be referred to *Foetidus* A. nuprestre. In most of them, however, he found the "Stylus laxus" villous" mentioned by Strepsel, but this he probably took from *Foetidus* figured, where the hairs are as adherent as surrounding the ovary. In fact,

*If we may rely upon Miquel's flora, and if Blume's plant really has a "coneduline production," like that figured for *E. montanum,* then these synonyms must be explained. But Blume does not so describe the station.*
They belong to the corolla. Forster's figures are stated, though insufficient to identify the species; are unetched, and in several respects accord neither with his own character, nor to either of them with Brougel's description from an original specimen. Forster's "Aegon fili," Brougel's "S Onis tubi largior" answers to some stages of the species. Brougel's "Aegon" describes to others, and to Forster an figure. But Forster's "S Onis expandidenum" is totally at variance with all forms of the plant, and also with his own figure, with which Brougel's "S Onis capitatum, pubescens, subumbellatum," agrees. The stigma is in fact globule, at first even depressed, globule, but after anthesis becoming somewhat obvolute or turbinate. There is nothing answering to the appearance of four parallel ridges as delineated in Forster's figure. Forster describes and delineates the tube of the corolla as much larger than it is, which has caused the genus to be
characterized as having a somewhat
funnel-shaped corolla, while Spruce
calls it "pubrosaica parapetalata."
It is really between campanulate
and rotata. The pendulousness of the
upper face of the lobes is variable
and sometimes wanting. The villous
cilia in the throat, sometimes elusive,
is often reduced to a tuft at the in-
duction of the short filaments, or
even upon them, as in Blume's
1, basiostemon. The lobes of the
calyx vary from triangular-subsac-
date to triangular-ovate, from very
acute to obtuse or oblong. The cap-
sule varies from globose, oval to ob-
long; from 2½ to 4 lines in length.
Placentae and seeds as in 5, digressi-

calamus; testa, when the dried pulp
is rubbed off, minutely papillose. In
the flowers are said to be very petiolate, like that
of Calytrera; at least in some of the varieties.

Plate Seniostoma angustifolium, var. ellipti-

cum. Fig. 1. Portion of inflorescence. 2. Bud, and
flower, rose magnified. 3. Flower, the corolla re-
moved. 4. Venticell section of pome. 5. Section of a
flower with the corolla 6. Corolla and stamens
displayed. All the details magnified
much
of var. macropetalum, showing the shorter style.
3. Geniculata astylum, M. \\
5. glaberrimum; stipulis bifidis, \ntruncatis; foliis ovatis, sepulis \navatis; corolla in tubo glabra \narticulata quinquecentate; stamn \ninflores cento sessili; fructus \nnatores angusti oblongi.

Tab. Fabrili, Society Lands.

A single specimen only of 
this very distinct species is in the 
collection, bearing forming fruit, 
modified ovaries, and a few flower 
buds. In aspect, it resembles, the 
large-leaved varieties of G. sagittata, 
some forms of which having an 
almost sessile stigma and oval 
oblong fruit, might have taken this 
Fabrili plant with them, except for 
the chemists' differences in the 
flowers. The deeply 5-parted calyx 
has broadly ovate and obtuse, or
abruptly acutish, quinquenually inbricated divisions, and the corolla (which we have in bud only) is entirely glabrous, and its tube are quinquenially inbricated in the young examination. The stamens are likewise glabrous. The ovary is said has a tapering pumilium which is directly tipped with anerogular and nearly glabrous stigma. The forming fruits are 4 or 5 times long, somewhat fusiform, 2-celled, with a thin dissepiment; the placenta are beginning their fleshy development, and enclosing the forming seeds; but showing no separate carilliform expansions. Leaves about 4 inches long, and 2 inches wide, rather thin; pedicles 2 or 3 times long, bynes sessile, twice or merely trichotomous, loosely rather few-flowered. 8 "

Plate 12. [Handwritten text: "Genus... a stygium... Unmummied..."

Flower... Diagram of the quinquenial abortion... Centra and stamens displayed... 10, 11, Stamens... 12... Section of calyx and pistil in outline. All magnified..."
5. Labor dea, baudich.

Char. nov. Calyx quinquepartitus, sepae anguste oblongi, lobis persistentibus. Corolla subcoriacea, intus villosa; lobi tubo dimidio breviortibus aestivatione intorti. Stamina 5, faciei coriis inserta, lobis alternae; filamenta brevissima; antherae lineari-oblatae, dorsa supra basim affixe, biloculariae. Ovarium ovuliferum vel conicum, 2-3-loculare; stylus aut brevis aut elongatus; stigma elongato-clavatum, pubescentissimum. Ovula in placenta ecrassis numerosissimae, ambigua, ut parum adpressa, corneae capsularis ecrassivitis gemina in locis reflexis plagis, placentis pulposis nidulantis.
omnino, genistomalis, pedunculosis, eis sine triuncro. - Frutices
Sandwichenses, stipulis in vagina
ulnae intrapetiolarum carnosar:
inflorae unius terminalis eynsas
sepals unbelliformi, - Sect. 1. Byra
aperta, pedunculata; calyp
quam corolla multo brevior;
avium dimorum. (Inae Labord-
ane et genisostomia medium.) —
Sect. 2. Labordea nova, gym
semilis unbelliformi, contracta;
sepala foliacea, lacinia, ut
unconvex secutur subasperaraid.

The genus Labordea (as written
by Sandichand and de Candolle), or
Labordea (according to Barthamis'
more correct orthography) until
very recent recently only by the charact.
and figure in the Botany of
Expedition's Voyage. Judging
from the plate, Mr. Bentham from
suspected the estivation of the corolla
to be valvular, and the fruit to be
baccate. His conjecture as to
the estivation would seem to have
been verified by Mr. Bureau, I
have not seen the inaugural
thesis of Bureau, but Mr. Bentham,
in the supplement to his Notes on
Loganiaceae, remarks that "Mr. Bu-
reauan has been enabled to dissect
three flowers of this plant [Lobaria
(Lagascordia). He confirms the
presumed valvular estivation of
the corolla, but always finds
two cells only to the ovary, and
very plausibly suggests that the
three cells one examined by Saun-
ichandr was accidentally abnormal.
Now the present collection com-
promises good flowering Specimens of
a species which can hardly be other
than that figured by Sandichandr,
and fruiting specimens of another, nearly
related species, - thus revealing the real
affinity of the genus. In the flowering plant, the lobes of the corolla are distinctly, although narrowly, overlapping in the compound manner, and are slightly inverted (toward the observer's left). I can only suppose that the flowers, if examined by Busch, were too young to show the actinoid properly. In the fruiting plant, the fruit is actually bicarpellary. Moreover, the fruit is capsular, and similar to that of *Senecostoma*, except in being trimerous. *Labordia*, therefore, is nearly related to *Senecostoma*, from which, thus far, it would seem to be well distinguished by its habit (resembling *Gomphrena*), the long andfiliform division of the calyx, the tubular (instead of rotate-lanceolate) corolla, and the elongated (instead of globose or豆瓣状), stigma, and the terminal inflorescence. The bicarpellary ovary proves to be trimer-
a sublunary character, not being at all constant in L. sepulchra, and probably not in L. dicentra. But the same collection which has supplied this important information, also furnished (as Dr. Henry's later collection of later date) good specimens of a third species which almost exactly fill the interval between the two genera. For, with the general habit and foliage, and the dissepimentary part of Geniostoma, it combines the elongated corolla, the clavate stigma, and the terminal inflorescence of Labordeae. The last three characters, taken together, will surely outweigh the "roof" of the calyx, and require the acceptance of this ambiguous species to Labordeae under, indeed we name the latter genus in Geniostoma, which for the present would hardly be warranted. I commence the enumeration with this connecting species.

sp. nov. (Tah.)

1. Labordeae (Geniostomoides) tinifolia.
Also collected by Kenné in Oahu, Hawaii, and Maui, in flower and fruit.

A glabrous shrub, with rather branched, leprous, leaves obovate, elliptical, or lanceolate-oblong, 2 to 4 inches in length, 9 to 18 lines broad, chartaceous or thin coriaceous in texture, opaque, with slender and inconspicuous veins. Those of the upper face hardly visible, obtuse or acute at both ends, sometimes acuminate. Petiolar about half an inch long. Stipules short, vaginate, truncate, nearly free from the petiole. Peduncle terminal, about half an inch long in flower, about twice that length in fruit. Ovaries repeatedly three celled, rather loosely flowered; the divisions and pedicels slender.fruit, subulate, small.
Calyx deeply 5-lobed; the lobes triangular, ovate, acute, and acuminate, incurved in aestivation, coriaceous, persistent beneath the capsule, about a line in length, 

Corolla subcoriaceous, white or whitish?

Hyperactinifera, the tube pilose inside, 3 lines long; the lobes ovate, obsolete, bearded near within near the base, rather strongly Convolute, in aestivation. (Naturus line avolving. Style piliform, surmounted by an elongated, clavate, persistent stigma. Ovary 2-celled, ovules amphitropous, borne on the thickish placenta. Capsule globose, 5 lines long, wholly that of *Peniostra*, the valves very thick and cartilaginous, separating from the ovate didymous placentae, in which the obvate seeds are imbedded. Embryo cylinder, little shorter than the
Fleshy alburnum: Callot 1000 small. I suppose this to be the Geniostoma
maeasphallium var. glaberrimum. The specimen really came from the
Sandwich Islands. In fruit the present plant could be distinguished
from Geniostoma only by the terminal inflorescence. If referred to
that genus, the original Labordeea would have to follow it.

Plate Labordeea tinifolia,
in fruit, and, Fig. 1, a branchlet in flower.
2. Diagram of the ovary. 3. Flower.
4. Expanded flower. 5. Corolla and
stamens displayed. 6. Calyx and pistols.
7. Section of the ovary and calyx. 8. The
fruit, dehiscent. 9. Transverse section of the
bulbous placenta. 10. See. 11. Anther longitudinal section of the same, showing the
embryo. All the details magnified.
2. Labordeea jagrasidea, Gandich (Tab.)

2. glabra, pallida; foliis obvato-ellaginis, pedunculosis contractis in petiolum brevissimum, alternatis penninerviis subcoriaceis; cyma quasi umbellato-constricta; calyce fere 5-secto, sepals lanceolatis foliis acris mensus, tubum corollae adequantibus, stigmata elongatissimis subclavatis.

Labordeea jagrasidea, Gandich.


Nab, Woods, in the district of Puna, and near the crater duo in Teaka, Hawaii, Gandichand.

This, rather than the next, I take to be Gandichand's original.
L. abordea, because it is glabrous, and so will answers to the published figure of the plant, but the branches are more slender than in the Plate, perhaps from growing in deeper shade; and the sepals are not united to the middle as that I suppose to be a mistake of the artist. Moreover, the stigma is long and slenderly clavate (not conical as Sandwichum represents it; the style is long and slender, but than the ovary seems to be sterile, but in specimens with enlarging ovary it is only half as long as the stigma; the ovary is commonly only two-celled; but Mr. Bancroft finds it to be in the flower-buds of Sandwichum's specimen which he dissected. Finally our specimens were gathered on Hawaii, but those of the following species...
on Oahu, where Sandich and obtained his original plant.
If this should prove not to be the original *E. engraeidea*, it should be named *E. asclepiadea*.

The inflorescence is a true cyme, but much contracted; its short branches and the pedicels bearing slender, linear-subulate bracts, as in Sandich and's plate, fig. 1. The flowers are nodding in anthesis. Sepals almost distinct, 5, 2.5 to 3.5 mm long, filiacous, with a very narrow, hyaline, margin, lanceolate, some of them varying to linear or to narrowly oblong, narrowly imbricated in ovation. Cornicles at first as long as the undeveloped corolla, at length not longer than its tube. Lores of the corolla obtusely acute, becoming lanceolate with age. Their narrow and thin edges involutely overlapping in the bud.
which is erect, pointed, and slightly contorted, in anthesis
broadly spreading, half the length
of the tube, the inner surface some-
what bearded in the middle to-
wards the base. 
Ovule, as in
its allies, amphitropous. 
Fruit
not seen.

Plate. Labordea sagittata. Fig. 1. Diagram of the ascension.

1. Sessilis, sp. nov. (Tab. 2.)

3. Labordea pseudofolia, sp. nov.

2. foliis sessilis vel oblongis

petiolaribus oblongis latis
to sessisis crasso coriaceis,

junonis subae late hispinque

pubescentibus fusca hispidis, eap-

alis oblongo-lanceolatis; capsulis

ovatis pedunculatis tri-

valvatis.

1. Lab. Mountains behind Mono-

Lake, Owens; in fruit only.
Two fruiting branches and a young sterile branch only are

gathered of this plant, species. These are short, as in Sandwich,
and figure. But, besides the pubescence, on which small
reliance can be placed, the and the thick and rigid leaves,
the latter are sessile or nearly so. The sepals appear to re-
ssemble those of the foregoing species, but are less foliaceous,
and are prominent. Transtis-
ous peduncles shorter than the capsules, which are glabrous,
ovate-globose, over half an inch
long, the valves thick, towards
the summit carinate on the back,
and tipped with a point of the
style, in place to in dehiscence,
separating from the three engorged milky placenta,
which fill the cell, and, as in
Geniostoma completely enclose in their substance the numerous seeds. These are obvate, smooth, over half a line in length, with a cylindrical embryo, almost the length of the fleshy albumen. The plate represents the principal details. This species is interesting as demonstrating that a tri-carpellary ovary is not a mere accidental, abnormal state.

Plate 1. Labordeza sessilis:
1. Ovule.
2. Pericarp.
3. Filiage.
4. Fruit.
5. The same after breaking.
6. Transverse section of the ovary.
7. Longitudinal section of the ovary, showing the embryo.
8. Placenta in the fruit.
9. The same after soaking.
10. The same after soaking.
11. The same after soaking.
12. Longitudinal section of the ovary, showing the embryo.
Besides these, a specimen was collected in the forest on the slope of Mauna Kea, Hawaii, which is evidently a congener of the preceding species, but too imperfect for determination. It may be a variety of L. lagrevoides, with somewhat of the aspect of L. semilis. The branches are stout; the leaves accumbent, those in Sandwich Plate, but are larger, 4 to 6 inches long, membranaceous in texture, or petioles half an inch in length. The remains of one or two fruits upon the contracted umbelliform cyme indicate a two-valved, oblong, wide, compressed, pointed capsule, with thinner walls than in allied species, and a calyx with linear lanceolate or subulate divisions, only 3 lines in length. It would be rash to characterize a third species upon such materials, nor should I be justified in referring the plant to L. lagrevoides.
L. labenda fragariaea, L. rubra et aliae officinarum floribus et officinarum ostentatis.
5. Hagraea, Thumb.

1. Hagraea Batheriana, Gray. (Tab.)

Folia obvatis seu obovato-oblongis, vario oblongis, obtusissimis vel abrupte breviter acuminalis basi acutis vel acutiusculis in petiolum basis anguste contractis, ovario-coriaceis, venis pubescentibus vel attingente obtusis; cyme congesta trichotonis multis floris; corolla 5-6, more pallide aurantiaceae tuto superior leviter ampliato et 5-petalo longiore; stignate bilamellato!

Hab., Society Islands, in the mountains of Tahiti and Bimeo, Fauka, Upolu, Samoan Islands, Claudelwood Bay and Nukuhu, Tafiti Islands, in fruit; but flowering specimens have recently been collected by Professor Harvey.

A tall tree or shrub, with short branches.
Leaves 6 or 7 inches long, 2½ to 4 inches broad, of a thick coriaceous texture, perhaps somewhat fleshy in the living plant, oblong or oblong-ovate, to oblong or broadly ovate, with a rounded or somewhat abruptly pointed summit, and a tapering or barely acuminate base, the vein, obsolete underneath, but sometimes apparent on the upper surface. Petioles one or two inches long, their bases dilated into the short and thick stems.
Stipular appendage, Cymule ken-mind, corona raise, hyaline, trichose, masses and many flowers, or sometimes, smaller and rather few flowers. Calyx thick, half an inch long; the ovate-ovarical lobes quincunx-cinically imbricated. Corolla said to be pale orange color; the tube 1½ to 2 inches, or in Samoan specimens over 3 inches, in length, at first somewhat curved, then at length straight, narrow and very gradually and slightly dilated toward the summit, and from three to five times the length of the spreading lobes, so that the form of the corolla is nearly salver shaped; the lobes are generally 6 in the specimens from the Society Islands, and 5 in the others, obovate-oval, convolute in section. Stamina as many as the lobes, nearly included! Anther linear, thick, acute, introrse, attached just above the
lightcase to the short filament. Style filiform, about the length of the tube of the capsule, its upper abruptly dilated into the obsolete papillose or camellide, the inner surface of which is glabrous. Valve not, incompletely 2-celled, the camellial place meeting in the axis, but not uniting. Valve innumerable, angular, spinose, bent at an acute curve. Style, if made to flow, would probably 2-cells. In this figure... Seeds ovoid with the micropyly a strinency narrow, slightly curved, anguste-papillose, the micropyly, the testa smooth, no spines. Embryo membraneous in part, albumen of a bright yellow, the length of its cylindrical, slightly curved, inside the testa smooth, or nearly so.

This species appears to have a wide range in Polynesia. It can only be any of & number certainly not his; 2. The genus, & number, as having the depressed, solitary stigma of the genus, or any form of E. Replissca (to which the corolla is similar though smaller but variable in size) for the same reason have been left out. 3. The same, which is placed to have a film like stigma, but it is in fact visibly distinguished from all others by its bilaminar stigma, like that of Replissca.

Rule: Lagoonia Boreoviana.

1. From with the (short) capsule. 2. The capsule is longer. 3. A flower seen from the outside. 4. From the inside. 5. Needle. 6. Lignum. 7. Flows seen. 8. From of the middle. 9. The same, 10. Vertical section of the same, showing the anther. Figures 9, 10, more a less magnified.
Zagraea gracilipes. M. Mill. (Lab.)

St. foliis lato-ovatis et subcoriacis

obtusis vel apiculato-acute tarsi

in peliolum longum abrupte
decurrentibus, cyma terminali
carnata multiforme, foliis multo

brevioribus, divisionibus pedicellis

que gracilibus; corolla e tubo

angusto superiori late ampliata

epatris oblongico-ampliata;

staminibus suberosis, stig-

mate capitellato; ovario 

prorsus uniloculari, placenta 

35. (1819)


St. Linn. Tom. 4, in Botanica, 1831, p. 237.

St. Sandal wood Bay and Keuna.

Acehue Islands. [Recently collected by Dr.

Semirara, with shorter pedicels, 45.

Plant about 6 feet high.

Leaves crowded at the extremity of the

flowering branches, coriaceous but
rather than dilated orate, 4 to 6 in. long, 2½ to 4 in. wide, either rounded and obscurely apiculate at the apex or more pointed, abruptly contracted at the base, marked with minute angles by 5 to 6 pairs of primary veins, which are indistinct on the upper surface; petals slender, 1½ to 2 in. long, thickened and dilated at the insertion, but with no proper stipules. Gyms (exclusive of the flowers) nearly exceeding the pedicels, several, compound; its division slender, with minute hairs, the pedicel or ultimate division, above the bracts, about an inch long, usually between two and three lines in length, deeply 5-lobed; the ovate-ovangular, divisions thick, with serrate margins. Corolla (white or yellowish) of a much thinner texture than that of the preceding species, an inch and a half in length; one-third in a maroon cylindrical tube,
which is abruptly dilated into a broad, funnel-shaped or oblong, oval, or throat, of the same length, bearing the oval lobes spreading about the same, but smaller, length, the latter consolidated in estivation. Stamens inserted at the summit of the proper style. Filaments filiform, about the length of the corolla, another entire, oval, dorsally attached near the middle, at the summit of the style-base, in the dorsal furrow. Outer face rather concave, the cells at this part down the middle of their inner face, Style filiform, as long as the corolla, at first straight, the summit often incurved after anthesis; stigma a small, depressed-campanulate, very slightly dilated Ovary ovate, strictly one-celled, the two narrowly bilocular placenta sessile, and so appearing like four placenta closely approximate in pairs. Ovules are
Noil does Brontëan remark that white, on the one hand, while "Haynæs" may almost be characterized as "Gardænæ" with a free ovary; on the other the genus forms the nearest real approach in the whole family to "Gentianæa"]] Comparing it with some species of "Disanthæs", the chief ordinal distinction consists in the greater development of the placenta and fleshy fruit." In this the present species are found the bisexual placenta as strictly parallel as in most Gentianæa, much more so than in Disan-
another itself. Zygadens also, have the
better properties of_btnlience.
The corolla in Plate (which
was engraved before the collection passed
into my hand) represents the corolla
as being regularly funnel-shaped, the
tube gradually expanding into the
upwards. A more correct delineation
of the shape of the corolla is
added in figure 1.

Plate B. Zygadens gracilipes. Fig.
1. A flower, of the natural size and
shape. 2. The corolla laid open. 3. A
magnified stamen, seen from dorso-lateral, 4. Vena-
tral view of the same. 5. Pistil magnified.
6. Magnified transverse section of the ovary.

Zygadens Nilincus, S. China, in Beg.fr.
ies, is a third species of the Zygadens
which may specimen is insufficient
for determining the relationship.
Catharinia

These materials confirm the genus as a very distinct one, and fix its position in the neighborhood of *Strychnos*, calling for some extension of the character of Bonnemais's third tribe. There are indications of dimorphism or incipient difference in sexes in the flowers examined. In different species of the same genus of *Cory-
agania* no capsas, some capsas are beardless or nearly so and have the anthers nearly sessile on the throat, while others are conspicuously bearded in the throat, and their equally subtended anthers are borne on filaments of their own length inserted some way down on the tube; the style also is sometimes slender and exserted, when I suspect the ovary is infertile or less fertile, and sometimes shorter or
even very short, and there the way is surely false.

(Case)

1. *Cophocarpa conipercarpa*, S. & M.

6. Calyx segmentis ciliolatis; ovul. sicc. 8, angustata, oblata, ebarie emarginata.

*Gartlera pyramidalis*, Seen. in *Borysthenia*, 1851, p. 257, no. 303.

*Tab, Eejee Island; at Ovo-

cr-c and Sandalwood Bay.*

A short, or true, glabrous thorn.
Leaves opposite, crenulate, oval, or ovate, obtuse, entire, the midrib and four or five pairs of primary veins rather prominent on both sides, the veins less conspicuous. Hippeps conspicuous forming a truncate sheath at base with the petiole, and somewhat higher between them. Hierosence acrosciial, spiculo or short pedic. umbelullay 3-4 radiale, Syncr. naked by me; its primary division an inch or more in length; the flowers sessile on the ultimate divisions. Bracts obdiate or deciduous. Caly. hardly above a line in length, exactly that of a Tagac or a diminutive scale.
(a pair of small pits or glandular spots on the inner face of each near the base. The laces not so thin, marinated, ciliolate. Ovary ovate, somewhat pointed, rather longer than the persistent calyx, tipped with a small entire stigma, two-celled. Placenta thick, conformed to the shape of the cells, fixed by their middle to the middle of the thickish dissepiment, their whole outer face covered with amphiphyses ovules. Fruit not yet mature, sub-spherical or fusiform, and stipitate, much or less in length, short pointed, lignified in texture, manifestly indehiscent, perhaps having a thin and somewhat flabby epicarp when mature, but with an apparently mucilaginous accrescence; the two man.

Now cells separated by a thick ligninous partition. Placentae in the specimens examined them rather thin, and with the margins recurved. No seeds were found. The corolla
and stamens had fallen from all the specimens.

In perfect as are the materials of this plant, I cannot doubt that it is a new generic type in
Podanaucaceae, of Aporogyrid affinity, which does not fall into any of
Pentland's tribes as at present constituted. The corolla and stamens
are needed to settle the particular relationship of this curious plant.
The genus is dedicated to the
ardent and enterprising Can-
chologist, Joseph P. Cunthony,
Esq., then one of the Naturalists
of the Expedition.

To the above I have to add
that flowers, now furnished by
Dr. Seymour, but not in very
good state of preservation, pretty
closely resemble those of the
following species (if such it be),
except that the five sepals are
minutely ciliate, and they another very obtuse at both ends; the beak of the throat of the cirrha either obvolute or cupriculous (as already noticed), but not so strong as in Diernanthia no 305. The style, also, commonly equals the cymba in length while in our specimen it is short as thick. As to this, I am confident, is a subsexual distinction. The nearly mature fruit, of my specimen from Dr. Stemmanna is almost two inches long, obvolute cymbae, alternate and flattened at the base, coated with a thin and closely adherent epidermis, which is doubtless apparently fleshly in the fresh plant, while the whole interior is a lignaceous putamen, by abortion one-celled. The cell scarcely more than a line in diameter, filled with a single ciliate seed, apparently albuminous seed. The structure
I have not sufficient materials for investigating.

Plate

**Contubernia enyne**

1. Portion of inflorescence, with a fruit, and calyxes with the pistil after the fall of the corolla. 2. Inside view of a sepal. 3. Vertical section of calyx and pistil. 4. Vertical section of a pistil showing the placenta of one cell, covered with scales. 5. Transverse section of the ovary. 6. Vertical section of a fruit, dividing the placenta. 7. Transverse section of the fruit and recurved (sterile) placenta.
2. Corthinia Semanii.

C. calycis segmentis ab margine glaberrimis; antheris sub-sagittatis; corolla favee eximie alto-barbatis, an emerit?

Gortenae varbata, Seem. l.c. no. 305.

Not. Heisse Islands, Dr. Semanii.

Hab. norra only.

Folige, as of C. campocapa, of which, probably, it may be only a variety. Calyx 5-lobed, 5-parted, the lobes orbicular, with glabrous edges, half a line long, not glandular inside. Corolla white, two lines in length, 5-cleft to the middle, the lobes ovate, valvate in section, the excessively villose bearded with white villose hairs. Staminus in all the flowers examined inserted in the middle
of the tube; the filaments about
the length of the anthers; the tubes
of the latter acute at the base.
Orangic ract, tapering into a short
and thick style, which is tipped
with a subcapitate and more or
less 2-lobed stigma; the panicles
thick. Ovules numerous upon
each placenta, some a dozen or
more, amphitropous.

I suspect that the beard of the
corsa will vary, as in the B. cir-
nifera, when I have not ad-
ted the specific name barbata.

1. Stryphnos Aristolochia, Linn.

Hab. Brazil, in the vicinity of
Rio Janeiro. (Foliage)

2. Stryphnos Colubrina, Linn.

Hab. Mangsi Island; a specimen
in blossom and another in fruit. Nine
line Island, a small island of the
Teresa group; in fruit. Collected by

1. Logania floribunda, R. Br.
2. Logania pusilla, R. Br.

Not. New South Wales, in the vicinity of Sydney.
Ord. Myrsinaceae.

1. Masa, F. H. S.

1. Masa memoriaeis, F. H. S.

Masa memoriaeis, F. H. S. in Linn., Trans. 17, p. 134, F. in Fl. Prodr. 8, p. 73.


Hab. Tongatata, and Samoan Islands. Also Navan, H. Friendly Islands, H. Harvey.

To the description of De Candolle, which in almost all respects well applies to our specimens.
add that the plant is perfectly glabrous throughout, and the leaves mostly oval (rather than obvate) obtuse or rounded at both ends, or sometimes acuminate, from 2 to 6 inches long and 1 3/4 to 3 1/2 inches wide, smooth, and with crenulate, but hardly at all toothed margins; the petiole 2 1/3 to 1 1/4 inches long. Racemes 2 or 3 inches long, rather loosely flowered; the pedicels mostly divaricate, pentangular, 1 1/2 lines long. Bracts, bractlets, and calyx lobes broadly ovate and obtuse, especially the latter. Lobes of the corolla quincentinal in aestivation, two exterior lips 2 lines in diameter, globe-like.
2. Masa Pickeringii, sp. nov.

M. foliis lato, lanceolatis obtusis, glabris, masculinis ramulis que pilosulis; fere varinis axillaribus simplicibus variis, compositis gracilibus; calyce cum tractis crasso-subulatis his situis; lobis ovatis acutis conice tumatis sub-ovariis; frupis ovoideis.

Hub, Heeloo Island, on the north side of Niti-levea.

Besides the hairy subsessile of the inflorescence, and especially of the calyx, this differs from the preceding in the manner leaves, varying from lanceolate to elongated-oblong, smaller leaves, narrower and acute tracts and bractlets, as pedicles barely a line long, twice the length of the track.
3. *Maesa perricafolios*, sp. nov.

*M. glabra; foliis lato-lanceolatis in tegerrimis, venis transversis, particulis axillaribus folio sublargioribus, floribus panicis, breviter pedicellatis, bracteis trilobatis lobitque calyce ovato-acute, corolla tubo campanulato calyce Panicolo longiori, dorsi ovoido, glabros haurissete pedicellatis.

*Not*. Feejee Islands, at Meea Bay, in flower. Collected by Professor Harvey in fruit. A flowering specimen somewhat like *M. varicentacea*, but with narrower leaves (3 or 4 inches long and at most 1 1/2 wide), oblong-lanceolate, the primary veins (9 to 13 pairs) nearly transverse. Racemes panicled, slender, glabrous but minutely glandular; peopl.
dicels half a line long, longer than the bract. Lobes of the calyx acute (not very obtuse, as in M. vamanelloides). Corolla half a line in diameter. Duplicates in Dr. Harv. specimens, at most a line and a half in diameter, subsessile.

No. 287 of Dr. Benneman’s recent Cejee collection, referred in his list to “M. Indica var.” is perhaps a form of M. persica folia, but the pedicles are longer, and the leaves broader, of thicker texture, and the primary veins much more ascending.

4. Masa ovata, R. B. C.

Note, Singapore. Imperfect specimens.

5. Masa Indica, R. B. C. e. e.

Note, Luzon, Philippine Is. and, in the mountains near Manila, the variety Highliana, like Cuming’s plant.

Dr. Benneman’s no. 288, from the Jeesa Islands, as to the large-leaved and somewhat pubescent plant, presumably M. indica. The globular and small-leaved specimens most probably belong to M. memorialis.

(Which Dr. Harv. also collected.)

M. foliis ovatis curvatis sepando- 
dentatis cum ramos paniculosis 
(terminalibus et axillaribus folium 
adquantibus) dense mollissima 
pubescentibus; pedicellis florum 
hand longioribus; bracteis bracteo-
lisque ovato-subulatis paninis; 
calyceis foliis triangulari-ovatis 
villosis tubum corollae brevi-
camporumulatae fere aequantibus 
(dupris ovarioribus pubescentibus).

Itab, Feejee Islands; in the 
mountains of Mathunata, at the 
ellevation of 1,000 feet.

A weak shrub, with a very 
soft, fulvous, villose pubescence; 
leaves ovate or ovate-oblong, and 
cordate with a narrower sinus, 3 or 
4 inches long, 1/2 to 2/3 inches wide,
more or less acuminate, either strongly and sharply or rather oblique and obtuse, very velvety to the touch, especially underneath, above becoming glabrous with age, the primary veins conspicuous, spreading; pedicles half an inch or an inch long. Family of numerous races: pedicles rarely more than half a line long, about the length of the calyx; the latter adherent nearly to the summit of the ovary, its broad lobes acute, with a very short campanulate, when expanded nearly a line and a half in diameter, the lobes ovate, the ovary ovoid, or oblong, or oblong-ovoid.

Dr. Scenann has recently collected and distributed fruiting specimens of this (no. 288, but more, A. macrophylla?), the drupes are oval, a line and a half long, and retain the pubescence of the ovary. It is quite distinct from A. macrophylla.

2. Samara, Linm.

1. Samara aurantiaea?

Chorizopetalum aurantiaeanum, Ex. in Linm. Trans. 17, p. 131, & Brown, & p. 88?

Sub, Small Island in the Solon Sea. Specimens in fruit only, of doubtful identification.


*Myrsine umbellata*, *monticola*, *Daphnie*

*4. glomeriflora* (Mart. Hed. *H. Bras)*.


*M. umbellata*, Miq. *H. Bras. Myrs. p. 310, f. 55*

Hab. *Brazil*, near *Rio Janeiro;*

*The Variety vulgariis of Miguel in* *The Flora Brasiliensis, p. 55, f. 4*.


St. B, Bay of Islands, New Zealand.

5. Myrione divaricata, A. Gunn.


St. B, Bay of Islands, New Zealand. In print.

Neither the stigma nor the poly-

petalous corolla will distinguish the

Suttonia from Myrione. As to the

section of the ovules to one or two,

Hab. Peru, in the vicinity of Lima and Callao.


Myssine salicina, Keward in Tork.,

Suttonia salicina, Tork. J. Fl. N. Zeal.,
1, p. 172, t. 44.

Hab. Bay of Islands, New Zealand.

With undeveloped inflorescence.

4. Myssine Mvilleri, A. & B.

Myssine Mvilleri, A. & B. in Linne, Trans.
17, p. 105, t. Prod. 8, p. 94.
Dr. Hooker figures four in his i. mammularia.

b. Myrsine Lessertiana, A. & B.

M. glabra; foliis crasso-eriaceis oblongo-lanceolatis seu obovato-spathulatis integerrimis costato-venosis nervo junta marginali cincis, petiolo bivissimo crasso; pedicellis 2-5-mis, punctatis impar subglobose longioribus; calycibus lobis va-xis obtusissimis ciliolatis; corolla 5-petala estivatisum valvata.

Var. a. foliis oblongo-lanceolatis seu elongato-ellipticis utrinque angustatis acuminatis, Myrsine Lessertiana, A. & B. Prod. 8, p. 96.
Var. B. foliis oblongis basi cuneatis vel cuneato-obtusatis pleuromarginibus obtusis.

Hab. Sandwich Islands: on the mountains behind Oahu (where it was gathered by Sandichand, Nagy, A.), also Hawaii, in the district of Oahu, and on Mooma Kea, at the elevation of 1500 feet.

According to Dr. Pickering this species on Oahu is a shrub, in Hawaii, a tree, forty feet high. One specimen from Oahu, having lanceolate-oblong leaves tapering to both ends (2½ to 3 inches long and 1 to 1¼ inches wide) agrees with Sandichand's plant upon which Sebinderdale founded his S. Lessaniaca. The others have more or less obvolute or cuneato-oblung and obtuse, green...
Retuse, leaves, the largest 5 or 6 inches long and 2 or 3 inches wide, thick and coriaceous, the margin somewhat revolute. One specimen bearing flower buds (from 2 to 5) in the axils of the older leaves, enables me to ascertain that the petals are distinct to the base, and are calyptrate in destination. The corolla is globular in the bud and then becoming hardly exceeds the already open divisions of the calyx. Pedicels in flower a line or a line and a half long, in fruit 2½ to 4 lines long. Tripods as large as peaches, when mature nearly spherical, apiculate.
I. **Mysine Sandricensis, A. J. C. l.c.**

HAB. Sandwich Islands; Oahu, in the mountains behind Honolulu, and Hawaii, near the Great Crater, ds. Also, probably the same species, on the mountains of Kauai, without flowers or fruit.

This, according to Dr. Pickering forms a small tree of thirty feet high, with the trunk a foot in diameter; the leaves he aptly compares with those of *Uva-crisi*. Many of them are narrow; the longest are an inch and a half in length. The narrow leaves, from mentioned by Dr. Pickering (the most slender oblong-ovate and only 2 or 3 lines broad), which was long since collected by *Ulaeae*, without flowers or fruit, passes firmly into those with *obovate-cuneate*
leaves. Dr. Pickering notes the flowers as "small and purplish. The specimens furnish a single flower bud, which in structure accords with the foregoing species, the petals being distinct to the base and valvate in activation. Here the difference between a deeply parted and a polypetalous corolla is evidently not of generic cause. In importance, -Le Cubilite tribul -believe should clearly be suppressed, along with his two suborders, which do not merit such a distinction. I have seen nothing answering to M. Cubilite cubil., with subsemite flower, fruits, and triangular acute calyx lobes.

M. glaberrima; foliis crasso-coriaceis, is oblongo-ellipticis seu ovalibus, integerrimis utrinque obtusi, brevissime petiolatis supra nitidis utrinque erubescens costa vel atro-velenis, venis venulisque reticulatis prominulis; pedicellis virginibus longioribus, calycis fructiferi lobis 4 triangularibus, ovatis acutiusculis.

Not. Society Island, in the mountains of Tahiti.

A specimen with full-grown fruit; the leaves thick and coriaceous, 3 to 5 inches long by 1½ to 2½ inches wide, with very short petioles; the primary veins 20 to 30 pairs, conspicuous, especially on the shining upper surface, connected by conspicuous reticulated veins; lobes, loosely
anastomosing towards the margin, but not forming so distinct an intramarginal false vein as in M. Lessertiania. Pedicels unarmed in a fascicle from a sessile scaly bud, in fruit 3 lines long; the persistent calyx not ciliate. Flowers unknown.


Ibid. Mountains of Tahiti; a very imperfect specimen with young fruit. Mountain ridge of Tutuila, Samoan Islands, without flowers or fruit; but pretty well agreeing with M. crassifolia collected at Norfolk Island by Cunningham. A specimen of
Barclays from Ambon appear to be of the same species, with thicker pedicles as long as the fruit.


M. glaberrima; folis subspathulatis petiolis attenuatis integerrimis, apice laceratis utrinque punctulatis, venis subaequilongis venis persicinis; floribus tetrameris sessilibus; calycibus lobis cito ovatis obtusissimis; corolla quadripartita; fructibus globosis.

Hab. Muthuata, Hejce Islands, on the mountain summit, at the elevation of 2,000 feet. Also mountains of Timor, Societ Island, I have it also from some one of the "Pacific Islands, collected by Mr. Cunningham.
This is recorded by Dr. Rickering as "a bushy plant, fifteen to twenty feet high, in the Zeejoe Islands.

The leaves in shape and size may be compared with those of Myrica cerifera and Gaultheria, but are quite entire, opaque, smooth, and in conspicuous venation, 1/2 to 2/4 or rarely 2 1/2 inches long (including the slender petiole of 2 to 4 lines), and 4 to 8 lines wide, with capacious or chartaceous, sometimes oblong or oblanceolate, sometimes lanceolate, often acute 2 or 3 in a fascicle from several axillary, scaly buds, their pedicels even in fruit shorter than the calyx, the latter smooth and obscurely at all lilidolate, very obtuse, half the length of the vestiges of the corolla, the divisions of which are narrowly oblong and rather larger than the anthers. Stigmas subside, more or less acuminate or dilated, as is common in this genus, and mostly divided into
two or three petaloid tubes or cests, stopes globose pointless, barely 2 lines\n
in diameter, 3 sepahte or nearly 2\nby which it may be distinguished\nfrom any form of M. capitellata\n(incl. merisepala, kuthalsii, etc.). It\nmere difficult to distinguish this\nmay be difficult to distinguish this\nfrom M. crassifolia.

To the present species belongs the\nfruiting specimens of Dr. Sennann's\nno. 289 (while the female flowering\n specimens are ambiguous between\nthis and M. crassifolia), also no.\n290, foliage only.
Two or three petaloid lobes or crest. Impe globosum, soft, less, barely 2 lines in diameter, sessile or nearly so.

11. Myersine \( \text{Bracken} \text{ridgei} \), sp. Nov.

R, glabra; foliis membranaceis oblongis utrinque acutis vel acuminatis petiolatis margine integerrimis vel undulatis; pedicellis filiformibus fructu (3-5) flos longibritus; calyce 5 lobo, lobis rotundatis ciliatis.

\text{Hab. Mountains of Ovolan, Freejoe Islands.}

The flowers are unknown, but the plant is probably a Myersine. Branches slim. It is remarkable for its thin and membranaceous leaves.
and slender pedicels. Branches slender. Leaves either broadly or narrowly oblong, 2 or 3 inches long, an inch or more in width, usually acuminate, minutely punctate, the margins entire, or in one set of specimens undulate, so as some leaves to appear crenately toothed; pedicels 3 lines long. Pedicels fascicled in two, and three, or sometimes solitary, from axillary buds, the scales of which are deciduous (in the undulate-leaved form not rarely crenate), 4 to 7 lines long. Fruits globular, 1/2 or 2 lines in diameter, subtended by the small calyx, the lobes of which are short, rounded, and ciliate. Apparently a straggling shrub in thick woods.
12. Myriobine Africana, Linn.

Hab. Cape of Good Hope, near Cape Town.

5. Cybianthus, Mart.

1. Cybianthus cuneifolius, Mart.

[Note: C. cuneifolius, Mart.] gen. flora, 3, p. 88; A. DC. prov. 8, p. 116; Miq. in Mart. fl. Bras. / Miq. p. 293, t. 38.

Hab. Brazil, in the Organ Mountains. (C. fusca, Mart. apparently is not specifically different.)
b. Ardisia, Swartz.

   The leaves are nearly entire; the peduncles and pedicels compressed; the divisions of the calyx very broadly ovate and strongly ciliate with jointed hairs.

2. Ardisia Murinillos, Nath. Itab. Ttiejee Islands; in fruit, seeds for the Indian specimens. (Dr. Stemman's nos. 290 and 291, probably the same, are not in our collection.)

*Arboresca; glabra; foliis ad apicem
rurum crassorum congestis
obovato-spathulatis utraque pedalibus
subcoriaceis integerrimis reticulo-nervulosis in petiolum brevem
crassum aestimatis angustatis;
pedunculis axillaribus compressis simplicissimis capitulorum
strobilacearum genentibus; bracteis magnis squamaceis
persistentibus.

*Itab. Ovolan. Tseejee Islands.*

This is probably of a peculiar genus. The single and very imperfect specimen is a branch, the summit of a branch, half an inch in diameter, beset with large
and contiguous leaf-scars, and with crowded leaves at the sum-
apex. These are from 12 to 16 inches long, 4 or 5 inches
broad, with a very short midrib and slender but rather conspicuous veins connected by finely re-
ticulatcd veinlets, and with evident Myrmicaceous dots or glands
in the meshes; the petiole an inch or less in length, very stout. Pedunc-
cles just below the leaves of the season, capitate, about 2½ inches
long, naked except at the summit, where a sheath is half an inch long;
beav ovate, emacate, squamaceous,

Dark-bronze, apparently persistent bracts, which are fully
half an inch long. From these
the flowers have fallen, leaving
large scars, whether of single short
pedicels

A memorandum by Mr.
Rich, which accompanies the specimen, states that the corolla is deeply five-creased, the style filiform, and every part of the flower covered with pellucid dots.


Ardisia grandis, Seem., from No. 293, from the Fiji Islands (in fruit only) considerably resembles this in foliage, but has the pseudo panicles.
Ord. Primulaceae, Vent.

1. Primula, Linn.

Primula farinosa, Linn. var. Magellanica.


P. decipiens, Ruby, in H. L. c. p. 44.

mostly in fruit.

Ital. Orange Harbour, Tierra del Fuego.

Dr. Hooker has discussed at some length the question of the specific identity of the Antarctic Primrose with the P. farinosa of the Old World and the Northern Hemisphere, and reached an affirmative conclusion. The white最容易
The only constant character known to distinguish it. No form or near relative of this species occurs elsewhere on the American continent between the Antarctic regions and the northern borders of the United States; so that this is perhaps the strongest case that can be adduced in favor of the hypothesis of a double or multiple origin of species.
2. Lysimachia, Linn.

1. Lysimachia lineariloba, Hout. & Br. 

Lysimachia lineariloba, Hout. & Br. 
L. subinovoides, Sieb. & Zucc. 
Munac.) 2, p. 16.

Notb. Sandwich Islands, on the 
Coast near Hilo. Hawaii; in fruit, 
Collected by Penny, in much better speci- 
mens on Maui and Ni’ihau. 
Except that the flowers (seen only 
in Penny’s specimens) are smaller, 
no notable difference appears betweem 
the plant of the Sandwich 
Islands and specimens 
gathered by 
Mr. B. Wright on the Volcano Islands 
and also in Japan, the more luxur- 
ant forms of which are identical with 

1. Lysimachia lineari.
C. l. luciiroides, Sieb. & Zucc.

Distributed from the Leyden Herbarium, but the Rauwolffiana's lineatula from the Bonina Islands appears to be different, as it is said to have lanceolate acute sepals and pedicels scarcely two lines long. Still it very well accords with Stokké and Aritto's brief character of that species (the plate of which, referred to in the letter press, was not published), except that the lobes of the corolla are spatulate rather than linear, which renders the specific name rather deceptive; yet it is hardly necessary to relinquish it in favor of Siebold and Rauwolffiana's better name of Luciiroides.

The plant is Arborea, although not the base sometimes hinders, branching from the base, the branches ascending mostly simple, leafy, the thickest leaves
by no means "indicata," Rue-carinii's description (under L. rubiginosus) is a well applies, is a good one, except that the style is not that, nor are the filaments in his own plant monadelphous at the base.

2. Lysimachia Stillebrandi, Hook.f.

L. scutellata, glabra, ramosa; ramis allatis, uncis reticulatis, indigenae folioideas; foliis ovatis oblongis lanceolatissimis, sepium acutatis vel acuminatis, subcoriaceis, laxe reticulato-viridibus, pedunculis ex axillis superioribus mutatisbus umbrifloris ferrugineo-pubescentibus, fluminibus 5-8-marinis, corolla subrotata lobis late obovatis sepala valde lanceolate, lata acuminata fere bis super excelsa culis; filamentis basi man-
adelpsis styloque gracilibus,
Lysimachia. Stillebraud., sp. nov.
Horn, f. in litt.

Var. a, foliis ellipticis seu elliptico-
lanceolatis basi in petiolum angus-
tatis

Var. b, daphnoides; foliis oblongis
arcte sessilibus esclaris.

Var. v, angustifolia; foliis linearis,
lanceolatis esclerominis.

Haleakalau, E. Maui, with a series of
narrow-leaved forms passing into Var.
This is a truly shrubby Primula and a genuine Lipistachia, attaining, I believe, several feet in height. The young plants, shoots, the peduncles, &c. are clothed with a rusty pubescence, which is at length deciduous. The leaves are some glabrous, and are mostly alternate; occasionally they tend to collect in whorls, and sometimes, especially in the narrow-leaved forms, they become truly verticillate in fours or fives. They vary greatly in shape and width, but intermediate forms connect those with the leaves 1½ to 2½ inches long and 8 or 9 lines broad with the for variety in Kenni's collection having
leaves an inch long and rarely a line and a half wide. The broader leaves are usually acuminate at both ends, tapering at the base into a petiole of two or three lines in length except in the variety from Kauai, in which they are sessile. Their slender veins, almost equally conspicuous on both surfaces, are finely reticulate; the extreme ramifications enflame into a juxta-marginal Vein and a narrow marginal is more the upper surface thickly and minutely punctulate or else revolute. Peduncles single in the axils of the upper leaves, from 4 to 12 lines long, bractless, unflowered, recurved toward their summit, so that the flower is pendulous. Flower sometimes pentamerosus, more commonly hexamerosus, heptamerosus or even octamerosus; the calyx deeply parted into acute lanceolate and acuminate divisions. Corolla dull purple or
flesh-color; in shape between short-funnel form and rotate; the tube a little and a half long; the round, oblong, lobes about 3 or 4 lines long, convolute in estivation, thickish, punctulate. Filaments inserted about the middle of the short tube of the corolla, subulate, filiform from a narrow, conical, ring, glandular, calyxes, two-thirds the length of the corolla, no interposed teeth. Anthers oblong, Style as long as the stamens. Stigma subcapitate. Ovary ovoid, very numerous, crowded on the axile placenta, amphitropous. Capsule globular, carioceous, at length 5-7-valved, many-seeded.
1. Magallis arvensis, Linn.

Stubs, Rio Janeiro, Brazil, Bay of Islands, New Zealand, Hunter's River, New South Wales. Introduced from Europe.

2. Magallis alternifolia, Cav.

Stubs, Chili in the vicinity of Valparaiso; the ordinary form, and one scarcely distinguishable from the var. densifolia, Hook. J. Fl. Ant. 2, p. 337 (Lycium cahuense, D'Ur.); which was collected at Orange, Victoria, Attagua.
4. Samolus, Linn.

1. Samolus Walczandi, Linn.

Stab. Madeira. Rio Negro. St. Pata=pcion. Lea=cion near Valparaiso, and Peru at Callao; The American forms all of Americanizing Lastively the var. floribunda (s. floribunda
Res. Arch., as is the North American Plant.

2. Samolus littoralis, R.M.B.

Ord. Borraginaceae

1. Echium, town.
   1. Echium candicans, Linn.
   2. Echium fastuosum, Jacq.
   3. Echium plantagineum, Linn.

   Ital., Madeira, on the coast at Funchale, &c.

2. Lobostemon, Lehm.
   1. Lobostemon lavigatus, Buck.
   2. Lobostemon panicicor, var. Bergei
   3. Lobostemon argenteus, Buck

Hal., Cape of Good Hope in the vicinity of Cape Town.
3. Anchusa, Linna.  

1. Anchusa Italica, Retz.

Hub. Madeira, in the neighborhood of Furnchal.


1. Myosotis capstitata, Stock. f.  


Hub. Lord Auckland Islands.
5. Eritrichium, Schrad.

1. Eritrichium linefolium, Medd.

Anchusa lineolia, Lehnn. Asperif. no. 158.

Sp. 3, p. 91, t. 200.

Antiphytum linefolium V. & Nalpesii (Anchusa Kunthii, Nal. Rel. Meyer, p. 372), DC. Prodr. 10, 
p. 121, 122.

Eritrichium linefolium V. & Nalpesii

Nab. Ruins of Peru above Baños; a slender-leaved form, the same as no. 5309 of Spruce's collection in the Ruins further south, and apparently also Meyer's Plant from farther south. — Antiphytum heliophyloides, 1838. Dr. Torrey has also referred to Eritrichium.

1. Gynoglossum latifolium, R. Br.

2. Gynoglossum australe, R. Br.

3. Gynoglossum suaveolens, R. Br.

Hab. New South Wales, in the vicinity of Sydney, N.

In the specimen of G. latifolium, which is just beginning to flower, the leaves are all distinctly peti-olated, and mucronate or cuspidate, rather than acuminate. The

stems are characterized in the Flora of Tasmania. The

specimens of the last two species

accord with Bremis diagnoses and with D. Hooker's notes in the appendix to the Flora Tas-"ma-nica, 2, p. 369.
7. *Pectocarya*, DC.

1. *Pectocarya lateriiflora*, DC.

*Hab.* Peru, in the environs of Abraijillo. A genus of one Chilean, one Peruvian and a Californian species.

8. *Schleidenia*, E. H.}

1. *Schleidenia*
8. Heliotropium, Craw.

1. Heliotropium Curassavicum, Linn.
   
   **Hab.** Rio Negro, South Patagonia. Near Lima, Peru, Coast of the Sandwich Islands. Also found upon almost all tropical and subtropical coasts; of American origin.

2. Heliotropium Europaeum, Linn.
   
   **Hab.** Madeira; approaching the var. oblongifolium.

3. Heliotropium undulatum, Vahl.
   
   **Hab.** St. Jago, Cape de Verde Islands, near the var. ramosissimum, Lehre; a more state of the species.

Hab. Marca, mountain near the town of Marca, Peru, in the vicinity of Lima.


Hab. Lower Andes of Peru, below Olorajillo; the common street Heliostrophiurn.


Hab. Peru, near Lima, on the Andes; the original station of Ruiz and Pavon.

The specimens are much more developed than that figured in the *Flora Peruviana*, 2, t. 110. They are from "a shrub, two or three feet high; flowers white, ovaries and branches of the plant with long and spreading somewhat silky, and partly deciduous hairs, and also canescent with a soft and close pubescence, both kinds..."
apparently somewhat viscous. The leaves are ovate or elliptical, acute at both ends, contracted tapering into a petiole. Summit of the branches or common peduncle mostly naked, slender, twice or thrice dichotomous. Spikes slender, elongated, from half an inch to two inches long, at its base. Flowers sessile, a line and a half long, sepals broadly lanceolate, equal in length to the villous, pubescent. Tube of the corolla about twice the length of the calyx, minutely pubescent externally, not bearded or pubescent within, the limbs plaited. Stamens inserted on the base of the tube of the corolla; filaments very short; anthers elongated-linear, ob-tuse, the somewhat incurved apex minutely bearded. Distinct style short and narrowed, stigma a disk shaped and surmounted by a
slender, cylindrical, emarginate, pendulous prolongation. Biserially separating into 4, minutely and sparsely hispid pyramids, about the length of the incurved lobes of the calyx.


*Hab.* Luzon, near Manila; *H. gracile var. depressum*, Cham., referred by De Brandle to *H. coronamandelianum*, but it seems distinct.

8. *Heliostaphyllum* (*Schleidenia*) *polystema* (Linn. Lehm.)

*Hab.* Brazil, in the vicinity of Rio Janeiro.

9. *Heliostaphyllum* (*Heliophyllum*) *parvi* =

*Hab.* Peru, near Lima. — To this species, as I suppose, belong 7*.
Syzygia chilensis of Ruiz and Pavon may be referred.

10. *Heliotropium* (Heliphrytum) persicariae folium, ssp.

*Tab.* Brazil, in the Organ Mountains near Rio Janeiro.

11. *Heliotropium* (Tiaridium) indicum, Linnaeus

*Tab.* Rio Janeiro, and elsewhere; introduced, originally from Asia.

mum procumbens, 

H. puticorum, depressum, strigoso-

incanum; foliis carinatis linear-

danseolatis, basi attenuatis vel

spathulatis; cymis pedunculata-
tis glomerifloris; calycis lobis

inaequalibus imbricatis, 2 extri-

inibus ovatis seu obovatis, 2 exterior-
inibus linearibus; corolla tibus extern

strigoso-serris, calycisitis lineo-

gine; antheris apicibus bre-

vissim barbulatis primis

coherebilibus; appressis micro-

lis 4 maris 5-6 scalbris.

Lithospermum incanum, Forst.

Bot. N. p. 12, Leh., in Linnaea

4, p. 445.

Heliostepsium 3. anomalum, Hook.

Pentacarya Heliotrichoides, De.
Prod. 9, p. 589.

Var. B. argenteum: Pube more dense, nitida, in canescent; floribus pallido majoribus.

Test, Clermont-Tonnerre, Carls.,Karaka), and nearly all the Coral Islands. Also on Malia of the Society Islands. Var. B. coast of Oahu, Sandwich Islands, likewise collected by King, and where Sandichand gathered a specimen of the ordinary form of the species.

This is certainly Forster's Lithospernum incarnatum, and is, I doubt, without doubt a Heliotrichoides, which specific name having long since been appropriated for a Peruvian
Heliotropium, that of Stocker and
Annett must be revised. The anom-
aly of five nucellus to the fruit,
however, which suggested the name
and induced de Candolle to form
a genus for this plant, is so
far from constant that I have
not been able to detect a single
instance in full series of specimens
before me, from nine or ten
localities, although it may be in-
ferred from Dr. Dickering's notes
upon fresh specimens that he
had seen six nucellus late fruits. I have observed
six nucellus, but the addition of a
supernumerary carpel is not so
extraordinary. The flowers throughout
in all other essential respects the
plant is a Heliotrope. Even the
inequality of the sepals is not
altogether unexampled, although here
strongly marked. The cyme, at first nearly capitulate is at length considerably evolute, and once or twice lipped, more or less serpentine, often with numerous flowers expanded at the same time. Bracts more! the extrocarp sepal largest and as it were confluent with the stamens in the manner of a bract; the second sepal similar in shape, but a little smaller, the third and fourth linear or linear-lanceolate, but nearly as long as the others; the fifth still smaller and sometimes minute. Corolla 2 w. 2½ lines long, blunted, apparently white, hypocrateriform, with a blotched, rather ample limb, within entirely glabrous. Stamens inserted below the middle of the tube. Anthors linear-lanceolate, with small incurved tips which are minutely
bearded under a lens, slightly cohering by mucous tips over the stigma. Every canescens style short, bearing a narrow annular line above which is the cylinder—prolongation, if the same diameter as the 
annular style stigmas. Also its summit panniculate.

In the variety from the Sandwich Islands, the foliage is strikingly silvery white, and the flowers rather larger (the calyx 3 lines long); no other difference appears.

Without much hesitation we may reduce to *S. gigantea*, the genus *Stellitona* = 
Pierne, Suttall's *Euploea*, as well
as *Schleidinia*, Ew. (Reskea, Mart.)
and *Pentacarya*, B. C., and, with the
venus, associate *Fonseca gigantia* with
this genus rather much more than
with *Christia*. But the plant
which, in Proc. Mem. Amer. Acad.
1. 1890, p. 403, I had characterized
as Sclistastrum japonicum, so closely resembles and is so related as has such geographical relations with Ternaria's Arguzia that it doubtless has a similar impuncuous fruit, with long, bilocellate pyriform, but the fruit is still unknown. Indeed it is not unlikely to be a variety of the Siberian and Mongolian species with a longer style and a glabrous ovary, these being the only notable of distinctions.


1. Boldenia (Tiquilia) dichotoma

Hub, Peru, on the desert upland near Yanga.

1. *Tournefortia (Mallota) argentea*, Linn.

Shores of the
Stab., Mangri, Soofoo, Jeejee, Navigator's, and all the Coral Is-
lands.


3. *Tournefortia floribunda*, K. B. K.


*Stab., Brazil, in the Organ Moun-
tains, and in the vicinity of Rio Janerio; all common species in that district.*
8. Tournefortia virgata, Ruiz & Pav.

Stab. Andes of Peru, near Chaquilla; a fragment only.

9. Tournefortia Mallichii, S.C.

Stab. Singapore: the corollas fallen.

10. Tournefortia carambola, Linn.

Stab. Luzon, in the vicinity of Manila.

11. Echretia, Linn.

1. Echretia lucifolia, Noot.

Stab. Philippine Islands, both Luzon near Manila, and Mindanao, at Balibago, Sooloo Islands. The C. lucifolia, only.
12. Cordia, Plum.

1. Cordia glabra, Cham.

2. Cordia grandifolia, A. DC.

3. Cordia obscura, Cham.

4. Cordia cylindristachya, Kunth, Sch.

5. Cordia discolor, Cham.

Stat. Brazil, in the Organ Mountains or in the vicinity of Rio Janeiro.

6. Cordia lantanaoides, Speng.

Stat. Peru, in the vicinity of Olmosjillo. In fruit only.
7. **Cordia standifolia, Kurz**

Hab. Peru, near Yanoga. Related by Alphonce de Candolle to *Narvaea; but in the specimens, as in the figure in the *Flora Peruviana*, the calyx opens into persistent teeth and is not calyptrae, nct that the character is here of much consequence.

8. **Cordia subcordata, Lam.**

Hab. Tahiti, Society Islands, Coral Islands, Kejoei Islands, &c. Gathered by Sandichand and Penny on the Sandwich Islands, where our narrative addicts appear not to have met with it. (And mentioned by Dr. Pickering as "planted around the dwellings of natives, introduced by aboriginal settlers"

C. pubes ferruginea Missula, demum glabrescens; foliis membranaceis ovatis acuminatis asperulis supra glabris, seratulis subulatis; floribus parvis cyano-glo-meratis; sessilibus calyce ovato-cylindraceo fer-
rugineo-villoso 10-striato, dentibus 5 minimis subulatis; corolla tubo calyceae vix su-
perante lobis estivatione inflexis et corrigatis longiore; drupis ovato-ovata, purpureis
1-2-spermis.

C. Spengelei, Skri. in Beypandia, 1831, p. 258.
vix Spenz.

Ital. Tangatabel. Hejia, Sata-

moan, and on some of the Coral
Islands.
A shrub, 10 or 15 feet high, with a misty pubescence, which is soft rather than rough. Leaves alternate, from 3 ½ to 4 inches long, tapering into a slender acumination, serrate with very slender teeth, long-setulated. The upper surface is one glabrous excepting some minute hairiness on the principal veins. Peduncles an inch or more in length, once or twice dichotomous. Flowers sessile, em- ded. Calyx barely 2 lines long, strigently striate, very firm, glabrous, pubescent, the truncate border minutely 5-toothed. Corolla apparently white, "rugose" from the strong corrugation of the small oblong lobes in the glabrosus. Stamens and style included. Drupes small, 4 or 5 lines long, with a rather conspicuous sarcocarp, and an acetestory pistamen.
which is angulate, tuberculate and often 1-2-tuberculate or spinose near the base, by abortion 1-2-

celled.

This is a genuine Cordia, but not closely related to any other species with which I am ac-
quainted. The specific name is unfortunate, as the leaves are by no means aspermis.
Congratulations

[Signature]
Convulvulaceae.

1. Argyreia, Lour., Night.

1. Argyreia tiliacefolia, Night.

Argyreia tiliacefolia, Night. 2e. Pl. Ind. Or. 4, p. 12, t. 1538; Miq. Fl. Ind. Pp. 27, p. 587.

Stab., Caldera, Mindanao, Philippine Islands.
2. *Lepistermon, Blume.*

1. *Lepistermon flavescens, Blume.*

Type. Luzon, Philippine Islands, near Manila.

Our plant, which is the same as Cuming's no. 1834, from the Philip-

ingines, I presume to be Blume's original

species. It differs from the Indian plant


8, L. flavescens, Night, 2c. p. 1362) basi-

cally in this, perhaps in constant par-

ticulars, viz., in the denser inflorescence,

which is almost capitate, and in the Arac

more or less briskly hairiness of the pistil,

which in the Indian plant specimens

examined, and as figured, is glabrous. There

is no essential difference in the scales of

the filaments, which Closson describes as gla-

brans, while this artist makes correctly figures

them otherwise.
Batatas, Rumph.

1. Batatas edulis, Choix.
   Hab. Sandwich Islands, H. Cultivated, and apparently also escaped from cultivation. There is also a specimen in the collection from Rio Janeiro.

2. Batatas pentaphylla, Choix.
   Hab. St. Jago, Cape de Verde Islands, in wild situations. Sandwich Islands, along the base of the Kaila Mountains, Oahu, and on W. Maui, enumerated by Dr. Pickering as if indigenous, when it was also collected by Macrae.
Batatas acetosifolia, Ehres, was collected by Penny on Nihoa, one of the Sandwich Islands.

1. Ipomoea, Linna.

1. Ipomoea (Calonyction) Broussonet, Linna.

Stab. Tteejea, Samoan, and Sandwich Islands (Hawaii); the ordinary form of the species.

2. Ipomoea (Calonyction) longiflora.

Ipomoea longiflora, R. Br. Prodr. p. 484, non Mill. F. & B. K.
Calonyction multilicium, de Caires, Stab.
Timor. p. 32; Ehres. in F. C. Prodr.
p. 523.

Stab. Sanford's, Disappointment, Nukis, Kauick, and other Pacific
Coral Islands.
This is probably no more than a variety of the preceding species, with pointless sepals, and mostly shorter peduncles.

3. Ipoerea (Pharbitis) insularis, stem.


Ital. Hawaii and Oahu, Sand which Islands, both the silky, canescent, and the smoother forms. Taejeu Island, Mr. Wright found it also at the Loa choo Islands. Kamy gathered at Oahu what is seemingly the same species with lobed leaves.
4. *Ipomee a (Pharbitis) Pubescens*,

*Loc.* Peru, in the vicinity of Chachapuyo.

5. *Ipomee a asarifolia*, Koenig. & H. Kuntze

*Loc.* St. Jago, Cape de Verde Islands. Apparently includes *I. umbica* and *I. rugosa*.


*Loc.* St. Jago, Cape de Verde Islands and Tahiti, Tuamoo Islands. Noticed also from other Pacific islands and coasts.

Hab. Tahiti, Society Islands: "the stem sometimes two inches in diameter; flowers white." Savaii, one of the Samoan Islands: "flowers corolla white, the margin yellow." Dr. Beken found it in the Society Islands.

8. *Ipomoea Impetemum*, R. Br.

Hab. Society and Feejee Islands; with angulate or even some what hastate leaves. Samoan and Feejee Islands, and coast of Hawaii, Sandwich Islands, with ample and broadly cuneate leaves.


*Ipomoea crotonanthia*, Bentli, F. R. Taylor, no. 675, p. 120, 1891, May.
Sulph. p. 135.  Sandalwood

Hab. Mina Bay, Hefje, and is frequent in open ground and at a little distance from the coast.

Apparently distinct from the preceding, in the points indicated by Mr. Bentham. Whatever it may prove to be the specimen wholly agrees with Stainton's Mast from Guayaquil. Perhaps it is Moore's I. alata.

10. Ipondea Bestigridis, Linna.


11. Ipondea Limifolia, Blume.


Stat. Brazil, in the vicinity of Rio Janeiro.

This well-named species does not accord with the character of Browne's I. viridis, to which it is doubtfully referred in the Prodraco. The peduncles are for the most part many-flowered, and the ferrugineousomentum nearly uniform on both sides of the scarcely curved leaves.

Ipomoea DiShotoma, Ohio?

Stat. Brazil, in the vicinity of Rio Janeiro; a dubious fragment.
14. *Iporica* Coptica, Roth.  

                      St. H. Jago, Cape de Verde Islands.

15. *Iporica* tuberculata, Kewen. Sch.  

                      Itab. Hawaii, Kanu, H. Sandwich Islands.  

Harker and Arnett, in Vat. Beach, No. 1, enumerated both *C. tuberculata* and *C. Cairinicus* from the Sandwich Islands. We have only one species, and no ripe fruit for determining whether the seeds are "silky-mentose" or "glabrous". Probably both are not distinct, as Bentham suggests.
16. Spiroma pendula, R. Br.

Not in the darker color of the flowers, this, again, seems nearly different from the preceding, so far as can be told from dried specimens.

17. Spiroma fastigiata, Sweet.

Not, Trowsers Islands; a specimen in fruit only, but apparently of this typical American species, which has found its way to India and Polynesia.


Not, Luzon, Philippine Islands, in the vicinity of Manila.
19. *Ipomoea Forsteri*.

*Ipomoea rotundifolia*, var. glabra; foliis ovatis, cordatis, sagittatis, mucronatis, longe petiolatis; pedunculis 1-3-floris; pedicellis tetraquetris, petiolum subaquantibus; sepalis ovalibus, obtusis, mucronatis vel aristulatis; corolla rosea vel purpurea, sesquipetallicata; capsula et seminibus glabris.


Var. B. *Hawaiensis*; foliis elongatis, sagittatis, acuminatis, lobis parvulis approximatis; pedunculis elongatis
3-7. Flos, corda "alba" pro-
licari.

Hab. Tahiti and Motu, Society
Islands, Tongatabu, Feejee Islands.
Var. B. Stilo, Hawaii, Sandwich
Islands.

Shoots and leaves
Young stems more or less his-
sante, pubescent, but the hairs mostly
soon deciduous. Leaves 1 1/2 to 2 1/2 inches
long, varying from roundish-ovate
with a deep acute sinus to deltoid-
sagittate, either blunt, acute, or cus-
pidately acuminate, the basal lobes
either rounded or with a short diver-
gent acumination; pedicel slender, from
an inch or an inch and a half
long. Peduncle shorter than the
petiole, but the pedicels often
equalling them, sepalis fully 3
lines long, or a chartaceous texture
in the dried specimens, broadly oval, very obtuse, tipped with a slender inner or cusp. Thiscea seeds black, very smooth. I cannot, with confidence, refer this variety to *C. obesca*. Part if *P. septauns* often grows in rather dry soil, ascends, and becomes valuable, thus it may include these forms, and especially the var. *Hawaiiensis*. In this latter the leaves are very much like the narrower ones of *P. sephsana* (commonly 3 inches long and 6 to 12 lines wide, tapering to a point, oval- to lanceolate-ovate), but the basal like an narrower and not at all diverging, but rather somewhat approximate or convoluted. Its peduncle attains the length of three inches, and bears an umbel of from 3 to 7 flowers. The campanulate, funnelliform corolla is shorter than in *P. septauns*,
and is noted by Dr. Pickering as “white”, but the dried specimens show a tinge of rose.

20. *Ipomoea reptans* Poir.

Stud. Mangri, Feejee, and Samoan Islands, on the coast.
5. Jacquemontia, Chois.


J. villosa-pubescent, mune glabra, canibus e radice tuberosa procerum bentibus; foliis carnosutis obovatis cuneatis, oblongis, emarginatis vel obcordatis majus glabris breviter petiolatis; pedunculis foliis, aequantibus 1-3 floribus; sepaliis 3 exterioribus ovatis obtusis herbaceis, mulso minoribus oblanceolatis acuminatis; corolla calycem duo duo longiore.

Convulvulus ovalifolius, Hort.
Uprica ovalifolia, Chois, Tour.
Cr. p. 57, & in H. Nov. 3, p. 357, quoad pl. SANDR. & var. PLAT. =

Hub., Sandwich Islands, in the
leeward portion of Oahu, Maui, and other islands. Oahu, Maui, Molokai, Menehune, Sandy Island, Kauai, Moolahee, Kealakekua.

The root, as Dr. Pickering was informed, is tuberous and edible.
Stems slender, slightly if at all ligneous at the base, prostrate or decumbent, one or two feet long, either sparingly or densely villous-pubescent when young, often glabrate in the age. Leaves an inch or less in length, moderately or deeply notched at the apex, often obtuse at the base, mostly acute at the base, glabrate with age; petiole 2 to 5 lines
long. Peduncle up to the bract
lets equaling or rather shorter
than the leaf; the bracts small,
lanceolate, or sometimes larger
and resembling the leaves in a
small scale; pedicels one-flav-
ered, or umbellately 2-3-flowered;
the pedicels mostly shorter than the
peduncle. Flowers small, calyx
3 lines long; the three broad outer
sepals lax and somewhat ampullate
after flowering, broadly ovate or
oval; the two inner slightly shorter
but very much narrower, acum-
nate, more pecious. Corolla
campanulate, apparently white,
4 or 5 lines long, glabrous. Sty-
mas elongated-oblong, flattish.
Capsule small, globose, 2-celled,
4-seeded, dehiscent.

It would have been remarkable if this were
identical the same as the East Indian and West
African species with which it was confounded. I have
not seen the latter plant; but was does not accord with the
character of it, and it has the stigma of "Acquamentia"
2. *Jacquinia Martii, Chois.*

*Hab. Brazil, near Rio Janeiro, "Alvus blue."

This, which is probably a common species at Rio, does not wholly accord with any the characters of any one of Chois's species. It is one of those with perfectly smooth sepals, of a characteristic texture in the dried state; and those in the present plant are intermediate in shape between those of *J. Martii* and *J. Blancketii*, var. major. The genus species needs revision. The plant figured as *J. canescens* in the *Botanical Register*, with very obtuse, equal, and smooth sepals, cannot be Humboldt's species; it is probably Chois's *J. valentina.*

1. Convolvulus erubescens, Linna.

Not. Hunter's River, New South Wales. — In this perhaps the most, with various synonyms, may be referred.

2. Convolvulus Bomariensis, Gar.

Not. Chili, in the vicinity of Valparaiso.

3. Convolvulus Hermionea, L'Her.

Not. Callao, Peru. — A variable species, diffused from Texas to Chili and Buenos Ayres, &c.

C. arvensis, Linna., was picked up in Madeira.
7. Anisea, Choix.

1. Anisea uniflora, Choix.

Tab. "Tong at abu". A single fruiting specimen according to the ticket, but it evidently the plant noted by Dr. Dickering (Distrib. p. 359) as from "Nalsa, Zeejee Islands". It is a wide-spread "Afr. Indian" species, and was collected at the Zeejies by Prof. Harvey, and by Dr. Seemann.

8. Calystegia, R. Br.

1. Calystegia soldanella, R. Br.

Tab. New Zealand, at the Bay of Islands. Woolongong, New South Wales.
2. Calystegia sepium, R. Br.

Hab. Bay of Islands, New Zealand.


1. Hewittia biestor, Night.


Hab. Luzon, Philippine Islands, near Manila.


13. caule lignoso decumbente; ramis volubilibus, junioribus herbaceis cum foliis ellipticis utrinque obtusis vel retusis (supra max glabratis) aurato-tomentulosis; pedunculis axillarisibus unifloris recurvis, fructiferis deflexis; sepalsis rotundatis coriaceis sericeis; stylis basi conduplicatis; capsula ovoidia coriacea evulvibus dehiscentis. Valvata; seminumbus baccatis.

Var. B. foliis oblongis seu ovato-lanceolatis acutis vel acuminatis.


Hyosmicus ovalifolius, Tomentosa, Chins., in 1830. Beiae.
Hab. Sandwich Island (where it was discovered by Menzies) on the southern base of the Kaaalaa Mountains. Nov. 3. Maui. Maui, no. 420.

This plant, which I presume to be the plant mentioned by Strother and Krenz from the collection of Menzies, occurs in the present collection with abundant ripe fruit and a few flower buds. A form of it with acute leaves supplied to me from Menzies' collection has also enabled the emetics from the later flowers, but a few retain their styles. According to Dr. Wickens the decidedly woody base of the stem is trilobate and decumbent. The branchlets are slender and *twining*. All the younger joints are clothed with a fine and close, yellowish, silkyomentum. Leaves
Vestiges of the dispermum, which
is wanting in the centre, dry
and coriaceous or cartilaginous,
apparently not deliscent by
valves, but bursting in irregularly
under pressure. Seeds 4 or
2, with a baccate, fleshy, and us-
like episperm, covering a hard
seed-coat. Embryo 1/2 as in Pro-
mena.

If Mr. Brown (in Prosor. p. 457)
has rightly stated the difference
between Romanica of Thomas
and his Breweriana, the two genera
cannot properly be maintained; and
the older genus of Thomas asay must
include Stylistoma, Raf., as well
as Breweriana. Traces of the fleshy
episperm, which is so striking in B.
Mariziesii, are manifest in B. Raf.
B. Tungucii and in B. (Stylistoma) Humistrata.
crowded, 
1 1/2 to 2 1/2 inches long, 9 to 15 lines wide, becoming glabrate above, somewhat coarcescent, in distinctly veiny, entire; petiole 4 to 5 lines long. Pedicels axillary, about the length of the petals, or in fruit longer, articulated near the base, one-flowered. Sepals nearly equal, ovate-oblanceolate, obtuse, about 4 lines long, little amplexicaulate in fruit. Corolla externally silky-pubescent, externally, campanulate and barely twice the length of the calyx. Stamens included. Ovary 2-celled; the cells each with two ovules. Styles 2, separate almost to the base, slenderly filiform, about 8 lines long, each surmounted with a capitate stigma. Capsule fully half an inch long, ovoid, glabrous, coarcescent, caducous with the united bases of the style, one-celled, having
11. *Cressa*, Linn.

1. *Cressa Cretica*, Linn.

*Hab.* Rio Negro, North Patagonia. Fern, at Callao. Oahu, Sandwich Islands, where Dr. Pickering regards it as an introduced plant. All the Spec. All belong to the var. *C. trichillenensis* (*C. tri-*

illenesis, H. B. K.), which likewise abounds on the coast of the southern part of California, and of the Gulf of Mexico.


2. *Evolvulus mammillarius*, Linn.

*Hab.* Brazil, in the vicinity of Rio Janeiro.
3. 
Evolvulus villosus, Ruiz & Pav.

Hab., Peru, around Callao.

4. 
Evolvulus alsinoides, Linna.

Hab., Cape de Verde Islands, Melville Island, Fiji, Fiji Islands. — A widely dispersed species, which includes E. linnaeus, Linna., and several others of the genus.

13. 
Dichondra repens, Forst.

1. 
Dichondra repens, Forst.

Hab., Brazil, in the Organ Mountains, and Peru below Otraibo, the var. sericea, Chili at Valparaiso, New Zealand, New South
Males at Sydney, and on Hunter's River, the latter the var. sericea.

2. **Dicksonia argentea**, Mill.

Nt. Peru, near Obligillo. - Resembles with Mexican specimens, gathered by Coulter, Gregg, &c., but the fronds more or less close-pressed and silver-vandy as in Wright's no. 517 from N. Texas.


1. **Guscuta racemosa**, Mart. var. **Brasiliana**.


St. Louis, 1, p. 505.

Stab. Brazil, near Rio Janeiro; with flowers scarcely developed.

2. *Buscetta Chilensis*, Ker.


Stab. Chili, in the vicinity of Valparaiso.


Itab., Peru (where it was collected by Donkey, &c.) in the environs of Churijillo.

4. Buscuta Sandivichiana, Choix.

Buscuta Sandivichiana, Choix, Buscut. p. 184, t. 5, p. 43; Engelm. l.c. p. 487.

Itab., Oahu and Manu, Sand-wich Islands, near the coast. A well-marked species, entirely destitute of stamineal scales.
Ord. Polemoniaceae.

The only plants of this order found in the collection are Collomía gracilis, Schult. from Baños, in the Andes of Peru.

Ord. Hydrophyllaceae.

1. Nama, Linn.


Nama diffuso-ramosissima, prope molle cinerea; foliis spatulatis densus attenuatis subsessilibus margine revolutis; pedunculis terminalibus demumque lateralibus solitariis vel bifurcatis calyci fructifer.
longirostris patentibus, papalis
corolla campanulata subdixa
dio brevisirostris capsula ovoide
paullo longirostris.

Vul., Sandwich Islands, on the
sandhills of the low isthmus of
Mauio. Also collected by Macrae,
Nuttall, and Powning on Oahu, and
by Nuttall on Maui.

Root annual, as in most of
the base of the stem
not all of the genus, but sometimes
becoming lignaceous and appearing
as if perennial. Stem branching
from near the base, and becoming
very diffuse, the branchlets divergent.
Leaves 4 to 6 lines long, including the
petiole, attenuated base, scarcely veined,
clad (as to the calyx branches, &c.)
with a soft and short but some-
what bristly, gland more or less

Moany pubescence. Flowers small. Sepals linear, slightly dilated at the summit, at least in fruit, when they become 2½ lines long. Corolla "delicate purple"; 2 to 2½ lines long. Capsule 2 lines long. Peduncles becoming lateral by sameal decurrent growth, seldom allar, about 3 lines long when fully developed, either single or more commonly geminate, the peduncle forked from near its base. Seeds oval, minutely persiculate, as in the genus,

This species most resembles N. diochotoma; but the ramification, peduncles, etc. are quite different. A revision of the species known to me is given in
2. Wigandia, H.B.K.


Hab. Peru, from near Lima to the Andes.

3. Phacelia, Juss.

1. Phacelia circinata, Jacq.

Hab. Chili and Peru, from the coast to the Andes; in latitude ranging from Oregon to the Straits of Magellan.

Hydrada spinosa, Linn. was of course met with at various stations: a fragment preserved in the collection bears no record of the locality.
Ord. Apocynaceae.

The following well-known species, not requiring any remarks, need only be enumerated:

Carissa spinarum, Linn. from Surin near Manilla.
Carissa grandiflora, a native of Port Natal, gathered in Baron Ludwig’s garden at Cape Town.

Struxtonia? cariaceae, of Wallis’s catalogue, foliage only, from Singapore.

Maloundia Jamaquinica, A. DC., from the vicinity of Rio Janeiro, Brazil.
Thysanthes emboloides, A. DC., from Rio Janeiro.

Lyciaria straminia, R. Br., Sydney, V.S. New South Wales.

Hasternia multinervia, A. DC., from the vicinity of Rio Janeiro.
Dipladenia atroviolacea, A. DC., from the same district.
Echites microphylla, Stadler. (C. prostrata, Vill.); C. peltata, Vill.; and C. basilica-carpa, var. augustifolia, Stadler; all from Brazil, in the neighborhood of Rio Janeiro.

The singular Lépine a Taïtiti, of decaine, from the mountains of Tahiti, was not met with by our naturalists.

1. Alysia, Banks, R. T. 132.

Banks superseded the earlier published name of Syngyzoma, Houtte, because the character was not good, and the name a false one, few of the species having a truly bearded stigmas. It might he said that the name Alysia is equally objectionable, the monili form fruit being less common than the simple drupe.

By Pnopora Killatum, Forst. (Nov. 36, 1715, J. J. Pohl. p. 19); Latill. (1889), L. Aust. (1839),
Alyxia mollahi, R. & J. Schult., Forst. 40, p. 459; Guillon. (1886), D. (1889),
3313; A. (1889), P. 3, p. 36.

Hab. Trigata. (Mississippi, U.S.A.)

Islands, Coral. Mollusk=
Coral Islands, Coral. Mollusk=
at a. He Heepee Islands, X. Borneo;
Society Island.

The leaves vary from elliptical
to broadly oval on the one hand and to
lanceolate on the other, and from one
to 2½ inches in length; they are al-
ways subacute or very short-pointed.
Calyx and short pedicels ciliated; cal-
tube of the corolla only ½ or 2 lines
long. Ovaries glabrous, but surrounded
by a villous ring. The pilose stigma
at first globular, becoming along
with age. Sepals short-ovate, 4 or 5
lines long, the style more than twice
the length of the calyx,
2. Alyxia Beandrae, Rottm. & E.

Alyxia Beandrae, Hort. Prov.,
L.c.; Sparg. Pl. l. p. 24
Alyxia Beandrae, Rottm. Schult. C. C.;
E. & E. (Can. desv., Hort.),
L.c. p. 245.

St. Hila, Mountains of Tahiti, Society Islands, In fruit.

St. Hila, Mountains of Tahiti and... Times, Society Islands. - captive

Leaves larger than in the last
and distinctly petiolate. Pedicels
and calyx characters, either glabrous
or pubescent. Flowers sometimes ter-
minated and much like those of
A. stellata, commonly pubescent,
and with a larger corolla. Petals
either silky, pubescent, or surrounded
by a ring of silky hairs. Drupe
that about half an inch in di-
ameter, the style not twice the
length of the calyx. Albumen
and longitudinally pubescent.

A. subscandens, glaberrima; foliis oppositis vel planisubiculatis, termis oblongis subtuberculatis, nunc obtusis nunc acuminate obtuso apiculatis, caudatis et basi acutis, supra ciliatis, subcrebris transversis lineatis sublongi petiolatis, cymis axillaribus plurifloris brevissimis pedunculatis petiolum vix superantibus; pedicellis brevibus arcte imbri- catis bracteolatis; bracteis ovato-triangulatis, dorso carinatis infer cuarvis ciliolatis sepalis cimisimilibus; corolla lutea longa viridis tubulosa, stigmatibus imbratis ovarii glaberrimis; drupis subglobosis breviter stipitatis.

Alyxia macrorrhiza, Rich in hab.

Salte 2 candus, var. angustifolia, foliis minoribus anguste oblongis etiam sublinearis, Alyxia filata, Bum, in Brazil, 1861, p. 257.

Var. P. parvifolia: foliis minoribus ellipticis (sesqui-pollia carinibus), pedunculis parvis = nymphaea, blanda = bis angustata.

This is said to be more or less abundant. It is glabrous throughout, excepting the ciliation of the fruitlets and divisions of the sepals. The leaves are commonly in threes, occasionally in fours, or on some branches merely opposite. In texture and variation, they resemble those of A. lancea, but they are usually larger, from 2 to five inches in length, and 12 to 18 lines wide, most commonly elongated-ovate, with an acute or somewhat obtuse or acuminate, tapering base, and a rounded, oblong, short-pointed, or else more conspicuously acuminate...
minute, but blunt apex; pedicle usually half an inch long. The flowers are in small, axillary, and very short pedicled, compact cymes. The pedicels are naked, but their divisions and the short pedicles (2 to 4 lines long) are completely imbricate with pairs of small and thickish, triangular, ovate and obtuse, appressed bracts, which are strongly carinate on the back. The exterior sepals resemble these bractlets, the inner ones are thinner and less carinate. Corolla "dirty yellow," the slender tube half an inch long, incurved at the throat (but less so than in Sandickandii's figure of A. larinea), and contracted at the orifice; the lobes ovate, acute, a line and a half long, Staminode inserted in the throat, another ovate lanceolate, style filiform, long and slender, stigma a rather small, capitate, bearded. Ovaries glabrous; the
Very short disk on which they rest also perfectly glabrous, or with a few small hairs. Sepals simple, very rarely semi-forms.

Involucral bracts glabrous half an inch in length, much or more in length of the stipe only about a line long, or rarely longer.

Albumen, as in the genus.

The variety Macrocarpa, of which there is only a fruiting specimen, is remarkable for its large, turgid, olive-shaped but somewhat carinated fruit, fully an inch and a half long and two thirds of an inch broad in the dried state, as if, instead of a few pointed or three-pointed fruit, these as many fertile portions had run together.

The foliage and bractlets accord with the ordinary form of the species. -- The variety angustifolia has rather smaller fruits than the typical form, as well as narrower leaves; the latter 2 or 2½ inches long and ½ to ¾ lines wide. It is said to climb tall trees. --
The variety parvifolia is an extreme form, smaller in all its parts, with elliptical leaves, the fruiting pedicels half an inch or an inch long, and apparently few-flowered.

This species is so widely distributed throughout the Baltic islands that it must have been met with before. It may have been confused with A. Leandria or with Saintichaud's A. Laurina. The bracteated pedicels at once distinguish it from the former, and also from the latter, in which, however, the calyx is bracteate and the pedicles very short and hard and, judging from Saintichaud's plate (for I have not seen the species) the sessile leaves, terminal and few-flowered pedicels, the smaller corolla more inflated at the mouth of the tube, and the pubescent ovaries all indicate a species very distinct from the present remarkable one.
4. Alyxia olivaformis, Humbert.

A. scandens, glaberrima; folis
oppositis varia varium; ovaria
dulcis, fruticis oblongis, basi attenuata
quisque ovata, basi attenuata, bevera, petiolatis;
pedunculis axillarisibus, 3-5 floribus
folio dimidio breviaibus; pedicellis
nudis, floribus tetraneriis. Cor
ossa tubo clavato calycem bif-
lo longioribus; ovaria glabra-
innis; styla fere unius stig-
mate fere uniberbi; drupis
olivaformibus; stipite calycem
bis terre superante; albumine
angulina latere leviter sulcato.

Alyxia olivaformis, Humbert.

Mt. Voi. Tvege, p. 451; Valp.
Reh. neuro. p. 361; Mt. DB. l.c.

A. sulcata, Stock. Mt. DB. l.c.

Voi. p. 90; DB. l.c.
Vas. \( \frac{3}{2} \) mysticficia: folis rigidi, 
vertices pruris elliptici, anguste 
oblongi, linearis, elliptici, fere 
lanceolati, foliis planifloris; 
fruticos minoribus pedicellis persistentibus.

Hab. Sandwich Islands; 
mountains of Tahiti, found by all 
collectors. Also, from a Racquet in 
Vas. \( \frac{3}{2} \) at coast of the district of 
Mainake, and mountains near Sheilla.

This is the Sandwich, A. aikia 
forma, and Honoa and Arent's 
Biakaka. The surface of the albumen is 
lighted and regularly grooved lengthwise 
as in no Max Species. The gemina, 
but these grooves appear on the fruit 
only when the pericarp is ripe and 
shriveled up. In drying, as in other Species, so that 
the albumen was naturally deposited 
by Sandwich. As to the leaves, they 
are variable in length, small, and are 
persistently haired, more than in A. aikia, 
and less, shining above, in some forms. 
Like the flowers, they rather more resemble 
A. sheilla. They are both opposite and 
alternate upon the stalk, plant, 
from one to two inches in length; 
communis one and other 
stock with a rounded base and 1 or 
more or less obscure aperta, or 
obliquely pointed apicula, but 
not rarely 
indeed to the most minute; the latter 
only, the to \( \frac{3}{2} \) line long. Peduncle, 
2 to \( \frac{3}{2} \) lines long, slender, 1 or 
rounded or flattened, pedicles about 
3 lines long, oblongate. Flowers 
(leaves in the all the specimens 
examine) sepals ovata, oblongata; 
barely a line long. Corolla yellow; 
3 lines long, the tube clavata; 
1 to 2 line inserted; later 
closed, corolla 
Carpelis (like a glabrous, white, 
flora) with a glandular pedicellus cap, which 
the upper append. Bracteola ovata
or oval-oblong, from one-third to two-thirds of an inch in length, usually inconspicuous, raised on a style of 2 or 3 lines in length, two often developed, and one or both of them occasionally double or moniliiform. Some specimens gathered by Penny, K., with smaller and narrower leaves than usual, effect a transition into the

Var. mysticellifolia, a singular form which would be taken for a distinct species. Its leaves vary on the same specimen, from elliptical and only half an inch in length, to elliptic-linear and an inch long by 3 lines in width. On another specimen they are lanceolate or linear lanceolate and from 1½ to nearly 2 inches in length. The flowers examined are pentangular; the sepals from 4 to 6 lines in length and oval. They have the longitudinally plicate albumen which distinguishes A. oliveformis.


Kauwolphia, Plant.

K. Kauwolphia Sandwichiana, A. S. C.

Hab. Sandwich Islands, on the mountains, behind Honolulu, Oahu.

The plant differs slightly from Sendivogius' generic character in having a long and filiform style. And the stigmatic is subtended by an indusiate ring. The ovaries are distinct nearly to the base, each about 4-ovulate. But the obcordate drupe is united to the middle, the upper part or lobes divergent. Pubescent oocytes, very thick. Hypogynous disk thin, saucer-shaped, with the margin entire.

1. *Berbera obovata*,苛里.

Hab. Tahiti, Society Islands: "a cultivated tree." Tutuila, Samoan Islands.

This must be Forster's and Guillemin's *C. Mangahas*. It is the only species noticed at Tahiti, and that only as a planted tree. 20 feet high, with large white flowers. At the Samoan Islands the same species grows on the coast and is noted as perhaps introduced. It is said to bear a large, red, and compressed fruit. It is noted as found wild at the Heejee and Tonga Islands also, but the specimens preserved all belong to the next.


Hab. Heejee Islands: common, both along the coast and in the interior. Also Tunatabu. (Collected likewise by Dr. Sennemann, No. 309.)
4. Oehrovia, Juss.

1. Oehrovia parviflora, Juss.

Oehrovia parviflora, Hort. Prod. N., p. 19,
Oehrovia parviflora, Juss. Fl. Keel.
in Ann. Nat. Hist. 1, p. 345;
A. DC. Prod. N. 8, p. 357.

Ochropis, Stem. in Rumph. 1675, p. 237; and Lab. 1764.

Ital. Huntington, (Also Varvai, Harvee.)

In Professor Lindley's account of this species, I have only to add, that the ovaries are not really united except at their apices, and that the five stigmas are as many as eight in the flowers examined; four on each margin of the pistil; they are ampulliform; the micropyle is long and narrow, and the specimen shows some half-grown fruit, which consists of a pair of void fleshy or impalpable carpels, the larger an inch long.

Oehrovia sandwicensis, A. DC. (Gent.)
Veronica carviflora, Hook. & Arn., var. Host, appears not to have been met with, but there are good specimens in Kenny's Hawaiian collection from Hawaii. The fully-grown flower buds are almost an inch in length; the narrow lobes rather larger than the tube; the latter glabrous within. Ovules 3 or 4 in each ovary, attached to the style, divided into a false partition of the radicle inferior!
1. Beachiera Mystrix, A. C. S.

Stab. Organ Mountains, near Rio Janeiro, Brazil. It varies with the leaves more distinctly pointed than in the figure of Vellozi.

6. Tabernamontana, Plu.

1. Tabernamontana coronaria, R. Br.

Tabernamontana coronaria, R. Br. in Bot. Rev. 2, 1, p. 72; Loud., Bot. Calif. 4, 406; Wright, Lc. 86; Hook. Or. 1, 427.

Var. B. Brady copper: frutibus ovatis, glabris vel turgidibus, glaberrimis; calycibus profundiis flavo.

Tabernamontana strigiliflora, Forst. Fl. Prodr. p. 20; van Ling. f. foliis latioribus ovalibus alliances.

2. Tabernamontana, A. C. S. Prodr. 8, p. 373; foliis angustioribus ellipticis lanceolatis sur tenuis.


and, common on the lee ward coasts (with the broad and the narrower leaf forms). Luzon, near Manila.

I scarcely doubt that these are all forms of T. coronaria; but the largest, ovate or semi-ovate capsules, are only an inch or less in length. They are said to be yellow when fresh, the seeds (which are exactly those of 70 coronaria) enclosed in rid folds. The largest leaves are 6 inches long and 3 inches wide: those of the small form 2 to 4 inches long, and 1 to 16 inches wide.

*Tabernamontana* Lavis, Nell. Fl. Flumin. 3, t. 18; Fl. t. c. p. 375; ined. dubia.

Nat. Rio Janeiro, Brazil.

The specimen bears immature fruit only, so that the genus is indeterminable. But the leaves are alternate. They are not much so much alternate, lanceolate or oblong and acuminate at both ends, rarely above two inches in length, bright green and of the ordinary green hue on both sides. The fleshy follicles and seeds appear to be those of a *Tabernamontana*. 

St, Bay of Islands and Waiau

Bay, New Zealand.

As the principal fruiting specimens are broad-leaved, and the only flowering one has the tube of the corolla much longer than the calyx, they must be referred to Parsonsia heterophylla of Cumingham and of Hooker (P. altiflora of Hooker), which is Par

nepetae capsularis of Hatter in part, A sterile specimen may well resemble the Kamal's figure of P. versicolor, but from the corolla H. Hooker refers this to P. heterophylla.

and the Parsonsia capsularis of Gordon's Zemes.
Lyonia, R. Br.

1. Lyonia straminea, R. Br.
   Stnt. New South Wales, at Hunter's River and near Sydney.

The corolla is essentially, but not absolutely valvate in section, the margin to the right of the observer slightly overlapping the other.

2. Lyonia glabra, sp. nov.

L. glabra; foliis ovasit subtessubcordatis acutatis acuminatis; calyceis lobis triangulatis acutis breviter; corolla fere glabra, lancee tantum annulatione barbatae; squamis nec larii dissectis glaberrimis ovarium subaequantibus; capsula cylindrica leviter bisulcata.
Flr. Crocan, Zeejca Islands.

A woody, twining plant, glabrous, except a very minute and dusty pubescence on the influence and young petiole. Leaves membranaceous, ovate or oblong-ovate, with a subacute or rounded base and usually an acute or cuspitate acumination. Vein, the venules conspicuous undermatt. The larger leaves 6 inches long and 3 inches wide; petiole less than an inch in length. Influence as in L. scabra, &c.; the flowers apparently smaller, and the calyx shorter, glabrous, but the lobes broadly triangular and acute, thick, nearly equaling the very short tube of the corolla, the small glands in their axil, crenate or laciniate. Corolla glabrous, or very minutely and sparsely pubescent under a lens; the short tube moderately ventricose, about one third of the length of the oblong-
lanceolate lobes; these are thick, glabrous within, and puberulous in activation; one edge however, narrowly bevelled and overlapping just as in L. stramineum, but more evidently so; the tube is moderately beaked only at the orifice, (They are straight and equilateral, not at all contorted).
Filaments inserted a little above the base of the corolla, pubescent, filiform, as long as the anther; straight, pilose towards the base; anthers linear lanceolate, reunite at the apex, sagittate at the base, the lobes somewhat incurved; they equal the corolla in length, and are connivent and become coherent with the stigma, which, with the style, resemble that of L. triloba.
Blades or lobes of the nectarary thickish, rather acute, entirely distinct, glabrous, nearly as long as the glabrous bilocular ovary.
Capsule nearly 6 inches long, almost cylindrical, straight, slightly grooved on each side, at the borders of the thin dissected 2-valved, immature seed linear, elaterate, nearly half an inch in length; the fulvors come twice longer.

Mr. Brown well says of this Lyonsia that it is "Parsley &c. minus affinis." The two should perhaps be united. The best, if not the only distinction is thus to distinguish the forms in the thickish lobes of the corolla, which are essentially or nearly valvate in "Parsley" in Lyonsia. To this genus rather than to "Parsley" belong H. Müller's P. ventricosa. The present species is a close cousin of " Chile, Scabre, Labile, of New Caledonia," which Debuigne has referred to Lyonsia. From this it differs chiefly in the pointed leaves.
almost glabrous in florescence. 75., the smaller and acute lobes to the calyx, nearly glabrous evintra, with merely a bearded ring in the throat (not with five vertical beaded lines), the minute and many glabrous, and the fleshy capsule.  This comparison is made with Labill.  juss. figure i haven't seen this plant.

Alstonia, K. Br., Creb.,

Juss.  diss. aspermum  mem. creb., unique, quantites 760.

Subgen. Dissuraspermum, Semina usque æqualiter et eae horum ciliato-plumosa, rursus comosa, basi apiceque in acumen vel caudam producta, cauda superiori apice bifida; albumen tenississimum. Corolla lobi lineari-lanceolati, staminum sinistrosum (sensu Candolle) convolvi; flos habrata. - Anteces vel arbustula insularum, glauco terrinim; foliis oppositis, peti-olis angustissimis marginatis, basi pl. m. dilatatis, cynis patentibus.
I. Alstonia (Dissuruspermum) costata

F. foliis ovalibus, obtusis, oblongis, elian margine undulatis, augusto lanceoletatis acuminatis, seminibus ovalibus utrinque acutissimis vel rectis, cernuis.


Alstonia costata, R. Br. in Mem. Tern. Soc. i. p. 413.


Ital. Mountains of Tahniti and Times, Society Islands.

Hoste's detailed description of this species, printed by Brilliam and Browne's character have little to be supplied, except the details of the seeds. Browne's
doubt whether the cilia of the margin were elongated so as to form a comma at the end was well founded. In fact, the seeds are not properly comma at all, but strongly, and densely ciliate fringed all round, the fringe diverging at right angles with the margin. In this species the tails of the seed are not more than half the length of the body, or even shorter, flat, fringed equally with the rest of the margin, the slender one (pointing to the base of the capsule) entire and rather blunt, the other more chafed or notched. The membranes of one or both of these tails, so conspicuous in the following species, are discernible in A. spinocyloides of Müller, in which the hairs extend both ways to form a comma. In Forster's description
of the seed "margarine cylindrica"
is evidently a lapsus for "margarine
ciliata." The capsules vary from
2¼ to 8 or 9 inches in length.
The leaves vary from oval or
oblong-ovate to narrowly lan-
cellate, as Haste remarked,
and from 2 to 8 inches in length,
but are all sharply acuminate.
Trends bearded in the throat,
the beard extending slightly to
the base of the lobes. The
latter are linear-lanceolate, and
somewhat plicate at base and ob-
turhan. I cannot detect
the five "capsules", "rig armato
oculo conspicuo", which are
thought to represent the nectary, except
obtuse indications of a ring
circular disk. The stig-
ma is subtended by a cupulate
or annular indusium, and is
acutely 2-lobed or bipartite.

Plate  Alsotania cortata.
Flower.  Long 1, long pedicel.

moss, Labill. (Tab. 1)

2. Alsotania (Dimoraphyllum) plumosa.

A. foliis auriculatis ellipticis oblongis obtusis nunc obtuse basi acutis subacuminatis, peninisibus longis utrinque longius canalis protractis. (Folia nunc parva bipinnatipartita, nunc 6-8 pinnatipartita.)

Hab. Mountains of the Zeejke and Samoan or Navigators' Islands.

This is very near the foregoing species, nearer than could be supposed from Labillardière's plate. For that does not well represent the stigma, which is indistinctly appended below and with sharp lacer above, nor the calyx, which is from five- to the base. The lobes of the corolla, moreover are a trifle narrower and less obtuse. In our specimens these are glabrous, except at the very base. This alone causes some hesitation in referring them to Labillardière's *A. plumosa* of New California, in which they are said to be pilose for the whole length of their inner face; but the figure hardly verifies this. The
seed, which Dr. Candolle supposed to be usually represented and found by Labillardière, accord well with those in our specimen from the Eezooee Islands, except that the tails of the latter, except that the tails are flat, rather than falcate and less abrupt at their origin; they are larger than the body of the seed. Plumeose cilia, like the margins of the latter, the cilia are acutely bifid at the extremity. The slender follicles vary from 3 to 9 inches in length.

These two species might very well be detached from the genus Alstonia, possibly with better reason than Blepharopus, has been. It seems wiser, however, to secure let the genus contain the types of which Mr. Brown associated in it.

Plate 1. Alstonia plumosa.
Ord. Oleaceae.

1. Olea, Town. R. Br.

1. Olea verrucosa, Link.

Stbt. Cape of Good Hope, in the vicinity of Cape Town.


O. levis; foliis lato-lanceolatis oblongisve acuminatis integerrimis, petiolatis supra lucidis subtilius pallidis; racemis axillaribus brevibus; corolla profunde quadri-
partita; staminaibus (an semper 3) 4; ovario conico, stylo drupa ovatoideae (in stip. angustifol., ellipsoideae).

Itab. Sandwich Islands: Oahu, on the Kualoa Mountains behind Honolulu; also in Remij's collection from Kauai (no. 479), and, a narrow-leaved form with the immature fruit elongated ellipsoideae from Molokai, no. 482.

"A tree, twenty-five or thirty feet high," glabrous throughout, or in specimens from Kauai, with the young parts slightly pubescent, Branchlets tense, grayish. Leaves opposite or sub-opposite, resembling those of Laurus nobilis, but pale beneath, from 3 to 5½ inches long, varying from broadly lanceolate to oblong or ovate-oblong, more or less acuminate, minutely veined, cori-

...
acervus, minutely punctate, the base acute or acutish; pedicle 3 to 6 lines long. Racemes in the upper axils, from half an inch to two inches long, on a very short peduncle, many-flowered; pedicels 1½ to 3 lines long, barely white, small, 4-lobed. Corolla petalate, deeply 4-parted; the outer divisions oval, their margins very slightly overlapping in the bud. Stamina 4 in all. The flowers examined: filaments very short, inserted on the very short tube of the corolla alternate with its divisions; anthers, as long as the corolla, oval, mucronate, somewhat introrse. Ovary elongated, conical or pyramidal, 2-celled, tapering into a very short thick style which is surmounted by a capitate two-lobed stigma. Ovules 2 in each cell, parietal. Impe oval, "as large as a garden cherry, blue," with a
somewhat capious pulp and a thick, osseous pith, yellow, one-celled, one-seeded. All stems fleshly, inclining to cornua (or conica), the flat carpels are oblong. In the
marmalade and specimens of Ram's collection, the unique fruit is
much larger, 9 lines long, and in shape quite like the common olive.

The four stamens, although unusual, are not unprecedented, being
occasionally met with in Chimenanthus.

Variable as to foliage, as are the specimens before me, I do not doubt that they all belong to one species, except possibly there is no. 482, of which I have not seen the flowers.
Blume, tourlcher, and De Candolle, attributes to Chimaenathus and Linociera an epalbuminous and tetraalbuminous fruit, a tribe thereupon, and a thick embryo. This is not the case, at least in the original species of either; genera Chimaenathus Virginica, as I had long ago noted, and C. (Linociera) ligustica, as C. Wright has observed, upon the living plant. I have verified upon his specimens, having the albumen and stigmas of Olearia Blume, in writing, rightly enough, the two genera (in Miss. Bot. 4, p. 317), still characterizes the seed and embryo in this way; and respects Dr. Hooker confirms it for several Asiatic species, and as he respects these characters under this C. samantica, the Asiatic species should be reperception the note and to the composition of the West Indies. The type of Chimaenathus Virginica is sometimes three-seeded.
3. *Olea maritima*, var. *depressa*

perata, Wall. Cat.

Hub. Singapore. But the inc.

ulnerance is as in *O. divina*.

An *Olea* occurs in the

Dejoe collection, an imperfect
specimen, with firm neck.
1. *Notelaea longifolia*, Reit.<n>

2. *Notelaea ovata*, Reit. Br.<n>

Hab. Hunter's River, New South Wales. A fragment of the outer, in as figured in the herbarium joint, and of the latter, which, probably is not specifically distinct with the corolla and stamens fallen.
Ord. Jasminaceae.

Jasminum, Tourne.

1. Jasminum Bahiense, A. Ste.

Hab. Brazil, near Rio Janeiro, "in wil'd situations, and to all ap-
pearance indigenous. Flowers white."

2. Jasminum didymum, Host.

Refh. Tant. P. 40.

Tab. Tahiti, Society Islands, com-
mon. "A woody vine." This is not
Voy. p. 66, nn Linn.

J. parviflorum, Deicate, Hand.
Timor, p. 77; De. Prod. 8. p. 310;
Miq. Fl. Ind. Bat. 2. p. 531.

Tab. Tahiti, Society Islands;
Canarina. "A nooky vine."

Loma-Town,
Hubi Vanna-leuru, Feejee Islands.
All our specimens must belong
to one species except, perhaps, an
imperfect one from Vanna-leuru,
Feejee Islands, which has more
decided calyx-teeth, the truncate
border of the calyx being tasselled
in all the rest minutely or absolu-
litely toothed. The tube of the corolla
is only 2 ½ to 3 lines long, and the
lobes in the same specimen variable in
form (according to age?), sometimes
acute, sometimes obtuse.

*Jasminum simplicifolium*, Hort.
- *J. sm. 8, p. 306.
- *J. australe* Hort. of Sim., in *B. M.* 1, p. 85, 1866.

*J. samoa*, Samoa, Friendly, and Fiji. Is.

In this the calyx teeth very much in size, ours and those of Dr. Harvey (from the Friendly Islands) having them in some cases as conspicuous as in the figure in the Botanical Magazine, in others shorter, while in those from the Fiji Islands they are minute denticles. Like the corolla in some specimens becoming linear-lanceolate and almost an inch long, in these 9 or 10 in number.
4. Jasminum tetraquetrum, Sp. nov.

*J.* erectum, glabrum; folis oppositis unifoliolatis, articulo petidi obtusum; foliolo ovato-lanceolato seu ovato acuminato basi acutiuscula tinnere; pedunculis brevibus paniculosis; calyci (frutiferi) tetrapetali, albis angustis densum in pedicello longe clavatum decurrentibus densum in dentes linearis subulatis verticilos tubum 2-3 mm superantes extensus productis.

Ital. *Teejee Islands*, on the mountain summit back of *M. Ahnata*, at the elevation of 2000 feet.

According to Dr. Pickering's note this is a *J.* formi a shrub, from
six to ten feet high; calyx terminating in four long segments, and splitting laterally to expose the berry. It is known only in this fruiting state. But the plant is most probably a Jasminum and allied to Blume's *Jasminum carinatum* from the Celebes. The leaves, or rather leaflets (for the articulation is visible though obscure) are about 2 inches long, coriaceous, alternate, acuminate, obscurely veined, three-ribbed at the base. Pedicels terminal, about the length of the petals; the pedicels usually 3, an inch long, slender and -ribbed at near the base, gradually clarata thickened and tetragonous upwards, where it expands into the four-winged tube of the calyx;
The wings extending beyond the truncate border into the four narrowly subulate teeth (half an inch in length), which stand edgewise; the tube is split down one side by the enlarging (more or less spherical) fruit. The flowers are a desideratum.

5. *Jasminum suavisissimum*, Lindl.


Hab. Hunter's River, New South Wales.

Apparently the same was collected at Moreton Bay by Mrs. Mallard.

The taller of our specimens incline to twine. The leaves are short-petioled; the calyx segments very slender. What Fuller and also Lindley in *Bot. Mitchell's collection name J. linicase, is J. micranthum R. Br., with simple leaves,
b. Jasmimum confusum, &c.

Stab, Island in the Sooloo Sea.
The specimen quite too poor and imperfect to allow of a determination whether it really differs from J. simplicifolium, which may have minute calyx teeth, but there is no appearance of being so here.
3. Issue license, renew.
Ord. Asclepiadaceae.

1. Sarcostemma, R. Br.

1. Sarcostemma clausum, Koen. & Schult.

Hab. Brazil, near Rio Janeiro.
The same as Hostmanna's ed. 962, from Surinam; the larger leaves elliptical or ovate-oblong, often with a small basal sinus. Probably it includes some other species of the section.

2. Sarcostemma Tombejanum, Secaise.

Hab. Peru: exsiccatum river-bed near Lima; in fruit.


2. Peplonias, Decaisne.

1. Peplonias nitida, Decaisne.

Peplonias nitida, Decaisne in DC. Prod. V. 5. p. 546.

Ital. Brazil in the vicinity of Rio Junins.

The follicles (smooth) and seeds are like those of Sarcostemma. The pedicels are short, truly axillary, and the flowers not at all silvery.


Ital. Cape of Good Hope, in the vicinity of Cape Town.

Stab. Madeira, St. Helena, and Sydney, New South Wales; adventive.

4. *Asclepias*, Linn.

1. *Asclepias campestris*, Decaime?

Stab. Rio Negro, North Patagonia, on the upland plains; foliage only; probably a smoother and narrower-leaved variant form of *A. campestris* of Montevideol.

5. *Sitassa*, Rbr.

1. *Sitassa umbellata*, Decaime,


Stab. Brazil, in the vicinity of Rio Janeiro; only a fragment of the latter.
1. *Oxyptalamum* Banksii, Poem. & Schult.  

*Oxyptalamum* Banksii (Poem. & Schult.  
Lindl.)  
Decaisne in DC. Prod. 8, p. 581, 582.  

*Hab.* Brazil, in the vicinity of Rio Janeiro.  

2. *Oxyptalamum Megapotamiacum*  

*Hab.* Brazil, near Rio Janeiro.  

3. *Oxyptalamum* (Schizostemma) Hooker  

*Cynanchum* isostratum, Hook.  
forma, latifolia.  

*Oxyptalamum* Hookeri, Paxalis, 9 em-  
tetiflorum, Decaisne in DC. Prod.  
397, 399.  

*Hab.* Chili, on the coast, near  
Valparaiso; very variable in foliage.
7. Sonninia, Reichelt.

Diplolepis Menziesii, Roem. & Schult. Syst. b. p. 95; Stock. g. Ann.

Hub, Chili, on the Heights back of Valparaiso.

1. Matelea Palustris, Anhl.

Matelea palustris, Anhl. Guian., i. p. 277, t. 109; Decaisne in DC. Prodr. 8. p. 571

Hub, Brazil, in the Organ Mountains, near Rio. ACCORDS very well with Anhlets figure.
1. Tylophora barbata, K. Br.

2. Tylophora Pernottetiana, Deccain

3. Tylophora Samoënsis, sp. nov.

4. Herbacea, volubilis, fere glabra; fllis cordatis acuminatis membranaceis; pedunculis filiformibus petiolo apice glanduliferis longi; umbellis pluriploris; corollis
Viscentsibus, corne staminae foliolis subcarneosis linea- oblongis, apice acutiusculo tautum, antheras ad aequalis tautum, gyrostegeo libris; pollinis obovato- oblongis ad- scendentibus, subsectae juse sessae brevissime stipitatis.

Isal. Savaii, one of the Samoan Islands.

"Amorphaea varie," almost or quite glabrous. Leaves mostly from 3 to 5 inches long and 1½ to 3 inches broad, ovate and more or less deeply ovate, abruptly and conspicuously acuminate, mem- branaceous, waxy, on slender petioles, bearing a small gland at the junction with the lamina. Peduncles and pedicels filiform.
Corolla "granish" 4 or 5 lines in diameter, the ovate acute lobes valvate in aestivation. Staminal corona of five narrow and but slightly fleshy appendages, which are strictly adnate to the gyrostegium, only their tips which equal the anthers free. Pollinia ascending or nearly erect, scarcely if at all stipitate. Follicles 6 inches long, slender, smooth.

4. Tylophora Brackenridgei.

5. volubilis, glabrum; foliis ovatis subcordatis mucronatis; pedicello glanduloso pedunculis pedicellis apice hand glanduliferum subequalibus; umbellulis plurifloris.
flosibus "carneis" undique glabris; corona staminae et glandulis seu gibberibus carnosis lateraliter compressis usque ad apicem acutum adnatis (in picco subulatis) anthera brevioribus; polliniis ovalibus medio juvem justa medium stipiti brevi flaxuoso affixis ascendentibus.

Itab, Ovolau, Feejee Islands.

Leaves 1 1/2 to 2 inches long, probably somewhat fleshy or coriaceous, ovate and usually more or less cordate, the obtuse apex tipped with a small minute acuminat; veins evident; no gland at the junction with the petiole; the latter glabrous like the whole plant, about half an inch long. Umbels small, clustered; pedicels 3
lines long, nearly very short, the lobes obtuse and ciliate. Centra "flesh-colored," yellowish-white in the dried specimen, white, 5- parted, about half an inch in diameter, the ovate-oblance divisions slightly overlapping in estivation. Body of the anthers a line long, of a firm succulent texture; the pollen-bearing tips behind the small cells short and transversely oval; the conical appendages a fleshy, salient, maroon crest, adnate by its inner edge to the back of the body of each anther, and gradually narrowing to upward to a point below the level of the polleniferous cells. Pollen masses shot oval, ascending on a curved stripe which is shorter than the ovum.
and attached at their about their middle. Stigma depressed. Immature follicles smooth, short, acuminated. 

Without doubt this is a congener of Endlicher's Hybanthraceae biglandosa, the pollen masses of which are probably less pendulous than is represented. The structure of the androecium is very similar, but the corolla appendages are transversely transversely dilated at the base, thence gradually tapering to an acute apiculum, which is perfectly adnate to the back of the another. In Rhipisia (Typhana Rhipisia and swamis, Deacon) I find the same structure, the corolla appendages equally adnate, and laterally compressed.
10. Marsdenia, R. Br.

1. Marsdenia marcellana, R. Br.

Type: Near South Wales, at Sydney and M. Hunter's River.
Gymnema, R. Br.

Gymnema, Bidaria, &c. &c.

1. Gymnema subcordatum, Br. &c.

G. volubile, undique glabellum; membranaeve
foliis ovato-lanceolatis sensu ovato-
oblengis basi rotundatis vel sub-
cordatis; pedunculis petiolum
adequantibus; umbella bipis
bifida; corolla rotata et partita
inclusi squamulis perseverantibus.

Sib., Fleejee Islands; in the
mountains of Muthuna, according to
the ticket.
Of this there is a single specimen, in flower, with a slender stem; the young shoot, leaves, calyx, &c. pilose. Subsequent under a lens, to the naked eye nearly glabrous. Leaves opposite, membranaceous, 2 or 3 inches long, with somewhat undulate margins, acute, or acuminate, sinuate, mostly veined, the base either rounded or somewhat cordate; the pediciles half an inch long. Pedicels solitary, more or less thickened at the insertion of the pedicels; this pedicel receptacle usually dividing and each division lengthening into a thickened saclike about two lines long. Pedicels numerous, about 3 lines long. Calyx small, much shorter than the corolla, the lobes minute. Corolla convolute in estimation, but the margins only
slightly overlapping, the expanded 
5-parted corolla only 2 to 3 lines 
in diameter, greenish, or the 
upper surface dull purple, 
glaucous within and without, 
but the margins of the oblong 
obtuse divisions obscurely 
ciliate; at the sinuses of each 
sinus is a very short, short 
fluffy squamula, almost ob-
solete, but evidently answering to 
the appendages of the corolla in 
the typical species of *Symmera* 
Then are no decurrent lines or 
ridges below the squamulae; indeed 
the tube of the corolla is almost 
wanting. No corona, glands, or 
other appendages to the androceum, 
which is very short. Anthers, 9, of 
the genus. Pollen masses, between 
clavate and oblate, erect, con-
stricted a little above the insertion.
of the short stipe, Stigma umbonate, Follicles not seen.

The stivation of the capsule in Sympnema is said to be valvate, particularly in his S. (Sympnema) recurvifolium. In all the species I have examined it is connate, as described by D赛车, but in all the spes of the present collection, and especially in S. stenosiphylum, the margins so slightly overlap that the stivation would hardly be taken for valvate.

2. Sympnema stenosiphylum, sp. nov.

S. priscusum, erectum, ramosissimum, per glabrum; foliis oblongis, linearisibus basi attenuatis, marginibus revolutis, costa subtus pilosa, perilaiis axillaris
Hab. Hejne Island; on the
lava-flux upland of Monticulata.
This is "a shrub, 3 to 5 feet in height," according to Dr. Pickering's notes, apparently very bushy;
the slender glabrate branchlets
crowded with leaves, and flowering in most of their axils. Leaves
narrowly linear, 2 to 4 inches long and 2 lines or less in width,
tapering below into a short petiole, in some specimens so
revolute on the margins as to appear filiform, oriacum,
glabrous except the middle beneath, which is minutely hairy, the upper surface lucid and veinless, the lower indistinctly feather-veined. Pedicels one or two lines long, or almost wanting, the numerous pedicels one or two lines long, crowded on a short squamose rachis. Lobes of the calyx oval, ciliate, nearly half the length of the corolla. The corolla is apparently white (not greyish-brown as recorded in Dr. Pickering's notes). 

When fully expanded, 3 lobes in diameter, the oval obtuse lobes delicately bearded with a white pubescence inside, almost valvate, the margins lightly overlapping in aestivation. The sinus and throat wholly destitute of appendages. Androcennium very
short, stellate, or clavate, oblong, erect, shorter than the filiform spirally-entwined stipes, stigma unlobate, follicles unknown.

The pollinia accord with the character of *Sarcobatus*, R. Br. (but they are not "apice lateralis pet-locida" as Miguel has it); the fruit is needed to determine if our plant belongs to *At* at genus. As the genera are arranged by Decaisne, the present plant does not accord throughout either Plate with *Bidaria* or *Bomarea* but manifestly inseparable from *Symmernia*. It is as recently been collected by Dr. Hiernmann (no. 322) but with other in other plant, only young fruit follicles, there are slender, tapering, and smooth.
There is in the collection moreover, a specimen ticketed as from New South Wales, which is apparently referable to Gymnema as established by Brown, but to none of his species. It has a glabrous costa wholly destitute of squamulae or other appendages. The materials are too imperfect for publication.

H. scandens; foliis glabellis glaubercornis; planis obscuris petiolum bis in toto glabuloso; pedunculo pedicellis bracteis longioris; sepalis albo-linari-oblungis; corolla et tegula glabrae intus puberulce lobis ovatis acutis; planis; corona stamineae foliis incrassatis, disco obovato concavo angulo intern. longi-uscule acuminato; margineb. bracteis hand revolutis, verso extimie bicarinato.
Tahiti, Manna, Tubuila, and Samoan Islands, also)

Stem fleshy, twining; the younger
branches more or less pubescent
or hairy, as are the petioles,
peduncles, pedicels, and calyx.
Petioles 1 to 18 lines long; the blade
of the leaves 3 to 5 inches long
and 2 to 4 inches broad, doubtless
moderately fleshy, but indistinctly
showing rather in distinct pin-
mate veins in the dried specimens,
minutely pubescent or glabrous,
apparently not glaucous; the upper
face having a single or triple gland
at the junction of the petiole with
the midrib; pedun
ules 1 to 18
lines long; pedicels slender, about
an inch long. Corolla 9 or 10 lines
in diameter; "white" of a rather
texture for the genus, glabrous on the lower and obscurely prominently on the upper surface, the margins of the triangular acute and acute lobes not revolute. Pieces of the staminal collar a line and a half on the concave and obvate and internally acuminate proximally upper surface or disk, their vertical thickness little less, inclusive of the two strong and closely approximated ribs, the edges of the disk acute. Follicles narrow, 5 inches long.

This may possibly be Forster’s Helianthus volubilis (nun liim.) Jsm.

Tanna. It is the Ngua Billandini of Dr. Seemann’s list, no 319 (Tanna Islands), but hardly of Seemann’s for the pieces of the staminal collar are strikingly acuminate instead of “angulo in tergo obtuso.”
Among the specimens too imperfect for determination are 1. Foliage from the Heeje Island, of what a Stoya, which agrees with "St. pilosa" sp. nov. of Seemann's list, no. 321 (which ime possess equally without flowers), only the leaves are glabrous, or only obscurely pubescent along the midrib underneath.

2. Two, or perhaps, three species of Stoya from the Samoan Island, and one from the Mangosi Island, without flowers, &c., and

2. Stoya dipstera, Seem.

Styl. Heeje Island. Folia
Without flowers or fruit. The same is the case with one specimen from Dr. Seemann's collection, no. 320, so that I am unable to characterize the species.


*Susara superaniana*, *Borzi.*, *Salm.*, *Bjor.* p. 1062.

*Dischidia* × *Collyris*, *Wahl.* P. *Biet.* *Rav.* 2, p. 35.

*Hyga inbricata*, *Scaeva* in *Scaeva*.

*Puvr. 8, p. 137, 7* *Deles. 2, c.* *Scl.* 5, 7, 90.

*Stab.* Small island in the Sotto Sea; without flowers.

*Stemite.*

*Dischidia* × *Leptostenoema*, with foliage only, was gathered on the Mayaijai Mountains, Luzon.
Ord. Gentianaceae.

The species, being all such as have already been investigated, need only be enumerated, as follows.

**Chionaria baccifera**, Linn. Picked up at the Cape of Good Hope.

**Erythrea australis**, R. Br., with uniformly pentamous flowers, from collected at Sydney, N.S., New South Wales.

**Erythranthe diffusa**, R. Br., from Louis, near Lisianthus obtusifolius, Hassk.

**Brazil**, near Rio Janeiro.

**Gentianella Magellanica**, Linn., from Orange Harbour, Georgia, with pentamous flowers, and narrower calyx, this, and with this, a few sterile stems of **G. prostrata**, Stapk., from Orange Harbour, Florida.
Gentiana congesta, Stork. f., (probably, as suggested, a form of, Montana), from Lord Auckland Island.

Gentiana cerina, Stork. f., mostly less leafy than Dr. Storke's plant, from Lord Auckland Islands.

Gentiana limoselloides, St. B., with some of var. incarnata, Engelm., from the Andes of Peru above Baños, at Casa Cancha 1s.

Gentiana paucicola, Engelm., at Casa Cancha, Andes of Peru.

Gentiana primulifolia, var. dilatata, Hed., Ohlo. And. 2, p. 53, t. 52., still more developed, from Baños, Andes of Peru.

Gentiana incurva, Stork., Alpamarsea and Casa Cancha, high Andes of Peru.

Gentiana pedifolia, H. B. K., short-leaved and long-leaved forms, from Alpamarsea and Casa Cancha, Andes of Peru.
Ist典雅 Tordegawa, Vedd. (X. gracilis B. Griseb. in Fl. Jm. B. Mos. Indies) from Barmo, Ardos & Corn.

Villasasia Parmassio felici, B. Br., from Mozambique, New South Wales.

Limonanthenum Kleinianum, Griseb.35 Koejje Islands, "common in Taro Plants, probably introduced." Collected by Dr. Harney and by Dr. Seemann., the latter's specimen larger-leaved and more like L. Kleinianum, but in some of them are the three ribs at prominent underneath, the flowers (too poor for investigation) are much smaller, and the seeds flat and sharp-edged, perfectly smooth. Those of L. Kleinianum, Y. India (in the Ceylonic specimens coll. by Dr. Thomson and distributed by Dr. Borker) are not badly supplied. represented in Stock. Bot. Misc. 3, 27, 30,
being turbid, obtuse at the margins, and minutely muricate by minute spicles which sub off.

*Erythrea subaeoides*, Gray, in *Proc. Amer. Acad.*, 6, p. 56 (the *Schizonicia subaeoides* Briss. in *Brugsch.,* 1, p. 226) was not collected at the Sandwich Islands by our naturalists.
Ord. Solanaceae.

Solanum prostrata, Linne. F., was collected on the coast of Peru, at Callao. Two others are mentioned in Dr. Pickering's notes on Peru, but no specimens occur in the collection.

Solanum spathulata, Ruiz and Pav. is evidently one of these above; the other is wholly uncertain.

Lycopersicum Peruvianum, Mill., with foliaceus reniform barts, was gathered in the environs of
Obrajillo, Peru.
Lyceum persicum cerasiforme, Dum.,
the normal state of L. esculentum Mill., in the coast region
of Peru, near Lima, and also L. regulare Dumal, or near it, camescent, and the fruit
tuberosum, Linna.,
from Banaos, Peru: appearing like
a wild specimen, but not paid to
be frequent along the upper margin
of the region between the commence-
ment of the rains and the upper
limit of cultivation.
Solanum microcarpum, Linna., which
includes fifty or called species ad-
mitted by Dumal in the Prodo-
mus, was collected, in various forms,
at Madeira, Rio Janeiro, Chile,
at Valparaiso, Peru, Sandwich
Islands; Tahiti, Society Islands,
Samoa, and other South Sea Islands,
New Zealand, St. Helena.,
Diego Smith Hales,
Solanum Sodomaum, Linna. Picked up at St. Helena and at Sydney, New South Wales.

Solanum aculeatissimum, Jacq. (S. ciliatum, Small), from Rio Janeiro, Brazil, and around Tranquebar, where several collectors have met with it, on Adventure Island.

Solanum Gaavurana, Vell. fl. St. Hil. 2. 1. 212, common about Rio Janeiro.


Solanum argenteeum, Small, at Rio Janeiro.

Solanum Radula, Vahl., at Rio Janeiro.

Solanum piluliferum, Small, as far as can be determined from the fragment, near Rio Janeiro.
Solanum supescens, and var. glabrescens, from Sendta, from near Rio Janeiro.

- Solanum cernuum, Vill. (S. jubatum, Dunal), near Rio Janeiro.
- Solanum Paratyense, Vill., from near Rio Janeiro.
- Solanum curvispinum, Dunal, from near Rio Janeiro.
- Solanumpaniculatum, Linne, from Rio Janeiro.
- Solanumclagmipilium, Cav., var. leprosum, Dunal, quite like Chilean and some Texan forms, at the mouth of the Rio Negro, South Patagonia.

Solanum concavum, Linde, as well as can be determined, in fruit, from Chili above Santiago. Berries globular, of the size of large peas.

Solanum amblophyllum, Hook. Bot. Misc. 2, p. 231, from the valley of
Can a, below Abajillo, Peru; the specimen insufficient for the comple-
tion of the characters. "Berries
small and red."

Solanum pulverulentum, Pers.,
in the same district, from Baños, higher up than
the last.

Solanum Nelsoni, Dunal, or
what I take to be that species, from the
Sandwich Islands. Vide infra.

Solanum sandwicense, Hook. &
Arn. (S. W. Oakese, Dunal), from the
Sandwich Islands. Vide infra.

Solanum in completum, Dunal,
from the Sandwich Islands. Vide infra.

Solanum viride, Solander, K.
Br., Tahiti, Samoan, Tonga, and
Hecjoe Islands, and wonder Coral
Island. Apparently includes S. anthro-

anthropophagorum, Lear. In vari-
ous forms, one of which, apparently, is
S. anthropophagorum, Lear, and...
Solanum inamoorum, Batt.,
at the Hoojee Islands, where Harveý
and Semmann also collected spec-
imens. Nothing to add to the
published character, except that
the branches do not appear to be
tortuous, the leaves are rarely ob-
lique, and the cymes are tri- or biacemosae.

Solanum Amicorum, Batt.,
at Torogatake, a poor specimen
adding nothing to our knowledge of
the species. But Dr. Harveý collected
five specimens in the Friendly Islands,
with flowers and fruit, the latter
glostose and resembling that of the
preceeding species.

Solanum repandum, Iurst.,
from the Society to the Hoojee
Islands; "naturalised, sometimes
cultivated, introduced by aboriginal
settlers." A variety with the leaves
Yes, let Tony, when full grown,
the flowers rather small, with
a white corolla, the van near
glabrous, the fruit smooth,
"as large as an apple, white
with a purplish tinge when
unripe, afterwards becoming yel-
low and edible, usually cooked,
but pleasant to the taste in
the crude state," is cultivated
by the Hejjeans (at Saloa,
Mathurata, &c.). It was called
by named the Hejje Ze-
mato. Tab. represents
a flowering branch, and a fruit
of the natural size.

*Solanum aviculare,* first, inclu-
ding *Solanum ascidium* &c., from New
Zealand and New
South Wales. A specimen of the form
with entire leaves is ticketed as from
Hejje Island, but it is not referred to
in Dr. Pickering's list, and there is
reason for supposing that it was gathered in New Zealand.

Solanum pungetum, R. Br., at Sydney, New South Wales.

Solanum elegans, Smal., and S. violaceum, R. Br., from Hunter's River, New South Wales.

Solanum indicum, Linn., at Manila, Luzon.

Solanum turvum, Swartz, at Singapore.

Gyphonandra divaricata, Sendt., as far as can be judged, although that species has not before been met with near Rio Janeiro.

Bassonia lucida, Smal. (Axeliana, Sendt.)

Saracha dentata, Ruiz & Pav., from Peru.

Nicandra physaloides, Linn., picked up at Sydney, N. S. Wales and St. Helena.
Physalis Peruviana, Lin., with edible fruit, from Madeira, the coast of Peru and Chili, Tahiti, Hiva and Easter, South Sea Islands, New Zealand, New South Wales, and St. Helena.

Physalis angulata, Lin., from and Lima, Callao, Peru, Tahiti, Tongatahu, and the South Sea Islands, and Manila, Luzon.

Withania (Hysonotricum) somnifera, Dum. et at St. Aug. Cape de Verde Islands, and Cape of Good Hope.

Helcladus biflorus, Miros, from the Andes of Peru at Banos.

Salpigochroma glandulosum Miers (Adropa glandulosa, Hook. Ec.), from the Andes of Peru above Banos.

Achistus arborescens, Schlecht. (Adropa arborescens, Lin.), from Rio
Lycium infaustrum, *L.* filiflorum, var. minutiflorum, *L.* Patagonicum, and *L.* pubescens, Miess, brevistipulat, 1. t. 71, 72 (the latter without flowers, and all inclining to run to gather) may be identified among the specimens gathered at the mouth of Rio Negro, South Patagonia.

*Lycium Chileense,* Miess, from Chili at Valparaiso.

*Lycium patsum,* Miess & Par., from the coast of Peru.

*Lycium Sandwichense,* n. sp., from Oahu, Sandwich Islands. Vide infra.

Lycium rigidum, Thunb., picked up at the Cape Town, Cape of Good Hope.

Solandra viridi flora, Sims, from Rio Janeiro, Brazil.

Datura Metel, Linn., St. Jago, Cape de Verde Islands.

Datura quercifolia, V. B.K., marked by the great spines on the fruit, from Valparaiso, "seemingly indigenous on the sands of the seashore", but noted in the Flora Chilena as found in gardens.

Datura stramonium, Linn., "Tahiti", but not enumerated in Dr. Pickering's list, nor by Guilliermon.

Datura alba, Nees, Luzon, near Manila.

Hyoscyamus albus, Linn., at Madeira.

Nicotiana acuminata, Graham, Chili near Valparaiso.
Nicotiana glutinosa, Linna.,
Peru, near Lima.

Nicotiana paniculata, Linna.
Nicotiana tubiformis, Wall., from
between Lima and Obrajillo,
Peru, and elsewhere.

Nicotiana suaveolens, Linna.,
Amazonas River, New South Wales,
Mettlerrichia principis, Mikau,
Brazil near Rio Janeiro.

Bestrum lavitatum, Schlecht.,
and C. bracteatum, Link & Otto, from
near Rio Janeiro, the bark of the
latter said to be used as a substitute
for Cinchona.

Bestrum Parqui, L'Her.,
from Valparaiso, Chili.

Bestrum auriculatum, L'Her.
and C. leptonanthum, var. major, Sarm.,
from Peru, at Lima and to-
wards Obrajillo; the latter species a
new variety of the former.

Finally these are in the collection
Scanty and imperfect materials of two, if not three, species of the Sandwich Islands, apparently of a new genus. The characters are noted under the name of... vide infra.
1. *Solanum*, Linn

1. *Solanum Nelsoni*, Dunal

Sine re, pubes setulata multibus flavido-tomentosis, caulibus praeitosis proeminentibus, foliis cordatis vel aciculatis integerrimis utrinque mollietis tomentosis sepium cum axillari parvo; racemo paniceo pedunculato denum laterali; floribus extus tomentosis; calycibus brevibus lobis obusis corolla 5-fida plicata tripli loviore; antheris apice attenuatis incurvis filamento (in sicco nigrum) sub-triusto longo oribus.

Sandwich Islands, on the sands of the low isthmus of Maui. (Oahu, Keani, no. 442.
• Kanai, Kuttall in Nat. Stock.)

Although I have not seen Nelson's specimen in the Banksi-
an Herbarium, upon which Dumal in 1819 drew up his description of
this species, I presume it is the
plant here characterized from
campfer materials. The grounds
of doubt are merely these, Dumal
describes the corolla as scarcely
twice the length of the calyx, and
the segments of the latter are nar-
row (laciniiis angustis), and he
places the species in the section Pa-
chystemonium. But in well devel-
oped flowers the corolla is thrice
the length of the calyx, and the
edges of the latter acute and obtuse,
but with age becoming somewhat nar-
power. And the authors, although short rather short, are strongly alternate at the summit, and their cells open by a minute and strictly apical pore. It is probable that this specimen did not admit of sufficient examination. The branches in the specimens before us, appear to be furmantose, the younger ones pubescent. Leaves from one to two inches in length and breadth, generally ovate, acute in outline, obtuse, clothed with a close and thick stellate tomentum which is usually whitish or fulvous on the lower surface but yellowish or ferruginous on the upper: petiole 5 to 9 lines long. The small axillary leaf when present is from 2 to 6 lines in length, and more or less petiolate. Peduncle usually terminal, about an inch long; Sear the
Plants rather few and racemose, buds half an inch in diameter when fully developed and expanded, strongly flayed, perishable, whitish. Filaments in the specimens bullate-margose, fully half the length of the cobling and taper-pointed anthers. Trany hairy; style slender.


*Platicoccus*, inermis, folios sub-

*Platicoccus* ovatis (basi obtus-a vel rotundata) integerrimis

undulatis vel sinuato angula-
to-sinusatis supra pubes stellu-

cuta minuta parce delapsa

glabratis subtus ramis flexibus

que cano- vel ochraceo-toment.
tosis, egnis pedunculatis plurifloris circumdatae demum lat." 

eralous; pedicellis gracilibus; calyces lobis subulatis corolla 

fere 5-petala (segmentis estiva 
tim valde induplicatis, evolutis 
valibus obtusis) 3-4-flo bre-
visibus; antheris oblongis ar-
curatis apice subapiculatis, pr-
vulis apicalibus. Indit oferim 
na minus minus incano, et 
in var. infra dicta crassiere 
formigine perfurseo.

Solanum sandwicensis, Hook. f. 

Arn. Bst. Beech. Vol. 1, p. 82, 

L. W. A. us, et var. emos-cen-
ulatum, Dansil in H. Brokr. 

11, p. 269.

Var. ? Kauaiense: foliis ovato-
oblongis magis acuminatis,
Itab. Oahu, Sandwich Is.
and, on the mountains, frequent at the elevation of 1500 feet; found by nearly all the collectors, War. B.? On the lee ward side of the tabular summit of Kauai, at the elevation of about 3700 feet.

A shrub, about six feet high, variable in foliage, and but few but fairly well marked; the fully expanded "cortex" almost an inch in diameter, the globose berries about half an inch in diameter; the leaves varying from two to 6 inches in length, sometimes the adult ones merely greyish-ivory, underneath, but mostly whitened,
and with a fulvous or ochraceous hue, with a close and fine and closely appressed stellularomentum. The single and imperfect specimen from Kauai regarded as a variety, may some- 

distinct, but it will more probably be found to mesper into the 

present species.


1. \textit{proscaucus, subtomentosum, act} \textit{leis igneis validis ant /punci-} 

\textit{simis ant numerosis (præcipe \textit{foliarihus varissime cauliniis)} 

\textit{armatum; foliis rotundibus oblongo-} 

give uninatis vel subpinmati-

\textit{fidos (his bractibus obtusissimis) 

\textit{supra stellulato-puberulis subtilis subtur-} 

cum inflorescentia fulvo-sea ochra-}
{\textit{Solanum \textit{incomplutum}, Spec.

Frut. \textit{Stuartia}, Sandwich Island,

\textit{Nelson} (without flowers or fruit), Reznik, no. 451 (a very acute leaf in flower), and fruiting specimens in the collection of the Expedition.


doubtedly only a foot or two in height and mostly only towards the base. The prickles in our specimens few and only on the leaves in Reznik's abundant on the leaves.
petioles, pedicels, and calyx: they are feebly start, straight, flatish, reddish, and 2 or 3 lines in length.

Leaves 1½ to 2½. inches long, and with petioles of half an inch or over an inch in length, mostly obtuse at both ends, rather oblong or oval. The anthers, and rarely showing any tendency to become curvate. Peduncles 3 to 6 lines long, influence short, subacumose or bifid. Anisopterous pedicels half an inch long. Lobes of the calyx short-oblung or ovate. Corolla 3 or 4 lines long, apparently white, sparsely stellate. Many externally. Filaments almost as long as the anthers, which are a line and a half in length. Slightly at all

Flour the white apex of the cells,
and looking upward. Berries half an inch in diameter, or smaller. Having been collected in Cook's voyage, this is in all probability indigenous to Hawaii. I do not identify it with any other of the numerous species of the group to which Dumal referred it, and by the foliage, apparently correctly.

2. Lycium, Linna.


2. incerme, glabrum, ramis rigidis; folii subcaulescentes spathulatis obtusis et basi alternatis vix petiolatis, pleisque fasciculatim; pedicellis solitariis folio brevioribus; floribus tetrameris; calycis breviter 4-fidibus lobis late triangularibus
Hub. Oahu, Sandwich Islands, "in the barren coast craters called Diamond Hill, near Honolulu.

Although collected so near Honolulu, in the district visited by so many naturalists, this Lycium was occurs in no other collection that I know of. Dr. Pickering, whose judgment in this regard is critical, records it as an undoubted native; and indeed it does not accord with any one of Mr. Miers' sixty-nine described species, so that I am obliged to treat it as new. Its peculiarities are
its fleshy leaves, as if it grew growing in the vicinity of salt water, and its tetranemrous flowers, with the corolla so deeply cleft that the species falls decidedly into Michx's section Macrolepis, the four lobes being larger than the tube. Otherwise its affinities appear to be with L. vulgare. But there is no hairiness at all at the base of the filaments; these are either glabrous throughout, or with some very delicate præbescence near the middle. Leaves about an inch long, and 3 lines wide near the rounded apex, thence narrowing gradually to the slender and nearly so base, nearly entire, but distinctly petiolated, veinless, except the faint midrib. Pedicels 4 to 6 lines long. Calyx 1½ to 2 lines long, the lobes a little shorter than
the tube. Lobe of the gynoecium column 3.5 lines long, oval, sickle-shaped. Berry 4 or 5 lines in diameter, "balsam to the taste, but edible."

Observations on the Nutkuan Pines
Calycis campanulatus, de durulis vel subdivis, immutatus.
These plants are named and described from very incomplete as well as scanty materials, in the hope that they may also attract imperfect materials which may perhaps exist in some European herbaria, or may direct attention that they may attract attention at the Sandwich Islands. Their aspect is rather that of *Eustroma*, but I know not to what genus they are most attuned related. The mature seeds are unknown; from the shape of unripe ones I suspect the embyo to be curved.
1. Eutrocoecrum latifolium, S. M.

N. folis subpuberulis late ovatis
his sepa ovatis obtusis; corolla
exter subtuberculata, tubo calyx
later
campanulato dextra longiore;

bacca globosa.

Hab., Oahu, Sandwich Islands,
on the ridge of the Kaala Moun-
tains.

A shrub "about 12 feet high", with stout bran chlets. Leaves muy
bran ecos, about 2 inches long and
1/4 to 1 3/4 inches wide, sometimes in-
clining to obvate, rather acute at the
base; petiole 6 to 10 lines long.

Sedées fascicled in the axes of the
upper leaves, few, 4 or 5 lines long.

Calyx 3 lines long, with 4 margins and
acutus teeth, or somewhat 2-eriff. Corolla
white; its tube nearly half an
inch long, cylindrical, the lobes ovate, spreading, their margins very strongly sinuplicate and the sinuses plaited, not half the length of the tube. Style Anther nearly included, almost 2 lines long. The forming fruit enclosed in the calyx, which is nearly conform to it and scarcely crescent.

2. *N. austriaca longifolia.*

*N. glabrum; foliis oblongo lanceolatis oblongisque basi attenuatis; pedunculis solitariis; calyce obtuso 2-4 denteato longiusculo (inmoderato) campanulato; base agetangato oblonga.*

† tab. *Oahu, Sandwich Islands,*
on the mountains behind Honolulu, at the elevation of 1500 feet.

Leaves 4 to 7 inches long, and about an inch and a half wide, thin and membranaceous, often with a bluish delamination. Pedicels 6 to 9 lines long, broader at the base, not seen. Immature seeds somewhat reniform, the testa reticulated.

3. *Aphthoecestrum breviflorum* S. W.

*N. arborescens*, pur glabrum, foliis anguste oblongis ellipticis, corolla tubo calycem 2-4-lobum vis superante.

Hab. Hawaii, Sandwich Islands, "between the Great Crater and the upper base of Mount Kaalawai, rare."
This is recorded as "a tree, 20 feet high, with the trunk 5 inches in diameter, and the wood greenish; habit of Solandra visida; the flowers greenish, but small." Branchlets stout. Leaves 2 1/2 to 4 inches long, an inch or more in width, mostly oblong at both ends, rather coriaceous in texture, the primary veins 9 or 10 pairs, rather smooth at carpiunus, almost transverse. Calyx 4 1/2 lines long, glabrous, 4-mered, with broad and rather deep teeth or lobes. Corolla nearly as in V. Latiflora, but shorter, only the outside of the lobes minutely silky, silky, silky, rather slightly protruding from the throat of the corolla. Fruit not seen.
Ord. Scrophulariaceae.

The collection in this order offers nothing worthy men and few things of much interest. The following must only be mentioned:

(Linn. Madeira)

Linaria spuria, Mill. and L.

Brummeri, Bent., from St. Jago, Cape de Verde Islands.

Scrophularia aconitaria, Linn., and L. racemosa, Linn., from Madeira.

Charostoma hispidum, Bent., picked up at Cape Town.

Lindenbergia Philippensis, Bent., at Manilla.

Nymphea oegmoides, Cham. & Schlecht., at Rio Janeiro.

Stenovia trifoliata, Reich. at Rio, and S. Chilenensis, Bent., at Valparaiso.
Curanga amara, Juss., at Bal-dera, Philippine Islands.

Vernicia parviflora, (at Rio Lanceiro; an Indian species now naturalized in South America.

Bombaya groen iflora, Spring., at Manila.

Buphthoria peregrina, Lin., and
Digitalis purpurea, Lin., at Madeira.

and Veronicaアナガリ, Lin., at Madeira.

Striga ürünler, Benthes., at St. Jago, Cape de Verde Islands, on roots of Physalis.

Harveya Capsensis, Stock., at The Cape of Good Hope.

Euphrasia speciosa, R. Br., at Sydney, New South Wales.

Euphrasia lebrus, R. Br., at Vandy with Pinematid leaves, E. angusta, R. Br., from New South Wales.
Go.  

**Rheumyrriaceae.**

The collection in this order presents affords nothing new, and is of any special interest.

1. **Schwenkia**, Lin. 

1. **Schwenkia divaricata**, Bentli. ind.

**Stat. Brazil, in the vicinity of Rio Janiero, where it was collected by Martius and Gardner.**

2. **Browallia**, Lin.

1. **Browallia grandiflora**, Graham.

2. **Browallia pedunculosa**, Bentli. ind.

**Stat. Peru, in the vicinity of Lima and Obrajillo in the valley of Santa.**

2. **Brunfelsia**, Schwart.

1. **Brunfelsia capitata**, Bentli. ind.

2. **Brunfelsia ramosissima**, Bentli. l. e.

3. **Brunfelsia Hispanica**, Bentli. l. e.
Tub. Brazil, in the Oyapa mountains near Nis. Ornamental plants shrubs; two of them have already been figured, as species of Francisceae.


1. Schizanthus Hookeri, Gillies.


2. Calceolaria glandulosa, Poepp.
3. Calceolaria petroflaenis, Cav.
5. Calceolaria viscousissima, Lindl.
Hab., Chile; near Valparaíso or Santiago. Of the third species above enumerated, every author but Sprague has written the name petiolaris, which makes a decided misnomer, whereas the name petiolaris of Barnades is characteristic of the lower leaves. One result of the error has been the introduction of two needless synonyms, B. floribunda, Lindl., and B. camata, Stark.

6. Calceolaria chelidonioides, H.B.K.
7. Calceolaria pinnata, Linna.
8. Calceolaria lobata, Cav.

Hab., Peru; between Lima and Obrasjillo; the last named above Obras-

jillo.


Hab., Peru, in the vicinity of Obrasjillo. The Verticillata described by Ruiz and Pavon and by Barnades,
are not well discriminated and are probably to be reduced.


*Hab.* Peru, at Otrajillo. From the characters should belong not only *C. glauca*, Ruiz & Pav., but also *C. terniflora*, Cav.; but all, with *C. angustiflora*, Ruiz & Pav., may be forms of *C. verticillata*.


*Hab.* Peru, in the Valley of Santa, at Baños, Gallard. 20. Callawai, 35.


*Hab.* Peru; "abounding in the environs of Otrajillo; costa partly
yellow and partly white; as figured in the Botanical Magazine.

13. *Calceolaria deflexa*, Kuntz

Said, Peru; in the valley of Canta, at St. Barios, 4s.

14. *Calceolaria barttieafolia*, McD.

Said, Andes of Peru above Barios, suprissentet, a span or so high, so appropriate is the specific name of this species that we had so called it long before the appearance of the second volume of Medellin’s *Eldores Andinos* in which his C. barttieafolia of Bolivian Andes is described. Judging from the published character, our plant is probably
15. Calceolaria Matthewsii, Benth.

Hab. High Andes of Peru, near Casa Cancha. Records perfectly with the plant of Matthews.

5. Alonzoa, Ruiz & Pav.

1. Alonzoa linearis, Ruiz & Pav.
2. Alonzoa incisecflia, Ruiz & Pav.
3. Alonzoa procumbens, Ruiz & Pav.

Hab. Peru, at Ol Jaguar, except the second, which was collected at Chili in the vicinity of Valparaiso. The third is hardly a form of A. canaliata.
6. Alectra, Thunb.

1. Alectra Brasiliensis, Bentha.

Hab. Brazil, near Rio Janeiro; a common South American plant.

7. Minniulus, Linna.

1. Minniulus lutesus, Linna.

Hab. Andes of Chili near Santiago; a hairy form of the latter. Also a smooth form at Obrajillo, Peru.

8. Limnophila, R. Br.

1. Limnophila Menthastrum, Bentha.
2. Limnophila serrata, Baudich.

Hab. Tresjicu Islands; and the latter
Hub, South Sea Islands: the former at the Fuejeo and Samoan Islands; the latter at the Fuejeo and Society Islands.

9. 


Hub, Brazil, in the vicinity of Rio Janeiro, where they are common plants.


Hub, Rio Janeiro, Brazil; Callao, Peru; Sandwich Islands; Manilla. Widely distributed over the warmer parts of the world.


Stab. Peru, in the vicinity of Ollaca, apparently not met with in Chili or South Patagonia, where it is often collected.


Stab. New South Wales, at Hunter's River and Worthington. The former much resembling our *G. Virginiana*, the latter close to *G. Peruviana*.


1. *Nandellia eristacea*, Benth.

Stab. Zeejee, Society, Samoan, and
Philippine Islands; also Rio Janeiro, where it is an introduced plant.

II. Vandellia scalra, Bentth.

Itab. Philippine Islands, near Manilla; an imperfect specimen.

12. Limosella, Linn.

1. Limosella truncifolia, Bentth.

Itab. Chili, in the vicinity of Valparaiso. - Upon all the evidence it can hardly be doubted that the plant of the American New World is a variety of L. aquatica; but I have no American specimen with such leaves as those of the European plant.

1. Capraria Peruviana, Tenill.

It. Peru, in the exciccated bed of the Rimae of Lima,

2. Capraria calycina, S. M.

C. glabra, Minutis, foliis lanceolatis
ser linearis paracentatis, densitatis gossis divaricatis prorsus
plenuque supra basin; floris in axillis solitariis, calyces lacini- 
is foliaceis varias de pedunculo
aequilongis ser longissimis cum
adquantibus capsulam superant-tibus; staminibus 4, stigmate emar-

ginato.

This was found among specimens of the Australian collection. The only ground of suspicion as to the habitat is that all the American species are American. The 2 corydally specimens belong to a plant about a foot high; the leaves in the principal specimen 2 to 3½ inches long and 3 or 4 lines wide, mostly entire except toward the base, where 3 or 4 sharp and salient laciniae from 3 to 5 usually beset each side; but a separate fragment exhibits shorter and broader leaves more like those of C. biflora. From this species, moreover, it differs in its solitary and stiff-peduncled flowers, twice the size, its divisions lanceolate, fliaceous, somewhat accrescent (in flower 4 lines, in fruit half an inch, long), sometimes a
little denticulate. Corolla between campanulate and funnelform; the limb about equally 5-cleft, the two superior lobes rather broader, all bearded within, as well as the nutlet. Stamens didynamous. Style filiform; stigma thickened, emarginate. Capsule (immature) like that of C. biflora.

14. Scoparia, LINN.

1. Scoparia dulcis, LINN.

Tab., Brazil, at Rio Janeiro, Peru, at Callao. Luzon, at Manilla. An American plant now found in almost every warm region.
15. Veronica, Linn.

1. Veronica elliptica, Linn.


2. Veronica odorata, Stock. f.

Stbr. Lord Auckland Islands: collected without flowers or fruit.

3. Veronica salicifolia, Linn.
4. Veronica ligustrifolia, A. Gunn.
5. Veronica dioica fliia, A. Gunn.

Stbr. Bay of Islands, New Zealand.

All the above species are well charac-
arrived by Dr. Stoker.

7. Veronica bleelia, R. Br.

Stab. New South Wales, at Sydney, 1845.

1b. Gurisia, Commers.

2. Gurisia breviflora, Benth.

Stab. Orange Harbour, Magelia, the former in clefts of rocks on the coast; the latter on the mountains.

17. Gerariantia, Linn.

1. Gerariantia communis, Cham. & Schlecht.

Stab. Rio Negro, North Patagonia. The insignificant species of this fine genus. None of the Brazilian or Peruvian species occur in the
collection.


1. *Castilleja fissifolia*, Linne. var. *pumila*, Web. (above Banos, and Tab. Andes of Peru; in the environs of Casa Bancha and Alpa-

marca.

The specimens are mostly of the high alpine variety figured by Web. as *C. pumila* (C. nubil-

gena B. *? Pumila*, Bentham. in Jb.), which in the letter-press he has reduced, along with five or six other supposed species, to the polyphyletic *C. fissifolia*. The younger line-

nars. A specimen from Alpa-

marca, only two inches high, has very short and proportionally broad, less lobed leaves.
19. Orthocarpus, Nutt.

1. Orthocarpus australis, Bentha.

**Hab.** Peru, at and above Olarcillo. With it an imperfect specimen of a plant, more like Castilleja, but not determinable.

20. Bartsia, Linn.

1. Bartsia subincisa, Bentha.

**Hab.** Andes of Peru above Olarcillo. The specimens, all referable to the same species, will include B. elongata, Hed. Lkh. And., and his variety pusilla. The capsule is either smoothish or pubescent on the galea and is more or less crenated. The anthers bear a tuft of very long, but not very
numerous hairs. It is probably the B. Peruvianna of Mulsan also (the oldest name) in the

description of which the calyx is perhaps exaggerated.

2. Bartsia Meyeniana, Bentli?

Hab., Andes of Peru, in the valley of Canta, above Buenos.

This very well accords with this species as figured by Middell, except that the corollas are perhaps a little larger, and the anthers are not at all bearded. The herbage is, as Middell remarks, extremely viscid; indeed, the lobes of the calyx, it, are very strongly and densely glandular-hairy.

It may there be noted that Bb. punlica and Bb. othocarpiflora, Bentli, are wrongly credited to the Quinarian.
Andes and to Jamesson's collection. They are both from the Peruvian Andes, and were collected and sent to Sir Wm. Jardine by Mr. McClean.


Stkt., Andes of Peru, near Baños.

The specimens, which are cer.

tainly of this species, have the spike even more loosely-flowered than those of *B. bey* mentioned by Beddell; so that the name is far from characteristic.
Ord. Myoporineae.

The group is probably to be hereafter included in Verbenaceae, along with Selaginaceae and Ephedra, all together forming one well-marked and easily recognizable order.

Nesogynus, A.D.B., founded on an Oceanic plant, which was doubtfully referred to Myoporineae, but has nothing in common with that genus, is hence referred to Verbenaceae.

In his ordinal character of Myoporineae, Alphonse De Candolle (Prod. 11, p. 701) states that the fifth stamen is always and wholly absent, "absque vestigio quinta superioris," in his overlook ing or disregarding Brown's character, "quandoque ru-
dimaturum quinta, varo Pollini = fere" (Prr. J. L. Auv. Ill., p. 514).
It may be clearly made out that
Brown here refers to the genus
Myospermum, and I suspect that
he had the Sandwich Island rep-
resentative of this group in view,
in which the stamens are really
isomorphic with the lobes of the
ovaria in all the flowers I am
able to examine.

1. Myospermum, Banks Island

1. Myospermum latum, Jost.

New Zealand, at the
Bay of Islands. - Dr. Sturke's
remark is Character "stamens
five" under this in the Flora
of New Zealand, under the genus,
is an evident success here.
The putamen in the fruit examined is three-celled and three-seeded; the ovary, as in the single one examined by De Candolle, is trilocular, and museum with no appearance of a fourth cell, and with only a single style in each cell. This militates against De Candolle's primary division of the genera founded on the number of styles to each carpel, and also against his genus *Polycaelium* (*Pentacaelium, Zucc.*).


*Hab.* New South Wales, at Hunter's River. In fruit only.
3. *Mysporum* (Polyceium) Sandwicense

*M. glabrum,* foliis oblongo-lanceolatis acutissimis vel tenuiter acuminatis integerrimis, in fasciculis ramosis. *F. m. ferrulatis,* fasciculis 3–8 floribus; pedibus petiolis subaequalibus, corolla late campanulata ad medium usque 5 fida; staminaibus 5; dyspe 4–8 loculari; ovulit floribus hexameris, flores 6–3 pollicibus angusti vel 3–5 pollicibus multo latioribus.


*Polyceium Sandwicense*, A. Sc. Prodr. 11, p. 706.

*Orin astrum caulis flororum*, Nutt. in J. & F. Stock.
In our collection the narrow-leaved form from Oahu and near the coast of Hawaii, broad-leaved forms from Hawaii ascending—Mona Rova and Mona Kea into the pastoral region at the elevation of 7,000 or 7,200 feet, and intermediate forms from the mountains of Kauai. One form is recorded as "a tree forty feet high" (but nothing is said of its wood, which, according to M'C. on the authority of Murray, Bleeker, has the fragrance of Sandal wood and is exported to China), another is said to be "a decumbent shrub." All appear to be forms of one variable species. The narrowest leaves are 4 to 6 lines wide, much attenuated at each end; the largest largest, from an inch to fully an inch and a half wide, much less tapering at the apex,
but tipped, like the others, with a
narrow, crenulate, acuminate, cuneus, some of the lower leaves in all
the forms more or less serrulate
with rather sparse, appressed teeth,
pedicels either almost veinless or
obscurely veined, pedicels 3 to 5
lines long, acutely angled, style
ovate, lanceolate, acute or acuminate,
about the length of the tube of the
corolla, corolla (white) very open,
campanulate, clift to or beyond the
middle, regular, the lobes broadly
ovate or roundish, nearly alike, more
or less pubescent, punctate. The cor-
olla is only 3 or 4 lines long, with a
bead the when expanded of about 5
lines. Stamens in all the flow-
ers examined as many as the lobes
of the corolla (five, or occasionally
six), all anther forms and nearly
alike, two or three, usually a
longer or with larger anthers than the rest. The whole fabric of the blossom is that of Alyssum, except the ovary, which is from 5-celled to 8-celled, with a single anatropous ovule suspended from the summit of each cell. Druse of the size of a pea, pointed with the base of the style; sarcocarp rather abundant; but membrane long, at the base often with as many angles as there are cells. Of these sometimes the whole number, as many as 7 or 8, remain in the fruit, while sometimes only two, three, or four are perfected. Seed cylindrical or cylindrical; albumen thin or sometimes wanting. Embryo cylindrical, the cotyledons about as long as the radicle.
The interesting fact that this species has the stamens issuing with the edges of the corolla had escaped the notice of preceding observers, except perhaps of Mr. Brown, who (as remarked above) was aware that some Myosorum, probably in this. This character, along with the increase in the cells number of the cells of the ovary, would fully warrant the establishment of a separate genus. But the fifth fifth stamen is wanting in Myosorum (Pentacodium) Eutricides of Japan, and in the allied M. Chinesa, and the former species sometimes has the ovary only 4-celled (unless, indeed, there is a happy chance in Ruyeariæ's detailed description); while, on the other hand, one of the original species of Myosorum has a trilocular and triniolate.
The habit being wholly the same, and other distinctions altogether wanting, I must conclude that *Penta caelicum*, Rucc., *fasciculata, Linn.,* and *Poly caelicum* (the latter restricted to the Sandwichian species, and characterised accordingly) are better regarded as more sections of *Myoporum*.

*Ord. Selagineae.*

*Selago corymbosa, Linn.,* *S. fasciculata, Linn.,* and *S. spuria, Linn.,* three common species, were picked up at the Cape of Good Hope, in the vicinity of Cape Town.
Ord. Gesneriaceae.


1. Gesneria (Isoloma) F. Hooglandii, Linn.


Hab. Brazil; in the Organ Mountains near Rio Janeiro. The specimen agreeing with the figure by Martius in exhibiting only opposite leaves; the uppermost pair reduced to small bracts, so that the inflorescence is long, peduncled and naked.
2. Gesneria (Toloma) salviacolia, Gaud. 

Gesneria salviacolia, Gaud. in Lindl.,
Jnr. Br. 4, p. 129.

Not, Brazil, in the vicinity of Rio Janeiro; A fruiting specimen.

3. Gesneria (brytholoma) latifolia, Mart.

Not, Brazil, near Rio Janeiro; The variety Gaudichaudi, DC.

4. Gesneria (brytholoma) bulbosa, Ker.

Not; Brazil, on the Corcovado and Organ Mountains; just the form figured in Brit. Mag. 7, 304; also a very large leaved,omentum-
A small variety, nearly Mat. t. 3386,
Bst. Mug. (B. bulbosa L. Werneri,
Klotzsch, Neps. Repart. 2, p. 717),
but the pedicel, calyx, &c. still
more hairy, - apparently hardly
of this polymorphous species.


1. *Gloxinia* (*Sinningia*) Helleri, Mart.

St. V. Brazil, in the vicinity of
Rio Janeiro.

The lower surface of the leaves
and the stem are strigillose-puberulent,
and the lobes of the ample calyx
are often toothed or dentilicate.

1. Besleria umbrosa, Mart.
   Stab. Brazil, in the vicinity of Rio Janeiro.

4. Phaethothamnus, A. Cunn.
   1. Phaethothamnus Islandi, A. Cunn.
   Stab. Bay of Islands, New Zealand.
   The foliage exceedingly resembling that of Carpodetus serratus.
5. Cyrtandra, Forst.

* Tahitensis et Samoensis.

1. Cyrtandra biflora, Forst.

C. arborea, pubes purpuracea coccinea nascentiunc partium max delapsa glaberrima; foliis ovato-velato-seu longo lanceolato-oblungis utrinque subacutis lavibus subitus pallidis crematotuberculatis vel subintegerrimis; pedunculis petitum paullo superan-

"involucrum albidum 2-
esque 3-phyllo, caducum pedicellos 2-3 unifloros generatis calycis quinquefidi lobis lato lanceolatis sensim acuminatis; corolla bisplicaria; fructu oblongo, foliis seca in seco.

Cystandra glabra, Forst. Fl. ins. 3. p. 234.

Forw. Tahiti, Society Islands, and apparently also from the same island, unless there has been transposition of specimens.

The above character is made up from specimens without flowers, from notes upon Forster's specimen in the British Museum, and from Forster's figure, and from his detailed description as printed in the Descriptions Taitensis, Vahl evidently.
had an authentic specimen in view. I do not cite Stork, and Knott, Brit. Beechey, p. 67, because "calyce pubescenti" or "matosus" is there introduced into the character, nor De Candolle, for a similar reason. But we must have one of the following Tahitian species more or less in view. Further materials are needed to determine whether the following next species is sufficiently distinct from C. biflora, or whether the Samoan specimens really belong to the latter.
2. Cystandra pulchella, Rich in

C. "juticeosa, tripodalis," glaber =

renna; foliis oblongo lanceolatis
(5-9 pollinatis) subfalcatis basi
subcuneata inaequilateralis
versus apicem repando, erematis
supra nitidis subitus pallidis;
pinctunculis folio paullo brevior-
ibus 7-9 floris; "bracteis latis" car-
ducis; calycis coriacei breviter
inequitatis
quinquefidi lobis ovatis ob-
tusis; corolla bipollinari; ovario
elongato.

Itdb. Tutuila, Samoan Islands,
on the mountain ridge, at the eleva-
tion of 1500 feet.

This is, of all the species I know
most allied to the original C. biflora,
distinguish it. Peduncles 4 or 5 inches long up to the bifurcation much thicker than the pedicels (which are only an inch long) and inclined to be conical subulate and fistulose; pedicels, at least the alar ones, about an inch long. Calyx about 8 lines long, of thick texture, glabrous, two of its broad and blunt lobes half the length of the campanulate tube, the others with sinus only half as deep. Corolla in size and shape agreeing very well with Foster's figure of that of C. biflora, as also the stamens. Anthers longer than the free portion of the filament, the cells equal and parallel. Nerve glabrous, the forming fruit siliceiform or lanceolate.
3. Cyrtandra induta, sp. nov.

6. arborea; foliis inaequalibus (altero 5-8, altero 8-14-petulatis)

ovatis seu ovali-oblongis

decumatis dentatis basi in

aequalitera papillis acutis pilis

plurisepatis supra minus

subtus cum pediolis peti-

ulis ramisque junioribus mol-

diter villosis; pedunculis peti-

olo æquilongis plurifloris; cal-

yce infundibuliformi pubes-

cente, lobis lanceolatis acu-

minatis 2-3-plo brevioribus;

coriis bipetulicaris; frr

et in immaturo elongato ob-

longo basi attenuato quasi

stipitato.

Jenk. Sinu. 3 & 5

Cyrtandra biflora. LB. Prod.

9, p. 280, pro parte?
Tabi, Tahiti, in the mountains, collected by Prof. Dana, at the elevation of 2,000 or 3,000 feet. A single plant glabrate less pubescent state was collected by M. Pancher, said to be very common in moist valleys, and Moenchhart's plant seen by De Candolle may be the same.

This species does not appear in Dr. Pickering's list; he two he mentions as 'possibly distinct' seemingly belong to the following. The specimen of our collection has the ample and thinish leaf very downy; that of Pancher presumes the down of the lower surface, but it is more oppressed and impetous, or in other words tormentose, and fere nigricious instead of fulvous. The calyx when full grown is almost an inch and a half long, acute
at the base, gradually widening upwards, the sinus of the two lower lobes anterior lobes as usual, much deeper than any of the three posterior ones, the former lobes scarcely half, and the latter only a quarter of the length of the tube. C. semiae is in no fit state for investigation, but as large as in C. biflora, and glabrous. The forming fruit nearly an inch and a half long, including the alternating base. The species appears to be a very well-marked one, even if the pubescence be variable.

C. pericosa, "8-10 pedalis" sub
benula vel glabella, partibus
novellis sericea, parte minuta
sericea subfermagineis; foliis
subaequalibus ovatis seu ovato-
oblungis acutis vel acumina-
tis subserratis (5-12-pollicariis),
adulcis supra nitido, rubri-
dis puberulis et subtilis ad costas
venulis que puberulis; pedunculis peti-
ols 3-4-pollicaribus plur-
ifloris; calyce campayanulato
ad medium 5-pido, lobis ovato-acu-
mintatis; corolla pesquipolllicari,
tubo gracili; fructu immaturo
elargato-oblongo manu basi
attenuato.

Hub. Tahiti, in the forest.
One specimen is ticketed Samoa,
Perhaps by some transposition.

Although the materials of the several specimens are rather incomplete and fragmentary, the species is evidently quite distinct from the preceding and from C. biflora. It is one of those species which by the elongated baccate fruit (bacc a siliqueformis) would seem to approach Blume's Philia; but the cells of the anther are strictly parallel. The leaves resemble those of the following species, but are scarcely whitish underneath. Petioles are inch or an inch and a half long. Peduncles often thickish, 3 to 6 inches long, app. The flowers apparently rather numerous, at least the cymes are sometimes three or four times dichot-
omnus. Corolla white, its tube an inch long, narrow and cylindrical. The forming fruit an inch long, narrow, the line about an inch in diameter, stigma 2-lobed. Ovary glabrous.


6. protescens, novillis partibus fer-
   migineo vel fulvo-pubescenti-
   bus; foliis ovatis ovalibusque (6-
   12-polllicariis) aequalibus utrin-
   que acutis vel sub-acuminatis sub-
   dentatis vel fere integerrimis, adul-
   tis supra glabris sublitis albidos
   ad costas variasque pubescentibus,
   petiolo (sesqui-quadrupolllicarii)
   cymis plurifloris bore-peduncula-
   tis bis terce terce longioribus;
calyce terminis pubescente a 
basi 5-6-partito, segmentis 
lato-lanceolatis corolla semi-polline 
cari paullo breviore; fructu breviter ovoideo.

Savaii,
Tab. Tutuila and Manu'a,
of the Samoan or Navigators' Islands, common on the coast. A specimen is ticketed Tahiti, but probably by a transposition of labels.

This occurs in the collection under various forms, which, however, all accord in their essential characters. The pubescence is all fine and appressed. The leaves, as usual, are mostly or less oblique or inequal and at the base, sometimes rather strongly so; some are quite entire, others irregularly more or less serrate. Peduncles half an inch to an inch.
in length; the cyme also short (an inch long), corymbose or umbel-like, 9-15 flowered; pedicels slender, pedicellate, softly ferruginous or fulvous-pubescent, as is the rest of the inflorescence. Calyx 4 or 5 lines long, about one third shorter than the corolla, sometimes 6-petalled, divided to the very base. Corolla with a rather broad tube and short limb.

Anthers, 4, of the genus. Rudiment of three stamens present as small sterile filaments. Stigma 2-lobed. Ovary glabrous. Immature fruit short-ovate, half an inch or less in length.

This should be compared with B. latifolia Benth., — a Jeejee species not yet identified in later collections, but that has the peduncles 2 or 3 inches, the pedicle only an inch long, and is more tomentose. Hostis B. cymosa also has peduncles larger than the pedicle.

c. cross glabra; caule pubescent.

- 10-15-pedulii; folius amplis (1-2-pedulatis) membranaeiss lanceolato-oblongis basi attenuatis subintegrinimis utrinque viridibus; cymis subsessilibus fasciculiformibus, corolla viridula petiolo subcuneata, bracteis "cornu viridula" fructu immaturo orvideo.

Gen. Laticornis:

Ital. Savane, one of the Sansan Islands, in the deep interior forest.

This is recorded as "an upright, thick-stemmed shrub, ten to fifteen feet high," with long leaves. The stout petals are 3 or 4 inches long, more than twice the length of the fasciculate inflorescence in face.
Their axils in the solitary specimen. The corollas which are said to be "rather small, greenish, somewhat urceolate, if present collected, are not present, even the calyx having fallen from the modified ovaries. The fruit is evidently void.

J. Cystandra labiosa, sp. nov.

C. glabra, præcedenti affinis, sed foliis lato-lanceolatis multo minoribus (6-7 prolicaribus); "floris majoribus; corolla alta eximie bilabiata."

Tab. Savaii, one of the Samoan Islands.

Hilum and vestiges of corollas remain in the collection. The corolla
appears to have been be short and broad, deeply bilabiate, the lips twice or thrice the length of the tube, the upper arching, the lower spreading.

8. Cyrtandra pogonantha, Sp. nov.

6. frutescens; foliis amplis (pedalis) utrinque acutis vel basi attenuatis, subtus integris nigridibus rininis glabris membranaceis, nascibus formineo pubescentibus; cymis petiolo brevi frondibus involucris brevi-pedunculatis subulatis; alabastris rostrato-acuminatis; corolla tubulosa brevis bilabiata estus pilis largis pluriseptatis insigniter barbata.
It is, Savaii, one of the Samoan Islands, in the deep interior forest.

Incomplete as are the materials it is easy to characterize this remarkable species and to confirm Dr. Pickering’s notes upon the plant. The masconet parts are ferrugineous—hairy, or pubescent. But the adult leaves are glabrous, except some of the pubescence remaining on the midrib and veins, and some scattered slender hairs on the upper surface. Petioles 1 1/2 or 2 inches long. “Flowers hairy, enclosed in a white, hairy involucre.” The involucre appears to consist of two or three white lanceolate bracts which are somewhat connate at the base, externally glabrate, internally perhaps whitish, and petal-like. The pedicles and calyx, with
rusty hairs. Only in the 2d form and prostrate, half an inch or more in length, in antho-

sis apparently splitting down one side to about the middle. Corolla an inch long, tubular, scarcely amplexica at the throat, bilabiate, the five lobes rather small, ovate and perhaps rather acute, their exterior face and most of the tube conspicu-
ously bearded with very long and stiff, tapering, many-jointed, white hairs. Stamens 6, of the genus. Anthers 2, exserted from the throat. Fruit unknown.
Vitienses.


C. caule crasso; ramis petiolis costisque foliorum fortissimo, villosissimis, pilis longis multiseptatis suprane attenuatis; foliis amplis ovatis utrinque acutis vel acuminatis serratis pilosis; pedunculis brevissimis plurifloris; flabellis amplis; calycis pedicello longiore tubulosum dentatofructus ovatum inclinante.

Cystandra Milnei, Seem. in Campblandia, 9, p. 257, absg. char.

Tab. Ovulare, Heejee Islands, according to Dr. Pickenings memorandum.
Sandalwood Bay, according to Mr. Rich's ticket.

This will characterized species was collected only in fruit. But as Dr. Seemann supplied me with a leaf only, his materials are perhaps not better than ours. In this, the Shaggy furinuous hairs are more rigid than in ours, as at the leaves appear to be equal in the pairs; petals 3 or 4 inches long, the blade of twice that length and conspicuously veiny; hairy on both sides, especially on the Veins, Corolla, &c. not seen, Calyx after flowering 7 to 10 lines long, cylindrical, conis or tubular, cymatiform, glabrate, longer than the included fruit.
10. *Cypandra dolichovcapa*, sp."

- *C.* *prutelescens*, ramis gracilibus, junieribus cum petiolis persistentisque (*unifloris?*) pilis longis supescentibus plerumque multisepstatis (mod. *C*. *melanocrurus* nec) barbatis; foliis lanceolato-oblongis acuminatis denticulatis supra hispido-breviter pubescentibus; calyce longi tuberculoso prueta cylindrica siliquaformi (*sesquibipollinari*) acuto 1/3 breviore sero deciduo.

*Hub.* Feijoo Islands, at Samo Island or Abuna Bay, Vanuatu.
A solitary specimen, in fruit only. It is evidently allied to the preceding species (of which also the costa is unknown to us), the leaves being similar though narrower, smaller, and less shaggy. The long and many-pinnated hairs quite the same, and the sessile or still longer tubular calyx (fully an inch in length) still persist upon one side of one fruit. The latter attains even an inch and a half in fruit length, while it is only 4 or 6 lines in diameter (which other species approach). Excepting the elongation, it seemingly accords with that of other species of *Cystandra*, i.e., it is a dry, cartilaginous berry, probably rather fleshy when fresh, and indeliscient. So that the anthers only are left to distinguish it.
11. *Cystandra involucrata*

Hub. Ovolan, Leejje Islands.

A single and very incomplete specimen, which accords with Dr. Seemann's, no. 279, except that the formineous involucral bracts have fallen. The leaves are resembling those of the preceding species, except that there are no long shaggy hairs on the petals, etc. The calyx is ovoid in the bud, the lobes subulate from a broad base, and about the length of the ovoid-campanulate tube. But as the specimen from Dr. Seemann does not show the flower, nor mine the fruit (nor either the corolla) I am unable completely to identify them, nor safely to frame a character.

C. frutescens, minutum, fusco-pubescentem; foliis oblongis acuminatis sub serratis; pedunculis petiolo brevioribus paniculatis; pedicellis flori longioribus; calyce 5-fido, lobis orbiculato-lanceolatis corolla dimidio brevior; fructu ovato-oblongo.

Hub, Ovalace, Zeejee Islands.

The flower is described from beauty materials in our collection, the young fruit from that of Dr. Freemann. Leaves opposite and nearly similar, 3 to 5 inches long, minutely hairy above and tomintose-pubescent beneath. Calyx 5-cleft quite to the middle, the
lobes spreading, Corolla half an inch long, straight, tubular, funnel form; the lobes short and spreading. Dr. Seemann's specimen is broader-leaved than ours, but the inflorescence, calyx, &c., are similar.

13. Cystandra Bitchhardtii, Stev.


A glabrous species, of which Dr. Seemann's specimens are probably better than ours.

These are indications of as many species of Cystandra in the Tzejcees as are now known in the Sandwich Islands. Besides those already mentioned in the collection of the Exploring Expedition, Dr. Seemann enumerates this C. acutangulara, C. Nili-
ensis,  & #160; C. elatior, & #160; C. coloeides, & #160; and & #160; C. ciliata. As far as can be judged from the imperfect materials which in my possession, none of these agrees with one collected by Professor Stanney, nor with the two species (C. calycina and C. latifolia) already described by Mr. Bentham from the collection of Banks. C. calycina is perhaps related to C. Nutiensis of Semmann, which seems to have a tubular calyx, like that of C. Milnei.
Cystandra Tabilotata and
Cystandra

In the collection from Zuma, in the mountains near Bamu, is a specimen, too incomplete for determination, of what seems to be an undescribed Cystandra, and also of a Rhynchosotecum, and from the Majabi Mountains are Aeschyranthus in similar condition.
Cystandra cordifolia, Sand. 

Cystandra cordifolia, Sand. 

Cystandra cordifolia, Sand. 

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Cysta
Stem jointed. Branches scantily, densely villous, as are the pedicels, peduncles, pedicel, &c. with long, wide, spreading, somewhat ferruginous, multi-articulated, soft hairs. Pedicels 3 to 5 inches long. Leaves 5 to 7 inches long, abruptly acuminate, cuneate with a narrow, often closed sinus, finely dentate with very narrow and sharp teeth; densely pubescent; many underneath. Peduncles 12 to 18 lines long, and bearing a pair of foliaceous bracts and an umbellate cyme of from 3 to 9 flowers; the shaggy pedicels about an inch long. Calyx an inch in diameter when expanded, thin, very villous on both surfaces. Corolla 9 lines long, the tube very woolly outside towards the summit; the
short limb with five almost equal rounded lobes. Rudiments
of 3 sterile staminae present. ovary
and young fruit ovoid, hairy,
pointed with a very short style,
which is articulated just below
the bilamellate stigma.

Sandwich's Plate pretty
well represents this species, except
that the villous shaggy pres-
bescence is omitted, the leaves are
not large enough, nor the rotate calyx
expanded.
15. **Cystandra platyphylla**, Sp. **v.**

*C. foliis rotundatis, conquis breve acuminatis argutis denticulatis supra hirsutulis subus canescenti pubescentibus, costis cum petiolis ramos calycibus que pubes ferruginea villosis; pedunculis plurifloris; calyce alte quinquefido in aequaliter quinquefido, lobis lato-lanceolatis latis corolla brevioribus, vario cum style gracili glaberrimo.*

*Hab. Hawai, Sandwich Islands; "in woods between Oahu and Pahua, Kaili", Brackenridge.

This new species much resembles the preceding, except in the particulars indicated in the diagnosis. The stem is said to be about 10 feet*
High. The pubescence is similar but less shaggy and more feathery; the leaves attain a greater amplitude, even to 8 or 9 inches in length and breadth, and are less deeply cordate; the lobes of the rather deeply cleft and not wholly expanded calyx are very much narrower (4 or 5 lines long, about a line and a half broad at their base); the corolla nearly an inch long, less hairy externally, with a rather distinctly bilabiate limb, the lobes longer; the ovary obovate or oblong, very smooth, is perfectly glabrous, with a slender style as much as two lines in length above the articulation. Filaments filaments longer than in C. endifolia, strongly curved. Fruit globose.
Cystandra Pickeringii, sp. nov.

6. ferruginea-villosa; foliis oblongo-lancolatis utrinque acuminatis subserresulatis supra rimosis subtus (prae ter costas villosas) canescenti-pubescentibus; pedunculis 3-5-floris; calyce crateriformi basi subequaliter breviter 4-5-lobo corolla brevissim lobis late deltoidis.

Hab. Oahu, Sandwich Islands, on the mountains behind Honolulu.

Only a single specimen was collected of this plant, which, if rightly referred to no. 16 of Dr. Pickering's printed memoranda, is frequent on the mountains behind Honolulu, at the elevation of 1500 feet. There
met with it in no other collection,
young.
The branches, petioles, and inflorescence are shaggy with fine
dense, ferrugineous, multiaarticulate
hairs, much as in the preceding
species. The leaves (often moderately
unequal in the pairs) are from 4 to
7 inches long by 1½ to 2 inches in
width, conspicuously acuminate, and
at the base tapering into a peti-
ole of ½ to 1½ lines in length, the
pubescence nearly as in C. pla-
typshylla, that of the lower sur-
face soft and velvety, fulvous-ca-
mescent. Peduncles rather longer
than the petioles; the fully developed
pedicels an inch or less in length,
Calyptr sparsely ferrugineous villous,
ampliate expanding in the manner
of C. endiophyla, but apparently
crateriform or even cyathiform.
Rather than rotate, if the same herbaceous membranaceous and villous texture, only 3 to 4½ lines in length, much less deeply lobed than in C. cordifolia, the lobes very broadly triangular, corolla hairy externally, somewhat bilabiate, ovary ovate, fusiform, glabrous, tapering into a rather short and stout, sparsely hairy style.

Except for the calyx and the soft pubescent dome of the lower face of the leaves, this might be taken for a variety of the following species.
17. Cystandra triflora, Gaud.
6. glabra vel primum ferrugineo-hirsuta, foliis oblongis seu ellipticis utrinque acutis vel acuminatis argente serro tatis serratis utrinque viridibus; pedunculis brevibus 2-5-floris; calyce subequaliter quinquefido, lobis cylindraceo, lobis lato-lanceolatis latis corolla brevibus.

Var. a. Gaudichaudi; ramis foliisque praeter costam venasque paginae inferioris ferrugineo-purpurscentes glabris; calyceis lobis tuto aequilongis.

Var. B. Arguta; ramulis cum inflorescentia ferrugineo-hirsutis; foliis majoribus ovatis lanceolatis.
acuminatis cæbra argutissime
serratis bristulis; calycis
(etiam ade fructiferi bristuli)
lobis tubo brevi oritis.

Var. I. hyporepsala; calyce fere quinquepartito; est præcedentis.

Tab. Sandwich Island; collected by Sandiehard on Oahu; in our
collection only from Hawaii, in the
district of Kona. B. VII. in the
deep mountain-forest of the same
district. 9 A.T.

The specific name given by Sandiehard is far from appropriate.
The peduncles in our larger-leaved and
more pubescent varieties bear five or
more flowers; and in the glabrate
from very community only two flow-
er. In the varieites B. X.V., the
leaves are from 4 to 6 inches long, 2 to 4 inches wide closely set with narrow and sharp salient teeth. The petiole 1½ or 2 inches long. Corolla either pubescent or glabrous. Ovary glabrous. Style Fruits globular.

18. Cystandra grandiflora, Baud.

C. foliis oblunquis utrinque acuminatis glabrosae subintegrae mis glabrosae sublus pallidis puberulis, costa venis petiolo que pubes brevissima fere regineis, pedunculo 1-2-floro bracteis foliaceis; calycem cylindricum subcus bracteis quinquelobo sinu latpe profundius fuso corolla glabra Paulo breviore.
Cryptandra grandiflora, Sand., l.c. 755; Stark. & Sternb. l.c.; De C. l.c.;

C. ENDLICHKIANA, MUS. in

Nel. Meyen. p. 359, t. 10?
C. ENDLICHKIANA, Meyen, Riech.
Wallp. Nel. Meyen, l. c. 3?

Hab. Sandwich Islands; in

the mountains behind Honolulu, Oahu.

The specimens, in poor condition, furnish little additional information about this species. The mescent leaves, peduncles, calyx, &c. are ferrugineous with a fine pubescence, which for the most part is caduceous. The cylindrical calyx, soon glabrous, when well developed is an inch long; its triangular acuminate teeth or lobes only 3 lines long.

C. glabra; foliis oblongis sublan-
ceolatis utrinque acuminatis
serratis subus pallidis; pedm-
culis triviis minus sub cinis 1–5 flosis;
calyce cylindraceo-campanulato
inalculari; acuminatis, cordati
anticis tubo æquilongis; corolla glabra;
fructu oliviforme.

Cystandra paludosa, Sand. l.c.;
p. 91.

Hal, Sandwich Islands, on the
mountains behind Palus, Honolulu, Oahu,
or Hawaii, between the crater Lua
Pele, Hawaii, and Mouna Roa.
This is most related to C. grandiflora, but only the nascent leaves are fimbriate; the adult parts perfectly glabrous. The leaves are obtusely and often Communally rather strongly toothed, and the common peduncle only from one to three lines long, terminated by a pair of small stellate-hairs, and from one to five umbellate, slender pedicels, which are usually half an inch long. Only half an inch long. Corolla, as in C. grandiflora with a rather ample limb. Corolla glabrous. Fruit oblong, elongate-oblange, 1 to 3 lines in length.

The stem of this species, according to Dr. Dickins' notes, is "sub-herbaceous", from 2 to 4 feet high, or "suffruticose".
20. Cystandra Lessoniana, Lind.

C. foliis oblongis seu elliptis utrinque supra acuminatis denticulatis supra munitulis subtilibus ramisque pubescentibus cum ramis et inf. pedunculisque pubescentibus pedunculis elongatis 1–3-floris tracteis lanceolatis; calyce 5–6-partito, lobis ovatis seu ovato-lanceolatis corolla extus sericeo-villosa brevioribus vel demum aequalibus; fructus ovato.

Var. B. Calyceis lobis elongato-lanceolatis; corolla pubescentia.

Hab. Oahu, Sandwich Islands, in the mountains behind Honolulu, Var. B. Aetatis novem West Marie.
The deeply-parted lobes of the calyx are at first considerably shorter than the corolla, but they are successively enlarged with age; at first silky and ferrugineous, when old they are glabrate. They are not always so broad as Gardichaud represents them, nor with such undulate-reflexed margins; sometimes they become merely broad-lanceolate, an in the variety from Mindi still narrower. When narrower they are occasionally six in number.

Petals civil with the pedicel 1¼ to 2½ sometimes more and the pedicels and flowers 4 inches long. The tracts 3 or 4 lines long. Corolla 7 lines long, the limb short. Fruit ovate, 9 lines in length.

White or greenish, as in all these species.

6. foliis ellipticis vel obovatis ulnisque papibus anguste acuminatis denticulatis supra hissetulis subtus cum inflata centro ramosa canescentibus velulatis, pedunculis gracilibus 3-5-flores, tracentis parvis, calyce campanulato subequaliter quinquifiido, lobis triangulibus tubo subaequatis longis corolla extus hisseta subdimidiata privatis.

Cystandra Garnotiana, Baud.

l.c. t. 53; Hook. V. P. l. c.; Fl. Osw. 9, p. 284.

Hub. Oahu, Sandwich Island, on the mountains behind Honolulu.
This is one of the small-flowered species; the corolla being only 4-5 lines long, and nearly twice the length of the calyx. The lower surface of the leaves is whitened with a very soft and fine, velvety down that on the pubescence of the calyx is similar, but rather more villous. Peduncles about an inch long, shorter than the slender petals, the pedicels of nearly equal length; fruits lanceolate or linear-subulate. The fruit which is figured by Gandisch and as ovate.
Ctystandra Macroei, Ssp. Mv.
C. folis lato-ovatis acuminatis denticulatis supra glabris subtus ramulisque nivulis pruinoso-in-canis ad viris pubescentibus, pecunulis brisssimis cymoso-multifloris; calyceae equaliter quinquepartito corolla pruinosa fructuque ovoido multo brevior, lobis s basi lata lanceolatis.

Hab. Oahu, Sandwich Islands, Macrae, 1825, Brodie in the "at the voyage of the Beagle" in the mountains behind Honolulu, Bremanside. A shrub, ten feet high, according to Dr. Pickering's notes; the branches in the specimen seen as if nearly herbaceous. They are stout, more or less quadrangular, glabrous, except the younger parts.
which are primrose rather than pubescent, as is the whole inflorescence. Leaves 4 to 8 inches long, 3 to 6 inches wide, broadly ovate, with a rounded or sometimes a cuneately narrowed base, and with a narrow acumination, minutely serrate, green and some perfectly glabrous on the upper surface. The lower whitened with a few procumbent, the midrib, the numerous principal veins, and the venicle pubescent; petiole 1½ to 3½ inches long. Pedicels at most a quarter or one half an inch in length, or in the upper axils scarcely any, for many-flowered, or the upper later ones rather few-flowered; pedicels cymose or fasciculately aggregated, 3 to 6 lines long; the bracts minute. Flowers very small for the genus, Calyx primrose-pubescent,
only a line and a half long, Wick- 
est, evidently calvate in aestivation, 
equally and deeply five parted, the 
division triangular-lanceolate, 
rather blunt. Corolla 7½ lines 
long, externally prominent, 
cylindracous-funnel-form, with 
short and apparently nearly equal, 
rounded lobes. Stamens not exam- 
ined. Fossil of the genus. Fruit 
(immature) about 4 lines long, 
cornical-ovoid or ellipsoidal, proba- 
bly fleshly.

The specimen in this collection 
is in fruit. The flower corolla is 
described from a solitary flower 
on a specimen from Aalorae's col-
lection. - The remaining known 
species of the Sandwich Islands, not 
met with by our naturalists, but 
found by Gaudichard at his second visit,
is C. Menziesii, one of the small-flowered sorts, may be characterised as follows.

23. Cryptandra Menziesii, Hook. vicin. (i.e. in not.)

C. subglabra; foliis quaternis (an semper?) oblongis seu lanceolatis utrinque acuminatibus semilatibus, pedunculis petiolo brevioribus umbellato-plurifloris; calycibus quinquepartitis, lobis subulato-setaceis. Corolla pannulata. Fructus sub-espermatibus. (Flores vix semi-pollinaces; calycibus lobis ½-pollinac.)
Ord. Bignoniaceae.

1. Bignonia, Tourne.

1. Bignonia cyclopifera, Vahl

Stab. Brazil, in the vicinity of Rio Janeiro.

In flower only; the fruit still unknown. The foliage, as much resembling "Lundia longa," but the flowers smaller, and the anthers glabrous.

There are imperfect and undetermined specimens of three other species of this genus, or order, collected in the vicinity of Rio Janeiro.
1. Arrabidaea Aguirre Castan, G.B.
2. Arrabidaea conjuga, Mart.
   Stbl. Brazil, in the vicinity of Rio Janeiro, in blossom.

3. Aderocalyumphia, Mart.
1. Aderocalyumphia marginatum, G.B.
2. Aderocalyumphia mitidum, Mart.
3. Aderocalyumphia longeraeum, \textsuperscript{Mart.}

Stbl. Brazil, in the Oparan Mountains and near Rio Janeiro; all in
flower only. The fruit, latter made known
3, 7) not collected.

1. *Spathodea Coito*, DeB.

*Hab.* Brazil, in the vicinity of Rio Janeiro; in flower.


1. *Tecoma speciosa*, DeB.

*Hab.* Brazil, near Rio Janeiro; in blossom.

2. *Tecoma Guaranica*, DeB.

*Hab.* Peru, from Yanga to the Andes.

The specimen is in fruit only, with the capsule (of the genus) linear, pointed.
compressed, seven inches long. Dr. Pickering notes it as "a shrub, five to twenty feet high, in foliage much like a rose; the flowers yellow. It is probably *Sambucifolia*, Hook. Bot. Misc. 2, p. 229, nut of N.H.B.K.


*Hab.* Sydney, New South Wales, in fruit. (Seeds of the genus.)


*Hab.* Newington, New South Wales, in blossom.


Stab., Brazil, in the vicinity of Rio Janeiro; the former in flower; the latter with the filicoid foliage only.


Stab., Chili, in the mountains above Santiago.
Ord. Lentibulariaceae

1. Pinguicula, Fum.

1. Pinguicula Antarctica, Nahl.


Hab. Orange Harbour, Tierra del Fuego; mostly in fruit.

2. Utricularia, Lin.


Itab. Brasil, in the vicinity of Rio Janeiro.

2. **Utricularia uniflora**, R. Br.

3. **Utricularia biloba**, R. Br.

Itab. Sydney and Worlonging, New South Wales.
Ord. Acanthaceae.

1. Ebermayera, Nees.

1. Ebermayera elongata, Miq.

Adenocrona elongatum, Blume, Bijdr. p. 757.

Erythracanthus elongatus, Aees & E. Griffithianus, Nees in M.C. Prodr. 11, p. 78.


Hub. Luzon, Philippine Islands, in the vicinity of Manila.
2. Gymnostachyum, Nee.

1. Gymnostachyum affinis, Nee.

Hab. Mindanao, near Caldera. A small-flowered, perhaps undescribed species.

3. Stygrophila, R. Br.

1. Stygrophila calicistea, Nee.

Hab. Luzon, Philippine Islands, near Manila.

4. Ruellia, Linn.

1. Ruellia australis, R. Br.


2. Ruellia serpens, Nee in Fl?

Hab. At sea Mindanao, at Cal-der-a, Philippine Islands.

A fine Ruellia, allied to R. crispa and hirta, diffuse and creeping, but diverging from the character of R. serpens in that the leaves are obtuse at both ends and not densely ciliate. The materials are scanty.

*Hab.* Sooloo Island. The specimens accord with the character of this species as cited by Nees, but are too few to complete the account of it.

4. *Ruellia (Dipteroncanthus) viscidus*.

*Dipteroncanthus (Alphonogmia) viscidus*, Nees in *S. Prodr.* 11, p. 140.

*Hab.* Peru, in the vicinity of Lima.

1. *Prioritis Stytrix, Miq.

*Stytrix fruticosa, var. Knaps. , Jat. , Ant. , p. 22, f. 13.

*Prioritis, Linnae, Jat. , cliff, n. 486.

*Barrenia Prioritis, Linnae, Spec.;

*Wight. & Dr. Pl. Ind., 2, t. 452;

*Jat. in De. Prod., 11, p. 237.

*Jat. Luzon, near Manila.


*Jat. Luzon, in the mountains near Manila! with triangular ovate, roundedish, ovate, and lanceolate leaves on the same plant,
7. Scautthus, Linna.

1. Scautthus ilicifolius, Linna.

Biliveria ilicifolia, Juss.; Nees in DC. Prodr. 11, p. 2685; Wright, J.C., Fl. Aust. 7, 457.

Hab. Luzon, in the vicinity of Manila.

8. Stenandriscium, Nees.

1. Stenandriscium dulce, Nees.

Hab. Chili, in the vicinity of Valparaiso; common.
9. *Lagochilium* sp.,

1. *Lagochilium repandum*, sp.,

*Lagochilium repandum*, sp. in
H. Brés. *Acaena*, p. 83, Vie
DC. *Prod. II*, p. 293.

Anh. Organ Mountains, near
Rio Janeiro, Brazil of an incom-
plete specimen.


Helm.*, 5, t. 98.

*Strobilochaschis glabra*, Link, Klotzsch,
S. prismaticae, Nees in Fl. Bras. I.c., p. 84, & in DC. Prod. 11, p. 294.

Hab. Brazil, in the Organ Mountains, near Rio Janeiro, and on the Corcovado.

17. Aphelandra, R. Br.

1. Aphelandra lyrata, Nees in De.

Hab. Peru, near Abrajillo; the form gathered by McLean in the same district, the type of the species,

1. *Graptoxyllum* *mortensae*, Nus.

*Hab.* Luzon, *in the vicinity of Manilla.*


1. *Costellaria* *jinamia*, Nus.


*Hab.* Hudson River, *New South Wales.*

2. *Costellaria* *procumbens*, Nus, var.

*Hab.* Mindanao, *near Caloocan, Philippine Islands; the var. singular var. S. Nus, i.e. with lanceolate and glabrate leaves, *justicia* ascendentis, K. Br.*
14. Dianthera, Linn.

1. Dianthera pectoralis, Linn.

Hab. Rio Janeiro, Brasil; the var. f. of Acos smoother and broader-leaved from; Rhytiglossa pectoralis, var. f. Nes. The Ground- The Groundian and Linnean name is by all means to be restored (Rhytiglossa leptostachya, f., Nes), for this genus is retained as distinct from Justicia.

15. Amphiscopia, Nes.

1. Amphiscopia Beyrichii, Nes.

Hab. Brazil, in the vicinity of Rio Janeiro.
1. *Justicia*, Linn.

2. *Justicia Ganarussa*, Linn.

*Hab.*, Luzon, Philippine Islands, in the mountains near Manila.

17. *Chamaaranthemum*, Nees.

1. *Chamaaranthemum Breyrichii*, Nees.

*Hab.*, Brazil, in the vicinity of Rio Janeiro; the var. *v. rotundifolium*, of Nees; the androecium 45, as figured in the *Flore Brasiliensis*. A small fragment only collected.

18. *Eranthemum*, Linn.

1. *Eranthemum variabile*, Linn.

*Hab.*, Sydney, Hunter's River, 15., New South Wales.


*Hab.*, Near Manilla, Luzon, Philippine Islands.

E. glaberrimum; folis ovato-seu lanceolato-oblongis peciolatis sapinis acuminatis acuminis obtusis; pedunculis axillaris petiolo longioribus cynosoro-tri-multi floribus; bracteis oblongis par velis herbaceis; pedicellis calycis longioribus; lacininis calycis se lacco-subulatis tubo brissimo planis longioribus; corolla "camilea" hypocrateriformia, lobis ovalibus.

Hab. Haejce Islands; base of the mountains back of Ulva Bay, according to Dr. Pickering.
Shrub "b feet high, ornamental", glabrous throughout. Leaves bright green, entire, 2 or 3 inches long, 9 to 18 lines wide, the veins inconspicuous, the base acute or obtuse; petiole 3 to 5 lines long. Peduncles from the upper axils, half an inch or an inch long, with a pair of foliaceous bracts at its summit 2 or 3 lines 3 to 6 lines long, cymose, three-flowered, with the slender pedicels when well-developed 3 to 4 lines long. The lateral ones subtended; or more commonly the inflorescence developing into a 2-4 times dichotomous open cyme, the lower bracts mostly herbaceous, the upper ones ½ to 3 lines long. Lobes of the deeply 5-petaled calyx 3 lines in length, very slender. Tube of the "pale blue", shiny, strictly hypowateriform corolla an inch
flora, slender; the lobes 7
to 9 lines long. Filaments a
little exerted; anthers of the genus,
as also the rudiments of the second
pair of stamens. Capsule an
inch long, the lower half sti-
pitiform and sterile.
A showy species, belonging
to the same group with E. Lib-
color, and with a truly cyme,
open in florescence. The color of the
flowers is stated from the Dr. Dickson's notes. This and
the following are distributed by Dr. Dickson, under the
name of "Scaptoplysmum Hostense," which Thomas
doubt on the assigned difference in color.


E. glabrum; folis ovatis lanceolation
obtuse acuminatis; pedunculis
axillaribus; sep. ramos termina-
tibus brevibus; 1-3-floris; bracteolis
minulis; calyces laciniiis subul-
latis tubo digito triplio longi-


tribus; corolla "purpurea" in fundibuliforme, lobis oblongis.

Itab. Haejee Islands; frequent and sometimes cultivated." Varan and Lifuka, Friendly Islands, Prof. Harvey.

"An ornamental shrub, 6 feet high, with purple flowers" closely related to the foregoing species; the foliage bare and habit similar. The flowers, however, are fewer, solitary or geminate in the axils or at the summit of short branchlets, on peduncles only 3 lines long, or some of them 3-flowered. The corolla is shorter, the tube broader and gradually dilated upwards; the lobes narrower, 4 or 5 lines long; the calyx teeth divisions of the calyx shorter. Androcium 15, wholly similar, but the
fertile filaments perhaps more pointed. Leaves sometimes densely expanded.

Whether Justicia longifolia of Forster (J. sinuata, Banks Island), which Rus has appended to his genus Anthocytocanthus, is a congener of this or not, I am unable to ascertain; but this and the preceding certainly) to Bracteococcus.

10. Anthocytocanthus, Rus.

1. Anthocytocanthus repandus.

6. glaber, elatus; foliis ovato-lanceolatis serre oblongis acumine obtuso repandis sinuatis membraeceis; pedunculis cymos-paniculatis; corylum extus calyceque minutis pubescentibus.

Anthr. p. 3; Nahl, Enum. p. 165.
Eranthimum repandum, Novem.
Sahl. Syst. 1, p. 175.
Antha canthus repandus, Nees in
St. Prov. 11, p. 462.

Vulb. Orolone, Fiji Islands.

Shrubby, apparently rather late, diffusely branched. Leaves one or two inches long, on petioles of 3 or 4 lines in length, thin. Pedicles in the uppermost axils, 2 or 3 lines long, bearing 3 to 5 flowers. Bracts and bractlets minute. Calyces lobes setaceous, orbiculate, pubescent, 1/2 to 2 lines long, shorter than the tube of the corolla, which is white, minutely hispid outside, to appear barely hairy. Scarcely half an inch long, apparently between funnel-form and salver-shaped; the
five leaves equal, oblong, 
side equal, roundish. Sta-
mus 2, no rudiments of the 
second pair. Anthers as in C. 
Persoonii, i.e. with a broadly lan-
culate connective, the 
diaphysis rather than 
cuncate, the cells 
yellowish, somewhat di- 
versant below, oval or oblong, on 
a broadly lanceolate connective. 
This from the leaves should be 
justicia repanda from 
Jamaica. The influenzae accords 
with that of the two 
truejean species 
of 
Evauntherium described above; but 
the small flowers and the anthers 
are not those of that genus, while 
they do correspond with the Cape 
species upon which Nee founded his 
genue Chaetacanthus.


Sib. Luzon, near Manila. Doubtless introduced into Luzon from Tropical America into Luzon, where it was also gathered by St. Heneke.

   *Stab., Peru, in the environs of Lima, and a glabrate state of the same at Manta.*

   *Stab., Peru, in the vicinity of Chujillo.*

   *Stab., Luzon, in the vicinity of Manilla.*


Tahiti, Society Islands. —

The specimens of both, much too imperfect to throw additional light upon these two species. One specimen of the former species, however, is finely and softly pubescent; the other, as described, glabrous or nearly so. — Of *D. clavata*, there is fruit deliscent fruit to show that the plant is a true *Dieliptera*, and that Foster's description, reproduced by Guillemin (in Rephr. Tait, p. 43) is correct. In the character from which suggested the specific name, was taken it agrees with the following species, but the clavation of the peduncles, it is indistinct. The bracts subtending the ramifications
of the inflameence are rather minute and subulate; the involucral valves are "linear-oblong" or rather linear-spatulate and small only two lines long. The apparent contradiction in Vahl's description which no puzzled reader (PRODR. I, p. 490) is thereby summarised by noting that the word "bractea" in the diagnosis refers to the involucral valves, in the appended remarks, to those which subtend the ramifications.

b. Dictyoptera (Peristrophe) victoria,

Hub. Upolu, Society, Samoan Islands; enumerated by Dr. Pickering among introduced plants; perhaps cultivated.

The specimens are of a glabrate form of the species, with tapering...
acuminate leaves and lax inflorescence, as if grown in shade, much resembling Peristrophe montana. Nees, which, with several other species, should probably be merged in the widespread P. tinctoria. I have examined ripe fruit in the Samoan specimens only: here the dissimiliment clearly separates below from the valles valves and rises upwards, as in Dicliptera. In a revision of the order probably this character will be less regarded, and the genus Peristrophe suppressed.

*Dicliptera umbellata*, or *Verticillata* Linn. Juss. was picked up, without flowers, at St. Jago, Cape de Verde Islands.
22. Hypoestes, R. Br.

1. Hypoestes purpurea, R. Br.

Tab. Luzon, in the Mayai-jai mountains.

Several undeterminable Acanthaceae specimens, undeterminable on account of their incomplete inflorescence, are in the collection, mostly from the Philippine Islands.
Ord. Verbenaceae.

In this order the collection contains nothing of novelty except the few species which follow the first collected.

The species are:

**Spelmannia Africana**, Hill, picked up at Cape Town.

**Cloanthus Stockmadis**, R. Br., at Hunter's River, New South Wales.

**Verbena crispida**, Lami., at Rio Negro, South Patagonia.

**Verbena spathulata**, Hillies, from the Andes above Santiago, Chili.

**Verbena hispida**, Ruiz & Pav., at Santiago, Chili.

**Verbena Basteri**, Schauer, at Valparaiso.

**Verbena littoralis**, H. B. K., at Valparaiso and at Callao and Lima.
Nebena cuneifolia, Ruiz and Pavon, at Abrajillo, Peru.

Nebena officinalis, Lin., Bay of Islands, New Zealand; introduced.

Stachytarpheta crassipes, Vale near Rio Janeiro, also Sandwich Islands, when it is naturalized.

Lippia scordoides, H.B.K., at Abrajillo, Peru.

Lippia scirpifolia, as new, in undescribed shrubby species, at the mouth of the Rio Negro, N. Patagonia, Vide infra. (Rio Negro, N. Patagonia, and)

Lippia canescens, H.B.K., at Callao, Peru.

Lippia modesta, Richaud, at Manila, Luzon.

Lippia geminata, H.B.K., at Lima, Peru.
Lantana nivea, Nut., L. mixta
Linn., L. lilacina, Desv. from
the vicinity of Rio Janeiro, and
L. Camara, Linn. from Lima.

Citharexylum cyanocarpum
Hook., & Arn. in fruit, and from
behind Valparaiso. (Pine, in the
valley of Santa, Petraea subtessera, Cham., at
Rio Janeiro).

Psemma integrifolia, Linn.
from off the South Sea Islands,
and P. vestita, from the Fijie
and Philippine Islands. Nice in pa.
Callicarpa eriochiloma, Schauer
at Manila.

Callicarpa longifolia, on a
small island in the South Sea.

Peziphila cuspidata, Mart.,
will figured by Schauer in the
Flora Brasilienis, from Rio Jan.

Peziphila fluminensis, Vellozo,
Gardneris no. 5874, not cited in the
Flora Brasiliensis, from the vicinity
of Rio Janeiro, in fruit only, from
Neptunia aculeata, Linn., from
a cultivated tree at the Cape of
Good Hope.

Bletendron torrentosum, R. Br.
at Hunter's River, New South Wales,
Bletendron villosum, Blume
and E. acuminatum, Wall., picked
up at Singapore.

Bletendron intermedium, Cham,
the mountains of Luzon near Manilla.

Bletendron incanum, R. Br., var. 3,
Oceanicurn, Caldera, Philippine Islands,
and the principal South Sea Islands.
Vide infra.

Bletendron (Tetrathyranthus)
valdiviense, from the Fijis, and
C. (Tetrathyranthus) Amicorum,
from the Tonga and Samoan
Islands; new species, consti...
ting a new section in the genus; vide infra.

Sculinia Aristica, Linn. and
G. villosa, R. v. - perhaps only
forms of one species - from Balderas,
Mindanao, and from an island
in the Solon Sea.

Vitea littoralis, A. Cunn., at
New Zealand, figured in Hook's
Floras.

Vitea trifolia, Linn. f., at the
Samoa and Tegua Islands; with
the var. unisolidata, Schauer (V.
ovata, Thumb., etc.) at the latter;
also a form of this variety, more
like the Chinese, but stouter and
with very short-petioled leaves, on the
sandy shores of Kauai and Maui,
Sandwich Islands.

Vitea tegumsi, Linn., Luzon,
near Manilla.
Avicennia tormentosa, Jacq.,

Avicennia officinalis, Linnaeus,

Schauer, at Bay of Islands, New Zealand, islands in the Solomons, and Sydney, New South Wales. And finally the

Nesogonites euphrasiusii des. A. de, of the Coral Islands, which, both by the authors and the ovules, belongs to differs as well as aspect, differs from Myopsaceae. Vide infra.
1. Lippia, Linn.

1. Lippia scriphioides, sp. nov.

L. patifica, intricato ramosis - similis, puberulo - sebifera, variis rigoris; foliis minimis fasciculatis - spatulatis curvatis brevibus, trilobis marginem revolutis; capitis globosis demum elongandis et axillis brevis, pedunculis solitariis vel brevibus subacemosis; bracteis ovatis et concavis foliis glandulosis calyce brevi subescente obovato breviter latis breviaribus; anthros superioribus sepalis appendiculatis.

Itat. Rio Negro, in the upland plain and elsewhere.

This, which Mr. Pickering characterises as "an unsightly shrub,"
The leaves reduced to mere granules, mostly disposed along the coarse blackish branches, the orb Thymus-like, if I mistake not occurs in the collections of Tweedie and Gillies in the Stockholm Herbarium. I first named Numbra parviflora, Gillies, a name which was never published. So far as I can learn, and which I have occupied in the genus Liparia. The leaves are from one to 2½ lines long, the smaller ones in the fascicles often entire, but the primary ones nearly all of them more or less three-angled at the apex summit; the margins strongly revolute. Heads solitary or racemose at the ends of the branches, 2 or 3 lines in diameter, on peduncles of barely the same length; with age
The stamen is elongated somewhat and belted in square with the rigid bases of insertion of the flowers; the tracts (or linear long) deciduous. Calyx 1½ to 2 time long, pubescent and subglandular, the two lateral lobes or lips broad, mostly emarginate.

Corolla nearly twice the length of the calyx. Hypocotyl terete, almost, apparently white, the limb somewhat bilabiate, glabrous.

The two upper stamens are emarginate. The stamens (but not always) have the connective extended into a filament-shaped, clavate, glandular-tipped, somewhat exerted apsependage, like nearly as in the glandulararia section of Verbena.

The habit of the plant is not one like that of Verbena serpiphorida.
1. _Premna, Linna._

1. _Premna integrifolia._

_Hab._ On the coast of Mangsi, Society, Samoan, and Zeejee Islands.

For whatever name this species be separable, all our specimen clearly are of one species, which includes _P. Taitensis_, Schult. in DC., and probably _P. Gandichrassidea_, and some others, and which plainly shows that the nice distinctions drawn from the form of the teeth of the calyx—ever those upon which the primary sections, _Sonina_ and _Premnas_, are founded, are of little avail. In this the short limb is usually more or less bilabiate, with one of the lips 2-lobed or emarginate,
the other 2-toothed, 3-toothed, or entire. The leaves vary considerably, the larger ones commonly inclining to be crenate.


*Note*: Near Manilla, Luzon, the same as Tuning's no. 599. Var. *Teejee Island, frequent along the sea-shore, and occurring also at some distance behind.*

Unwilling to add to the load of species which cannot now be understood without an entire revision, and observing how much the calyx-lobes vary in this genus, I refer the specimens from the *Teejee* to *P. vestita* although the truncate
border of the calyx, instead of being rather deeply four-crested, has four or five very shallow incisions. The flowers may also be rather larger. But the means of comparison are not considerable ample.

3. Clerodendron, Linn.

1. Clerodendron incurvum, R. Br.

Var. 3. Oceanicum: foliis majoribus (2½—5 pollicaribus) magis acuminatis; calyce truncato denticulatis 5 minibus; cymis minue 5—7-flores; Vulkameria incurvus, Linn., Blume, Bl. 164 488 2, p. 705 3, exc. B.

b. Commersoni, spring, Sept.
and abundant in the coast; collected also by K. Seemann in the
Zeejee Islands, also Mindanao, and by Dr. Harvey on the
Friendly or Tonga Islands.
This has evidently been confused with *C. incisa*, which
has smaller and bluntier leaves and, as described by Schauer, "calyx
5-dentatus, dentibus lato-triangulatis
bus acutis," whereas in this the
(perhaps more cyathiform) calyx
is exactly truncate or obscurely
reapand, with five much non-uniform
denticulations, so far as could
can be judged from all the speci-
cimens before me, this might
will claim to be specifically
distinct, and it may be *C. incisa*
mexicana, I suspect, however, that
intermediate forms occur.
2. Clerodendron (Tetrathygranthus*) 

ovalifolium, sp. nov.

C. foliis ovalibus obtusae acuminatulae integerrimis basi subaugustatis cum petiolo brevi radisqueque tenuibus glabris; cyonis plurifloris conybus-paniculatis canescenti-suberulis; corolla Hypocraterim aphsa, tubo (ultrapollinari) calyce obtusa quadrilobata pluribus longiora, lobis 4 rotundatis equalibus stamina ad aequalibus.

* Limbus calycis et corolla quadriradiatus regularis; c. et. Euclerodendri.
Tab. Leuje Islands, in the mountains of Ovolaun, is the plant second species mentioned in Dr. Pickering's notes, but the specimens are marked Sandalwood Bay. Shrub or small tree, glabrous, except the inflorescence. Leaves rather coriaceous, oval and inclining towards obvate, 5 to 7 inches long, 2½ to 4 inches wide, the petiole half an inch to an inch in length. Peduncle one or 2 inches long, compressed, as are its divisions. 7-12-flowered, the cymes forming a terminal corymbse panicule, the leaves gradually reduced to small oblong or lanceolate bracts. Pedicels 3 to 8 lines long. Calyx glabrous or glabrate, of a thick texture and firm texture, apparently valvate in bot

oration, 3 lines long, apparently
little enlarged after anthesis, corolla an inch and a half long, of nearly the same diameter and glabrous up to the limb, which is regularly 4 parted and minutely canescent: the lobes 3 lines long, thickish, incurvate in estivation. The genitalia, which do not surpass the lobes of the corolla are altogether as in _Clemodendrum_, except that the two short lobes of the stigma are flattish and obtuse. Fruit unknown.

Notwithstanding the extreme smallness of the flowers, there is no reason before unknown in _Clemodendrum_ I do not hesitate to retain this and the following species in that genus.

6. foliis ovatis seu cuneato-obovatis in petiolum brevem attenuatis integerrimis ramosque subtectibus glabris; cynmis multifloris cylindraceis, paniculatis canescenti-puberulis; corolla tubo subinflorida calye quadrilobato 3-4-plo lobis suis 4-subsinuilibus 2-3-plo longioris, stamina 6bus parvi erectis, blumenda in Americam. Sum. in Pomplandia, 10. (Aug. 1832), p. 749.

Hab. Samoa, Islands; also Navua and Lifuka of the Tonga or Friendly Islands. Dr. Harvey.

A close eugeneer of the last, and one of which we have ample materials. Perhaps they may be found to run together.
But this has the leaves more narrowed at the base, and the larger ones from 9 to 11 inches in length; the cymes many-flowered; the calyx and the lobes of the corolla larger, while the tube of the latter is shorter and enlarging upwards, indeed nearly funnel-form, and the four stamens are moderately exserted. The largest and best developed flowers are those of my specimen from Professor Hickey. In these the tube of the corolla attains an inch in length, and the spreading slightly unequal lobes about half an inch. In our specimens the parts are smaller. The tetranieris flowers recall Labillardière's genus Oxera, of New Caledonia; which, indeed, might now about as well be reduced to a
section of Clerodendron, not
withstanding the ventricose and
irregular corolla and the ab-
dently the upper pair of stamens.
In these important respects
C. Amnicum accords with
Clerodendron.

4. Nesogenes, R. D. C.
Calyx obconicus, 10-meris, 5-dentatus,
dentibus triangulatius, post arcuato
sinu acutis patentibus. Corolla
bilabiata, labio superiori lipar-
tto, inferiore tributo tripartito,
lobis rotundatis cum bilobis,
postice paullo brevioribus. Sta-
minalis 4-fistulis, cum subdum-
quinti didynamis, cum ves-
tigio filamento quinti: anthore

* Since these descriptions were
drawn up, Dr. Seemann has published
a character of this species, in the Me-
randia of Aug. 15, 1852, and fortunately
under the same specific name which
I had chosen. But he does not men-
tion the薅ness of the corolla, nor the
with that of the calyx;
leter-vernus character which especially
by distinguishing is most remarkable.
Indeed Seemann describes the calyx
as quinquelfid, which is not the
case in any of the specimens before
me.
tibus, hirtello, se caltra, ranis foliosis: foliis parvulis ovatis.
busi angustatis in petiolum brevem attenuatis integerrimis, inferioribus quae subcrescentis, floribus panis in axillis sepsine geminis; pedicellos calyci brevioribus minutissime bilabellatis max decurvis; corna canales cente?

1. Nesogenes euphrasiioides, A. DC.

Myospernum? euphrasiioides, Stock.
A. E. 
Nesogenes euphrasiioides (error typogr.), A. DC. Prodr. 11, p. 703.

Hab. Coral Islands of the Pacific: Whittemody Island, Beechey. In our collection from Taiara or King’s Island, Carshoff, Karaka, 85.
This plant has the aspect of *Nepenthes pulcherrima* or *N.
Lythrum*. It is not a shrub, but probably an annual, with the stem indurated, and often as it were lignaceous at the base. The anthers are completely two-celled, and the ovules erect. So that it really has nothing in common with the *Myrsinaceae*, to which Hooker and Bentham referred it, and upon whose description Stephens de Candolle characterized the plant as a new genus in that order. Without doubt it is a true *Nerteraecaceae*, but I know of no genus to which it is related.
Globulariaceae

Globularia salicina, L. (gathering little collected) at Madeira, represents this Old World order in the present collection.
Ord. Labiate.

1. Ocimum, Linn.

1. Ocimum Basilicum, Linn.

Hab. Tahiti, Society Islands; "naturalized and cultivated." (O. gratissimum is enumerated in the Botany of Beechey's Voyage and by Guilliermond, but our naturalists noticed only the present species.) Samoan and Fuejoe Island; "clearly introduced"; at the Fuejoe, "cultivated by the natives." This also is enumerated as O. gratissimum by Deerman in the list of the Fuejoe collection.

2. Plectranthus, L’Her.

1. Plectranthus Australis, R. Br.

Hab. Sydney, New South Wales.
2. **Plectranthus parviflorus**, Mill.

*Hab.*. Harbour River, New South Wales.
Kanai and Hawaii, Sandwich Islands.
Indigenous?

3. **Plectranthus Forsteri**, Benth.

*Hab.*. Manma, Navigators' Island. Ovolau, 45. [Note: possibly a misreading or abbreviation, possibly referring to the Society Islands. It is *Coleus* atropurpureus of Dr. Schumann's list.]

3. **Coleus** [signature]

1. **Coleus acuminatus**, Benth.

*Hab.*. Luzon, in the vicinity of Manilla, where it was first found by Chamisso.
1. **Coleus pentellarioides**, Benth.

*Type:* Luzon, in the Majañac Mountains near Manilla; a variety with very coarsely toothed leaves, mostly cuneate at the base, not purple beneath, approaching *Miquelias var. laxiniatus* (*C. laxiniatus*, Benth.); in fruit only.

4. **Beltiodora**, Pohl

1. **Beltiodora radicans**, Pohl.

*Type:* Brazil, in the Organ Mountains near Rio Janeiro.

5. **Styptis**, Jacq.

1. **Styptis fasciculata**, Benth.

*Type:* Brazil, in the Organ Mountains,
near Rio Janeiro.

2. Stylistis Pectinata, Boit.

Hab. Peru, in the arid, dried bed of the Rimac, at Lima.

3. Stylistis marcelaus, Boit.

4. Stylistis spicigera, Lam.

5. Stylistis capitata, Jacq.


Hab. Philippine Islands: no. 4 and no. 5 from Caldera, Mindanao; the others from Luzon, near Manila. All of them doubtless introduced from America.
b. Marsypianthes, Mart.

c. Marsypianthes hypstroides, Mart.,

Stab. Brazil, in the neighborhood of Rio Janeiro: a most common plant.

7. Lavandula, Tourne.

1. Lavandula Stachas, Lin.,

2. Lavandula Pinnata, Lin.,

Italy, Madeira; on the sea coast at Funchal.

8. Mentha, Lin.

1. Mentha Viridis, Lin.


Tab. Madeira, and in Chili, near Valparaiso and Santiago; introduced from Europe.

4. Mentha aquatica, Linn.

Tab. Cape of Good Hope, in the vicinity of Cape Town; doubtless introduced from Europe.

5. Mentha satureioides, R. Br.

Tab. New South Wales, at Sydney.


1. Lycopus australis, R. Br.

Tab. Moolangong, New South Wales.

This Australian Lycopus was
first arranged by Bentham as a variety of \textit{L. Europeus}, and then reinstated, with the remark that it is very closely related to the North American \textit{L. sinuatus}. As I cannot specifically distinguish the latter from \textit{L. Europeus}, nor the Australian from the North American, except that \textit{L. australis} has more slender calyx-teeth, Bentham's suggestion that all the known species may be reduced to \textit{L. Europeus} and \textit{L. Virginicus}, becomes more and more probable.


1. \textit{Origanum vulgare} Linn.

\underline{Stab, Madeira}. — This is recorded in de Candolle's \textit{Prodrornus} as if indige
moves to the New as well as to the Old World. But in the United States it has recently been naturalized, and that very sparingly, in some districts.

Micromeria, Benthi.

1. Micromeria varia, Benthi.

Stems, Madeira; corval, in dry rocks, and with it a fragment of the common Calamintha Calamintha
podium, Benthi.


*Tab.* Chile; common on the slopes behind Valparaiso. "Flowers bluish-purple, but turning red in drying."


*Tab.* Peru; common at Oblajillo, where it was before collected by Crouch & Shanks.


*Tab.* Peru; frequent in the environs of Oblajillo and of Barros. This extends up and into the alpine region, and is therefore included, and well characterized in Weddell's *Chloris Andina*. 

5. Juticosa; petalis glabris; foliis latiorebus rhombo-ovatis petiolatis sub-serratis lineato-vexosis haud coriaceis puberulis subitibus vix canescentibus; verticillatis multis multifloris; calycis accessor mortuatis, pedicello longiori dentibus subulatis, favee intus muda; corollis pilosis calyce (semipellucide) triplo longioribus.

Ital., Paris, at Batiscan, frequent along the upper margin of the [al-] pestrine region.

A shrub, 3 to 5 feet high. Leaves half an inch or less in length, not including the distinct petiole, either rounded, or somewhat truncate, or cuneate at the base, irregularly and rather sharply serrate or serrulate, pubescent, or the younger ones and tracts hairy.
Paler underneath, glabrate with age. Pedicels 2 to 4 lines long, Calyx tubular, hisitely hairy, the teeth broadly subulate, of equal length. Corolla fully an inch and a half long when fully developed, strongly densely pubescent in the back bud, and moderately so in the expanded blossom. "Scarlet," the lobes ovate and obtuse. Stamens slightly exerted. In the foliage this resembles S. rugosa, but the flowers are much larger, the corolla elongated 1½. It should be compared with S. mitchella, K.K., but the branches are glabrous, the leaves not tomentose beneath.

1. Sphaele Lindleyi, Bentth.

[Text in Latin, regarding habitat and common around Valparaiso.]

2. Sphaele semiigolia, Bentth.

[Text in Latin, regarding habitat in Peru, near the vicinity of Obrajillo.]


[Text in Latin, regarding herbaceous, foliis amplis hastatis, cerebriformes, arenulatis utrinque canthaque camo, tormentis, loris, floribus oblongo-lanceolatis, sessilibris, cymis laxis multis, flores Athyrium elongaturn.]
I believe the text should be:

Piciotilus; corollis "purpureis" tubulosis calyce triplo longioribus; stamina longa exserta.

Stnl. On Hakeakala, E. Maui, Sandwich Islands, from 3000 to 5700 feet above the sea.

Apparently herbaceous and tall, but the height of the stems not recorded, canescent with a fine and soft tomentum. Can- line leaves about 6 inches long, ovate-subulate 1½ to two inches in length, whitened with a close and very soft tomentum, slightly rugose, exactly and rather narrowly hastate, 2½ to 5 inches broad at the base, including the tapering and acute basal lobes, tapering to an acute or acuminate apex.
The margins finely and closely crenulate. Lowest leaflets 2 to 3 inches long, sessile by a somewhat narrowed base; the upper successively smaller. Influenence many-pubescent at length glabrate, somewhat glandular; the many-flowered cymes dichotomous cymes short-peduncled, approximate, forming an elongated thyssoid panicle. Pedicels slender, 2 to 4 lines long. Calyx 3 lines long, in fruit 5 to 6 lines long, slightly bilabiate; the narrowly subulate teeth rather shorter than the cylindrical-campanulate tube. Corolla about an inch long, somewhat pubescent, stamens and style conspicuously exserted. Nectaries very smooth, most striking and distinct species.

1. Salvia coccinea, Linna.

2. Salvia Mauritius Pohl.


Hub. Brazil, at Rio Janeiro and in the neighboring Organ Mountains.

4. Salvia strictiflora, HOOK.

5. Salvia Curckshanksii, Bert.

Hub. Peru; the former from Yaso to Usrajillo; the latter abundant at and above Usrajillo, both just where they were collected by Curckshanks.
   Peru, at Lima.
   Tahiti, Society Islands.
   Manua, Samoan Islands: "seeming indigenous on dry rocks." Not before recorded from the islands of the Pacific; but Mr. P... who said it from Tahiti states it to be very common there. Anderson gathered it in the Galapagos, and Murray at the Sandwich Islands. Doubtless it has been introduced from America.

   New South Wales, on Hunter's River.


*Hab.*, Cape of Good Hope, in the vicinity of Cape Town, where they are common species.


*Hab.*, St. Jago, Cape de Verde Islands; common on dry rocks.

15. *Brunella*, Linn.

1. *Brunella Vulgaris*, Linn.

*Hab.*, New South Wales. One of the most widely distributed of Phanerogamous Plants.
10. Scutellaria, Linn.

1. Scutellaria humilis, R. Br.

Hab. New South Wales, at Murrains River, also at Tasmanian species, allied to S. minor, of Europe and Asia.

Periconia veynoidea, H.B.K., which Dr. Smekshanks collected at Ovajillo, was seen seen abundantly appears from these, as Dr. Pickering's "Menandria," but no specimen exists in the collection.


*Stachys*, Chili, near Valparaiso, unless they abound, except the last named, which was from the Cordilleras near Santiago.

*Stachys arvensis*, Linna.

*Stachys*, Peru, in the Andes between Buenos and Guayaquil, taken for indigenous by Dr. Pickering. Also at Sydney, N.S. Wales, and St. Helena; introduced,
18. Leucas, Burm.

1. Leucas decemdentata, Smith.
   Hab. Society, Samoan, and Fijian Islands; ssp. "naturalized."

2. Leucas javanica, Bath.

3. Leucas linearifolia, Sprag.
   Hab. Luzon, Philippine Islands, near Manila.

Leonurus Sibericus, Lin., and
Leonotis nepetaphylla, R. Br., were
picked up in the town of Rio Ja-
neiro, in waste grounds.
19. Gomphostenema, Nall.

1. Gomphostenema Philippinarum, Benth. in DC.

Hab. Luzon, in the Majai-Majai Mountains near Manila.

20. Phyllostegia, Benth.

An examination of the new extant materials leads to calls for the suppression of four of Benth's species and for the establishment of as many new ones, two of which, by an account of their simplified inflorescence and their habit, constitute a peculiar section of the genus. All the (still are restricted to Hawaiian species) are restricted to the Sandwich Islands. The species
may be disposed as follows:


Calycis lobis tubo æquilongis, foliaceis amplexicostatis, firmissima, P. vestita.

Calycis lobis tubo pl. m. breviore:

Fructiferi ampliati, explanato-patentes, foliacei. Pedicelli calycem sericeo-pubesce, subsequentes. P. grandiflora

Fructiferi flabellati, explanato-patentes, (P. racemosus fove excepta), glabra. Pedicelli graciles, Vertebrallasti floriflori, fruticulati. P. brevidens

Verticillasti bis-flori, cymulæ, asperis pedunculatis, P. glabra. Firmissima: pedicelli breves. F. missuta.

* Known only by one deplorable specimen of Macrae's collection, but probably of this genus.
Molliter pubescens seu villosa.
Pedicelli graciles calyce
scepiissime longiores; pilis
Patentibus. — P. parviflora.
Pedicelli calyce cum
corolla strigosa-pubescentes
cenentis subaequantes. P. elavata,
Pedicelli brevissimi, plurissimi.
Calyxis lobis subulatis.
Sa. n. anacastati tubum
subaequantem. P. stachyodes.
Calyxis lobis ovatis, ob-
tusi, tubo breviores. P. racemosa.

52. Lateriflorae. — Racemi simpli-
ecifloris (Pedicellis solitaris),
freves, ex axillis foliorum infe-
rionum. Corollaæ violaceaæ,
parvae.

Lobi calyce hisulissimi tubo æqui-
longi, lineares. P. floribunda.

Folia basi sat cordata; calyceis angusti acuti, dentes subasci. *P. haplostachya*, sp.

Folia basi vix cordata; calyceis amplissimis truncatis, oblique truncatis sub-dentatis. *P. truncata*, sp.

*Phyllostegia truncata* (sp. Nov.): spicamen simplicis mensuris minoribus; foliis lanccolatis crenulatis basi truncatis vel subcordatis sub-tus incanis; floribus brevissimis in spicam simplicem digestis brevissimis pedicellatis; calyce puberulo glanduloso amplissimo truncato, dentibus brevissimis latis obtusissimis; corolla
Phyllostegia Vestita, Benth.

P. undique hissitissima, foliis ovatis; racemo elongato; calyceis lobis foliis amplissimis postentissimis ovatis oblongis acutis sape dein tatis tubo equilongis; corolla brevi. Variat racemo laxiore folioso (P. Vestita)

tubo elongato, lobis elongatis velundatis subaequalibus crispis. — Maui, Sandwich Island, Coll. Penny, no. 395.

— Upper leaves one or two in this large, 3 to 5 lines wide, velvety-pubescent above, finely white-tomentose beneath; lower leaves not seen. Spike elongated. The lower pair of flowers an inch apart, the upper aprimate. Bracts 1 to 2, as in P. haplostachya; the pedicels more obvious, a line or a line and a half long. Calyx cylindrical, the first segment campanulate, glandular at summit, becoming rather campanulate, and just before anthesis rather globular; calyx teeth, 6, ovate or oblong, rather large, obtuse, white, a little longer than the tube, covered with many short, glandular hairs; flower stalk, oblong, short, purple with a few short hairs; petals, several, ovate, purple, darker near the summit, obtuse, longer than the tube, very glandular; stamens, 5, distinct, with very short filaments; anthers, purple, oblong, very wide at the summit; style, purple, shorter than the tube, slender; ovary, 5-celled, with thick, short, purple hairs; ovules, many, pendulous, ovate, obtuse, with a short purple beak; fruit, purple, oblong, smooth; seeds, many, oblong, yellow, with short beaks. — Lokelani, Mauna Loa, Hilo, Kealakekua, February 26, March 2, and May 24, 1837.
Benth.) et racemos, dense, nude, foliis florusibus pleurisque calyces fructiferi haud superantibus (P. dentata, Benth).

Phyllotegia vestita & dentata,

Benth. in Bt. Reg. sub. m. 1292,

Lab. p. 651, & in Bc. Prod. 12,

p. 553.

..in forest &

Hub. Hawaii, in the district of Puna, and on Monua Kea, where it was discovered by Macrae.

Well marked by its minute or even bristled hairiness, membranaceous ample leaves (4 to 6 inches long besides the petiole, either much, somewhat acute or truncate at the base), and the ample foliaceous lips of the calyx, which in fruit become nearly half an inch long.
from with leafy in florescence not
less than in the other, the calyx
lobes are apt to produce one or
two teeth on each margin. Cor-
olla "white, rather small"; its tube
hardly exerted from that of the
calyx.

2. Phyllostegia grandiflora, Benth.

P. appress - pubescens vel glabri-
uscula, foliis ovato-oblungis
sub ovatis cremato-perraratis;
vascinae sublaxo simplici; calyx
lobis foliaceis ovatis obtusissi-
mis patentibus tubo dimidio
brevioribus flos quater ampliatis;
corolla alba tubo extus serviceo
calyce triplo longiore, labio in-
feriore maximo. *P. macrophyllum
Prasinum grandiflorum* Benth.

Brit. Herb. *V*o*·* *N*o·*3, 453, i. 155, f. 2.
Phyllostegia grandi flora, Bent.

l.c. 1 in Linnaea, 6, p. 78; Hook.


on the mountains near Kunrak,

Hub, Cadre, where it was col-

lected by Maerae, Chamiseo,

Guindiehaud, and most latter col-

lectors.

Leaves 2 to 4 inches long, often

acuminate, glabrate or glabrous

above, more or less pubescent

with short hairs beneath. Stems of

the inflorescence, pedicels, calyx

et., silky, pubescent, less so with

age but not becoming glabrous.

Ventriculate to filiform, the slender pedicels not turn-

ded at first, straight Calyx

at first rather cylindrical, with

the spreading lobes a line and a

half or less in length, in fruit

campanulate, with the lobes from

2 to 3½ lines long. Tube of the corolla
Van. 3.
B. Ambiguus: Calyx glabrous.

V. 3. Ambiguus: Calyx glabrous.

3. Phyllotaxis, Davidens, Scleros.

In the species 'Pacifical' the leaves are usually straight or slightly curving at the base.
tubo quadruplo triplo love
serioribus; corolla tubo
calycce triplo longiore (sub-
pollicari); foliis subtus nive-
paree pilosis.

Hab. Hawaii, in the forest
of Mauna Kea, at the elevation
of 3000 feet. Var. B.? West
Maui.

Branches, glabrous through-
at, except along the upper side
of the tube of the corolla. Leaves
membranaceous, 3 or 4 inches long,
1½ to 2 inches wide, sharply serr-
ate, tipped with a small acum-
nation, obtuse or rounded at
the base, on slender pedicels. Fl-
iorescence as in D. grandiflora,
(except in the smoothness) i.e. the pedi-
cels sessile or nearly so, but more
numerous, from 7 to 11 in each cyme.
Calyx turbinate, campanulate, 2½ lines long, separably stellate, the teeth very broad and obtuse, sometimes stronger, but always drawn as much as one quarter of the length of the tube, not spreading. Tube of the corolla about half an inch long, the large peltate lower lip about the same length. Branches of the style very short; the stigmas nearly as in P. grandiflora.

The variety ambiguus, of which we have only a single specimen, is ambiguous between the present species and P. grandiflora, having a corolla of the about the size and shape of the latter, and most of the leaves are sparingly pilose underneath. But these (calycus, petals, &c. (about 5 in each cyme), &c.) are perfectly glabrous,
and the calyx-teeth, although manifest and of the same form as those of P. grandiflora, are much shorter and hardly spreading. Stigmas as in P. grandiflora, but rather more unequal, the lower one larger. I have reason to think, but am not certain, that this is the same as a specimen which Menzies also gathered on Malacca, which is preserved in the herbarium of the British Museum, and which Bentham referred to his P. chamissonis;—in which case, should it prove to belong to a distinct species, as is likely, it may be named P. Menziesii.
4. Phyllostegia glabra, Buxb.

P. glaberrima; foliis ovatis basi rotundatis vel truncatis, racemo laxo thyrsdeo, cymulosis plerisque pedunculatis trifloris; lobis calycis parvis brevibus lanceolatis oblongischis vel obtusis tubo dimidio brevioribus, fructiferis vix angustiatis subpatentibus; corolla tubo calyce 2-3-plo longiore. — Variet calycis lobis angustioribus acutis seu latisibus oblongis vel obtusis, fructiferis rari raro tubo aequilungo, cernua subpalliiiari vel minore.


Phyllostegia glabra, Buxb., in Buxb. Reg. no. 1292, t. 7 in lineae, 6. p. 79: forma ramosior paniflora.
P. Macræi, Barth. in Sch. l.c. p. 554.

P. Chamissonis, Barth. in Linnae
l. c., l. c. p. 557, & in Sch. l. c.;
forma fl. majoribus.

Nan. Garnet, on the mountains
behind Kauaihama, and in the
mountain defile across West Maui,
gathered by nearly all collectors
from Gandiahanda to Kaima.
Gandiahanda Plate represents
the largest-flowered form, Bentham's
P. glabra was described from speci-
mens smooth with sparse hairs,
and probably later
covered with smaller flowers.
The corolla "white tipped with pink",
varies much in size, but in none
of the specimens under examination
does it rival that of P. grandiflora,
common in many it is only half an inch
in length. It clearly belongs to one species,
and it is the only one with the cymules pedicellate, except
Phyllostegia Parviflora, Bent.


Var. a. Gaudichaudi; foliis subbis molliter vel mollissime pubescentibus, racemis saepe paniculatis; floris parvulis; calyce sesquiternario; corolla gracilis; pedicellis saepebus calyce (½-lin.)
multo longioribus (3-6 lin.)
tantum
nunc coarctaque longius.

Praecipua Parviflorea, Gand.
Mot. Frey e. Nov. p. 453, t. 65,
fl.
Phyllostegia Parviflora, Bentth.
in lio na, l. e. etc.

Var. 3. glabriuscens: foliis caule-
que subpubescentibus vel glabra-
tis; floribus majoribus; pedicellis
calyce (2-3 lin). 2-3 filio longioribus;
articulatis interdum 5-floris.

Phyllostegia macrophylla, Bentth.
l. e., praesertim pl. macræi.

Var. 4. mollis; mollissime veluti
pubescens, canescens; pedicellis
calyce brevioribus vel subaequali-
tibus; corolla (4-5 lin.) calyce
duplo longiore.
Phyllostegia mollis, Bentth. in Liebm. 6, p. 79, & in Hoeh."n.

Hub., Oahu and Maui, in mountain forests; gathered by most collectors. Var. B. Hawaii, not in the present collection, but a specimen from the mountains behind Honolulu connects it with the type of the species first and ordinary form. Var. Y. West Maui; specimen not well developed, more hairy than the ordinary form, probably growing under greater exposure. Oahuan specimens with rather short pedicels and very soft velvety leaves, which are quite intermediate, showing that P. mollis belongs here, and not to P. clarata; the canescent form which flowers larger and is silky-hisptate, the calyx with appressed strigilose pubescence, 49.
This is on the whole a large-leaved species, the ampler leaves being 6 inches, with and the pedicle 2 inches, in length. The variation in diversity in the size of the flowers is hardly as great as in the preceding species. The corolla does not surpass half an inch in length, but is slender in var. a, thicker in b. Brain N. per branch of the style and its stigma commonly smaller than the other.
Phyllostegia stachydroides.

P. molliter pubescentis; folis ovato-lanceolatis; subcordatis conspicuatibus; subulatis; radice dense; venecillas breviolubris; lobis calycis subulate-lanceolatis; tubo paullo brevioribus; corolla pubescentis tubo calycice duplo longiora.

Hab. Hawaii, in the district of Wainiha.

The single specimen is from a branching plant, with the leaves much like those of P. racemosa, but tapering to a acute point and scarcely subcordate at the base, the short and soft pubescence less dense. The raceme is more compact and leafless, and spiciform, even the prolificous pedicels seldom more than
a line and a half long. CECH
These are about five times the size
in each fascicle, and destitute
of any common peduncle, as in
most species of the genus. Calyx
 minutely pubescent and glandular,
3 lines long, fully after flowering
4 or 5 lines long; the lobes lanceo-
late-acute from a broad base,
more attenuate-pointed than in any
related species, rather rigid, some-
what spreading. Corolla slender,
Probably white, rather thinly and
finely pubescent, half an inch
long. Style slightly clavate;
the subclavate lobes unequal
and stigmas unequal, the upper
stigma smaller. — Additional
specimens are wanted; but the
species appears to be a well-marked
eone.
Phyllostegia clavata, Bentth. f. c.
P. pubescens, hisruta pilis appressis; foliis ovatis seu ovato-lanceolatis subacutis basi rostri tumulatis virsubcordatis cumato serratis; verticill astris 6-14 floribus; pedicellis calyce subaquilongis; lobis calyceis strigosis late triangulatis ovatis obtusiis tubo triplo breviobitis; corolla strigosa pubescens tubo calyce triplo longiore; stilo apice clavato.

Variet. 1. foliis glabriuscensibus pedicellis frutiferis calyce 2-3-plo longioribus, et 2. villosis, subbieana sericeo-villosa, canescens, lobis calyceis paullo majoribus.

Hab. Hawaii, in the forest of Monoa Kea, collected only by Macarze, and, in the canescently...
Hairy form, by our Naturalists. The smoother form, apparently of this species, was gathered on Mani by Henry.

The leaves are larger than in the next species, and more or less acute or pointed, at most obscurely crenate at the base, and with a more minute pubescence. The specimens in the present collection, although manifestly of this species, are much more hairy than Macraea's. The younger leaves and the calyx very densely and canescently silky beneath. As in the following and other species, the lower verticillasti, and in some specimens all of them, are in the axis of ordinary leaves; in others they are crowded in a naked virgate rosette. Pedicels 2 or 3 lines long. Calyx 2 or nearly 3 lines long.
5 or 6 lines long with a rather thick and strigously hairy or silky tube. Style more clavate than usual at the summit, the upper lobe smaller, and with its stigma often abortive.

P. Phyllostegia racemosa Benth.

P. tomentulosa-pubescentis; foliis oblongis sub ovato lanceolatis obtusis basi quassiis cordatis crenatis; verticillaris 8–12-floris; pedicellis brevissimis; lobis calycis tomentulosi ovatis obtusissimis tubo dimidio lacinulis, ine = t.If eros = t.If eros accelli patentibus, pubescentes calyce 1 fistulosa longioribus.

Stat. Hawaii, in the forest of Maua Kea, where it was discovered.
by Macrae.

Stems or branches elongated and ascending, with a fine and soft pubescence. Leaves small, only one or two inches long, with the petiole 3 to 6 lines long; the lower floral ones similar, the upper gradually decreasing; the one to 3 lower verticillasters often remote and shorter than the outflanking leaves. Pedicels barely one line, or at length a line and a half long; the fascicle sessile. Calyx 2, or at length 3, lines long. The very obtuse and foliaceous lobes at length almost as long as the tube. Corolla fully 4 lines long when well developed, white. Branches of the style often unequal, the upper one smaller, as in P. clavata.
Phyllostegia haplostachya, S. Kuntze.

P. cano-tomentosa; foliis cordato-oblungis seu cordato-lanceolatis crenatis; verticillastris bifloris, floribus subsessilibus in spicam simplicem virgatam digestis; calycis dentibus lato subulatis erectis tubo 3-4 plo brevioribus; corolla tubo large exserta, lobis margine crispis.

Var. B. Leptostachya; foliis minus, foliis angustioribus e basi leviter cordatis minus cordata, pagina superiore calycibusque minutim tomentulosis nec albis in canis; floribus inferioribus dissitis.

Hab. In sandis et montibus.
Kauai. Flows erect from chimneys near the base, 2 or 3 inches long, arching over. 1 or 2 feet high, white to cream. Base and upper ridges.
The lowermost equaling the calyx, the others much shorter or minute. The spiky therefore naked and more or less pedunculate, from 3 to 6 inches long. Flowers in all instances solitary in the axil of each bract, almost sessile, or the pedicel barely 1 line long.

Calyx: 3 or 4 lines long, cylindraceous, densely white-tomentose, a little curved and the flower horizontally spreading in anthesis; the teeth nearly equal a line in length, broadly subulate, rather acute, erect or connivent in fruit and not accrescent, cordate-tomentose, pubescent externally, white; the tube nearly straight, 8 or 9 lines long; the lips less unequal than in other species, the upper one and the three lobes of the lower one rotund and with
strongly undulate, crisped margins, the lower lobe at length exceeding the lateral ones, filaments hairy, as in the rest of the genus. Other species, author of the genus, so of the style, which however is often sometimes sparingly hairy towards the summit; it is elavately thickened upwards above, and the short lobes are elavate and terminated by the truncate-dilated stigma of the genus. In one instance the lobes of the style and the stigma were found to be connate into or confluent into one, Aechenia gerninately sub-carinate, some-what coherent in pairs, appendix white, thickly and silirocose-crustaceous, hairy at the summit, included at maturity in the then ovoid and nearly
closed calyx, instead of being exposed in four open or expanded calyx, as in the other sections of Phyllostegia.

In the variety leptostachya, to which the Hawaiian specimens approach as to the foliage,—the leaves are smaller as well as generally narrower (1½ to 2 inches long and ½ to ¾ inch broad at the less cordate, or in the uppermost almost truncate base), less velvety or glabrate above, but densely white tomentose beneath, the margins finer and rarely; the pairs of flowers are more separated (the lower an inch or more apart) and perhaps more spreading, and the calyx finely tannutose, instead of white tannutose. Fruit unknown. Possibly it is of a distinct species; but probably not.

This species and the nearly related P. Sum-
cata. of Kew's collection would naturally be taken for the type of a distinct genus; but I find no sufficient reason for their separation.
P. villosa. Hirsuta; cande rigido; foliis ellipticis seu oblongo-ovalatis acuminatis exsutis, serratis basi rotundatis vel obtusis; racemis brevibus plurifloris et axillis foliis inferiorum, stachii pedicellis filiformibus calycibusque patentibus hirsutissimis; calycis lobis linearibus tubo max. equis longis suo et corollae "late violaceae" subaequilongis.

Not. Hawaii, in woods of the district of Puna. Before known only from the specimen gathered (probably on Hawaii) by Nelson in Cook's last voyage, and preserved in the Banksian Herbarium.
Stem probably herbaceous; it is recorded as rigid, upright, 18 inches to two feet high. Leaves thin and membranaceous, from 2½ to 7 inches long, with the petiole one or two inches long. The inflorescence arises from the axils of the lower, then mostly fallen, leaves, and consists of nearly sessile and leafless racemes, not cymes, in our specimens, and I believe in Nelson's also, although in that the flowers are more numerous and crowded. Pedicels in our plant solitary in the axil of each bract, in fruit 5 or 6 lines long, the bracts ½ to 3 lines long, the lowest and larger ones oblong or lanceolate and sessile, ovate, or suborbicular, ½ to 3 lines long, the tube at first cylindrical, in fruit open-campanulate, the tubes long and
slender. Corolla 4 or 5 lines long, "deep violet and ornamental", slightly pubescent, in conformation similar to that of P. Parriflora, the style and stigmas, similar. Achenia the open matt of fleshy, projecting from the four-tipped calyx.
Stenogyne Bentli.

The corolla is more or less hairy or downy externally towards its summit in all the species, while the lower part of the tube is apt to be glabrous or glabrate. Its lower lip is never longer and nearly as long indeed as sometimes "subequal"; but in this genus it is the upper, not the lower, lower lip which is the longer, in some species strikingly so when fully developed, as in the small-leaved section, where the erect or more or less falcate incurved upper lip produces much beyond the short lower and three-crested lower one, calls to mind the corolla of a Castilleja. The bearded annulus is wanting in S. staminea, S. diplopia, and S. cordata, therefore probably in S. sessiles, and nearly so in what
I suppose to be S. maccanthera. The stamens equal the upper lip, or are exerted beyond it. Quam
[For a conspectus of this species, see Proceed. Amer. Acad. 5, p. 7. ]

2. Caritus basi suffruticosis acut.
   tetragonis ad angulos praestinum
   cum petiolis retrosum hisintis;
   glabratis
   foliis rotundis crenatis basi truncatatis
   viri subcordatis; verticillatis
   b-floris; pedicellis petiolo dimidio
   bruniius calyci glabo leviter
   dentato subaequilongis; filamentis
   villosis; corola examinulata extus villosa.

Not. East Maui, Sandwich Islands, or the banks of the crater
of Mauava Haleakala.

Stems erect or ascending, square,
from an apparently woody base,
about a foot high, square, miniscule
with short and rather rigid hairs, at
least in the angles, where the pubescence is strongly retrorse. Leaves an
inch or a little more in length, conspicuously petioled, elliptical-obovate, often set use at the rounded summit, either truncate or obscurely subtruncate at the base, coriaceous in texture, sprinkled with some scattered minute hairs, at least when young, otherwise glabrous; the petiole half an inch long, minute with long and reflexed hairs, or at length glabrate. Flowers axillary, as in the genus generally, Pedicels more or less barely discernible; the petalous bracts rather conspicuous. Pedicels 1½ or 2 lines, or in fruit fully 3 lines in length. Calyx campanulate, perfectly glabrous, or rarely with one or two short scattered hairs, 3 lines long, very obscurely nerved; the limb scarcely oblique; the teeth as short and broad as those of S. campanuloides. Corolla 1½ lines long, villous
externally with a soft down, the throat little dilated and slightly oblique, the spreading lower lip a little shorter than the erect upper one. Stamina moderately exserted beyond the upper lip; the filaments bearded with long villous hairs. No annulus to in the tube of the corolla. Petioles fimbriate, disposed to cohere in pairs, the petiole very thick and crumaceous.

Apparently a well-marked species, and most related to no. 381 of Kerry's collection, which I take to be a form of \textit{S. macrantha} of Bentham, although it has smaller flowers and apparently smaller leaves than Macrae's
The following character is drawn from the plant of Rever's collection:

*Stenogyne macrantha (Benth.)*

Pilis patentibus undique molliter hispida; foliis subrotundis vel ovatis crenatis basi sepsius cordatis submembranaceis longissimis petiolaris; staminulis bracteis, pedicellis calyce 5-lobo aequilongis, utrisque hispidis; filamentis subrotundis; corolla (subpollinari !) extus fere glabra, in animula extus sericea. — Hawai,

Henry, no. 381. — Divergently branched; the hairs at least on the stem, with papillose dilatatae. Leaves 1½ to 2½ inches long; the petals 6 to 12 lines long, calyx 4½ to 5 lines long; the hairs more or less unequally, about 2 lines long, or the larger 3 lines long in fruit. Corolla not quite an inch long, tubular-like, with 5 stamens oblique at the dilated middle, and with the lower lip decidedly shorter than the upper, whereas Macaruris plant is said to have "labio superior vis in forme brevior." Anemones reduced to five minute hairy leaves; filaments slightly exceeding the upper lip, distinctly pubescent.
2. *Sternogyne cordata*, Bentth. vel nisi modo barbatis glabra; foliis subpetiolatis ovatis basi pl. m. cordatis; verticil lastris 2-floris; cal. pedicellis brevissimis; calyce quin magna. lili, lobis acutis, anticus tuto subaequilongis; corolla examinata, latis fere equilongis. Variet. caule et foliis tectis vel sectis.*


*Ital., Hawaii, in the district of Naimea, and on the mountains of West Maui. Before only known in Nelson's collection, made in Cook's last voyage. Plant only a foot or two in height, sometimes glabrous or nearly so.*
At the nodes and the short pedicels (these only a line long) which are bearded, and the pedicels (barely 2 lines in length) minute; in other species the leaves, as, are sparingly minute. Branches slender, rather acutely triangular, very leafy. Leaves about an inch long, somewhat coriaceous, nervose-veined, mostly acute, slightly cordate. Flowers about equaling or the upper exceeding the leaves. Calyx 5 or 6 lines long, the elongated, campanulate tube nervose, the limb bilabiate, and a little more deeply cleft between the two anterior lobes, which however are a little shorter than the much less deeply cleft or barely three-toothed upper lip; the lobes or teeth water-triangular or triangular-lanceolate, all acute or pointed.
Corolla 9 or 10 lines long, canescently pubescent externally, or glabrate towards the base of the tube; the dilated throat little oblique and the lower lip as long as the upper; its middle lobe somewhat exceeding the lateral ones; no trace of an anellus. Filaments not exceeding the upper lip; scarcely pubescent.

The nearly related S. sessilis has been collected only by Marcus. The specimens, in the Banksian and Hookerian Herbaria, have larger, rounder, more rugose, and more closely sessile leaves than those of the present species. I know not whether the corolla is equally destitute of an anellus.
S. subglobosa; calybus decumensi, \textit{tuberibus} et \textit{repentibus} tetragonis
ad angulos retrosum hissatris; foliis
notundo ovatis crenatis basi sub
\textit{cordatis} truncatulis \textit{subflaccidis};
\textit{verticillarum} \textit{b. s. floris}; \textit{pedicellis caly}
cem \textit{vix aequantibus}; \textit{dentibus caly}
eis \textit{obtusis}; \textit{brissiemiis}; \textit{corollae}
\textit{elargatae} \textit{superne puberulae labii}
\textit{fere equalangiiis}.

\textit{Hab.} \textit{Hawai}, \textit{in} \textit{the} \textit{forests} of
\textit{Mauna Kea} \textit{and} \textit{near} \textit{the} \textit{Lea-Pele}.
\textit{Also} \textit{collected} \textit{by} \textit{Rams}. \textit{Often} \textit{simple},
\textit{stems elongatiss} \textit{square, usually}
\textit{more or less} \textit{hirsute} \textit{pubescent} \textit{or} \textit{hirsu}_____wet on \textit{the} \textit{sides, always} \textit{retrostylz}
\textit{hairy on} \textit{the} \textit{angles. Leaves} \textit{one} or
\textit{two} \textit{inches} \textit{long,} 4 \textit{to} 18 \textit{lines} \textit{broad, obtuse,}
\textit{rather} \textit{membranaceous, glabres or mi}
mutely and sparsely hairy, appearing glabrous to the naked eye. Petiolar 4 to 6 lines long, pilose-ciliolate. Pedicels in fruit 3 or 4 lines long, glabrous, as is the calyx; the latter 4 to 5, or in fruit even 6 lines long, with obscure veins, resembling that of the following species, but more elongated, and the teeth (a line or a line and a half to in length) broader and rounder, and less unequally. Corolla above an inch long, strongly incurved, gradually dilated upwards, profusely purple, the lower part glabrous, and the short lips almost equal in length. Filaments equaling the broad upper lip, slightly hairy. Stamina of the corolla strongly bearded.

A well-marked species, allied both to S. undifolia and to S. scrophularioides.
Sterogynia sphenularioides, Bentth.

S, glabra, divaricato ramosa; foliis ovatis seu ovato-oblongis acutis serratis basi rotundatis vel truncatis subflaccidis; petiolo gracilis; verticillastis saepissime b floris; pedicellis calyce breviter davato longioribus; ovarioe superne pubescentiibus latis subaequilongis.

Var. B. foliis oblongo-ovatis saepius acuminatis argutius serratis floribusque majoribus.

Sterogynia Nelsonii, Bentth. Lab. p. 655, s in DC. l.c.

Chrysopis montana, Nutt. in Nutt. West.

Hab. Hawaii (and Oahu, Nuttall).
in forests. Gathered by most collectors, the variety o., collected by Nelson, Hawai, is not in the present collection.

The plant of the present collection, gathered in the ascent of Mauna Kea, is exactly that of Macrae; the leaves thin and flaccid, entire, mostly acute, 12 to 18 lines long, with the slender petiole about half an inch long. Calyx 3 lines long, nearly nerveless, and with short, obtuse, more or less unequal teeth. Corolla when developed 7 to 9 lines long, purple or pink, gla-

hairs or glabrate for the greater part of its length, but the limbs silky-pubes-
cent externally, especially in the bud. Filaments somewhat exceeding the upper lip, slightly hairy below. The plant of Macrae (which appears to be exactly Hutchins’s Charopsis montana) is intermediate between the former and
the Nelson's plant upon which S. Nelsonii was founded. This last has larger, more paper, oblong-ovate and acute, sharply serrate leaves (as near the larger 3 inches long), the calyx being to be included through the and larger flowers; the corolla as large as in my S. calaminariaeides, and glabrate, and the stamens are more exerted. Remy's no. 396 is about the same thing, but the corolla, an inch long when developed, and then mostly glabrate, is canescently silky-pubescent in the bud. The annulus is strongly bearded.
Steinogyna rugosa, Benth. l.c.

S. saxius glabra vel glabratą; foliis coriaceis rigidis oblongis seu ovato-oblongis basi rotundatis vel truncatis petiolatis cremato-serratis reticulatis nunc rugosulis; verticillastis pleniusque b-floris; pedicellis calyce brevioribus; calyce sub inaequali, lobis saxius mincerato-acutis vel acutissimis tubum subaequante tibus; corolla glabri inferior paulo brevior. Variat. 1. sue omnino (corolla excepta) glaberrima, laevis, sue pedicellis calybusque hissitulatis; 2. Missu la vel hispidula, foliis nunc rugisi-rivosibus asperulis; 3. pubes brevi mollis induta, verticillastis b-10-floris.
Itab, Hawaii, in the forest and region of Mauna Kea, 49, ascending to the elevation of 9,700 feet or more, also below on the coast. Apparently common: collected by Merritt, Maca and Kenny.

A well-marked species under all its variations as to pubescence, smoothness, or virginity, but rare and seldom deserving its specific name. Stems mostly erect, sometimes decumbent, obtusely angular or subterete, usually very smooth, herbaceous, very leafy. Leaves from 1½ to 3½ inches long, with a petiole from half an inch to an inch in length, sometimes thinner, but commonly thick and rigid as if growing in exposed places. Prostrately menose-veined and finely venose-reticulated, often not at all
...and very smooth, sometimes rugose and rough, either perfectly glabrous, slightly minutely beneath or on both sides surface, or in one form, from the district of Naimead (probably near the coast) finely and softly downy, especially underneath, as are the branches, pedicels, and calyx; the style varying from obtuse to obtuse lanceolate. Pedicels 1/2 to 3 lines long. Calyx 4 to 5, or in fruit at after anthesis even more or less prominent 5 to 10. The lobes 1/2 to 2/3 lines long, at length rigid and more or less pointed, sometimes the two lower rather blunt obtuse in flower; the three upper more or less united, "pink or not colored," oval or g 5 lines long, barely twice the length of the calyx, externally appressed-pubescent, except the lower part of the tube, annules within straight bearded, which is glabrous; the dilated throat...
oblique, and the lower lip manifestly shorter than the upper. Filaments about the length of the upper lip, minutely glan-
dular below.

An imperfect specimen from the mountains of Kawai appears to belong to the second form of this species, except that the fructiferous calyx is less evidently nerves, and its teeth are shorter.


6. glaberrima; caulibus fili- on frondibus papillos procumben-
tibus; foliis coriaceis
oblungo-linearios seu lineari-
lanceolatos cumulato-serratis
in petiolum angustati; verticilias
tris bifloris; floribus pedice
denti; lobis calycis inferioribus tubo
paullo longiores, corolla glabra.

Tab. Hawaii, in the district
of Wainee, probably at no great
elevation: also collected in Hawaii
by Kenney.

Stems extensively procumbent, decumbent, or parmentaceous, slender.
Leaves one or 2 inches long, 3 to 5 lines wide, mostly obtuse, thick and coriaceous, smooth, glabrous.
Dull, the petiole 3 to 5 lines long.
Bracts, pedicels, &c., as in S. nigosa, but the latter solitary in the axil.
The nervous calyx rather narrower, half an inch long, and the lobes broadly lanceolate, the two lower rather longer than the tube, the three upper stiff united usually about half way up, the corolla almost glabrous, more nearly so than I have seen it in S. nigosa.

This is perhaps an extreme form of the last, but Kenney's specimens accord with ours in all respects, and the long trailing stems, narrow leaves with a taper contracted base, and solitary flowers are peculiar.
S. glabra, diffusa-ramosissima, sub-scandens; foliis pannis oblongis serratis vel incisis basi in petiolum marginatum angustatis; verticillatis bifloris; corolla extus puberula, labio superioris falcato e large... productis; staminaibus extensis.

Hab. Hawaii, on Mooma Kea (where it was discovered by Maerae), commencing in the forest at the elevation of 5,000 feet and extending to 9,500 feet, in the pastoral district. "Half of branches, climbing"; glabrescent except a minute hairiness at the nodes and in lines on some of the ultimate branchlets (especially in more rigid specimens gathered by Henry) at the branch...
squarrose. Leaves from 3 to 6 lines long, including the margined petiole, either submembranaceous or more rigid, acute, or sometimes obtuse, veiny, strongly and commonly sharply serrate or pinatifid-incised. Pedicels solitary in the axils, one or two lines long, subtended by a pair of setaceous bracts, Calyx 3 lines long, strongly nerves, at least in fruit, Campanulate, somewhat unequally 5-lobed in the manner of the genus; the lobes ovate-lanceolate, acute or acutish, nearly the length of the tube. Corolla about 7 lines long when fully developed, "green", externally minutely pubescent; the tube only a little surpassing the calyx, the upper lip 3 or 4 lines long, falcate-incurved, broadly and very much exceeding the three-lobed lower lip; annulus within conspicuously.
bearded. Filaments and style at length surpassing the upper lip. Fruit, t., as in the genus, in which this and the two following closely allied species compose a ge-

desm_ notable section.

S. Hispida, ramosissima, foliosissima; foliis parce oblongis sem ovoidibus obtusis grosse crenatis breviter (nam brevissime) petiolatis, verticillatis bis floribus; corolla extus hispida, labio superiori lanceolato producto; staminibus exsertis.

Hab. Maui, on the crater of Mount Haleakula, from the elevation of 5300 to 9500 feet. Differences from the preceding in the hispid for hairiness, which is soft, one of the and acuminate on the acute angles of the stems; in the obtuse and crenate of thick hairs, some of which taper into a marginal petiole, while others are abruptly carvo
ted or rounded at the base, some with very short peduncles or hardly any; and there is less inequality in the lips of the corolla. Lores of the calyx as long as the tube, rather obtuse. The branchlets in the specimen are not divericate, but almost erect.

S. Dionysaea diffusa, sp. nov.

S. mollis villosu-pubescent, divericato-ramosissima, foliis panis rotundis grosse crenatis basi truncatis vel subcordatis petiolatis; verticillastis bifloris; calycis lobis obtusis; corolla extus pubescente, labio superiore ligne proiecto; staminibus sessilibus.
Hub. Hawaii, district of Waimea, in forest.

This has the habit of S. microphylla, but is doing all over, and the small leaves are round and abruptly petioled; the blade laminar 1¼ or 2 lines long and wide, coarsely erucate or obscurely 7-lobed; the rather slender petiole ½ line or a line and a half in length. Pedicels of the same length. Calyx as in the preceding, but more bilabiate or oblique, and the outer lobes obtuse. Corolla when fully developed 8 or 9 lines long, narrower than in S. microphylla, less incurved, but falcate; its upper lip semi-lately produced (becoming 3 lines long), the short lobes of the lower one rather acute. Stamens at length
conspicuously exerted. Anomoles
of the costa strongly bearded.

On the north bank of the great
crater of Hō East Maui was
gathered a specimen, without
flowers or fruit, of what is likely
to be another species of this small-
leaved section of Stereogyne. The
leaves, however, are larger (half an
inch long, besides the naked petiole
a quarter of an inch long), ovate-sub-
ovate or deltoid, and incisedly or
laciniately lacerated, and with the
diffuse branches cinereous-pubes-
cent.
22. Prostanthera, Labill.

1. Prostanthera Sieberi, Benth.

2. Prostanthera denticulata, R. Br.

3. Prostanthera maritima, R. Br.

Hab. New South Wales, all gathered in the vicinity of Sydney.

23. Hemigenia, R. Br.

1. Hemigenia purpurea, R. Br.

Hab. Sydney and Hunter’s River, New South Wales. The species includes, H. Sieberi, Benth., as the forms collected clearly show.


*Hab.* Sydney and Hunter's River, New South Wales.


*Hab.* Chili; frequent on the ridges of the mountain slope back of Valparaiso, forming a many-stemmed shrub from 3 to 6 feet high.


*Hab.* Fiji Islands, on Vavau-levea and Niuheuatu, in cultivated ground. (Collected at Nandy by Dr. Harvey.) Also recorded, among intro-
Succulent plants, by Dr. Pickering at Tangatana, when it was long ago found by Forster. This tropical American species, allied to T. Canadense, has not been met with at any intermediate for islands.

3. Tenuirium argutum, K. Br.

Var. B. pinnatifidum: foliis lacin.

cato-pinnatifidis vel sub-bi-
pinnatifidis.


Except in the incision of the leaves, which are incisely and even doubly pinnatifidis, this accords with Brown's T. argutum, so far as can be judged from the examination of a single dwarfed
Specimen.

H. Tenuarium 

Stab. Madeira, on rocks at the Corral.


1. Ajuga Iva, Scherb.

Stab. St. Jago, Cape de Verd Islands; on rocks.

2. Ajuga australis, R. Br.

Stab. New South Wales, at Hunter's River.
Plumbaginaceae.

Stallice Brasiliensis, Boss in Fl. Prov. 12. P. 644 — Probably a race from the variety antarctica, and more variety of S. Lumicium, Linnaeus, was collected at the mouth of Rio Negro, South Patagonia.

Armorica vulgaris, Mill. The form named S. Macrocarpa, then was collected on the sea-coast, and a dwarf variety of it (S. Armorica var. alpina, Hort. L.) on mountain summits, at Orange Starborough, Tasmania.

Plumbago scandens, Linnaeus, at Rio Janeiro and at Lima.

Plumbago caerulea, P. B. K., from near Trujillo, Peru.

Plumbago Regeliana, Linnaeus, from the Sandwich, Society, and Fiji Islands.
Plumbago rosea, L. (P. coccinea, Moiss.), near Luzon, in the vicinity of Manila.
Ord. Plantaginaceae

Plantago major, Linn. was picked up at Madeira and St. Jago, Cape de Verde Islands. Plantago lanceolata, Linn., also at Madeira.


Plantago Virginica, Linn., has short stems, more apt to form with short stems and corolla closed after flowering, from Rio Janeiro and the Oregen Mountains, Brazil, answering to 7. Kewen, but what Brazilian species in the Andes, P. trachys = tachys, Kewen, appears to be a sterile form of this species.

Plantago Aristella, H. P. K., glabrate forms, from Rio Negro, South Patagonia,
Chile and Peru: also var. Crispa, from the Andes of Peru. Vide infra, no. 3.

The principal root:

Plantago maritima, Linn., var. junceoides (P. junceoides, Lam.), answering to the plant of the eastern coast of North America, from the mouth of the Rio Negro, South Patagonia.

Plantago lanceiflora, Lam., in various forms, from Auegia. Vide infra.

Plantago uncialis, B. caine, from the snow line on the Andes of Chili. Vide infra.

Plantago tumida, Link (probably only a form of P. hispidula, Ruiz & Pav.), distinguished from P. sericea by the annual root, therefore probably a form of the polymorphous
P. Patagonica), from Chile near Valparaiso,
Plantago sericea, Ruiz & Pav.,
to which Meddell has happily
reduced most of the perennial Ameri-
can of this section in the Prodrumus
(the annual ones being equally re-
sizable to P. Patagonica), from the
Andes of Peru above Baezos.
Plantago mutigena, J.A.B.K.,
from the high Andes of Peru, above
Baezosa, and at Casa Tancha, 4500
and it is very probable, from
Dr. Pickering's memoranda, that
P. rigida, J.A.B.K., was also noticed
in this region, out of flower, and
not collected.
Plantago principis, Cham. Schlecht,
(including P. drumiana, Rand., and
several named varieties), from the San-
dine Islands. Vide infra.
Plantago *pachyphylla*, sp. nov., with several varieties, from the Sandwich Islands. Vide infra.

Plantago, Linn.

1. Plantago panciflora, Linn.


P. polymorpha, Banks Island. in titl. Banksian cam i eare, non man aptum sed ineditum.

P. acuticalis, Rec. in Gen. 1, p. 727, f. 121.
Hal, Orange Harbour, Florida; the var. laxa (O. mimaanthus var. laxa, Torr. & Fr.), abbreviata, muscoides; O. mimaanthus var. muscoides, Torr. & Fr.) and barbata (O. barbata, Torr. & Fr. var. a.); the var. muscoides, "congested into a carpet-like surface, marked out into stars by its radiating crowns of short rigid leaves only on mountain summits."

All of these antarctic plants are all forms of one species. The distinctions between O. barbata and O. mimaanthus were reduced by Dr. Hooker to two, viz., the bract at the base of the leaves in the latter, and the broader and shorter base part of the dehiscent capsule, scarcely exceeding the calyx, in the former. The first-mentioned character would be expected to break down.
on consideration of Dr. Hooker's varieties, and of what we know of it in other species; and it does not coincide with the others for our good faithful specimens of P. barbata have the funnel-shaped persistent portion of the capsule twice or thrice the length of the calyx; and our specimens of P. marantchii, from Hooker's collection on Hermite Island, with entire marcescent leaves, show an abundant beard or mohr at the base of the younger (long, narrow, and entire) leaves. Decaim's distinction from the walls and seed is invalidated by Dr. Hooker's excellent figures, which give to P. marantchii four seeds in each cell. Foster's specific name of barbata, being inapplicable to the whole species, and not very much old earlier than Lamarck's may give way to the latter.
I hesitate to adduce Chilian synonyms, having no specimens referable to this species north of Peru, and the following related species is manifestly distinct.

2. Plantago **uncialis**, sect. **uncialis**

P. _punctifera_ var. _major_, Barneaud, l. c. p. 17.  
P. _barbata_ var. _uncialis_, Neud., Chlor. Ind. 2, p. 150.  
P. _andicola_, Gillies, in Bent. Hook.

Not. High Andes of Chile, above Santiago, close to the snow. The caespitose rhizomata are thick, and even a very short fusion
form root. Leaves glabrate, thick and rigid, obtuse lanceolate-linear, rather obtuse, many of them sparingly cleft, sometimes whitish-white in the axes, very strongly so, capsules in fruit an inch or an inch and a half long, exceeding the leaves, glabrate, 2-4-flowered in a capitulum. Bracts orbicular-ovate, concave, very obtuse, scarious, about the length of the broadly ovate and very often mucronulate lobes of the calyx, reflexed in fruit, broadly ovate and as if subcordate, obtuse. Capsule globular-ellipsoidal, 4-seeded, dehiscing below the middle, the persistent portion only half the length of the sepals. The latter character appears to distinguish the species well from P. barbata, possibly one of Dr. Hooker's varieties of the latter being more.
3. Plantago Mistella, H.B.K.

Var. β. Orbignyana: mana, Nin-
tillo-pubescentes vel Missuta;
foliis saepe laciniato-dentatis;
spicis lividis.

Plantago Orbignyana, Hedd. Steinh. et Decaisne in DC. 
Sch. 2, p. 159.

Var. γ. longifolia: foliis gla-
bris integerrimis lanceolatis 
 cum scapa et spicu prolanc-
gis.

Hab. etc. Glabrate stales y 
P. Mistella were collected at the mouth 
y of Rio Negro, North Patagonia, 
at Valparaiso, and at Olga'llillo, 
Peru. The perennial root, as well
as the texture, etc., of the leaves
ought to distinguish it well from
any form of _P. Virginica_. All
the specimens have the carnivirt-
cal corolla and probably short stamens
with small anthers of the analo-
gous form of _P. Virginica_, except
the specimens from Obrajillo: These
have the corolla open, and the long
stamens and style both exserted,
and the ovary, in one of the two spec-
cimens at least, is fruitful, as it
occasionally is in the same form
of _P. Virginica_.

The Nav. Orbignyana was
collected in the Andes of Peru,
avove Páezos. It is evidently no
more than a dwarf alpine form
of _P. ohiella_, which inhabits the
region just below. The specimens all have
short stamens and carnivirt-
closed corolla; nevertheless it must not be hastily inferred that these flowers are self-fertilised, and are in no functional relation to their largest counterpart with open corolla and erect anthers. For, indeed, in these specimens the stigmatic summit of the style protrudes from the apex of closed corolla during anthesis, so that the dimorphism is intended for cross-fertilization, as in Primula and Helenium. Only there seems small likelihood that pollen from the included stamens will often fertilise the pistil of the long-stamened form. I have not been able to detect any such exserted styles in the allied P. Virginica, where however it may be expected to occur. In P. pusilla and P. heterophylla, Nath., cross-fertilisation
lization is facilitated by the corolla of the short-stamened and rather long-styled plants being open at anthesis.

The var. lugifolia is a dubious plant, collected at the mouth of the Rio Negro, South Patagonia, only a single specimen only.

4. Plantago princeps, Cham. & Schlecht.


Var. B. laxifolia: canae pedale; foliis magnis (4-7 pubescensibus) submembranaceis oblongo-lanceolatis ovalibus sequ obovatis basi in petiolum alatum angustatis 9-7 tipilinervis, basibus laxius imbricatis; capsula plerunque 5-ferma.

Var. V. Hirtella: foliis praeertum subulatis cum pedunculis pilis crispatis petioli angustatis hirsutis; capsula dispersa; etc. sie precedentis.

Hab. Sandwich Islands; the typical form on the Kaala Mountains, Oahu, and a form intermediate between this and Var. B. on the Mountain of West Maui. Var. B. laxifolia, Hawaii, at the northern base of Mount Kea, growing among stones by the sea-side. Var. V. Hirtella, on the tabular summit of Koolau.
Chamisso recorded his opinion that Sandichandra P. Deleanum would probably prove to be a more form merely of P. princeps, and Burman had rightly combined them, but wrongly adopted the former name. No grounds for specific distinction appear among the specimens of the Oplean plant, whatever may be thought as to the more marked forms which are then appended as varieties.

The typical form of P. princeps has lanceolate narrow leaves, about 6 inches long, crowded in a coma, like that of a young Dracena, upon the summit of a naked, acuminate, scurvy, simple or branched, lignous caudex, from two to ten feet high. This passes variously into broader-leaved states, like that figured by
Gandīchandra, only generally more petiolate, and this, into it seem into the variety laxifolia. The ovules are two in each cell, or else two in one cell and only one in the other. Style and filament both usually much elongated.
The var. laxifolia, except for transitional states, could invariable be taken for a distinct species. From the station it might be thought to have descended the mountain and have been altered by its warmer and maritaine situation; but the species is not known to occur on the mountains of Hawaii. This form blossoms and fruits while the stem is less than a foot high and barely ligneous, but it becomes taller and truly woody, although fistulous. The leaves are less crowded, and mostly much broader, from 4 to 7 inches long and
1½ to 2½ broad, varying from obtuse lanceolate to oval or orbinate, and narrowed at the base into a winged petiole of an inch or two in length. They are thinner and softer in texture, and their ribs or nerves (3 or 4 on each side) are more separated; the lower ones rising from the middle a good way up, and curving according to the breadth of the blade. The long spikes persist in fruit for some time after the subtending leaves fall off, and become pendulous. Seeds about 5.

The var. nitella should fairly be regarded as a minute state of the preceding variety, but I found the cyme and seeds to be solitary in each cell. All three may indeed prove to be distinct species; but they may with more probability be regarded as forms of one fruticose species, which varies,
in an extraordinary manner, as plants of the Sandwich Islands are prone to do. The blossoms are horned, but some appear to be more fertile than others. The style is prolonged in all the forms; and the filaments also are erect. The lobes of the corolla which are reflexed after flowering are truly acute or pointed.

P. Brevignieri, Barnéoud, Plantag. p. 35, described from a single specimen of Sandwichan's collection, which Decaisne has not identified. From the narrower and very acute lobes of the corolla and the acute bracts would seem to be a state of the present rather than of the following species, still from its being placed near P. macrocarpa and P. vinacea (which is P. eriopoda, Torr.), and the leaves described as fleshy.
and obtuse, it may be a form of the latter, erroneously characterized.


*P. acaulis*; candid ce crassissimo lanato; foliis crasso-coriaceis ovali-oblongis ligulato-lanceolatis integerrimis 5–11 nervis glabris vel tomentulosis puberulis; scapo multo brevioribus; spica elongata densiflora; floribus busi lanatis (nunc demum glabratis); bractea sepalisque ovatis obtusis vel obtusissimis; corollae lobis ovatis obtusis obtusissimis vel post anthesis in acutatis; ovulis in loculo 2–4.
Var. a. Mavicensis: latifolia; foliis 9-11-nerviis (cum petiolo brevi lata 5-7 poll., largis 1½-2 poll. latis) subitus capitisque tenuis decidua tormentosis; candice erecto perennis, ovulis in loco subsexu masculinis, staminibus (styloque) latis, exsertis, ovulis (in to quoque loculo 2-4) tenuibus gravidis.

Var. b. Mavicensis: candice repente minus lamato; foliis crasso-lanceolatis latiusculis lanceolatis seu lineari-ligulatis raro dent. peculatis 5-9-nerviis in petiolum brevisimum vel breviissimum attenuatis cum scapo 1-2-pedali glabris vel hisculiunculis, tormento sepium evanido, fructus sepaliis pleurisque ciliolatis capsulae elipsoidicae 4-6-spermae.
paullo breviserris. Aristoglossa for- 
minata. Sub var. gracilis, fli-
ngipes; petiolo gracilis 1/2
pollicari limbo lanceolato ob-
langa æquali; segeto gracili;
spica laxiflora; capsula oblonga
calyce in subbiplo superante.

Nav. V. Kavaicensis: desparsa;
foliis oblongis cum petiolo lato
brevissimo sesqui-bipolllicari-
bus; spica laxiflora cum se-
po gracillimo semipedali;
est. var. B.

Hab. Sandwich Islands, var.
a. Maui, in Monna Hale-a-
Kala to the elevation of 7500 feet.
"Apparently the same species at the
tubular summit of Kawai", ac-
cording to Dr. Peckering. Nav. B. Ka-
waiti, in Monna Kea and Monna.
Roa to the elevation of 6000 to 8000 feet and in the environs of the Great Crater. The sub-var. gracilis, Hawaii, Kuray, no. 429. Var. V. On the tabular summit of Hawaiian.

Of the plant taken as the type of this species, only a single specimen was gathered in flower. It will be seen to resemble closely. Dr. Hooker's P. Aucklandica, from the Aucklandia, from the Auckland Islands, while P. princeps resembles P. Fernandezia, from Juan Fernandez. We do not possess specimens of either of these southern species. The present plant differs from P. Aucklandica in the pubescence and in having at least more than one ovule and seed in each cell. It is acanthescent; the very thick canary appears not rising above the ground, bearing off rosettes from its whole length, clothed with the vestiges of former leaves and with a dense coating
of long and rusty wool. Leaves in a close radical cluster, 5 to 7 inches long, about 2 inches broad, oval-oblong or elliptical with a short narrowed or petiole-like base, entire, very thick and coriaceous, ribbed with from 9 to 11 parallel nerves, which are impressed above and rather prominent beneath, glabrous or rough glabrate above, tomentose and also some what Minute pubescence underneath. The wool some what decumbous with age. Scape a foot or more in length, compressed towards the base, clothed as is the whole sheath, with a dense spike of 5 to 10 inches in length, dense, glabrous, except a few at the base by a tuft of long woolly hairs. Denticles ovate, obtuse, glabrous, except when young, or nearly so, about equalling the calyx. Sepals ovate, obtuse, thickish, with thickish searious margins and a green keel, naked, or finely ciliate at the tip with...
five woolly hairs, which are decision

more a little larger than the calyx;

the lobes ovate and obtuse or obtuse

flesh, spreading after anthesis. Stigma

ments and style very elongated. Ovules

2, and I believe sometimes 4, in each

cell. Fruit unknown. The flowers

in the specimen not disposed to fertilize.

The var. Hawaiensis seems under

several forms, and conspicuously differs

from the plant of Maui in the leaves,

which are narrower, varying from

oblong-elliptical-lanceolate, to

or broadly lanceolate, 4 to 6 inches

long, and from 6 to 12 or even 15 lines

wide; the nerves usually fewer. The

candle is smaller and more apparent

enclosing. The tormentum of the leaves

and scape slight or early deciduous,

or replaced with more persistent pubescence.

Spike the fruit less dense, a foot or

in length, sepals broadly ovate and
very obtuse, for the most part ciliate or ciliolate. Lobes of the emula obtuse or even retuse, but sometimes apparently becoming acute after ovary mostly 4 in each cell.

Capsule maturing 3 to 5 small seeds, which are scarcely hollowed on their inner face.

No two species appear more distinct than to the var. C, from a, hut Rumph's no 429 unites the latter with var. B, and are Hawaiian specimen is quite intermediate between B and a. So that the whole series must be regarded as of one polymorphous species.

Plate

Plantago platyphylla

Maricensis, of the natural size.

Fig. 1. Flower and bract. 2. Corolla, stamens and pistil. 3. The latter displayed. 4. Transverse section of the ovary. 5. Longitudinal section of the ovary. The details variously magnified.
Ord. Nyctaginaceae.

Pisania grandis, Parkinson, R. Br. (P. inermis, Hort., and Jacq. * P. procera, Hortus, Deles. l.c. 1787. P. Brunonianum, Endl.), known from the root by having the fruit mucicaritate with glands, the less usually rounded at the base, and plice of the short limb of the perianthi complete. (Coval Islands generally, Samoan Islands.)

* Dr. Seemann, in his Journal of Botany, 1. p. 246, proposes to adopt Hort's specific name (that drawn from the ground) in the ground that Darwin had in manuscript notes struck out every thing upon which he had founded this Pisania milis, and referred to it instead, Jacquin's P. inermis. Evidently that will not do at all. There is nothing to take precedence of the American P. inermis, Jacq.
also in other collections from (but not in
ours) from Mr. Society, and Feejee Islands.

Pisnia excelsa, Blume (P. ma-
ecrupa, pers. Syst. t. 56. P. Forst-
iaria. Exst. in Bot. Mayer. t. 56. P.
(See these with good figures.) P. syrtes-
tris, Teesm. P. viscida, Seem. in
Brmh. P. umbellifera, Seem. t. c. t
in Jour. Bst. 1. p. 244.* remarkab-
for its long and narrow, smooth fruit (½
to 2 inches long), more or less striate or co-
tate, and can usually by the absence of pli-
or incompletion of the siphic of the peri-
carp. In our collection only from the
Sandwich Islands, but a widely spread Oceanic and
Australian species.

* Dr. Seemann (t. c.) having recently ascer-
tain that this is the obscure besides umbellifera
of Forster (found in male forms only), has tried
to restore Forster's specific name. But the rules
of nomenclature do not in such cases demand
the restoration of the older and obscure name, give
under another genus, especially whese incapable
private, as in the present instance.
*Picroia minor*, Choisy, Brazil, near Rio Janeiro, where other species were noticed.


**Boerhaavia paniculata**, Rich., Brazil, near Rio Janeiro.

**Boerhaavia dissecta**, H.B.K. and B., viscose, Laq., Chile.

**Boerhaavia diffusa**, Lin., the var. obtusifolia on the Coral Islands generally, the var. acutifolia on Vahes' Island, Sandwich Islands, Samoan, and the Philippine Islands; both forms at the Society Islands, also New Holland.

**Boerhaavia hispida**, Willd. Biny Island, one of the Coral Islands, an American species, found also on the Galapagos.

**Colignania scandens**, Benthi., or near it, certainly the same as Matthews's no 3122, from the floral leaves white, from the environs of Obrazillo, Peru.
Amaranthus melanocephalus, Linn., var. tricolor, Lam. was collected at the Feejee Islands.

Amaranthus retroflexus, Linn., at Valparaiso.

Amaranthus paniculatus, Linn., var. strictus, Moq., at Madeira.

Euphorbus viridis, Moq., at Rio Janeiro.

To the Samoan and the Society Islands (mostly the var. caudatus, & caudatus, Moq.), and a law, emended from from Rio Negro, South Patagonia.

Euphorbus deflexus, Raf., at Valparaiso, Chili.

Euphorbus lineatus, Moq., at the Sandwich Islands, viz. Hawaii, a
male plant, and Kauai, a female; for the Sandwichian plant appears to be dioecious, Macarès also gathered the female on Oahu. Thence not the means of comparing with the Australian plant. It is to be noticed that Dr. Pickering speaks of the plant into the Sandwich Islands,

Chamissoa altissima, H. B. K., at Rio Janeiro.

Chaparrilla obovata and C. vala, Sandwich, at Oahu, Sandwich Islands.

The two species appear to hold their characters, the latter was first collected by Menzies. Its nearly ripe fruit shows an evident disposition to be circum- sessile, as in Chamissoa. On the

Menard Atteur is no antlers,

Achysanthus mutica, sp. nov., Sandwich Islands,

Achysanthus aspera, Linn. (inclu-

ring A. argentea, Linn.), Cape de Verde, Society, Marques, and Philippine Islands.
Achyanthus Canescens, R. Br.,
Feejee Islands; and a larger leaved
form (A. Velutina, Hook. & Arn. exl.
W. Sandw.) from the Coral and the
Society Islands.

Achyanthus Splendens, Mast. in Dc.
Oahu and Marie, Sandwich Islands.
On the coast. Besides the shining,
silky tamarind, this has shorter, and
denser subsessile spikes, larger more
lanceolate flowers, and less cartilagi-
ous carinulate scarious marginated
sepalts than the preceding. (A bi-
unctata, Flume, was also collected at the
Sandwich Islands, by H. A. Morse, by
Achyanthus diffusa, R. Br., at Malabah River, now sunk.
Achyanthus frustrata, Flume,
at the Feejee, Samoan, and Philippine
Islands.

Porva Javanica, Juss., at St. Iago,
Cape de Verde Islands.

Porva Lunata, Juss., at Manila,
Luzon.
Philodorus (Arctrichium) Sandwicensis, m.v. sp. Sandwich Islands, vide infra.

Trichinum seligeri, N. Canon, at Strathis River, New South Wales.

Celosia argentea, Linn., picked up near Macquaria.

Celosia grandiflora, M. v. at Rio Janeiro, Brazil.

Celosia longiflora, Mart., with the preceding.

Pseudeiranthus, Poir. (Hebanothe virgata, Mart.), at Rio Janeiro, in the Oyan Mountains, near Rio Janeiro.

Alzgifiastrum, stramineum, Mart., at Rio Janeiro and Morro dos Olhos, from Brazil, near Rio Janeiro.

Seeringia, bacata, M. v. (S. celosi = ziede, K. Br.) at the Kejira Islands and Luzon, and S. indica, D.iger, at the latter.
Mogiphanes straminea, Mart., M. multicaulis, Mart. (referred to the above by Grisebach), and M. ra-mosissima, Mart. (Species of Telan-thera, Moq.), all from the vicinity of Rio Janeiro.

Mogiphanes (Brandesia) pubiflora, (Telanthera pubiflora, Moq.), under several forms, in Peru, from Lima to Obrajillo.

Mogiphanes (Brandesia) elongata Bar. nigricepse (Telanthera elongata, B. nigri-cepse, Moq.), at Obrajillo, Peru.

Mogiphanes (Brandesia) andicola, (Telanthera andicola, Moq.), in the high Andes of Peru, near Casa Cancha.

Mogiphanes (Brandesia ? Tomentosa? (Telanthera tomentosa, Moq. ?)), but with the heads mostly sessile or nearly so, at Obrajillo, Peru.
Philoxenus postulacoides, A. St. Hil., (Iresine postulacoides, Moq.), which bears no usual at the base of any of the
seeds, on the coast of Brazil at Rio Janeiro.

Philoxenus verruculosus, R. Br. (incl.
P. aggygatus, A.B.K.), with the preceding.

Altermanthea ficoides, R. Br.
(Buchholzia maritima, Mart. Telanthera
maritima, Moq.), with the preceding; also
Tangatalba.

Altermanthera fortescens (Telanthera
fortescens, Moq.), at Callao, Peru.

Altermanthera paronychoides, A. St.
Hil., at Rio Janeiro, Brazil.

Altermanthera serrilis, R. Br., at
Hunter's River, New South Wales.

(including A. multiflora & A. denticulata)
1. Achyranthes, Linn.

1. Achyranthes (Achyranthes) mutica, sp.

A. glabella; caule pruinoso ramosissimo; foliis obvatis spatulatis sericeo lanceolatis obtusis viridibus in petiolum brevissimo gracilis attenuatis; spicis ovatis semilibris densifloris; clavi subvillosa; bracteis hirsutis latioribus ovatis numerosulis floribus 2-3-flores brevissimis; sepaliis 5, ovario lanceolato obtusiusculis fruaces paucis trinevris; staminibus anthropis 5; stamina oblongis apice laciniatis filamenta adaequantibus.

Tab. Sandwich Islandi: Ha'akaalua Mountains, Oahu, a marum-leaved form without flowers. The species is hea
characterised from a flowering specimen of Ranj's collection, from Kauai.

This species, which seems to combine

Moquin's first two sections of Schizophr

this, is manifestly a representative of the

Bronis A. arboreus of the Norfolk

Island. The bracts are minute; flowers

glabrous; two line long, in small heads or

spikes which are borne in the upper axils

and terminal and scarcely surpassing

the petals. Stamina quite remarkably

dicate at the truncate apex. Style, 5, of the genus. Leaves

are to nearly two inches long, including

the petiole, almost glabrous; the mastic

ones, with the shoots, and especially the

nodes, pubescent.
Mrs. Stetson went to
Worcester, May 1877
2. Pilotes, N. Br.

Psilotrichium (Bolme) & Philotes, Mag. in
Dr. Prod. 13. p. 279, 281.

1. Philotes (Psilotrichium) Sandwicensis,

P. fruticosus, tormento sericeus; foliis
oppositis petiolatis ovatis ovatisque
mune obovatis subutius incatis; spicis
pedunculatis vel ad apicem pedunculi
tortato, em feritis ovatis, cylindraceis
sepalis lanceolato, oblongis) dioisio
cum bracteis rhabdique villosis
simis, fructiferos communibus.

Navis, rami florificum etiam lignescens
libus; foliis ovatis mune ovato-lanceolatis
plebrisque acuminatis, rarius ovali
oblongis obtusis basi pl. in attenuatis.

Hab. Sandwich Islands: Kauai near the coast; where, as well as in Oahu, it was also collected by Mrs. J. H. C. Clarke.

A shrub, 4 or 5 feet high, much branched. Leaves all opposite, one or two inches long, including the slender petiole, primordially veined, clothed with a fine silky tomentum, greenish above, canescent beneath, sometimes with a yellowish tinge. Stipules very numerous, terminal and from the upper axils, or short, or rather long and slender peduncles, very villosis - laminate, half an inch or less in length. Bracteae persistant, ovate, acuminate, almost shorter than the flower, nearly concealed in the long bracts of the flowers. Bracteoles deciduous with the flower. Surulate.
Sepals equal, of rather firm texture but with senescent margins, 1½ to 2 lines long, ovate-oblong or ovate-lanceolate, obtuse or acuteish, beset on the back (but not on the senescent margins) with long villous hairs, in fruit closed and more rigid. Staminodes included; filaments subulate, another short, oblong, two-celled; no intermediate filaments or teeth. Nutricula thin, rupturing at the base. Style elongated, filiform; stigma simple, capitate. Seed large. Embryo solid in more than a circle; radicle ascending.

The specimens from Kauai (B. kauaeensis), besides their more herbaceous character, have rather larger and ovate, very obtuse leaves, but probably the difference is not specific.

In referring the Indian species which
He had formerly named *Biblostichium ovatum* to *Ptilotus* (on account of the villous fringes to the inner sepals) again. Kendall neglected to mention that its leaves are opposite. I may add that there are obsolete teeth between the filaments.

The Sandwich Island type, with opposite leaves and woolly spikes, the villosity on the back and not on the margins of the sepals (*Bolostichium*), *Biblostichium*, with opposite leaves and glabrous or pubescent flowers, *Thamostachys*, with opposite leaves and the inner sepals villous-fringed, and the original *Ptilotus*, R. Br. with alternate leaves, and the inner sepals villous-fringed, are all doubtless sections of one genus rather than separate genera.
Chenopodiaceae.

*Chenopodium baccatum*, Moq.,
The *Chenopodium baccatum* Labillardiere (*K. Billardieri*, K. Br.), was collected at Morangin, New South Wales.

*Chenopodium multitaur*, K. Br., at Hunter's River, New South Wales.

*Chenopodium lancifolium*,
K. Br., an incomplete specimen, from Hunter's River New South Wales, which almost exactly accords with *C. leptocephalum*, Nutt., the *C. album* var. *leptocephalum*, Moq. in Sf. Proo., of California, K., (*= Fris. no. 718*).

*Chenopodium Sandwicensium*,
Moq., on Oahu and Hawaii, both on the plains by the coast and on also a form of it with less slender plants in cliffs, the mountains, the flowers tendin
to polygamous sections. The pistil late with elongated branches to the style and abortive stamens. (The C. album var. candidum, M. M. A. Stripler, Oahuensis, Meyer, not collected.)

Chenopodium murale, Linn., picked up at Rio Janeiro, Brazil.
Chenopodium album, Linn., at Valparaiso, Chile.
Chenopodium glucens, R., at the Bay of Islands, New Zealand.
Chenopodium ambrosioides, Linn., in various forms, from Valparaiso and Callao, Peru, also St. Helena.
Chenopodium Chileense, Schrad.
Chenopodium, Chili. &c., multiforme, var. fruticos, Negro, W. Patagonia.
Habitum (Orthospermum) glaucum, Dilomum, M. M. O'Brien, Hunter's River, New South Wales.

Obiree munita, J. E. &c., collected, without flower or fruit, m.
the Island of San Lorenzo, at Callao, Peru.

Obire Lampa, Mq., (Striplus, Billis), collected on the cliffs of the Río Negro, South Patagonia, with almost spinatifid leaves, but destitute of flowers and fruit.

Obire Montivallis densis, Mq. (Striplus, Spring.) from the mouth of the Río Negro, a "prostrate, hoary, small-leaved" species, more bushy, with rounded laciniate involucres.

Obire Patagonica, Mq., with the above, "upright, hoary," differing with the breasts of the involucres thick and coriaceous, perfectly entire, their back also smooth and even in most of the specimens, but occasionally bearing one or two tubercles or crenes.

Obire subulata, Mq., Mixed with the specimens of the above species.
was a single loose fruit of this species, according to the character

*Sulcikedia diffusa*, K. Br., from

Maitland River, New South Wales.

*Sulcicoria grandichandiana*, 

Moq., from the coast at Rio Janeiro, Brazil, and Rio Negro, South

Patagonia.

*Sulcicoria Peruviana*, T. B. K., from

the coast of Peru at Lima.

Bullao: Specimens without good fruit or flowers, probably *S. antiqua*, 

Michx., and even *S. pratensis*, L. *Sulcinomeum*, Moq.), and perhaps the

not, *Sulcicoria Andica*, Milde, ex

Stork. f., from New Zealand and

the coast of New South Wales; the

embryo endospermate and no album

(in the New Zealand specimens);

and therefore a good *Sulcicoria*

*Pratensis*, Stork., var. (S. latifolia, Lowe) from Madeira; also

a form with more slender, spreading
or recurved leaves (S. Helenea, Moq.) from St. Helenea.

*Suaeda foliosa*, Moq. from Callao, Peru, and Lima, in the desert upland.

*Suaeda involucrata*, Moq. sp., from Rio Negro, North Patagonia: vide infra.

*Suaeda (Chenopodium, Moq.) maritima*, Dumort., from the mouth of the Rio Negro, North Patagonia.

*Suaeda australis*

*Suaeda (Chenopodium) australis*, Moq. from Hunter's River, New South Wales.

*Salsola kali*, Linn., from the coast of Chili at Valparaiso.

And the following may be here appended:

*Melloca Peruviana*, Moq. in *C. Prov. 13* 2, p. 225, as well as can be judged from a fragment preserved and from Dr. Pickering's note, from
the environs of Chajilla, Peru.

Batis maritima, Linn., from the coast of Peru at Callao, fruit
and female flowers only, so that it is not known whether the male flowers accord with Dr. Torrey's B. California

tica.

Sesuvium Potulaceastraum, Linna. was collected also at the Sandwich Islands, or Oahu: specimens mis-
placed.

Sueda, Forst.


2. Sueda contracta, glabra; ramis rigidis
crassis; foliis lati, lineari-oblongis, obtusis; floribus in axillis
1-3 sessilibus, singulis involuc-}

lo squamoso caly-

ccum dimidium subquante suf-
culo; calyce frutiferus globosus parmascens; stigmaticae 4-5; pericarpio membranaceo; Kermes Verticalis; Turgido Magine 
convexo lavo nitido.

N. Mouth of the Rio Negro, North Patagonia.

A "shrub, with linear succulent leaves, and axillary flowers," more closely square where the leaves have fallen; 4.; the branches stand 1/4 the thickness and leaves half an inch long, or the upper ones on flowering shoots. Shoots considerably from a line to a line and a half wide, not narrowed at the base. Flowers closely set, in the cluster for triforous calyx a line and a half in diameter, its segments suborbicular, fleshy, with scarious margins. Seed fully a line long, very turgid and with perfectly rounded margins. Writ by D. Pickering.
Resinited as a "chaffy 5-leaved calyx" is a circle of securious bractlets, like those in other species of this genus, only much more conspicuous, and apparently always fire in number. After this involucral stellate radiate after the fruit, the calyx falls off at maturity, is then 1'2 or 2 lines in diameter.
B.D. Phytolaccaceae

Kivina humilis, Linn., the var. puberula, was picked up at Rio Janeiro, Brazil.

Aristomorpha coriacea Don (which includes A. crassica, Mue. (Pircunia crassica, Bostero, Poepp. et Endl. Nov. Gen. et Spc., 1, 42, 43, 44), on the slope of the side of Mili behind Nataline, in fruit.

Phytolacea octandra, Linn., was collected at Sydney, New South Wales, doubtless introduced from the New World, to which the species, figured by Dillenius, belongs. Linnaeus referred to it a very different plant of Kamphfer's (P. Kamphferi, Esp., in Mem. Amer. Acad.), and in collecting the following is sometimes confused with it.
Gr. Polygonaceae.

Chorizanthe virgata, Benth. var. formosa, Benth., characterised upon our sending to Chili above Santiago; remarkably different from the type of the species in the nearly prostrate involucres.

Chorizanthe paniculata, Benth. Chili, in the vicinity of Valparaiso.

Chorizanthe vaginata, Benth. (of which C. frankenioides, Rees., appears to be a glabrate state). Valparaiso. "Kumey littoralis", H.B.K. (probably only R. longiflorus; introduced by "R. crispus" Linn., at Callao, Peru)

Kumey Maderensis. Lone, near R. tingitamus, Linn., was collected at Madeira.

Nunez Morii, Camps. (N. jimansiatus, N. Mor.) New Zealand, and Hunter's River, New South Wales. New South Wales, and Hawaii. N. giganteus, fit., either the cumbent or rampant or climbing, on the mountains of Hawaii. Sandwich Islands.

Nunez longifolius, Dc. 3 or some allied species, the flowers and fruit not developed, on the Kaua, Mountains, Oahu. Sandwich Islands.

Polygonum stypticum, Chama. T. Schlecht., a form with shote leaves, on the coast at Rio Negro, Patagonia.

Polygonum Chilensis, C. Koch., probably a more form of P. maritimum, at Valpar
Polygemma aesc, St. B.K., Brazil, near Rio Janeiro.

Polygemma hydropiperides, Mich., Cera., near Lima.

Polygemma paracaroides, H.B.K., with the preceding, and on the coast Vyparaiso, Chile.


Polygemma glabrum, Will., Sandwich Islands, thought by Dr. Pickering to be an introduced plant.

Polygemma minus, Will. et Hook., Bay of Islands, New Zealand.

Polygemma pedunculare, Wall. (F. Imberebe, Seem. in Hook. 9, p. 258, Mom. bank. Island), Hveju Islands, and var. subevaratum, Linn.

Polygemma strigosum, R. Br., near the River, New South Wales.
Muhlenbeckia gracillima, Meisner, Sydney, New South Wales,
Muhlenbeckia australis, Meisner, New Zealand.

Muhlenbeckia complexa, Meisner, with the preceding,
Muhlenbeckia chilenensis, Meisner, var. in-

juncunda (Polygonum incanumum, Lindl.),
Valparaíso, Chile; and a sterile fragment,
probably of the same species, from Obra-
jillo, Peru.

Cerozota brasiliensis, Nees & Mart.,
and C. declinata, Mart., both well de-

scribed in the Flora Brasiliensis, from the
vicinity of Rio Janeiro.
Br. Thymeleaceae.

- *Pimelea virgata*, Vahl, *P. prostrata*, Vahl, and *P. uniflora*, R. Rich., were collected, all in a sterile state, at the Bay of Islands, New Zealand.

- *Pimelea linifolia*, Smith, and var. abietina, Meisn., at Sydney, New South Wales.
  - *Pimelea glauca*, R. Br., with the preceding species.
  - *Pimelea ligustrina*, Labill., sterile shoots only, with the preceding.
  - *Pimelea curviflora*, R. Br., several forms with the preceding, one of them (also collected at wide Bay by Bidwill) with larger leaves and shaggy main, var. virgata: Sydney and Hunter’s River.

- *Dracaena muscoides*, Lam., at Fone Harbor, Fuegia.

- *Hylstroemia standifolia*, Scaife, at Frigatebuck, ride infra.
Nikstroemia fœtida (Daphne fœtida, Lin. f., Fort. & Indica, Lin.) and varieties, & c., at Society, Samoan, Feejee, and Sandwich Islands: vide infra.

Nikstroemia elongata, sp. nov., at the Sandwich Islands: vide infra.

Nikstroemia Sandwicensis, Meisn., at the Sandwich Islands: vide infra.

Nikstroemia Wuu nusii, sp. nov., at the Sandwich Islands: vide infra.

Nikstroemia rhizophylla, sp. nov., of Sandwich Islands: vide infra.

Nikstroemia phillyreaefolia, sp. nov., at the Sandwich Islands: vide infra.

Passerina pericoides, Lin., at Cape Town, Cape of Good Hope; sterile branches, Struthiola cacta, Lin., and S. striata, Lin., with the preceding.


Arthrosolen laxus, G. A. Meyer, at the Cape of Good Hope.
Leucosmia Burmatiana, Benthi., at the Tonga, Samoan, and Feejee Islands: vide infra.

Leucosmia Forsteri (Dais disperma, Forst.), at the same Islands: vide infra.

Leucosmia frutiflora, sp. nov., at the Feejee Islands: vide infra.

Drymispermum lanceolatum, sp. nov., at the Feejee Islands: vide infra.
1. Nikstroemia, C. B. C.

1. Nikstroemia rotundifolia, Decaisne

*W.* foliis orbiculatis bracteis petiolatis late ovatis utrinque obtusissimis vel rotundatis fere glabris, venis primarum adascenditibus tenuibus setis simulantibus vix protrusiibus; ramulis cano-pubescentibus; capitulis paucifloris bracteis petiolaribus; floribus subsessilibus, subtomentis pilosis ascensis; calycibus letis ovatis obtusis,


Itab. Tangatalne. Incomplete specimens.
The hypogynous scales (in this & which are occluded in pairs) and the way, whether hairy or not at the apex, do not seem to furnish good or available characters. The species are difficult.


W. foliis herbaceis ovato-oblongis oblanceolatis puberulis, aculeis aculeis acuminatis glabris, venis primaris patentibus reticulatis, lobis auriculatis, umbellatis, glabris, habitu capitatis, seminibus luteo-villosis, calycibus alabastris, seminis ovoidis, fruticoso lenuo venuloso, vis salidiscoris subseriatis.


D. Indica var. fecunda (R. Br.), Guill., Reph. T. Tr. p. 36.

Philodendria Forsk., Decase in
W. Indica, L. H. Meyer in Bull.

14, p. 543.

Var. a. Valdensis: foliis sat firmis coriaceis, membranaceis, apice vel utrinque acutis; rhachis capitulorum primo vario crescente (proboscente quod elongans floribus herissimis pedicellatis cunctis.

Var. b. Laminensis: foliis tenueisibus membranaceis plurinque acutis vel acuminatis; floribus magis pedicellatis lacteis in capitulo laxiore, rhachis deflorata (squarrosa demum crescente glabra).

Var. c. Ovulatis: foliis membranaceis

Var. d. Ehrlichi: foliis membranaceis utrinque obtusis vel obtusissimis; floribus parce glabellis.
V. S. Oahuensis: foliis subovariis, oblongis acutis vel acuminatis, pubis glaucis, pallidis, staminibus parvis.

Stab. a Tahiti, to Society Islands; N. Samoan or Navigator's Islands; V. Fiji; also collected by Dr. Fanning. S. Oahu (Kamehameha, 1831) and Marii Sandwich Islands.

The materials at hand are scarce, in flowers and fruit. They are perhaps none other than one species, and those of the Sandwich Islands are quite doubtful.

Briefly, all belong to a widespread generic species, I have not seen it from China, and, as it is not from any part of India, I have found it under specific name, first published by the Japanese Linnaeus.

*The Mikronesica India from that country, distributed by Dr. Hooker and Thwaites, which I have without leaves or fruit, may be a narrower leafed form of the following, apparently new species:*

Mikronesica nativa (sp. nov.) foliis ovatis acuminatis, pretis et pilis prins largioribus, stamiis puberulis superbus, fruticibus subglobosis, staminibus parvis. — Lov. Other Islands, Chief, Wright in South Pacific Exploring Expedition. Leaves about an inch and a half long, flowers 5 lines long.
3. **Nikstroemia elongata**, sp. nov.

*W. foltis membranaceis oblongo-lanceolatis seu ovato-oblongis acumini glabris acutisve* subitus pl. m. glaeco-pallide (2½ - 4 - Millianicaribus). Venis primaribus patentibus quam venulas laxe reticulatibus magis pronunciatis; ramulis glabris seu glabellatis; capitulis pauci- et floribus brevissimis pedunculatis, reflexis hachi max glabro haud exscescens; drupa oblonga vel fusiformi.

*Stat. Sandwich Islands; in the mountains of Kauai, Maui, and Oahu.*

*The flowers are unknown, the specimen from the three islands being in fruit. The leaves are large and long, 2½ to 4 inches by one or...*
one and a half in width, thin, and in venation resembling W. fruticosa, but the veins less reticulated and less conspicuous. Inflorescence in fruit sub-sessile or short-pediculate. Drupe 5 to 6 lines long, in the dried specimen appearing as if printed at both ends.

Lin. Beds. C.C.


W. foliis subcoriaceis, herbaceis, ovatis, oblongis, venis primarios patentibus subitus prominulis, venulis obscuris, capitulis multifloris subsessilibus brevibus pedunculatis, demum spiciformibus, phal. elongatis, florulis squarroso-seribus, cor. pubescentes, calyces sericeis, lobis ovatis, obtusis, drupa ovidea.
Sandwich Islands, Hawai'i, near the coast, at Pyrnis or Hilo Bay.

Our scanty specimens, collected in the same district as Macrae's, have been compared with his. If the unry and elongated shape of the inflorescence should prove inconstant, then the doubtful var. S. of N. feet, along with the doubtfully named, probably be joined with this, during several fruiting specimens, from Kanai and Oahu. Having nearly coriaceous leaves with primary veins rather prominent and the veinlets less distinct—may probably be joined with this. Better some of them with N. phillyreaefolia. Better and more abundant materials of these must be had, before the Sandwichian Nikstroemia can be satisfactorily settled.
5. Nikstroemia Ulvaei, sp. nov.

N. procumbens; ramulis brissimis, lomentosis foliosissimis, foliis crasso-
coriaceis obtusis obtusissimis setus-
seis (sub-peltatis) brevipeltatis,
spacis venis ramulisque obscuris;
capitulis subsessilibus multifloris
in spicam elongandis, rhachi (de-
mum semipelticii) deflorata tomen-
tosa empetrassimae arenolata; calycis
lobis ovatis obtusis fimbriis globosa.

Hat, Gahan, Sandwich Islands,
on dry ridges, Koloa, Kauai (also
near Tonoluli; Also Kauai (Kauy,
no. 225.)

Branches stout, nearly prostrate,
crowded with leaves; the inflorescence ter-
minal and on very short lateral branch-
lets. Leaves from half an inch to an
inch in length, including the petiole
of hardly a line and a half in length, waved.
and obtuse at the summit, acute at the base, dull, very thick; the midrib rather prominent beneath, but the ascending primary veins obscure on both surfaces; the sinuities nearly obsolete. Flowers almost sessile, 3 lines long, more or less puberulent. Anthecis not square, but covered with sunken areole separated by short tomentum. Hypogynous scales 2, two-echt.

b. Wikstroemia laxifolia, sp. nov.

W. Numilis, ramosissima; ramulis novillis tomentoso-sericeis; foliis coriaceis ovalibus obovatisque basi acutis brev-petiolatis apice pinnatisque retinuatis (potentissimis) spatiosis glabris, venis primariis obscuris, venulis ob-solutis, costa subtus prominula; fasciulis plurifloris subtessilibus, rachis
The Sandwich Islands; Hawaii. In the east coast of the main island, from the shores of Kauai, the mountains of the region are covered with forests, and the shores of the island are dotted with villages. The natives are mostly fishermen, and the island is known as the "island of fish."
N. Humilis, ramosissima, undique glabra; foliis coriaceis ovatis oblongis seu oblongo-lanceolatis acuti obtusissime basi in petiolum brunne attenuatis, costa subitus prominans, venis vix prominulis seu obsolatis; fasciculis paniculatis subseriatis, rhachis glabra, deflexa squamosa bracteae crescente; calycis lobis ovatis seu oblongo-lanceolatis lanceolatis seu angustis oblongis tuto dimidio brunilibus; supra glabra canaliculis.

Var. a. foliis viridibus labiis majoribus (1-2 pollicariis) parum rigidis, venis subitus septibus evidentibus, venu lis obscuris.

Var. b. rigida: foliis pallidis diversis gracilibus rigide coriaceis paucis et parvis (semi sub pollicari), venis vannulisque obsolitis.

Hab. Hawaii, Sandwich Islands, near the Great Crater and a Mount Loa, to the elevation of 6700 feet. Also in Meany's collection no. 222, the var. b.
A low, upright shrub, with very rigid coriaceous leaves, less so in var. 

white flowers 3 to 4 or 5 lines long, the lobes of the calyx narrow, and larger 
at length linear, than 

than in any foregoing species. The two forms would seem to be quite distinct; but indications of their running together are not wanting. The var. B. doubtless inhabits more arid 

and exposed stations.

Char. *Drynippernum,* nisi calyx squamae facci insitae, lobis alternae. — Flores 5–4-meri 8–10-nderi, genitalibus (more quam undae Rubiae acumin etc.) dimorphis.

The specimens in hand, except of *L. Burmitiana* Ryst. (*Dais dispersa* var. Hott.), are far from complete or good; and I cannot very well match them with Dr. Pickering’s notes, which materially aid in the elucidation of the species. The flowers being sometimes tetrameros and octandrous, there is nothing to separate the genus from *Drynippernum* except the scales in the throat of the perianth, and these are minute in two of the species. The author do not prove to be versatile, as they
were said to be by Bentham, nor indeed are they so represented on his plate. So that, instead of placing the two genera under distinct tribes, as done by Meissner, after the model of those of the Thymelcea proper, the question rather is whether Leucosmia should not be reduced to a more section of Gymnangium. As there are at least three species of the former now known, it will be most proper to keep up Bentham's genus, at least for the present.

In all the species of which sufficient materials are extant, I find that the gynostia are dimorphous, some flowers having short filaments or nearly sessile anthers and an exserted style, others (which only have been described hitherto), slender filaments, the upper set therefore exserted, and an included style.
The stigmas correspondingly differ, that of the included style being usually clavate or almost linear, that of the erect style thicker or capitulate. This dimorphism probably occurs in Drymoporum also, but I have not the means available to investigate it. Where the specific characters drawn from the length of the filaments and of the style are very suspicious, open to much suspicion. The only species which we have from Togatoto is Burnham's L. Burnnettiana, which, so far as I know, is always 5-mensis and 10-annus. But from the Samoan and the Fiji Islands we have an allied species was collected which has 4-mensis actinaria flowers and truly water-lanceolate acuminate leaves, such as Foster's character assigns to his Dais Dispora. I thought it likely, therefore, that Foster's species, was made with "fri-
his octandris decandrisque, was made up of these two, and I still incline to suppose that the character in the Prodrumus had the same, and was lancedolate, slender-pointed and thinner-leaved octandrous species in view. But, on the other hand, the fine Drawing of S. De Disparvina (tab. 136), made on the spot at Madagascar (of which, by the kindness of Mr. Bennett, the obliging Curator of Botany, the Botanical collections at the British Museum I possess a copy), exactly represents L. Brunettiana. The only difference is that Bennett's Plate represents the form with slender filaments, and Foster's with some filaments included among them. The specimen in G. Foster's herbarium, acquired by the British Museum at Lamberti's sale, consists of a single leaf of the same species. This leaf,
and the leaves in the drawing are by no means "enerviae"; that portion of Foster's character, therefore, remains still unaccountable.

Under these facts, Foster's Dais disperma must be referred to Lencosmia barrettiana (which should have taken the name of disperma), and not rather than to my L. acuminata, to which the specific phrase might better apply, but which cannot be shown to have been known to Foster at all.

2. foliis late ovalibus ovatis summis mune obiculatis subito acumini pulvinatis subrostriis crassiusculis; capitulo terminali multiplo; fructibus longis ovatis seminibus decandris extus glabris; squamis fasciculatis parvis integris, syrinx incisus obtusus oblongo; stippe globosa, putamine percassum.


*Hab. Tonga, Samoan, and Fiji Islands: frequent along the seashore."

From the generic name it may be inferred that the plant collected by Mr. Sands had white flowers; but Dr. Pickering notes them at the Samoan
Blends as "purple", and in his no. 2—
which I take to be a form of the species
with larger or longer, more oblong leaves
— as "red-purple." It is of the latter that
Mr. Pickering records the clusters of
flowers with large bracts". These have
disappeared from our, as from Bartha-
mi's specimens. The anthers
are basified, are linear when on
slender filaments, but shorter or barely
oblong in the form with very short
filaments. The latter flowers have
the erecte style surmounted by a thick
clarate or oblong-capitate stigma,
while in the former the included
stigma is much longer and more
slender. I suppose occasionally some-
times are seeded. Further, I have
nothing further to add to Mr. Barthani's
account of this plant.
L. Leucosmia acuminata, S. H. 

L. foliis ovato-lanceolatis seu ovato-oblongis sensim vel progressse acuminatis membranaceis; capitulis terminalibus axillarisbusque floribus; floribus tetrameris vel andris ex tubus glabris, lobis oblongis, aquam faucialibus majusculis tenuibus subincisis erosisse; antheris oblongis.

Dias disperma a. Hort. c. c. quad can, pro parte ???

Tab. Samoana and Frejcee Islands.
A shrub or small tree, "with ornamental red fruit," and at the Samoan Islands, and the flower clusters with two conduplicate involucral bracts (Leeuwen Island), if Dr. Pickering's notes are rightly marked. Leaves 4 to 6 inches long, 1/2 to 2 1/2 inches wide, agreeing with the specific phrase of foster except as to the characters "enerveus." The slender primary veins, with the midrib, are rather conspicuous, and (being of thinner texture) the reticulated veins of the petiolar veins are more apparent than in the foregoing species in the dried specimens, especially by transmitted light. Petioles a fourth or a third of an inch long. Pedicels axillary as well as terminal, 3 to 6 lines long, bearing a star of a very apex 5 to 7 seriate flowers. These are of the same structure and form as in L. Burmanniana, except, as far as examined, they are tubular and...
Atix. Only 1½ to 2 inches long, glabrous or nearly so externally, the 4 oblong obtuse lobes tormentulose within and also without when covered in aestivation; the color not recorded, probably purple or purplish. The dimorphism is as well marked as in the preceding species; the stigma of the long style capitate and emarginate, of the short style much less enlarged. There is no fruit in the collection.

Dr. Semanani's *Pseudopersea* plant, in its state, no. 3816 of which I have flowers and his D. m. sp. 382, of the Feejee Islands, have rather broader, less tapering or acuminate, and thicker leaves than our *L. Petiolata*, and subulate or subacute, subacute at the base, the petioles half an inch or more in length. They perhaps belong to a quite distinct species. Best the scales in the throat of the perianth are as in *L. Foetida*, i.e., are larger, broader, and thinner than in *L. Murrilliana*, and more or less crenate or incised. With the materials in hand, it is not safe to refer Semanani's plants to our species.
3. Lecanonia pubiflora, Sp. no.

foliis ovato-lanceolatis oblongis vel acuminatis subcavi acris; capitulis axillaribus et fasciculatis e ramos velustiosis pridan de foliato, capitulis pauci-
plurifloris; fructibus pennatis de-
caudis ebus pubescentibus, libis
oblongis, 2 quamis fasciculatis par-
vis integris; anthoris paenulis brevi-
oblungis (filamentis saepe stipes, gracil-
limis); drupae immatura ovato-
fusiformi.

Dymispermum sp. no. 379, Sem.

l.c.

(240, 350)

Dymispermum montanum, Sem.

l.c. 3. (Specim. imperfecta.)

Hab. Hejce Islands.
"A tree, 30 feet high; flowers very
on the trunk." Pet peduncles occur
abundantly in the axils of the leaves
of the specimens. Leaves 2½ to 4½
inches long, and from one to two wide,
or petals of 2 or 3 lines in length,
lanceolate or obovate at the base,
more or less acute or acuminate, of
a rather firm, coriaceous, membranaceous
texture; the primary veins and the
articulated veinlets less evident than
in either of the foregoing species. Pedun-
cles an inch or less in length, about
2-flowered. The tubular calyx is 2
inches long, and resembles that of L.
Fosteri, but is pentamerous in all the
few flowers collected, and is beset with
somewhat woolly phyllary crenae. All
our flowers have stamens and being
stands another on very slender fil-
ments (but the upper set shorter than
the lobes of the calyx), and included
Style. Immature drupes (loose in the collection) are 9 lines long, smooth, and tapering to each end.

That Schumann’s no. 379 belongs to the present species (although I have no flowers) is evident from the foliage and from the peduncles borne on waxy enlarge-
ments of old branches. His no. 380, with young buds only may be different.
3. Drymispermum, Reinn.


D. glaberrimum; foliis invitis petiolaris lanceolatis utrinque subacutis supra mitidulis, venis venulisque tenuibus; fasciculis terminalibus pauciifloris; calyce inseribiliiformi-tubuloso extus glabro, lobis ovatis acuminatis.

Hab. Keejoe Islands, in the mountains behind Meethuata.

Leaves 2 or 3 inches long, including the short petiole, ½ to 1½ inches wide, green both sides, the primary veins scarcely more conspicuous than the fine, reticulated veins. Peduncles very short. Involucral bracts ovate, caducous. Flowers about 5, sessile, "white and fragrant," a little more than an inch long, 4-merous,
octandrous; the ovate lobes of the calyx tapering into a slender acumination, tormentulous on the upper face, as also on the lower face of the two inner, where they are exserted in the bud. Stamina in two distinct ranks, just as in Leucosmia (and probably in Drymispermum generally), all on short filaments in the specimen collected; the (oblong) anthers of the upper set barely exserted out of the throat, the others deeply included. Style also deeply included; the stigma clavate-linear and glandular, resembling that of the short-styled form of Leucosmia Busnelliaca. It may be inferred, therefore, that Drymispermum also has dimorphic genitalia. The fruit, which is not met with in the collection, is said to be "half an inch in length, and somewhat compressed."
Ort. *Elaagnaceae.*

*Elaegnus latifolia, Linn.*, the var. *triflora* (apparently also *E. perrottetii, Schlecht. in DC.*) was collected in Luram, near Manilla, and

*Petunia punctata*, Ruiz & Pavon (which has been referred to this order until its true affinities are determined), in the vicinity of Valparaiso, Chili.

Ort. *Peneaceae.*

*Penea macrantha, Linn.*, one of the common South African species, was picked up near Cape Town.
Os., Monimiaceae.

Siparuma erythreae, A. D. C. (Citri-
osa erythreae, Tul.) Brazil, near
Rio Janeiro; in fruit.
Mollinema graciles, Tul. Brazil, near
Rio Janeiro; in fruit.
Hedyocarpa dentata, A. Font. Bay of Islands,
New Zealand; in fruit.
Hedyocarpa doreinii, sp. nov. sam. stack.
Hoehe and Samoan Islands.
Bordea fragrans Gay (Huezia fragrans,
Burm.) Chile, near Valparaiso.
Punyshura Cassapas, Endl. Cook's River,
New South Wales.

Mr. B. J. M. Monimi. Asterospermenum. Tres-
jee Islands. The materials too incomplete.
A shrub or tree, glabrous, with alternate,
oval and quite entire, Laurel-like leaves
(3 or 4 inches long), their veins minutely
reticulated; very short and thick woody pro-
odum peduncle, either solitary or geminate
in the axils of the leaves, and enlarging under
a perianth of 4 or 5 short and broad incur- 
bricate sepals into a globular fuges- 
cent receptacle, which appears to bear, 
caused by the unexpanded perianth, sev-
and plumose-hairy stamens with scarzy 
any styles, but these are too little develop-
ed to make out any structure, so 
stamens or male flowers known. Perhaps 
a Laurelia, which genus Dr. Staple 
has recently reduced to Athanaspermum.
Hedy carya, Hart.


St. foliis fere membranaceis ovatis oblunquis ve plantagine integerrimis longius pediobatis; racemis terminalibus 5–7. floribus; receptaculo cum perigonio petalato discis formis margine subintegerrimo, masculo glabro supra anthoris innumeris vestito, connectivis apice dilatato truncato quam loculi angusti latiore; fructu supra pruincecente; drupis bracteis stipitatis.

Nov. B. denticulata; foliis membranaceis naviter dentatis vel denticulatis.

Stab. Sandalwood Bay, Hujie Islands, with lanceolate, also with oblong leaves, an entire. Samoan Islands, mostly with larger and thinner, oval–oblong leaves, sometimes toothed (var. B.).
Of this remarkable plant I shall no

The male plant in flowers, and the female

It is, doubtless, a true

The petals of the calyx ob-
side or reduced to seven or eight broad and

The sepals is, the ovary, like, circular and

The ovary of the latter from a third
to half an inch in diameter, its upper

This is structure accord with the true species

The cells linear and oblong and

opening or closing, except that the car-

The ovary in the female

plant appear to be no more numerous

than those of H. dentata. Several perianth

upon the same receptacle; the stamens,

two-thirds or three-fifths of an inch in length,
obscenity if at all stipitate, with a thin
paracercus and a crustaceous endocarp; the seed, albumen B, as in 1st. duclata; but in some of the fruits examined had the endocarp been formed. The calyx is glabrous, or the inflorescence minutely puberulent. Pedicels an inch or less in length. Leaves from 2 1/2 to 6 or even 7 inches long, thin or thinish, thinish, loosely pinnately veined and venulose acute or acuminate: petals half an inch to an inch in length. There is little reason to suspect that the diverse forms of foliage indicate more than one species.
C. Chloranthaceae.

Ascarina polystachya, Forst. Tahiti, Society Islands.

Ascarina lanceolata, Stock. f., ex Stearn. in Botanica, 9, p. 259. Ovoloa, Beejeu Islands. (Cham. fig. 278, pl. 16.)

Chloranthus 3, plinj. only (with broadly oblate, cuneate and coriaceous leaves), from the mountains of Tahiti.

Chloranthus salicifolius, Brasi. Epimelia. Luzon, in the Maguajai Mountains.

Chloranthus brachystachys, Blume. Luzon, near Baines.

Or. Aristolochiaceae.

1. Aristolochia, Tan.

1. Aristolochia Pickeringii, Sp. nov.

A. (Diplolobus) Herbacea, Volubilis, glabra; foliis membranaceis verticellatis, acuminis abruptis beiro; floribus quasi racemosis glaberrimis; perianthio recto tubo unilabiato, super ovarium stipitatum attenuato dein de glob subgloboso-inflato denique breiter attenuato, labio lanceolato acuto tubum totum exceedente.

Tab. Tintula, one of the Same, an or Navigators' Islands, on the mountain ridge, at the elevation of 800 feet.
This species is allied to A. acuminata, Lam., A. Tagala, Cham., and A. Grandi Mandie, in

chartae. From the first it differs in its broader and thinner leaves, elongated axis of inflorescence and straight, glabrous perianth with a larger and narrower, pointed limb; from the second by the broader leaves, the shape of the limb of the perianth, and by the narrowed portion of the tube above the globular inflation being nearly longer than the latter, and much shorter than the limb; from the third by the whole shape of the per-

anth, and of the leaves. Leaves 4 to 6 inches long, about 1 inch wide, slender, the limb nearly an inch and a half long, 3 or 4 lines wide. Only a single and poor specimen was collected.
Nepenthes. Leaf Pitches
of Nepenthes ampullaria, Jack
and N. Rafflesiana, Jack were
picked up at Singapore.
Ord. Lauraceae.

Cinnamomum camphoratum, Blume, Van. Nitidum, Meissn. in DC. Foliage only in the collection, of two forms or species which nearly accord with C. camphoratum; one with broad and lucid leaves, evidently the plant scented by Dr. Pickering as having bark with the flavor of cassia, but stronger; the other narrow-leaved and glaucous. Feejee Islands.

Cinnamomum, foliage only allied to C. brevifolium, Miquel, not mentioned in Dr. Pickering's notes as having aromatic bark. Feejee Islands.

(C. pubescens, Meissn. in DC., Dr. Sennmann's no. 376, does not occur in our collection.)

Cinnamomum Deckanicum, Assya, the official Cinnamomum, Cult. at Siasf a press.

Persea Indica, Spring, Madeira.

Persea gratissima, Santa, Avocado-Tree, Madeira, probably cultivated.
Pasea Linquen, Nees, Chili, near Santiago.

Apollonias Camarieriensis, Nees, Madeira.
Nesodaphne Tanariri, Hook. f., New Zealand, at the Bay of Islands.

Nesodaphne Tanariri, Hook. f., New Zealand, at the Bay of Islands.

Cryptocarya Pennins, Nees, Near Valparaiso, Chili.

Endiandra Sieberi, Nees? New South Wales, foliage only.

Ajoynea saligna, Meissn. Brazil, near Rio Janeiro.

Ajoynea elliptica, Meissn. Brazil, with the preceding, and too nearly related to it.

Ajoynea intermedia, Meissn. Brazil, near Rio Janeiro.

Mespilodaphne Parviflora, Meissn. Brazil, near Rio Janeiro.

Nesodaphne Langsdorffii, Meissn. Brazil, near Rio Janeiro.

Nesodaphne Foetens, Nees, Madeira.
Shy Amorphophallus lanceolata, Nees. Brazil, near Rio Janeiro; in fruit.

Camphonandra divaricata, Nees. Brazil, near Rio Janeiro.

Goeppertia hisuta, Nees., var. Brazil, near Rio Janeiro. Foliage, also, of a broad-leaved species.

Tetranthera calicaris, Hook. f. (1853). T. tangara, Meissn. in DC. (1864). Bay of Islands, New Zealand; in fruit. The berry is oval and as large as an olive; from it the calyx has fallen away completely leaving no persistent base. According to Hooker, all the stamens are gland-bearing.

Tetranthera eloncata, sp. nov. Haeje and Samoan Islands; vide infra.

Tetranthera remedania, sp. nov. Haeje Islands; vide infra.

Tetradenia (Cylicodaphne, and calye maris obscured by Glathriae) Pickeringii, sp. nov. Haeje Islands; vide infra.

Tetranthera richii, sp. nov. Haeje Islands, vide infra.
Tetranthera Brackenridgii, sp. nov. 
Tetranthera Semmannii, Meissn. 
Tetranthera Brackenridgii, sp. nov., Kurume, near Manilla, female plants only.

Litsrda. dealbata, Nus. var. glabrata, Meissn. 
Litsrda. dealbata, Kurume, near Manilla.

Cassytha Capensis, Meissn. Cape of Good Hope.
Cassytha glabella, K. Br. Verhagen, M. S. Wales.
Cassytha rugulosa, Meissn. Sydney, M. S. Wales.
Cassytha pubescens, K. Br. Hunter's River, M. S. Wales.
Cassytha paniculata, K. Br. 3. Hunter's River.

and Sydney, M. S. Wales.
Cassytha filiformis, Lin. Society, Sandwich, Samona, Kurume, and all the Corel Islands. Also, apparently, Sydney, M. S. Wales.
Lauracea indeterminate: Two species with only vestiges of flowers and fruit, apparently of the Geothaphne tribe, from the Fijian Islands. Foliage only of several other species, none of them answering to Actinodaphne multiflora, Bada, or Acanthosperma palmarium, W. Foliage also of some Brazilian species.

2. Gowdaphne, Oppositifolia; glabra vel glabra; foliis amplis ovalibus oblongis chartaceis obtusis vel acuminitis bassi acuti penninervis utrinque mitidiis venosisque, elegantibus canescentibus utique paginam elegantem percutente; inflorescentia cymosa, pedunculo commune petidiunculadæquante. A. Vitiensis: ramis venis costaque foliis subbus ternatis fusco-pubescentibus; bacca oblonga oleifomni resquipedicellata.

Var. B. lamboensis: unisquæ glabra; in orbiculis tetraphyllis pennineis et floris.

Hab. Keeling Islands: "On the mountain summit behind Mathurata, at the elevation of 2,000 feet." If this be, as I suppose, the Lauraceæ with opposite leaves and an elongated fruit" recorded in Dr. Pickering's notes (if so accidentally misplaced under Cinnamomum).
The specimen recorded as from the Samoan Islands may be safely united with those of the Kauai Islands, differing only in the pubescence, which is evidently rather deciduous. The leaves are characteristic, in being opposite, or rarely sub-opposite, mostly from 5 to 7 inches long and 2 to 3½ inches broad, shining both sides, the primary veins (7-9 pairs) and costa prominent beneath and impressed above; the secondary veins and beautifully reticulate veins conspicuous on both faces. The best developed fruit is an inch and a half in length, and olive-shaped, its calyx is wholly deciduous. The Samoan plant has female flowers, buds in a small discio-

sum cyme; the involucre of four scales, purplish. Androecium, a six-parted stamen, with a globular pistil. The male flowers are unknown.
2. *Tetranthera enseadentia*, sp. nov. (Tab.)

1. **Crudaphne**, Alternifolia; foliis amplis
   chartaceis late ovatis subacuminatis laxe
   rotundatis vel truncatis, margine revolutis
   supra glabris sub-tus, glaucis fustis
   utrinque 1-9 subts fustis folioler expressis cum
   petiolis rarissimque ferrugineo-tomentosi
   dorsi; umbellis in pedunculo communi
   petiolo bracteatis;
   flore fasciculato, involucro tetra
   phyllo; calycis sexpartito; staminibus 12,
   filamentis 3 exteriore e glandulis, eutern
   medio glandulis 2 sessiles genitibus.

*Tab.* Ovolan, Zeejae Islands.

By Mr. Bruce Smidas, who collected the specimen.

This is noted as a "tree, thirty feet high", with broad ovate leaves, 8 inches by
five, green and smooth above, the lower
surface glaucous-white and nearly gla-
ious, whitly triumvert and the very prominent
midrib and primary veins on that side forming 
formicmous, these connected by rather 
conspicuous transverse veins. Calyx
flowers only glistening. Filament slender,
filament, slender, 
villosus, the thorn of the outer series 
only distribution of glands. By the fruit
this may prove to be a Cylindropuntia,
but that genus will hardly stand.

There is some foliage in the collection
which may belong to the same or to a
nearly related species; the leaves are
a foot in length and acute at the
base.

Plata

Cylindropuntia erumpens
2. Tetraphithera (Cylicodaphne) Pickering:  
folis ovatis submarginales basi 
sepulcis e rotundata aculis subul 
albo-glacies penninervae costis utris 
quae 5-6 prominentis, inferioribus in axi 
illis barbatis, inviscis penninervis basi 
aparibus, venis venulisque tenuissimis reti 
culatis incommunicis; pedunculis 
tibiis petiolo brevissimo, masculis 
solitariis, feminis separatis linis 
3-5-floris; involucro tetraphyllo; 
calyce maris mullo, staminibus 
12, filamentis annibus infra apicem 
hit glanduliferis; fru. baccata (junior) 
calyceis tuto in capsulam tranca 
tam canesco cineta.

Nan, Orofou, Hhejew Island. The 
foliage also collected by Dr. Stee 
mann (no. 378).

A tree or shrub, 15 to 25 feet high, 
with slender branches, which are some
What fuscans, pruinose when young, leaves 2½ to 4½ inches long, obtuse, acute, or acuminate, at least, glaucous-white beneath; the principal veins few, the least pair basilar and commonly slender, this next pair usually the strongest, and sometimes making the leaf appear as if tripinnate. Petiole slender from half an inch to an inch long. Common pedicels 3 lines long, filaments, filaments slender, all anther joints, and with a pair of sessile glands a little below the apex, below Massely villous, all but the three innermost cuneate at the base unto a minute cup; besides which there is no calyx. The female plant are more in young fruit only, the pedicels (usually 3 or 4) in line and a half long, stout, erect, about the length of the truncated capsule.

The presence of this capsule shows our plant to be Cyclamens, while the small flowers exhibit the character of the Flabellaria section of Cyclamen, only the stamens are fewer.
and (as in) other Oceanic species all glands bearing.

4. Tetrathera Richii, sp. nov. (Tab.)

glabra; foliis ellipticis utriusque subacutis suberectis mitidis peninisulis, costis utriusque 6-7 venisque textibus, sete subtili, petiolo gracili; pedunculis fasciculato-racemosis in pedunculo communis brissimis; involucro tetraphyllis; masculo 5-floso; calice 6-partito; staminibus 9 omnibus glanduliferis glabris.

Tab. Ovolan? Haagee Islands.

Only the male plant, and with undeveloped flower buds. From its resemblance to the next, it is likely to have the fruit of a true Tetrathera. Leaves about 3 inches long, of the same green hue on both sides,
and the delicate veins are minute, about equally conspicuous, but the ultimate reticulation of the upper surface finer and nearly saccate; petita 14 to 15 lines long. Peduncles rarely substipulate when young, soon glabrate. Involucres glabrescent.
Tetranthera Brackenridgii, Sp. Nov.

GLabra; foliis ellipticus oblongisae basi acutis subcoriaceis subius glaescentibus penninervis, costis terenitis, reta supra obsolete infra terenii; pedunculis petiolo minimo basi ovato fasciculatibus absque pedunculo communii; involucro tetra-mylo tetra-tiifo; calyeae 6 parte; staminibus 12; ovatis tiglandulatis; bacca ovata calyiis basis patelliformi imposita.

Stab. Zejje Islands; in fruit: the male flowers collected by Storch, no. 903 of Dr. Seemann's list.

Leaves 1½ to 3 inches in length, obtusely acuminate or obtuse, wholly penninerved, the main veins 5 to 7 on each side of the midrib, obscure above and little conspicuous beneath; the upper surface dull or scarcely shining; the lower glaucous or glaescent, the network inconstipacies and
with branches slender and lower meshes
above in the foregoing species. Petiole 4
to 8 lines long. Flowers buds very small.
Berries half an inch long.

E. Tetranthera Weinmannii, Miss.

J. globra; foliis parvulis oblongis vel
oblongis ovatis obtusis basi acutis vel ob-
tusis pubes glaucis simplexuis
subtilibus reticulatis, petiolo brevi; pe-
dunculis solitariis brevibus; involucro
tetraphyllo si flore; staminibus 9 omnibus
vel pleribus glabulis fivis basi pilosis.

Forma a. rigida; foliis rigide cori-
aceis, pete pagina superioris obscuro
vel obliterato. — Forma b. foliis cori-
aceis vel teneritis coriaceis folitis
simplicisuis supra lucidis retinuis
reticulatis.

Itab. Dryas Islands.
Our specimens are obviously of the same species as Beccari's no. 374, although the leaves are much thinner, scarcer, more coriaceous, greener above and white beneath, and quite strongly triple-ribbed underneath. One probably grow in the shade, and the other in dry and exposed places. Both are male plants, and with very expanded flowers. Male flowers with long or but short calyx-lobes. 

**Tetranthera palmatiflora** Meissn., in Fl. 15, p. 193, not found by our naturalists, which is evidently related to the above and, like it, is known with male flowers only. The flowers examined by me showed no calyx-lobes, six stamens in a hairy ring from the margin of the reduced calyx-tube, and one or two less perfect ones within, all of them gland-bearing.
Ord. Proteaceae.

Petrophila pultchella, R. Br., Sydney, New South Wales.

Geopagon anethioides, Knight & Slat. syd., New South Wales.

Geopagon anemophilus, Knight & Slat., Sydney, New South Wales.

Conospermum ericipulum, Smith, Sydney, New South Wales.

Conospermum tarifolium, Smith & var. brunii, Meiss. (the variety with unusually long leaves), Sydney, New South Wales.

Conospermum langefolium, Smith, & var. longifolium, Meiss., Sydney, New South Wales.

Symphicarca montana, R. Br., Sydney, New South Wales.

Parsonia Fora A. Quin., Bay of Island, New Zealand.

Parsonia linearis Andr. Br. B. April 177.

Cork River, New South Wales.
Perononia lanceolata (Lindl. Bot. 1774, Sydney, New South Wales (The stipe of this branch has a more or less distinct articulated
Perononia delicata Pers.) labelled Sydney Island, Australia, perhaps mistaken, more likely to come from New South Wales.
Perononia ferruginea, Smith, Sydney, New South Wales.
Grevillea semiica R. Br., Sydney, New South Wales.
Grevillea linearis R. Br., Sydney, New South Wales.
Grevillea burigata R. Br., Sydney, New South Wales.
Grevillea sphaerata R. Br., New South Wales.
Grevillea Calypso R. Br., New South Wales.
Haarea plumiformis Car., Sydney, New South Wales.
Haarea acicularis R. Br., Sydney, New South Wales.
Haarea gibba Car., Sydney, New South Wales.
Haarea daehloidy Car., Sydney, New South Wales.
Lambertia formosa Smith, Sydney, New South Wales.
Byometha pyriforme Knight & Bailey, New Zealand (occasionally in South Australia.)
Em Cotinum Coccinimum Forst., Orange Harbor, Terra del Fuego, Argentina.
Lomatia silicifolia R. Br., Sydney, New South Wales.
Banksia ericifolia Linn. fl., Sydney, New South Wales.
Banksia spinulosa Smith, New South Wales. (Leaves hardly as fine as in width.)
Banksia Marginata R. Br., New South Wales.
Banksia integrifolia R. Br., Sydney, New South Wales.
Banksia latifolia R. Br., Sydney, New South Wales.
Bauksia oblongipila, Cas., Hunter's River. Illustration New South Wales.

Bauksia serrata, Linm. fil., Sydney, New South Wales. (Among the specimens a form occurred with the very sharply serrated leaves, from six to eight inches long, and seven to nine inches wide.)
Santalaceae.

Quinchamalium majus, Broun.

(Latin, with L. gracile, would appear to be not distinct from L. Chilense, Lam.), collected in Chile, from Valparaíso to the mountain region.


Persicum australis, K. Br., at Winter's River, New South Wales.

Persicum spicatum, Lin., T. paniceum latum, Lin., at the Cape of Good Hope.

Binodea muscosa, Banks, at Orange Harbour, New Zealand, in fruit.

Leptomeria acida, K. Br., at New South Wales, Sth. latum, K. Br., at Sydney, New South Wales.

Santalum acuminatum, A. Br., at Sydney, New South Wales; fronds only.

Santalum (Gasi, stem, at the
Seeraj Islands; vide infra.
Santalum freylinianum, Sandick,
and Varieties, Sandwich Islands; vide infra.
Santalum pypularum, sp., us,
Sandwich Islands; vide infra.
Exocarpos Sandick haudii, A. de,
at the Sandwich Islands; vide infra.
Exocarpos cupressiformis, Labill., at
Sydney, N. Sw Aust. N. Hales.
1. Santalum, Linna.

1. Santalum (Yasi, Scern. (Jal.)

1, foliis chartaceis oblongis ovato-oblongis lanceolatisque in juventute his frondibus ramos longe lineatis utrinque acutiusculis; cymis plenis paniculatis lateralisibus parvis; perigonii linte oblongico, lobis ovatis (sepe 5); disi lobis incassatis obtusos-truncatis filamentis (antennis aequalibus) ad stylo elongato; aequalibus; frupsa pisiformi, rum tannine levi.

Santalum (Yasi, Scern. in Boma-Mandia, g. p. 258, sine char. 5. diversifolium, Rich in Herb., nec A. De.

Tab. Zeejic Island, at Sandalwood Bay.
This Heejean Santalum in its broad-leaved forms most resembles S. album. But it is less, if at all, glaucous, and has rather smaller flowers, perhaps shorter filaments, and the anther cells are a little narrowed at the base. The masses of leaf appear to be analogous to S. album var. mysticfolium A. De. (S. mystic- folium, Roxb.), which is said to have lanceolate leaves. The lobes of the disk are just as in S. album. Young plants produce slender, linear or linear-lanceolate, thin leaves, 4 or 5 inches long, and only 3 or 4 lines wide. Some of these are figured upon the plate prepared under Mr. Kirk's direction, along with a flowering specimen of the broadest-leaved form.
Plate  -  Santalum Yusi.
A broad-leaved specimen and a short frond a young tree with large
and narrower leaves. Fig.
2. Santalum Freycinetianum, Gandich. (Tab.)

1. foliis coriaceis vel subchartaceis variis (ad ovalibus orbatis ellipticis) oblongis, usque terminalibus lateralisbusque paniculatis multo floribus floribus ad apicem ramulatorum tuto subseriatis; perigonii obconico lobis ovatis vix longiori; disi lobis ovatis obtusissimis filamentis brevioribus; stylo elongato; fruista ovado-globosa (raro seminibus cari), punctamine leviusculo. Inter formas variabile:

Var. a. Gandichandii; foliis orbatis oblongis, paniculatis in petiolum herm attenuatis.

Nav. β. ellipticum: foliis charta-
cis vel subveriaceis. ellipticis
oblongis seu ovali-obovatis, petiolo
gracili.

S. ellipticum, Sandwich. l.c. p. 482.
I. DC. Prodr.; Gray in Proceed.
Ann. Acad. 4, p. 7

Nav. Y. latifolium (Gray, l.c.): foliis
magis eriaceis late ovalibus seu
rotundatis, petiolo septius brevissi-
mo.

Beach. I.n. p. 94.

Note: The Sandwich Island Sandalwood
was so important a tree commercially
is variable even beyond its conspecifics.
The two species imperfectly charac-
terized by Sandwich and the third
by Hooker and Arnott, are pretty clearly forms of one, which was first collected by Meurice, and of which the most common-leaved form known was figured by Grischich as S. Foey cinnamomum; a thinner-leaved and slender petioled form with the inflorescence usually axillary, is S. ellipticum; and the form with thick rounded, short-petioled leaves, and either axillary or terminal cymes, is S. paniculatum, Dickel. The flowers are either rose-colored or dull, according to circumstances, and only two or three lines in length. Stigma often 4-lobed. Drupes ovoid-globose, between a third and half an inch in length, with a thin pulp, the pericarp almost even (scattered at all times or corrugated), empty, slender, radiate rather larger than the stypleones.
Santalum Freycineanum. Fig. 11. A drupe, of the natural size. 12. Vertical, and 13. transverse, section of the pericarp, seed, and embryo; enlarged.

3. Santalum Pyrularium, Sp. Nov. (Sat.)

S. foliis (aut tenueibus aut crasso-)

coriaceis oblongis ovatisque subglanulis; inflorescentia produc.

lus floribus majoribus;

perigynio tubo cylin- draceo

tubis oblongis longiori; disco lobis

ovalis angustis; stylo ultra an-

theras oblongas sessis papillis ex

serto; drupa pyriformi (cum pedicello brevi incrassato pollinari),

putamine valde numeroso - viso

so.

Var. a, foliis obtusis tenentibus cariaca, petiolo gracili, cyanis plerunque lateralibus.

Var. B, foliis ovatis crassos cariaca, petiolo brevi crasso, cyanis densifloris, terisque terminalibus.

Hab. Sandwich Islands: Var. a, Kauai, on dry mountain ridges, Oahu, coll. Kewui, no. 505. Var. B, Maui, on the north bank of the crater of Mmea Haleakala.

The two forms of this species have indicated close analogies. A, to the var. ellipticum, and B, to the var. latifolium of S. Hookerianum. Only the thinner leaved form was described in the Proceedings of the American Academy, above.
cited, and is here figured. The thick-leaved form would appear to owe its rigidity and its condensed habit to a more arid and exposed locality. The characters relied on to distinguish this species are the much larger flowers (these being half an inch long), with a cylindrical tube which considerably exceed the oblong limbs, the more elongated anthers, and (less distinctly) the narrower lobes of the disk; also the larger and pear-shaped fruit (usually when well developed about an inch long, including the thickened pedicle into which it tapers), with a very rough, viscid, or purple putamen. Embryo slender, nearly the length of the albumen. Most of the var. B., are more or less immature fruit, which is not so large, less pyriform, and does not show any roughness of the putamen.
Plate Santalum pyrularia. 1, in flower, also in fruit. Fig. 1. A flower, 2. Its upper portion laid open. 3. Vertical section of a flower. 4. A stamen, outside view. 5. Inside view of the same. 6. Pistil, 6. the way vertically divided. 7. Vertical section of a fruit. 8. Transverse section of a fruit. 9. Ovuliferous of the natural size. 10. Embryo detached. — All the details, except Fig. 9, more or less magnified.
2. Exocarpus, Labill.


6. ramulis striatis conflatis; foliis dimorphen, albis squamis formibus, albis maximae evolutis. 4 = 2: uncialibus ellipticis semirotundis; pubitis s= meris vaso.

4. meris glabris.

Rigidiissima,

Nur. 3. foliata: arborescentes; ramulis laxioribus; foliis saepe evolutis semi-liqui

cialibus ellipticis semirecto-oblungis.

Exocarpus capsus si formis, Hook. \\

Breed. Nov. p. 95, var. R. B. R.

E. Gaudichaudii, A. Dc. Prod. 14, p. 670,

Nur. B. foliata: arborescens; ramulis laxioribus; foliis saepe evolutis semi-liqui

cialibus ellipticis semirecto-oblungis.

Hali, Sandwich Islands: a. Hawaiii to the being elevation of 6500 on Mount a Loa.
B. Baliu, in the mountains behind Honolulu.
De Candolle, describing from Candolle's specimens, alone, has not noticed the expanded leaves, which show themselves occasionally on the condensed and stunted forms, of 'Hawaiian, but are most common in the arborecent form of Oahu. They are true leaves, as much so as those of De Candolle's first section of the genus, although sessile or nearly so, and by a twist at the base becoming vertical. Where large they are more or less evidently 3-7 nerved. The flowers are not described in the Prodrums, but are occasionally tetramerous; they are perfectly glabrous. Nutlets nearly bicolporate. Nut ss. short, arill, 3 lines long, the base immersed in the short obovate, red, fleshy cup.
Euphrasia piscatoria, first, was gathered at Madeira.

Euphrasia Peplus, Lin., also gathered at Madeira, likewise occurs among specimens distributed as collected at the Bay of Islands, New Zealand. If correct, it is a waif from Europe. Dr. Hooker does not mention it, but speaks of E. heliscopus as introduced into some parts of New Zealand.

Euphrasia egyptiaca, Briss., (E. Forsskalii var. a. Bay), St. Iago, Cape Verde Islands.

Euphrasia portulacaoides, Sprung., var. acutifolia, Briss. Rio Negro, Norte Patagonia, ad altam Santiago, Chile.

Euphrasia ovatifolia, Engelm. in St. Val-Paraiso, Chile.

Euphobia pittleri var. linna. This species, Peruv. near Lima, Tahiti, Society Islands, Mrs. Seward's and Kane's Island, but not in the present garden.


Euphobia Atto, Vent., Samoa Islands and Mauritans, Philippine Islands, with more or less incaudicrinius appendages to the gland, Taveuni Island, with appendages nearly as large as in E. cheirodonta, all with globe seeds. E. helianthea, E. levis, and E. oblata, admired by Kurz, are especially all forms of E. Atto. It seems it not from Tahiti, the Society Islands, or Fuxa Island.

Euphobia Tidensis, Buns. (E. Atto, Guillaumets, from Tahiti; also in all, Van. Arch. Probably a more variety of the West.

Euphobia omnium, Buns. (Aegiphylus omnium, F. W. Bauer, &c. Papeete, Tahiti, Society Islands, Vavae Islands (Kings and Ninens). From Dr. Hanna's collection see from it only one or two.
Friendly Islands. To this (from the specimen of Houtt. in Kew. Museum, which has subulate leaves, and the habitat, doubtless belongs), origanoides, Hout. ex Linne.

Euphorbia ranonissima, Stock. & Am. - Some - some, Tujuu Island; sterile, but apparently the same as Cunningham's no. 1362, from Polichotte Island. Probably a variety of the last.

Euphorbia clusiafolia, Stock. & Am. - Oahu, Sandwich Islands. (Involv. glabres within in some specimens.)

Euphorbia kernyi, sp. nov. - Oahu (Kumu) and Kauai, Sandwich Islands. Vide infra.


Euphorbia multiflora, Sandwich, Sandwich Islands, in various forms; vide infra.

Euphorbia cunata, Meyen. - Sandwich Islands, Oahu and Kauai; first collected by Merrie. (Appendages of the glands sometimes obsolete.)
Euphorbia tidigiana, Miss. Freeju Island, also collected by Seemann: "A thick-stemmed tree, only 6 to 15 feet high, according to Dr. Dickson's notes, which state that the capsule is trigonous. The specimens preserved show no fruit.

Euphorbia parviflora, named by Dr. Dickson as "parviflorum". Part of the stem, to 3 feet, with a cluster of flowers.

Euphorbia micrura, not to parviflorum in stem,
1. Euphorbia, Linn.

2. (Ariosphysillum, Gymnadeneae): fruticosa, argylos, glabra; rami dense distis ad articulationes morosis; stipulis in unam interpetiolarem triangularem coalitis; foliis auriculae petiolaris obtusis vel ellipticis submarginalibus lucidis tenues, coriaceae penninerviiis integerrimis subacutis vel subaequilateratis, basi rotundatae fere æquali vasis augutatae in æquali; cynmis axillaris 1-5, cephalis subsessilibus; pedicellis foliis multo brevioribus; involucro campanulato lobis minimis, glandulis transversae ovalibus; capitulo (aut glabro aut tomentulosae) coecis vix carinatis; semen tetragono-obovato pustulato rugoso.

Hab. Sandwich Islands, Kanai, a very incomplete specimen (nearly destroyed by rot) in the collection of the Ex- pedition, with narrowly oblong leaves decidedly unequal at the base acutae base.
Much broad leaved,
Oahu, Henry, no. 578 without fruit.
Hanalei, Kauai, N. Mann, in intermediate in the foliage to the two
other Mann specimens.

A very distinct species, allied in character to Elsinochila, but much
taller, inclining to be simple-stemmed
and arboreal; glabrous, except the slight
pubescence on the involucres, and a
decisions tumefaction on the capsule
in Mr. Mann's specimen; leaves from
1.5 to 5 inches long and from 10 to 20 lines
wide, narrower than in E. chilensis
and the primary veins (from 20 to 30 pairs)
more evident, but the ultimate reticula-
tion of veins less distinct; the apex more
acute; petals 3-6 lines long; usually
borne in 2 or 3
lines long, sometimes solitary; lobes of the
involucres almost obsolete, emarginate; styles
short; their lobes short and thickish. Capsules
in the collection of the Expedition, very small,
acute, triangular, 3-lobed, and glabrous; but
apparently not well formed, and with no mature
seeds! in Mr. Mann's specimen much larger,
2 lines long, the cocci obtuse on the back, seed
coarsely serrulate-rugose.
2. **Euphorbia multifloris**, Gandich.

**Var. b.** tomentella, Briss.: rami juniores et folia tomentellis.

**Var. V.** tenero: glabra; rami gracilibus; foliis ellipticis oblongis subellipticis viridis.

**Var. S.** torifolia: glabra; foliis lineari-lanceolatis (bipartitulis) et crassis; pedicellis involucro 2-4-plo longioribus.

**Var. e.** celsastroides (E. celsastroides, Briss.): glabra; foliis obvato-oblongis applanatis basi angusta truncato-subcordata; pedicellis involucro pluribus longioribus.

**Habit.** Sandwich Islands. B. Oahu. V. Oahu, in Stillwand and Mannis collecting. S. Kauai: plainly connecting the narrow-leaved forms of *E. multifloris* with the west, E. Oahu, behind Island; coll. by Keng on Ni‘ihau, and a form (var. S?) on Kauai.
ORDER, Urticaceae

SUBORD. Urticaceae.

The admirable monograph of Brodell.

Urtica Magellanica, Först. (near the town called M. Darwinii by Dr. Hooker), Orange Sierras, Tierra del Fuego.

Urtica dioica, Lin. (in the environs of Valparaiso).

Urtica australis, Storck f., Lord Nelson Island.

Urtica andicola, Meeh. Urtic. p. 60, in the Andes of Peru, at Baños; the leaves in size and appearance resembling the following species.

Urtica Sandwicensis, Meeh. i.e., Hawaii, Sandwich Islands; just like
Macrae's Plant, the female perigo-

num gamophyllous to the summit.

Helenium ruderalis, Sandich., (Sky


(Sky Mouskia ruderalis, Endl., in Mus. Nindst. 17, 13), on the Coral

Islands, generally.

Helenium interrupta, Sandich., var.

spicata, Wett., Samoan and Faejee

Islands. This was collected on Faejee

by Macrae, but is not in our col-
llection from the Sandwich Islands.

Lapsorea Harveyi, Seemann, Sa-

moan and Faejee Islands. Vide infra.

Lapsorea stimulans, Miq. (America

stimulans, Linn. f.) was gathered at the

Mangyi Islands.

Usnea glabra, Wett. (Proceris glabra,

Volk. v. Str.), Sandwich Islands, in the

mountains behind Lamalulu. Also, var.

mollos, Wett. (probably a distinctly distinct species) from Mission Tea, Hawaii,

near Mokua, range as above, Sandich.

Usnea jaquimini, Wett., Brazil, in

the Ogar mountains near Rio Janeiro.

The form nearly answering to U. subpelata, Miq.
Pilea pubescens, Liebm., in the Organ Mountains, near Rio Janeiro, Brazil.

Pilea peploides, Hook, fern., Oahu, Maui, and Hawaii, Sandwich Islands, the leaves varying from two to seven inches in length, and mostly erect, sometimes almost round to the base.

Bellinia elatosferoides, Sautier, Brit. Roy. Bot. Misc., t. 119; Medd. Micr. t. 6, well marked by the long-armed sepals, was collected in the Majalai Mountains, Luzon; the female.

Bellinia Nitiensis, sp. nov., at the Toraja Islands: vide infra

Procris Cephalida, Cuming, et Medd. (Elatostena lucidum, P. Pedunculatum, Furt.), at the Society, Samoan, and Feeje Island.

The male flowers in the specimens are open-cymose, not glandulate, but the greater part of them on fasciculate pedicels as long as the calyx.
Elatostema Hugosoni, A. Gunn., at the Bay of Islands, New Zealand.

Elatostema umbrosum, sp. nov.,
Teeje Islands: vide infra.

Elatostema macrophyllum, Brum., Brit., @q. 1, 45, at the Teeje Islands, when it was also collected by Dr. Harvey.

Elatostema sessile, Forsk., at the Society and Samoan Islands, in various forms, among them a variety, from the Samoan Islands, with long peduncled male heads, which, like the var. grade of Meddell, needs further investigation with better materials.

Elatostema sesquiflorum, Frassk., at Caleveros, Mindanao, Philippine Islands.

Elatostema rigidum, Medd., Luzon, in the Majaizai Mountains.

Elatostema obscurum, Medd., Luzon, in the mountains near Bânos.

Elatostema podophyllum, Medd., Luzon,
in the Majaljai Mountains; sterile.

Elatostema diffusum, Rich, in herb. sp. nov., Savaii, Samoan Islands; vide infra.

Elatostema? at the Feejee Islands, not in flower, resembling, C. filicoides [Melia filicinum], Seemann. no. 421, also sterile; but the leaves are less oblique, their teeth rather fewer and coarser; the stipules bristle-pointed, dark chestnut-colored, exceeding the short internodes in length, and persistent; the branchlets not pinnatifid, but decurrent, marbled (as in Seemann's specimen). The stems, runners, are woody. Apparently the same species occurs with large leaves.

Bæhmiaria candata, Swartz (B. arborescens, Gaertn.), Brazil, near Rio Janeiro.

Bæhmiaria platyphylla, Don, var. virgata, Medic. (B. virgata, Host. B. intermixta, Beccari), in various forms, at
The Society, Samoan, and Fijian Islands; vide infra.

Cypselophaeus macropus, Wdd.

(Which is Boekmania Harveyi, Saman, in Engleriana, l.c., no. 431), at the Fijiee Islands, the var. heterophyllus, Wdd., also Tahiti, Society Islands, and Atuone, Samoan Islands, the var. multicaulis, Wdd., the Samoan specimens with very thin and large leaves. These are ticketed by Mr. Rich as "the Cotton-Plant of the Natives." It is this plant, I suppose, which is seconded by Dr. Dickering as having

Neriumia melanostoma folia, Sandwich, including N. vavata, Sandwich, var. Frey, and a form with N. sericea, Sandwich, Brit. Ind. Br. Brit. 133, a form with fine-sticky leaves, at the Sandwich Islands; the typical variety from on Oahu; Medder's var. B. on Houti, and form answering to
Sandwichia t. sericea, on the mountains of Kauai.

**Fouquieria latifolia**, Sandwich, Bot. W., Brit. & For. 1: 194, Nov. Motie, p. 142, t. 13; Sandwich Islands, on the mountains of Oahu behind Hono; also, with very large and mapple-shaped leaves, more prominent on the ribs, on Kauai. The specimen add nothing to the published figures and the excellent description by Motie well.

**Pipturus asper**, Ned. Motie, in the vicinity of Manilla, Luzon.

**Pipturus albidus** (Buchneria, Nord. Flora, t. 13, Sandwich Islands): vide infra.

**Pipturus velutinus**, Ned., trans. from most of the South Sea Islands: vide infra.

**Pipturus gracilipes**, sp. nov., these Islands: vide infra.
Mississippi Corymbulosa, Ned., Utie.

(Mississippi Corymbulosa, Ned., Utie.

Perhaps too near M. celtidifolia, at the Fleece and Samoan Islands; vide infra.

Mauritia Australis, Ned., Utie.

p. 480 (named M. Tahitiensis in Dr. Seemann's list), at the Fleece Islands.

also collected by Dr. Harvey


Phemaph Lavigatus, Ned., Utie., 16, Peru, in the vicinity of Obsajilla.

Varicaria officinalis, Linna., gathered on the coast of Madeira.
Laportea, Sandich.

1. Laportea Harveyi, Seemann.

2. arborea, incarnis, unique glabra; folius late ovatis subseratis proprie basim cordata subcordatam vel margine atum triplicinervis; cymis pedunculatis utrisque decompositis diffusis, divisionibus ultimis globulari-flores, pedicellis feminearum bisimisi carnoso incrassatis; perigonio femineo minimo subequaliter 2-lobo; stigmatic subtulato filiformi; achenio parvo granuloso-lacerauto.


Isol., Hokianga Island, also collected by Dr. Harvey and Dr. Seemann.
Alavaí (A'lapapa). Samoan Islands.

Although no stinging thorns appear, this is called "the stinging tree". The imperfect male specimen from the Samoan Islands is said by Dr. Pickering to have been "brought from interior Savaii. The tree was heard of on other islands of the group, as much dreaded by the natives: the living leaves are said to sting severely, if the part exposed be cut." The Fijian speciments Dr. Pickering records among the introduced plants. They were from "a single spreading tree, thirty feet high, with the trunk a foot in diameter, planted near the mission house at Levuka. The pain from the application of the leaves is said to recur for many days." From an own collection and that of Dr. Harvey.
have male flowers only. Dr. Schumann's have the fruit, which is many times smaller than that of _L. eremulata_, barely a line long, flat, and wightish granulated; the calyx almost very minute, almost obsolete. Male cypses very diffuse and decompound, the divisions and pedicels filiform. Sepals obsolete. Leaves smooth, usually very broadly ovate, acute, and slightly with the broad base slightly ericate, 6 to 9 inches long, 3 to 7 inches wide, either rather obscurely or decidedly serrate. The plant has much the aspect of _Amea glabrata_. Schumann's _Laportea Villosa_, said to be near _L. Porteriifolia_, does not occur in our collection.
Pellionia Saulich.

I. Pellionia Vitiensis, sp. nov.

III. dioica; ramulis puberis glabris; juliis (maxime disparibus, altero minimo postulato, vel sequentibus abortis antente homonomphis alternis) ovatis seu ovato vel oblongo, lanceolatis plurinque candato acuminatis basi obtuso vel subacuto magnis fere loco serratis obt. 3-4 at triplo 3-4-plinervis, costis venisque subtus prominentibus; influenta et masculis effuso egynosis pedunculatis, feminis influenta capitato contractis in axis petitum serrilibus; perigonio feminineo 4-5-partito, segmentis inaequalibus, 2 majoribus lineari-spathulatis sub apice umbonatis 2-3 minoribus lineari-subulatis.
Hab. Feejee Islands: collected also by Dr. Harvey (female) and Dr. Semann (stamine).

Dr. Reddel cites the Feejee Islands (Milne) as a habitat of P. clathostemoides; and Dr. Semann referred his no. 429 to that species, which it certainly is not, as the triple or quadruple-nerved leaves plainly show. It is doubtless a smooth and broad-leaved form of the present species. We have the male plant with similar large leaves (from 4 to 7 inches long and 2 to 4 inches wide), but with the ribs and veins beneath, as also the petioles and the young shoots, more or less hispitate-pubescent. Dr. Harvey and our own collecting have it with much smaller and narrower leaves, the former with good female flowers. The base of the leaves is generally cuneate, but in the broadest form mound-yester
or even obliquely subcordate, in the narrower forms more tapering into the short petiole. The larger primary veins from toward the base of the lamina are strongly ascending, the first forming ribs, the first on the larger side reaching hardly to the middle of the lamina, the next one higher up on the narrower side almost as short as the middle itself, which thus seems to fork, and it reaches to the near the base of the considerably prolonged acumination. This acumination is either gradual or somewhat abrupt, and is always serrate; the serrations extend downwards to near the base of the leaf, are either coarse or fine, but are more regular and sharper than in P. elastomoides. Stipules pretty large, lanceolate - alternate, caduceus. Male cyme open and
decompound, on a peduncle of twice the length of the petiole, truncate at the divisions, the ultimate divisions or pedicels longer than the flowers.

Calyx 5-parted, the divisions obrate, imbricated in the bud, short-mucronate on the back; vestige of the pistil, is, as in the tribe. Female flowers on pedicels longer than the calyx, but all crowded into a sessile or nearly sessile, capitate, axillary, glomerate, the calyx less than a line long, its larger divisions imbricate, rather than mucronate just behind the tip; the smaller divisions very slender, not longer than or wider than the line or staminal filaments. Achene not seen.

However various as to the size and shape of the leaves, all the forms may confidently be referred to one species.
Elatostema, Forsk., Medd.

1. Elatostema umbrosum, sp. nov.

E. caule apresso pubere; foliis mem-
banaceis obtusato-lanceolatis acuminati
tis a basi obliqua acuta usque ad
summum apicem grosse obtusisque
dentatis penninerviis utrinque his
pulvis et asperulis; stipulis oblongo-
lanceolatis max. deciduis; capitulis ter-
visinis pedunculatis.

Hab. Henie Islanda; 1. in the mountains
of Ovouau, at the elevation of 1500 ft.

This species most resembles E. se-
guinae of New Zealand. But the
leaves (4 or 5 inches long) are less oblique
at the base and more distinctly peltate,
and the strong serratures are broad and
blunt; these extend to the tip of the
acuminatia. The heads are sub-sessile, and involucrate with large bracts. The flores are not sufficiently develop to furnish characters. The wholly peninerved leaves distinguish it from every form of C. sessile.

2. C. latostema diffusum, Rich in habit.

C. vanossissimum, glabellum; foliis lanceolatis acuminatis basi acute vel hinc obtusis subsemelibus peninisimis grosse serratis, dentibus utrique 5–8; stipulis pariis ovatis subpersistentibus, capitis sessilibus seu masculis (superioribus) pedunculatis.

Var. a. agrimonioides; foliis profunde seu inciso-serratis, dentibus obtusi-
Var. B. angustatum: foliis linearibus, lanceolatis, dentibus minoribus acutioribus subappressis.

Hab. Savai'i, one of the Samoan Islands; a. in the bed of a watercourse three miles from the sea; b. in the deep interior forest.

Branches minutely appressed-pubescent or glabrate. Leaves sparsely and minutely hispidulous or glabrous, an inch or an inch and a half long, 3 to 5 lines wide, or narrower in var. B., with 5 to 7 slender primary veins on each side of the midrib, slightly oblique at the base; the teeth very strong and salient in var. a. (1-1½ lines long); in B. much less conspicuous and appressed. Heads small, pubescent.
Boehmeria, Jacq.

1. *Boehmeria platyphylla* Don.

*N. virgata*; foliis rotis oblongisque pl. m. acuminatis, modo emato, dentatis vel emato, serrulatis, spicis (basii varo subcentatis), spicis masculis (quandoque androgynis) paniculatis, femineis / sepalias longis similis.

*Boehmeria virgata* t.B. interrupta,

Urtic. p. 366.

Simeon and

*Hab. Dahuiti, Society Islands*. The
ordinary Oceanic form, and females
mostly specimens collected are females of a
Very large and broad-leaved form (6 to 8 inches long) and evergreen, slightly long-petioled, from Lake Waihina, and Lake Maud, a form with smaller leaves, either glabrous or pubescent or sub-sessile, and the flowering, interrupted, pendulous female spikes from one to three and a half feet long. The Oceania species all have much smaller and blander more or less at testis than the Indian B. platyphylla that I should be disposed to restore Houtte's species. But Archipelagian specimens appear to combine the two... The two toothed of the leaves alone distinguishes these very long-spike specimens from the var. macrastaechya (Splitgerbera macrastaechya, Night. Ic. t. 1977.)

Plate A. Dodonaea platyphylla, var. virgata; female plant, from
the Society Islands. Fig. 1. Female floreello, enlarged. 2. A flower and its bract of the same, more magnified. 3. Longitudinal section of the last. 4. Piece of male spike, in bud, magnified. 5. Male flower expanded. 6, 7, Stamens more magnified.

Pipturus, **Nevi.**

1. Pipturus albidus.


Pipturus Jaetensis & P. Gaudichaudianus (in Monogr. Notic. P. Gaudi-


*Tab. Sandwich Islands; in Oahu*
and Hawaii, up to the elevation of 5,000 feet.

To this, the Tapa plant of the Sandwich Islands, I restore the original specific name given by Hooker and Arnott. For it was purely by some oversight that Meddles named it Taitensis, as there is no instance that it was ever found at Tahiti. Meddles's species P. Sandiana, which he afterwards reduced to a variety of his P. Taitensis, is a form with thicker and rougher leaves, their lower surface nearly or quite destitute of whitiness. None of our Hawaiian specimens approach it.
2. Pipturus velutinus, Nee.


Pipturus velutinus var. Hypoleucus, Nee. I. c., cim. syn.

Var. b. tiliaceus: foliis ovato-cordatis obtusius acuminatis, mane cordato-ostenditis subtilis pubescentibus multis viridibus altis velutinus, petiolis variolis que nitido pubescentibus.

Tab. The ordinary state, with the leaves variable in size and shape, but always whitened or white to the mature state, from the Society, Samoan, and Fijiee Islands; also on King's, one of the Coral Islands, and Mangiie Islands. The var. b. on Maraka, Carls Hovm and Vincennes (Coral) Islands, and Vanua levu of the Fijiee Islands, the latter specimens approaching the original of Labillardiere.
3. Pipturus gracilipes, sp. nov.

P. ranulus lanatus puberulus mns gla-

membranaceous

bratis; fdlis ellipsticas seu ovali-va-

tis plerunque acuminatis ultra

medium obtuse serratis versus basin

versus rotundatum vel obtusissimam in

tegerrimis utrinque viridibus glabris,

petiolo largo filiformi; glomerulis

(femineis) in spicas simplices fili-

formes dispositis; perigonio femineo

canescenti puberulo.


This appears to be a very distinct

species. The membranaceous

leaves are 2 to 4 inches long, or very

slender petioles of one to 4 inches in

length, rather sparsely serrate, entire

toward the usually rounded base, and

glabrous, except a minute trace of fun-
bescence on the principal veins or ribs underneath. The ribs and veins
are slender and not prominent. Fe-
male spikes simple, 2 or 3 inches long;
the stachys filiform, the globular
clusters small, filiform stigma very
caduncous.

Mississippi, Grand Chute.

1. Mississippi euryepithelya, wild.

Ists; Green and Samson Islands (fe-
male plants; at the former also collected
by Dr. Harvey and Rev. Seemann.

Plate 2. Mississippi euryepithelya,
metal, smaller, and from. Fig. 1. Female
capitulum, enlarged. 2. A flower from the
same prior magnified. 3. Vertical Section,