

W 54  
QK349  
B45  
1874  
V.3

# ICONES PLANTARUM INDIÆ ORIENTALIS

OR

PLATES AND DESCRIPTIONS OF NEW AND RARE PLANTS

FROM SOUTHERN INDIA AND CEYLON

BY

LT.-COL. R. H. BEDDOME

CONSERVATOR OF FORESTS, MADRAS

---

300 PLATES

---

PLATES 201-300

MADRAS: GANTZ BROTHERS

LONDON: J. VAN VOORST

1874

1903

HERBARIUM BOTANICUM  
REGIÆ BRITANNICÆ

**STROBILANTHES PAPILLOSUS.** (T. Anders.) A large shrub, stems more or less 4-angled, the younger ones acutely so, exceedingly rough with short harsh hairs, leaves ovate acuminate crenate very asperous on both sides with short harsh hairs rising from numerous papillæ 4-6 inches long by 2-3 broad, petiole about 2 inches long channelled on the upper side, spikes terminal and axillary short leafy, the peduncles 1-1½ inches long, bracts leafy lanceolate scabrous, bracteoles and calycine-segments linear ciliate, 2 of the latter larger than the other three, corol bluish 1½-2 inches long glabrous on the outside somewhat hairy in the centre inside the tube more or less recurved suddenly narrowed in its lower half, lobes equal rounded, stamens 4, submonadelphous, the two centre ones shorter, style slightly hairy. *Anders. Journ. Linn. Soc. Vol. IX, p. 468.*

Ootacamund, common in sholas at 7000 feet elevation, allied to *S. Perottetianus*.

I rather think Dr. Anderson has confounded 2 species under this name, and that his description is partly taken from *S. Neilgherrensis*. (The dissections are taken from living specimens.)

PLATE CCI.

**STROBILANTHES EXTENSUS.** (Nees.) A small shrub, stems 4-angled slightly hairy or subglabrous below, glandularly hairy upwards, leaves ovate often cordate at the base acuminate coarsely serrate slightly rough and hairy on both sides, the lower ones petioled the upper sessile 1½-2 inches long by 1-1½ broad, petioles channelled 3-9 lines long the pair generally unequal. Spikes terminal and from the upper axils forming a sort of a panicle, bracts small and very early deciduous, bracteoles linear much smaller than the calyx early deciduous, subscariose. Calyx segments rather unequal one of them generally longer than the others all linear and rounded at the apex glanduloso-hairy as are the bracteoles, corol deep purple 1-1¼ inch long, tube a little contracted at its base, stamens 4 submonadelphous, the tube very slightly hairy, the filaments glabrous the inner two shorter, style slightly hairy below, ovary puberulous at its apex. *Nees. DC. Prod. xi. 195.*

Western Mysore, near Manjeerabad, also in Sylhet, Assam and Khasya, and cultivated in the Lal Bagh Gardens at Bangalore.

PLATE CCII.

**STROBILANTHES IXIOCEPHALUS.** (Benth.) A small undershrub, stems glabrous or subglabrous, the small floriferous ramuli or leafy spikes setose with long silky white hairs, leaves membranaceous lanceolate acuminate crenate attenuated at the base into the petiole densely lineolate and sparingly setose on both sides, up to 6 inches long of which the petiole is sometimes 2 inches, 1-1½ inches broad. Spikes axillary, terminal or leaf-opposed, leafy below and densely setose, the heads few flowered oblong or ovate, the bracts much imbricate ovate leafy about ½ as long as the flower and with the bracteoles and calyx setose with gland tipped rather viscid hairs, bracteoles linear shorter than the calyx, calycine segments linear subequal. Corol white about 1¼ inches long, the tube much narrowed in its lower half, glabrous outside slightly setose within. Stamens 4 monadelphous, the 2 middle ones much shorter, filaments and style slightly hairy towards the base. *Benth. in Walps. Ann. Vol. III. p. 218.*

South Canara, in the plains about Bellatangady not far from Mangalore, also on the ghats at no great elevation. My specimens were identified by Dr. Anderson.

PLATE CCIII.

**STROBILANTHES ANCEPS.** (Nees.) A small undershrub, stems more or less strigose bluntly 4-sided, leaves membranaceous very variable and often the pair very unequal in size, ovate to elliptic acute or with a long acumen, attenuate at the base entire or obscurely toothed, up to 7 inches long of which the petiole is sometimes 1½ inches, ciliate at the margin and sparingly hairy on both sides, particularly on the costa and veins and furnished with minute shining glands. Spikes axillary and terminal generally naked and simple, sometimes leafy and branched, generally very flat and winged and much ciliate, flower heads short subglobose or cylindric, bracts large leafy ovate furnished with glands deusely ciliate and more or less hairy as are the bracteoles and calyx, bracteoles linear, calycine segments equal or subequal linear, flowers white very slightly hairy about 1 inch long, the tube narrowed below, stamens 4 monadelphous the middle 2 shorter, the longer filaments hairy, style glabrous. *Nees. in DC. Vol. XI. p. 189. S. punctatus, Nees l. c. p. 182.*

Anamallays, South Canara ghats, Tinnevely ghats, also in Ceylon. Easily recognized by its flat generally winged peduncles

*Ruellia ? punctata, Wight Icones 1563, is a true Strobilanthes, and may retain the name of punctatus; it is not mentioned by Anderson; it is a large shrub with white flowers and very scabrous leaves, the hairs arising from harsh papillæ. Wight's figure is very characteristic, so I shall not refigure it; it is very common on the Pulney hills 4000 feet, and I have found it on the Anamallays, and elsewhere along our ghats.*

PLATE CCIV.

**STROBILANTHES VIOLACEUS.** (Bedd.) A large shrub, stems bluntly 4-angled glanduloso-hirsute above, leaves thickly membranaceous ovate to elliptic long petioled the pair often unequal acute or acuminate rather suddenly attenuated at the base, up to 8 inches long (of which the petiole is sometimes  $2\frac{1}{2}$  inches) by  $3-3\frac{1}{2}$  broad harsh with much short pubescence on both sides, primary veins very regular and prominent, and the transverse veinlets very prominent beneath, panicles terminal rather lax glanduloso-pubescent, bracts at the ramifications small oblongo-linear, calycine bracteoles linear shorter than the calyx and like it glanduloso-pubescent, calyx-segments linear equal or subequal, flowers  $1\frac{1}{2}$  inches long deep violet-purple, tube scarcely contracted except at the very base glabrous outside, hairy within, stamens 4 the 2 middle ones much shorter, filaments and style hairy towards the base.

Abundant about the head of the Sisparah ghat (Nilgiris), a very beautiful species; it is very rarely to be met with in flower.

PLATE CCV.

**STROBILANTHES SEXENNIS.** (Nees.) A very large shrub up to 25-30 feet, old trunks up to  $2-2\frac{1}{2}$  feet in girth, the younger branches somewhat 4-angled and often glanduloso-pubescent, leaves lanceolate acuminate sessile and amplexicaul or decurrent down a short petiole, coarsely serrate quite glabrous or slightly hairy on both sides, always densely lineolate above, up to 17 inches long by 5 broad, but often only 8-9 inches long, veins not so numerous or regular as in violaceus, transverse veinlets inconspicuous, panicles terminal, scarcely lax glanduloso-pubescent as are the calyx bracts and bracteoles, bracts broad ovate, bracteoles linear lanceolate or spatulate equal in length to and broader than the narrow linear equal calycine-segments, flowers white, corol generally much curved about  $1\frac{1}{4}$  inch long, tube scarcely contracted a little hairy inside, stamens 4 monadelphous the two middle ones much smaller, anthers all rounded at the base, filaments and style slightly hairy, ovary glabrous, capsule glabrous oblong acuminate. *Nees in DC. l. c. p. 187.* *S. homotropus, Nees. l. c.* *S. argutus, Nees. l. c. 188.* *S. cerinthoides, Nees. in Herb. Hook.*

Very common at Ootacamund and elsewhere on the Nilgiris at the higher elevations, also on the Pulneys, &c., 5000-7000 feet, and abundant at high altitudes in Ceylon; it is the largest of all our species, and in the Kookal shola on the Pulneys it grows to be quite a small tree with a hard woody trunk nearly 3 feet in girth.

PLATE CCVI.

**STROBILANTHES GRACILIS.** (Bedd.) A very large shrub, branches glabrous terete, leaves lanceolate acuminate serrate sessile, auricled at the base and amplexicaul densely lineolate but otherwise quite glabrous or with a few weak setæ, up to 8-9 inches long by 2 inches broad, panicles terminal lax glabrous or slightly viscous, bracts very small caducous, bracteoles linear shorter than the calyx, calycine-lobes linear equal and with the bracteoles slightly glanduloso-pubescent or almost quite glabrous, flowers rather remote white tinged with lilac about 1 inch long, tube scarcely contracted, stamens 4 monadelphous the two inner a little shorter, filaments hairy, anthers sagittate at the base. Style slightly hairy, ovary glabrous, capsule ovoid glabrous pointed. *Bedd. in Trans. Linn. Soc. Vol. XXV. not Anders.* *S. Beddomei, T. Ander. Journ. Lin. Soc. Vol. IX. p. 482.*

Anamallay mountains, 4000-5000 feet elevation, nearly allied to Sexennis.

PLATE CCVII.

**STROBILANTHES ANDERSONII.** (Bedd.) A very large shrub up to 20 feet high. Stem terete hirsute, leaves sub-membranaceous ovate acuminate serrate up to 9-10 inches long by 5 broad, the pair often unequal and on petioles of different lengths, petioles  $\frac{1}{2}$ -2 inches long hirsute, spikes axillary  $2-2\frac{1}{2}$  inches long, flowers in short oblong dense heads, bracts large ovate obtuse ciliate but otherwise glabrous densely imbricate, bracteoles and calycine-segments all about equal linear lanceolate ciliate. Corol glabrous pale blue  $1\frac{1}{4}$  inch long, stamens 4 monadelphous the 2 middle ones a little shorter, filaments glabrous, anthers sagittate, ovary and style glabrous. *Bedd. Lin. Trans. Vol. XXV. p. 222.*

Anamallay mountains 6000 feet in moist woods, allied to the next species but with larger flowers.

PLATE CCVIII.

**STROBILANTHES CALYCINUS.** (Nees.) A shrub 4-5 feet, stems strigose or glabrous, leaves oval or ovate acuminate attenuated at the base crenate hirsute, 6-7 inches long (of which the petiole is  $\frac{1}{2}$ - $1\frac{1}{2}$  inches) by  $2-2\frac{1}{2}$  inches broad, spikes axillary  $2-2\frac{1}{2}$  inches long (of which the peduncle is  $\frac{1}{2}$  to 1 inch) erect or suberect oval, bracts much imbricate large suborbicular or obovato-cuneate crenate glabrous or slightly glanduloso-hirsute, bracteoles and calycine segments narrow lanceolate all about equal and nearly or quite

equalling the corol, corol dull yellowish red glabrous outside and within except a small tuft of hair, the tube only contracted at its very base, stamens 4 monadelphous slightly exserted, the two middle ones a little shorter, filaments glabrous, ovary and style glabrous. *Nees DC. l. c. p. 186. S. coloratus, Nees. l. c.*

Ceylon, central provinces, at 7000 feet elevation.

PLATE CCIX.

**STROBILANTHES AURICULATUS.** (Nees.) A much branched shrub, branches 4-angled slightly scabrous towards the apex, leaves elliptic acuminate serrate with the base cuneiform auricled and amplexicaul, 4-7 inches long by  $1\frac{1}{2}$ -2 inches broad, slightly hirsute on both sides. Spikes axillary and terminal 1-4 inches long narrow linear, the peduncles tetragonal, bracts densely imbricate orbicular cuspidato-mucronate, hirsute or glanduloso-hirsute, bracteoles none. Calycine segments somewhat unequal linear obtuse glanduloso-hirsute, flowers large  $\frac{3}{4}$  to 1 inch pale blue, tube much contracted at its base, stamens 4 slightly monadelphous the 2 inner ones shorter, filaments hairy. *Nees l. c. p. 191.*

Common about the Jubbulpore and Nagpore country, but I have never seen it further south. Common in a cultivated state in gardens.

PLATE CCX.

**STROBILANTHES CILIATUS.** (Nees.) A small shrub, branches terete or 4-sided fimbriate at the joints, leaves elliptic acuminate attenuated into the petiole serrate densely lineolate above and with a few setæ on the costa and veins, lineolate and glabrous below subcoriaceous, 6-7 inches long by 2 broad. Spikes axillary 2-4 inches long generally simple with the peduncle bracteate jointed and refract below the middle, sometimes somewhat branched and leafy, flower heads small narrow oblong, flowers small white spotted with lilac about 1 inch long, bracts ovate or nearly orbicular pointed cucullate much imbricate lineolate, bracteoles a little smaller than the calyx linear-lanceolate, calycine lobes equal or subequal linear-lanceolate glabrous or with a few hairs, corol with a very narrow tube below suddenly campanulate below the lobes very slightly hairy inside, lobes rounded, stamens 4 monadelphous the two inner a little shorter, filaments hairy below glabrous above, anthers purple, ovary and style glabrous. *Nees l. c. p. 183;—Wight Icones tab. 1517. Strobilanthes Warreensis, Dalz. in Hook. Journ. of Bot. ii. 341.*

This is found about all our ghats from the very foot up to about 4000 feet, and it flowers I believe every year. I have refigured this although Dr. Wight published a drawing, as his is not characteristic and scarcely to be recognized.

PLATE CCXI.

**STROBILANTHES BARBATUS.** (Nees.) A large glabrous shrub often up to 12-15 feet, with numerous exposed roots from the lower part of the stem, branches 4-sided often completely and very broadly winged, sometimes quite naked, leaves lanceolate, acute or acuminate crenate or subentire coriaceous glabrous but densely lineolate on both sides, somewhat shining above paler beneath, 6-10 inches long by  $2\frac{1}{2}$ -4 broad, petioles naked or winged 1-1 $\frac{1}{4}$  inches long, spikes axillary and terminal 1-2 inches long often leafy at the base, bracts densely imbricate rhombico-cuneate long cuspidato-acuminate lineolate and coarsely ciliate but otherwise glabrous, bracteoles similar to the bracts but a little smaller and narrower, flowers small, calyx 5-cleft to the middle the segments acuminate, corol white about 1 inch long the tube much contracted at the base and suddenly campanulate just below the lobes, lobes long ciliate and very hairy within with white hairs, stamens 4 submonadelphous exserted, the middle 2 a little shorter, filaments hairy, sometimes the rudiment of a fifth stamen is present, ovary and style glabrous. *Nees. l. c. 179. Strobilanthes tetrapteris, Dalz. in Hook. Journ. of Bot. 1850. Vol. II. p. 342.*

One of the commonest species on our moist mountains up to 3000 feet elevation, from Canara down to Cape Comorin, forming often the chief undergrowth; in the Anamallays it covers miles of country; it only flowers about every 7th year, and then dies down; winged and wingless forms are to be found on the same plant.

PLATE CCXII.

**STROBILANTHES CAUDATUS.** (T. Anders.) A shrub 4-5 feet, stems glabrous below hirsute towards the apex; leaves lanceolate or linear-lanceolate with a very long caudate acumination, lineolate on both sides, furnished above with a few distant setæ, slightly hairy on the veins beneath, entire or obscurely crenate, 4-7 inches long by 1-1 $\frac{1}{2}$  broad, petioles 2-3 lines long, spikes axillary simple or branched, heads small subglobose 3-6 flowered, bracts bracteoles and calycine segments linear all densely villous and ciliate

with very long white or brown often gland tipped hairs all subequal in length or the bract twice as long as the others and the calyx segments more or less unequal. Corol about 1 inch long whitish with a tinge of red, stamens 4 scarcely monadelphous included, the 2 middle ones a little shorter, style glabrous, ovary a little hairy at the apex. *Anders. in. Thw. Pl. Zey. p. 228.*

Common on the Brumagherries in the Wynaad at 3500 feet elevation, also in Coorg and South Canara (Kudra Mukh), and in Ceylon (Hantani, at 2000-3000 feet.)

## PLATE CCXIII.

**STROBILANTHES JEYPORENSIS.** (Bedd.) A large shrub, branches obtusely 4-angled a little hairy above glabrous below, leaves submembranaceous broadly ovate with a long acumination suddenly attenuated at the base crenate, densely lineolate above and furnished with a few setæ, slightly pubescent below with longish inconspicuous hair, 6-7 inches long without the petiole by about 4 broad, petioles 3 inches long. Spikes axillary trifold or single 3-4 inches long linear lanceolate flowered from nearly the base, bracts bracteoles and calyx glanduloso-pubescent and long subulato-acuminate, bracts lanceolate 3-nerved, bracteoles linear a little shorter than the calyx, calyx segments distinct to the base linear, flowers small, corol about  $\frac{1}{2}$  an inch long white, tube contracted only at the very base, stamens 2 monadelphous, filaments hairy, style and ovary glabrous, capsule smooth mucronate much shorter than the calyx.

The Gudam hills near Golcondah (Vizagapatam district), 2500 feet elevation, also mountainous tracts in the Jeypore country.

## PLATE CCXIV.

**STROBILANTHES CANARICA.** (Bedd.) A rigid shrub 3-4 feet. Stems hirsute obtusely 4 sided, leaves coriaceous ovate pointed prominently veined entire or subentire on the margins, when young densely lanate with white hair, in age sparingly hirsute on both sides or nearly glabrous above, 2-3 inches long by about  $1\frac{1}{2}$  inches broad, petioles 3-6 lines long, spikes short dense terminal and from the upper axils generally crowded several together in each axil shorter than the leaves oblong and flowered from the base, bracts ovate hirsute, bracteoles linear-lanceolate hirsute shorter than the calyx, calyx cleft half down the segments linear-lanceolate hirsute, corol white puberulous outside a little hairy within, about  $\frac{3}{4}$  inch long, the tube contracted only at its very base, stamens 2 monadelphous, sometimes rather unequal, anther cells somewhat pointed at the base, filaments a little hairy. Style hairy, ovary glabrous.

South Canara, on the Kudra Mukh mountain, elevation 6000 feet.

## PLATE CCXV.

**STROBILANTHES CONSANGUINEUS.** (Nees) A large shrub, stems somewhat 4-angled glabrous or a little hairy, leaves membranaceous or sub-membranaceous ovate acute or acuminate, suddenly attenuated at the base, prominently and very regularly veined, glabrous on both sides but densely lineolate, or hairy beneath, quite entire or more or less crenate, without the petiole 4-5 inches long by  $2\frac{1}{2}$ - $3\frac{1}{2}$  inches broad, petioles up to 4 inches long the pair often very unequal, spikes axillary 3-4 inches long very long, bracts ovato-lanceolate nerved glabrous or a little hairy or densely hirsute, flowers white or pale blue about  $\frac{3}{4}$  inch long, calyx cleft  $\frac{1}{2}$  down, segments linear-lanceolate acute, corol-tube contracted at the base, glabrous or puberulous outside, stamens 2 submonadelphous, filaments glabrous or a little hairy, style hairy, ovary hairy at the apex. *Endopogon consanguineus*, *hypoleucus*, and *anmumum*, *Nees. l. c. p. 104.*

A very common species on the ghats of the Nilgiris and Pulneys and other mountainous parts of our Western ghats, from the foot up to 5000 feet. One variety common in the Bolunputty valley, has the spikes much paniculate and densely hirsute, the variety figured is the commonest form.

## PLATE CCXVI.

**STROBILANTHES NIGRESCENS.** (T. Anders.) A shrub 4-5 feet, stems erect tetragonal, leaves lanceolate acuminate serrate 4-5 inches long by  $1-1\frac{1}{2}$  broad glabrous on both sides but densely lineolate above, petioles 8-18 lines long. Spikes axillary and little longer than the calyx, bracteoles linear and with the calyx glanduloso-hispid, calyx cleft down about  $\frac{2}{3}$ rd, segments acute, corol ovary glabrous. *Anders. l. c. p. 226.*

Ceylon, Ambagamwa district, 3000 feet elevation.

## PLATE CCXVII.

**STROBILANTHES DEFLEXUS.** (Anders.) A shrub 4-5 feet, stem glabrous somewhat 4-angled, leaves narrow-elliptic caudate serrate densely lineolate but otherwise glabrous, 2-3 inches long of which the petiole is sometimes 1 inch, 6-9 lines broad, peduncles axillary solitary or twin thickened towards the apex naked deflex, heads capitate 6-8 lines long, bracts foliaceous acute glabrous 6-8 at the apex of the peduncle, bracteoles filiform, calyx cleft to nearly the base, segments linear-lanceolate ciliate and sometimes pilose, corol pale-purple 8 lines long the tube contracted at the base, stamens 2 submonadelphous, filaments glabrous, ovary and style glabrous. *Anders. in. Thw. En. Pl. Zey. p. 227.*

Ceylon, Hautani, at 4000 feet elevation.

PLATE CCXVIII.

**STROBILANTHES THWAITESII.** (T. Anders.) A shrub, branches tetragonal scabrous, leaves submembranaceous elliptic or ovato-elliptic acuminate serrate asperous above, hirsute beneath, 5-6 inches long  $1\frac{1}{2}$ -2 inches broad, petiole 3-6 lines long, peduncles tetragonal about as long as the petioles drooping simple or trifid at the apex, heads capitate 1- $1\frac{1}{2}$  inches long ovate about 3-flowered, bracts lanceolate acuminate bullato-corrugate ciliate 7-10 lines long, bracteoles much smaller linear acute ciliate, calyx cleft to the middle, segments linear-lanceolate ciliate, corol 1 inch long white glabrous outside a little hairy within. Stamens 4 included the 2 middle ones much shorter, filaments and style hairy. *Anders. l. c. p. 227.*

Ceylon, Ambagamwa district.

PLATE CCXIX.

**STROBILANTHES HELICOIDES.** (Nees.) A shrub 2-3 feet high, stem leaves ovato-oblong acuminate lanceolate glabrous coarsely and sharply serrate, 5-6 inches long by 2- $2\frac{1}{2}$  inches broad, petioles about 3 lines long, panicle-leaves ovate or ovato-lanceolate smaller than the stem leaves and gradually dwindling into bracts, panicles cymose very long slender lax filiform and flexuose, pedicels slender 2-3 times longer than the calyx, bracts small lineolate, bracteoles linear-subspathulate shorter than the calyx, calyx cleft to nearly the base  $3\frac{1}{2}$  lines long, segments linear-lanceolate, lineolate and furnished with a few gland-tipped hairs as are the bracteoles, flowers violet 1 inch long, tube inflated, lobes short rounded. Stamens 4 included submonadelphous, the 2 middle ones shorter, filaments and style hairy, ovary glabrous, capsule glabrous pointed about 6 lines long. *Leptacanthus helicoides, Nees. l. c. 170.*

Ceylon, Hantani and Ambagamwa districts, up to 3000 feet elevation.

PLATE CCXX.

---

CORRECTIONS IN THE NOMENCLATURE OF PREVIOUS NUMBERS.

---

- Plates 14, 15, 16, & 17. For *Serjssa* read *Saprosma*.  
 18..... For *Nauclea tubulosa* read *Stepheyne tubulosa*.  
 20..... For *Gardenia* read *Byrsophyllum*.  
 37 & 38..... For *Griffithia* read *Randia*.  
 39..... For *Borreria* read *Fergusonia*.  
 40..... For *Discospermum* read *Diplospora*.  
 41 & 42..... For *Sageræa* read *Bocagæa*.  
 46..... For *Anaxgorea Zeylanica, H. f. et T.*, read *Anaxgorea Luzonensis, A. Gray*.  
 71..... For *Orophea coriacea, Thw.*, read *Bocagæa coriacea, Thw.*  
 72..... For *Orophea obliqua, H. f. et T.*, read *Bocagæa obliqua, H. f. et T.*  
 75..... For *Popowia ramosissima, Bedd.*, read *Popowia Beddomeana, H. f. et T.*  
 96..... For *Stylocoryne*, read *Byrsophyllum* (the sterile ovary is very badly represented in the lithograph.)  
 114..... For *Zizyphus Wynadensis, Bedd.*, read *Ventilago Bombaiensis, Dalz.*  
 123..... For *Diospyros calycina, Bedd.*, read *Diospyros foliolosa, Wall.*  
 133..... For *Diospyros microphylla, Bedd.*, read *Diospyros buxifolia, Miq.*  
 163..... For *Memecylon amabile, Bedd.*, read *Memecylon terminale, Dalz.*



## ACANTHACEÆ.

**STROBILANTHES CUSPIDATUS.** (Benth.) A large shrub, branches lanate when young glabrous in age, terete or obscurely 4-angled, leaves ovate acuminate a little attenuated at the base irregularly crenate, in age glabrous above or with a few hairs, (when young densely lanate) densely lanate beneath, without the petiole 3-4 inches long by  $1\frac{1}{2}$ -2 inches broad, prominently parallel-veined, petioles 1- $1\frac{3}{4}$  inches long. Spikes axillary often leafy glanduloso-hispid, bracts lanceolate acuminate or cuspidate, bracteoles linear lanceolate as long as the calyx, calyx cleft down half-way, segments acute and glanduloso-hirsute as are the bracts and bracteoles, corol about 1 inch long puberulous outside, tube very narrow at the base, stamens 2, filaments and style and apex of ovary hairy. *Benth. in Linn. xxiv. 646.*

Nilgiris, on the Seegoor ghat.

## PLATE CCXXI.

**STROBILANTHES WALKERI.** (Nees.) Shrubby 2-5 feet high, stems subglabrous tetragonal above, leaves elliptic to oval or suborbicular acuminate, acute at the base undulato-crenulate densely lineolate above and rather hairy and scabrous on both sides submembranaceous, without the petiole about 4 inches long by 2 broad, petioles often unequal up to  $1\frac{1}{2}$  or 2 inches long. Spikes axillary solitary or twin simple or trifold 1-2 inches long, the peduncle sulcato-striate bracteate and jointed, heads 1-3 flowered about  $\frac{1}{2}$  an inch long, bracts oval acute bullato-rugose slightly hairy and ciliate, bracteoles linear shorter than the calyx, calyx cleft to nearly the base, segments linear-lanceolate ciliate, corol about  $\frac{1}{2}$  inch long white or pale purple, tube scarcely contracted at the base, stamens 4 all equal exserted submonadelphous, filaments and style glabrous. *Nees. l. c. 181.*

Ceylon, central provinces, 4000-7000 feet.

## PLATE CCXXII.

**STROBILANTHES LAXUS.** (T. Anders.) Shrubby 4-6 feet, stems terete glabrous, leaves ovate acuminate cordate serrate subscabrous on both sides glandular beneath, without the petiole up to 6 inches long and  $2\frac{1}{2}$  broad, petioles up to  $2\frac{1}{2}$  inches long. Spikes solitary or twin strobiliform axillary many-flowered often branched rather lax, 1-5 inches long, bracts  $\frac{1}{2}$  inch long rotundato-ovate ciliate and furnished with waxy dots as are the bracteoles and calyx, bracteoles lanceolate, ciliate shorter than the calyx, calyx cleft to nearly the base, segments lanceolate acute equal or subequal ciliate broader than the bracteoles, corol  $\frac{3}{4}$  inch long yellowish red, purple at the base, stamens 4 monadelphous of equal length exserted, filaments and style glabrous. *Anders. in. Thw. l. c. p. 228.*

Ceylon, Hantani, 4000 feet elevation.

## PLATE CCXXIII.

**STROBILANTHES ZEYLANICUS.** (Anders.) Shrubby, 3-5 feet high, stems erect 4-angled sulcate subglabrous, leaves elliptic to oval or ovate acuminate scabroso-serrate coriaceous scabrous on both sides particularly on the prominent veins and densely lineolate above, 5-10 inches long by  $2\frac{1}{2}$ -4 broad, petioles 1- $1\frac{1}{2}$  inches long. Spikes strobiliform pedunculate axillary shorter than the leaves or elongated and leaf-bearing, bracts foliaceous large ovate with a long gradual acumination, lineolate, the margin scabrous, bracteoles lanceolate a little larger than the calycine lobes, calyx cleft  $\frac{1}{2}$  down, flowers  $1\frac{1}{2}$  inches long, hairy outside, tube contracted at the base, stamens 4 submonadelphous the two middle ones much shorter, filaments hairy, style and ovary glabrous. *Anders. l. c. 227.* *Strobilanthes callosus, Nees. partim.*

Ceylon, Ambagamwa district and Kokool corie, 2000 feet elevation.

## PLATE CCXXIV.

**STROBILANTHES ADENOPHORUS.** (Nees.) Shrubby 3-4 feet. Stems terete or slightly 4-sided lineolate, leaves narrow-lanceolate acuminate, much attenuated at the base and often decurrent on the petiole lineolate on both sides but otherwise glabrous, entire or slightly scollop-toothed, 4-5 inches long by 1 inch broad, submembranaceous paler beneath, primary veins distant about 4 on each side inconspicuous below, spikes axillary and terminal solitary, peduncles thickened towards the apex, 1- $1\frac{3}{4}$  inches long 1-2 jointed and with deciduous bracts at the joints, flower-heads oblong 1- $1\frac{1}{2}$  inches long, bracts, bracteoles and calyx lineolate but otherwise quite glabrous, bracts large obovate, bracteoles narrow-ligulate much shorter than the calyx, calyx cleft to nearly the middle, segments acute 2 of them often more or less united, corol 1 inch long the tube funnel-shaped contracted only at its base glabrous out-



side a little hairy within. Stamens 4 monadelphous the 2 middle ones shorter and a fifth fertile one sometimes present, filaments hairy, apex of ovary and style hairy. *Nees. in DC. l. c. p. 182.* *Strobilanthes lanceolatus*, *Nees. l. c. 181.* *Goldfussia myrtinia*, *Nees. l. c. 174.*

Anamallay mountains 4-5000 feet, and also in Ceylon. The plant figured is from the former locality and I have no Ceylon specimens for comparison, but Dr. Anderson refers my specimens to this species.

## PLATE CCXXV.

The following South-Indian species are figured by Dr. Wight in his *Icones*.

- Strobilanthes viscosus*, *Arn.* (*Endopogon*, *versicolor* and *viscosus*). Anamallays and Nilgiris.  
 „ *Kunthianus*, *Wall.* (*Phlebophyllum*). Nilgiris higher ranges.  
 „ *Wightianus*, *Nees.* Nilgiris and Pulneys, higher ranges.  
 „ *punctatus*, *Nees.* (*Ruellia?* *punctata*). Pulneys higher ranges.  
 „ *asper*, *Wight* Nilgiris do do  
 „ *sessiloides*, *Wight.* „ do do  
 „ *sessilis*, *Nees.* „ do do  
 „ *Perottetiannus*, *Nees.* „ do do  
 „ *Zenkerianus*, *Nees.* (*Endopogon Strobilanthes*). Western ghats generally.  
 „ *foliosus*, *Wight.* (*Endopogon foliosus* and *capitatus*). Western ghats generally.  
 „ *Strobilanthes micranthus*, *Wight.* Western ghats generally.  
 „ *luridus*, *Wight.* Western ghats generally.  
 „ *lupulinus*, *Nees.* (*Strob. rugosus*, *campanulatus*). Western ghats generally.  
 „ *Grahamianus*, *Wight.* Bombay ghats.  
 „ *tristis*, *Wight.* (*Goldfussia tristis*). Western ghats generally.  
 „ *pallidus*, *Anders.* (*Goldfussia decurrens*). Coorg and Canara.  
 „ *perfoliatus*, *Anders.* (*Leptacanthus alatus*). Coorg, Canara and Concar.  
 „ *pulcherrimus*, *Anders.* (*Leptacanthus Walkeri*). Nilgiris.  
 „ *Neesianus*, *Wight.* (unknown to me). Nilgiris.  
 „ *rhamnifolius*, *Nees.* (*Endopogon rhamnifolius*). Ceylon.

Of the following 5 Ceylon species I have no specimens.

*S. Gardnerianus*, *Nees.*; *S. scaber*, *Wall.*; *S. Hookeri*, *Nees.*; *S. vestitus*, *Nees.*; *S. Arnottianus*, *Nees.*; nor have I specimens of *S. callosus*, *Nees.*, which occurs on the Coucan ghats and in the Nagpore country.

Besides these Bentham describes (*Walps. Ann. III*, 218) a South Canara species under the name of *S. microstachys*, which is unknown to me; and I do not know *S. rubicundus* (*Leptacanthus*, *Nees.*) a South Indian plant, and I have a new species only in leaf (somewhat allied to *S. perfoliatus*) from the higher ranges of the Anamallays; this gives a total of 59 species for Southern India and Ceylon.

**LEPIDAGATHIS GRANDIFLORA.** (*Dalz.*) Shrubby, branches 4-angled glabrous except a few hairs at the joints, leaves elliptic acute or acuminate, the upper ones sessile or subsessile, the lower petioled, in age sub-glabrous on both sides or with a few scattered hairs, margins entire scabrous and ciliate, 5-8 inches and more long by  $1\frac{1}{2}$ - $2\frac{1}{2}$  or more broad, petioles up to 2 inches. Spikes terminal and from the upper axils generally simple, bracts large oval penninerved, hirsute and long ciliate as are the bracteoles and calyx, bracteoles narrow lanceolate, calyx 5-cleft to nearly the base the upper segment broad lanceolate 5-nerved, the 2 lower narrow lanceolate 3-nerved, the lateral ones subulate; corol  $1\frac{1}{2}$  or nearly 2 inches long pale blue deeply bilabiate, the upper lip bifid the 2 lobes emarginate, the lower lip 3-lobed, the convex palate furnished with long yellow hairs, anthers ciliate subsaggitate at the base, ovary and style hairy. *Dalz. in Hook. Journ. of Bot. ii.* 138.

South Canara, common at Bellatangady and elsewhere near the foot of the ghats; flowers in November and December. Also on the Syhadree mountains, Bombay: the whole plant turns black in drying.

## PLATE CCXXVI.

**LEPIDAGATHIS CUSPIDATA.** (*Nees.*) Shrubby, stems pubescent at least towards the apex, leaves elliptic acuminate entire or somewhat repand glanduloso-pubescent when young, in age glabrous or with a few hairs, often decurrent on the petiole, up to 8 inches long by  $2\frac{1}{4}$  broad, petioles up to 3 inches long, spikes axillary 3-4 inches long, or elongated and leafy below, the leaves small

not exceeding 1 inch in length, bracts oval 3-nerved about  $\frac{1}{2}$  inch long by 3-4 lines broad glanduloso-pubescent and spinoso-mucronate as are the bracteoles and calyx, bracteoles lanceolate much smaller than the calyx, calyx 5-cleft to nearly the base, the upper segment broad lanceolate 3-nerved or sub 5-nerved, the 2 lower lanceolate 3-nerved the 2 lateral ones linear lanceolate all equal or subequal in length or sometimes the upper one double as long as the others, corol shortly tubular a little hairy outside, limb bilabiate the lower lip larger a little hairy inside below the anthers, 3-partite, the lobes rounded equal, the upper lip rounded emarginate, the 2 inner stamens a little longer than the other 2, anthers ciliate, one of the cells much below the other and divergent, style hairy. *Nees. DC. l. c. 258.*

South Canara on laterite rocks about Sooleay, quite in the plains; also on the Bombay ghats. Dr. Wight's *L. longifolia* from Malacca (*Icones tab. 1564*) is closely allied but has the anthers spurred.

PLATE CCXXVII.

**LEPIDAGATHIS FASCICULATA.** (*Nees.*) Stems herbaceous somewhat procumbent villous, leaves membranaceous ovate to elliptic acute or acuminate softly villous or hirsute, 1-2 inches long by  $\frac{1}{2}$ -1 inch broad, sinuately dentate, petioles 2-4 lines long, spikes axillary and terminal simple or branched generally longer than the leaves and often leafy, bracts oval or elliptic 3-nerved glanduloso-pubescent as are the bracteoles and calyx, bracteoles linear lanceolate shorter than or as long as the calyx equal or unequal, calyx 5-cleft to nearly the base, segments equal in length the upper one lanceolate 3-nerved the 2 lower linear-lanceolate, the 2 lateral subetaceous, corol 2-3 lines long white with purple mottlings, the upper lip emarginate the lower 3-lobed, filaments glabrous, anther-cells ciliate one rather above the other, style and apex of ovary hairy. *Nees, in DC. l. c. 260. Lep. Goensis, Dalz. l. c. 340.*

Malabar, Canara, &c., also in Behar, Ceylon and Birmah.

PLATE CCXXVIII.

**LEPIDAGATHIS RUPESTRIS.** (*Nees.*) A low plant spreading close to the ground, stems suffruticose acutely 4-angled or almost winged, the angles scabrous with thick hairs, leaves oblong sessile rough above with a transverse lineation, scabrous on the nerves beneath with coarse hairs  $\frac{3}{4}$ -1 $\frac{1}{4}$  inch long by 4-6 lines broad, flowers congested in a large woolly ball at the apex of the root, bracts and bracteoles similar ovate or oval cuspidato-mucronate, calyx 4-partite the upper segment ovate 5-nerved the lower deeply bifid, the 2 lateral ones lanceolate, all scarious and mucronate and densely hairy and ciliate chiefly at the apex with long woolly hair, corol bilabiate very hairy, upper lip emarginate, lower 3-lobed, stamens subequal, filaments glabrous, anther-cells ciliate one above the other. *Nees. DC. l. c. p. 256.*

Kurnool and Cuddapah plains, in black cotton-soil.

PLATE CCXXIX.

VIOLACEÆ.

**IONIDIUM TRAVANCORICUM.** (*Bedd.*) A perennial shrub 5 feet high, branches erect woody glabrous terete below, angled towards the apex; stipules subulate glanduloso-puberulous, leaves linear lanceolate subsessile, distantly serrated glabrous 2 $\frac{1}{2}$ -3 $\frac{1}{2}$  inches long by 6-10 lines broad, flowers pink, peduncles 6-8 lines long furnished with 2 puberulous bracteoles towards the apex a little below the flower and there jointed, sepals long subulate not keeled equal recurved, the lower petal with the long claw saccate and furnished with 2 spurs, the others falcate, the upper 2 only ciliate, the 2 anthers nearest the large petal furnished with a round gibbous spur at the base, seeds white 6-9.

Travancore and Tinnevely hills 2-3000 feet elevation, very like the common *I. suffruticosum*, but a tall shrub.

PLATE CCXXX.

EUPHORBIAOÆ.

**CLAOXYLON INDICUM.** (*Mull.*) An undershrub, diœcious, young parts strigose or nearly glabrous, leaves membranaceous elliptic more or less acuminate serrate the serratures often ending in a bristle, rather scabrous with rough dots but in age generally without hairs except on the costa, 3-8 inches long by  $\frac{3}{4}$ -2 inches broad, petioles  $\frac{1}{2}$ -2 inches long with often 2 small glands at the conjunction with the leaf, racemes axillary shorter than or nearly (particularly in the male) equalling the leaves, the rachis glabrous or

subglabrous, the bracts and flowers more or less hairy, flowers in interrupted tufts along the racemes, the female with few bracts and 1-flowered, the male with numerous bracts and several flowers, perianth or calyx 3-4 parted, the *female* with 3-4 narrow spatulate slightly hairy glands (or petals?) shorter than the sepals, ovary hairy 2-3 cells, styles 2-3 much lacerate, the *male* with about 30-32 stamens mixed with clavate very small glands the apices of which are furnished with 2-3 long bristles, capsule about 3 lines diameter, the 3 rounded cocci strigose, a central column present in the middle. *Mull. DC. xv. 782.*

Anamallays and Tinnevely hills up to 3000 feet. My specimens of the Ceylon plant, named *C. longifolium* by Thwaites and *C. oligandrum* by Muller, appear to be quite the same; they are however in very young bud as far as the male goes, and it is described by Muller as having fewer stamens. The drawing represents a female plant:—1, is a tuft from the male raceme; 2, a male bract; 3-4, male flowers showing 30 stamens and 3 or 4 sepals; 5, anthers; 6, one of the glands mixed with the anthers; 7, female flowers 2-3 styles; 8, the gland or petal removed from the same; 9, vertical section of the ovary; 10, transverse section; 11, fruit; 12, fruit, the cocci fallen off, showing the central column.

PLATE CCXXXI.

**MALLOTUS DISTANS.** (Wall.) A shrub often straggling but sometimes a small tree, young branches petioles and inflorescence densely clothed with short soft greenish stellate tomentum, petioles opposite very unequal  $\frac{3}{4}$ -2 $\frac{1}{2}$  inches long, leaves membranaceous 3-nerved up to rather more than a foot long by 7 inches broad but generally smaller, broad ovate or rhomboido-ovate entire or obscurely toothed acute or acuminate, not peltate or very slightly so and furnished at the base on the upper side with 2-6 large black glands, in age glabrous above, beneath softly and densely stellato-pubescent and often minutely and inconspicuously aureo-punctulate, bracts linear, *female* racemes from shorter to as long or longer than the leaves slender drooping 3-12 flowered, flowers distant solitary on pedicels about 3 lines long, elongating in fruit to 6-9 lines, calyx 3-5-parted, no disk, ovary densely and softly stellato-tomentose, capsule unarmed 3-lobed 4-6 lines in diameter stellately-fulvous. *Male* spikes more or less elongate, the flowers in interrupted distant sessile heads along the rachis, the heads each bearing 4-10 flowers and subtended by a single bract, calyx as in the female, no disk. Stamens about 45. *DC. Prod. xv. 976. Croton distans, Wall. 7772-A.*

Tinnevely near Courtallum, very abundant on the Singampetty hills, south of Courtallum, 1000-2000 feet.

PLATE CCXXXII.

**CROTON RETICULATUM.** (Wall.) A shrub 3-5 feet, monœcious, young branches and young parts densely ferruginous with brown stellate scales, leaves submembranaceous ovate to oblongo-lanceolate acuminate quite entire or nearly so at margins, in age glabrous above, silvery-white beneath with scales, up to 8 inches long by 2 $\frac{1}{2}$  broad, but usually smaller, petioles up to 1 inch furnished at their very apex with 2 (rarely 4) pedicelled clavate glands. Stipules small subulate deciduous, racemes terminal or from the upper axils up to 3-4 inches long many flowered, a few of the lower flowers female the others all male, all silvery-white, bracts inconspicuous, male flowers clustered about 1 line in diameter on short pedicels, the petals oblong ciliate and often lanate much larger than the calycine segments, stamens 15-20, filaments glabrous, receptacle villous, the female flowers 2-3 times larger than the male, the hypogynous disk glabrous repando-crenate or sub 5-lobed, styles 3, each 2-cleft with the divisions again bifid, the stigmas or arms truncate rigid glabrous subinvolute-incurved, calyx increasing when in fruit, the capsule ferruginous with scales subglobose 6 lines long by about the same breadth. Seed brown mottled. *Wall. cat. 7724-B. ;—DC. Prod. xv. 580. Croton hypoleucos Dalz. in Hook. Journ. of Bot. 1853 Vol. III. p. 123.*

Common in all our western moist forests up to 3-4000 feet elevation. In the analysis, fig. 1 is a fruit life size; 2, one of the cocci inner face, just burst and shewing the seed; 3, the seed; 4 shows the central column from round which the 3 cocci have fallen off.

PLATE CCXXXIII.

GRAMINEÆ.

**OXYTENANTHERA MONOSTIGMA.** (Bedd.) A large unarmed reed, culms—? leaves 8-10 inches long by 1-1 $\frac{1}{2}$  broad lanceolate rounded or somewhat attenuated at the base, setaceous-acuminate at the apex, glabrous except minute asperous recurved points at or near the margin (sensible to the touch but not visible without the lens), primary veins 6-8 on each side. Sheaths striated glabrous, inflorescence terminal in very closely approximated dense globular heads about 2 inches in diameter, spikelets very numerous perfectly glabrous about 1 inch long and very narrow, 2-flowered, viz, one empty palea above the 2 unequal glumes and 1 terminal bipaleaceous floret, lower palea very glabrous and shining with glabrous margins, apex much hardened and terminating in a long

articulated spiny point which is deciduous in age, upper palea convex and perfectly glabrous shorter than the lower, stamens 6 monadelphous in a long tube, anthers with a prominent bristle hairy at its apex, squamule none, style and ovary perfectly glabrous, stigma entire terminating in a minute thickened point at its very apex, caryopsis narrow linear oblong, when ripe half as long as the upper palea in which it is closely folded.

Anamallays. It is at once distinguished from all the rest of the genus by the articulated very long spiny point to the lower palea of the terminal or fertile floret, the palea and glumes are perfectly glabrous even at their margins, and the style is glabrous with a simple stigma. *Bedd. Fl. Syl. p. 233.*

## PLATE CCXXXIV.

## RUBIACEÆ.

**NAUCLEA PEDUNCULARIS.** (Wall.) A middling sized tree, glabrous, the branches a little compressed, leaves ovato-elliptic coriaceous acuminate glabrous about 6 inches long by 2 broad, petioles 3-4 lines long, peduncles terminal stout, pedicels 3 slender 15-18 lines long bracteate at the base, flower heads 8-9 lines in diameter, no bracteoles between the flowers, calyx-segments linear-spathulate rounded at the apex a little hairy, corol yellow turning to purple, tube a little hairy towards the apex outside and hairy within, lobes oblong hairy outside and there furnished with a short horn below the apex, filaments about as long as the anthers, anthers slightly apiculate, stigma globose sulcate, ovules about 7 in each cell, the placentas pendulous from nearly the apex of the partition. *Wall. cat. 6091;—Walps. Rep. ii. 512.*

Ceylon, Saffragam and contiguous districts, up to 1000 feet, not uncommon.

## PLATE CCXXXV.

**PSYCHOTRIA ANAMALLAYANA.** (Bedd.) A large shrub or small tree, glabrous, stipules broad-lanceolate with a long acumination much sheathing, 1-2 inches long deciduous, leaves cuneato-obovate shortly and abruptly acuminate, 8-12 inches long 2-2 $\frac{3}{4}$  inches broad towards the apex, much attenuated towards the base, petiole 1-2 inches long, cymes terminal shortly pedunculate many flowered, flowers greenish large, bracts minute acute deciduous, calyx cup-shaped shortly but sharply 5-toothed, corol-tube very short villous in the jaws at the insertion of the anthers, lobes thick rather longer than the tube, filaments glabrous as long as the anthers. Style glabrous, stigma of 2 clavate lobes, berry oblong about 9 lines long by 4 broad, crowned with the remains of the calyx. *Grimilea longifolia, Bedd. in. Linn. Trans. Vol. XXV. p. 218 (not Psychotria longifolia, Dalz.)*

Anamallay forests, generally on banks of rivers at 3000-4500 feet elevation.

## PLATE CCXXXVI.

**RANDIA DECCANENSIS.** (Bedd.) An unarmed tree 30 feet, young shoots tomentose, leaves broadly-ovate rhomboid-ovate or almost orbicular obtuse or emarginate scarcely coriaceous, above glabrous or subglabrous in age, beneath densely velvety, 3-4 inches long by 2-4 broad, petioles  $\frac{1}{2}$ -1 inch long, cymes axillary or from the old axils a little shorter than the leaves subglabrous, rather loose, the branchlets 3-flowered, flowers 5-merous white 6 lines in expansion, calyx cup-shaped, the teeth small acute, corol hairy outside the tube scarcely as long as the lobes hairy in the jaws, lobes rounded. Stamens exerted quite sessile, style linear, stigma scarcely exerted globular entire, ovary cells 5 ovuled, fruit not seen. *Bedd. Fl. Syl. under Rubiaceæ.*

Nallaymallay mountains, Kurnool.

## PLATE CCXXXVII.

**PLECTRONIA MACROCARPA.** (Thw.) Shrubby subsacandent, thorns axillary very stout recurved, branches terete rufo-pilose when young glabrous in age, leaves ovate acuminate 1 $\frac{1}{2}$ -3 inches long by  $\frac{3}{4}$ -1 $\frac{1}{2}$  broad densely rufo-pilose beneath particularly on the prominent veins, sparingly pilose above, petioles 2-3 lines long pilose, cymes pilose solitary in the axils the peduncles 6-8 lines long, flowers numerous on the dichotomous branchlets with a single one in the fork, brownish white rounded at the apex in the bud, 5-merous, calyx minutely toothed, corol about 3 lines long contracted above the tube when in bud, the lobes lanceolate a little hairy on the outside at length reflexed and a little longer than the tube, tube pilose within. Stamens exerted, style hairy much exerted, stigma thick

ovoid entire sulcated, drupe roundish rather compressed emarginate 1 inch long. Seeds tuberculate. *Canthium macrocarpum*, *Thw. En. Fl. Zey. p. 152.*

Ceylon, Hartani, at 3000 feet elevation.

PLATE CCXXXVIII.

**PLECTRONIA TRAVANCORICA.** (Bedd.) A middling sized tree unarmed, branches terete glabrous. Stipules with a long filiform subulate point (5 lines long) from a broad base; leaves ovate with a bluntish acumination glabrous membranaceous, about 2 inches long by 1 inch broad, much paler beneath, petioles 6-8 lines long, cymes glabrous slender many-flowered axillary or from tubercles at the axils solitary or several together shorter than the leaves, pedicels elongate and slender, flowers 4-merous very small rounded in the bud campanulate, calycine teeth subulate persistent, the tube and lobes of the corol each  $1-1\frac{1}{2}$  lines long, tube with a ring of hairs in its jaws, lobes ovate scarcely acute, stamens exserted, style much exserted glabrous, stigma globose sulcate, fruit not seen

I have only met with this tree on the Travancore and Tinnevely ghats.

PLATE CCXXXIX.

**SCYPHOSTACHYS COFFEOIDES.** (Thw.) A shrub, leaves lanceolate much attenuated at both ends acuminate at the apex glabrous subcoriaceous,  $2\frac{1}{2}$ -5 inches long by  $\frac{3}{4}$ - $1\frac{1}{4}$  inch broad, petioles 1-2 lines long, stipules entire at the margins glabrous inside subscarioso, peduncle very short or wanting, flowers solitary at first almost quite enclosed in the large sheathing subscarioso bracteole, fruit a red berry. Seed oblong striated about 2 lines long. *Thw. En. Pl. Zey. p. 157.*

Ceylon, Ratnapoora district, abundant up to no great elevation, called Wal copee.

PLATE CCXL.

## EUPHORBIACEÆ.

**AGROSTISTACHYS INDICA.** (Dalz.) A small tree up to 15 feet high, leaves subcoriaceous or coriaceous, 5-15 inches long by 1-6 inches broad, from narrow lanceolate elliptic to very broadly ovate, very coarsely serrated with the serratures incurved, or sometimes quite entire, margin much thickened, glabrous on both sides, primary veins very prominent and thick very variable in number, transverse veinlets also very prominent, petioles up to 2½ inches long, stipules ovato-lanceolate subulate acuminate striated soon deciduous, bracts broadly triangulari-ovate acute concave sericeous, petals obovate, connective obtuse produced beyond the anther-cells. Ovary hairy. *Dalz. l. c.*

Very common in our dense Ghat forests from Canara down to South Tinnevely, 3-5000 feet elevation, also on the Bombay ghats, and in Ceylon 1-2000 feet elevation, and in Birimah and the Andamans.

PLATE No. CCXLI.

## BIXINEÆ.

**ASTERIASTIGMA MACROCARPA.** (Bedd.) A large tree, diœcious, young shoots minutely aureo-pubescent, leaves exactly oblong with a short sudden point at the apex, quite entire, above glabrous or the costa very minutely pubescent towards the base, beneath glabrous except the costa and primary veins (which are minutely strigose) and furnished with very minute white dots (under the lens) 10-12 inches long by 3½ broad, venation very prominent beneath, the primary veins much raised about 7 on each side alternate, veinlets parallel prominent with the venules prominent and beautifully reticulated, petioles 9-10 lines long pubescent, *female* flowers whitish about 1 inch across in few-flowered 1-1½ inches long fascicles on the older branches, pedicels 4-5 lines long thick, calyx segments rounded minutely puberulous or subglabrous, petals 12 shorter than the calyx ciliate oblong, stamens about 60 in 2 rows, anthers oblong small opening longitudinally along the outer edge, ovary sessile, placentas 6-7. *Male* flowers in short axillary many-flowered racemes, petals 16, stamens about 70 in 3 rows rudiment of ovary 8-lobed. *Bedd. Flora Sylvatica page cccxxvi and Analytical Plate 28 male flowers only; tab. cclxvi. the female tree.*

Travancore ghats, 2-3000 feet elevation.

PLATE No. CCXLII.

## LEGUMINOSÆ.

**SMITHIA SETULOSA.** (Dalzell.) 3-4 feet high, stems hispid with long deflexed hairs, leaves 4-5 inches long, leaflets 5-10 pair linear-oblong ending in a bristle glabrous on both sides, the margins long ciliate about 1-1½ inches long by 3-5 lines broad, the common petiole hispid, stipules adnate setaceo-acuminate scariose glabrous, flowers in a large terminal panicle, calyx striated strigose and ciliate, the segments entire very unequal the upper large suborbicular or obovate the lower boat-shaped acute, bracts small ovate nearly half as long as the calyx, flowers bright yellow, legume 10-12 seeded reticulated. *Dalz. in Hook. Journ. Bot. iii. p. 208.*

Common in the Wynaad and elsewhere on our Western Ghats and in the Bombay Presidency; the specimen figured was gathered at the head of the Carcoor ghat at nearly 3000 feet elevation.

PLATE No. CCXLIII.

**SMITHIA CAPITATA.** (Dalz.) Stems glabrous 1-2 feet, leaves 1½-2½ inches long, leaflets 9-15 pair linear oblong obtuse ending in a bristle ciliate at the margins and on the costa beneath with long hairs, 4-6 lines long by 1½-2 lines broad, the common petiole hispid, stipules adnate terminating in a bristle, flowers numerous in spherical solitary terminal heads, bracts obovate equalling the calyx and similar to its segments, calyx segments glabrous undivided but very coarsely toothed the teeth ending in very long bristles, legume 5-7 seeded glabrous smooth. *Dalz. l. c.*

The Anamallays, Bolampatty hills and elsewhere on our Western Ghats and on the Bombay Ghats; the specimen figured was gathered on the Bolampatty hills near Coimbatore.

PLATE No. CCXLIV.

## ACANTHIACEÆ.

**EBERMAIERA LIGULATA** (Bedd.) Shrubby erect 2-3 feet, stems terete glanduloso-pubescent, leaves membranaceous 1-3½ inches long by ¼-¾ inch broad spatulate and gradually decurrent down the petiole entire or obscurely crenate, glanduloso-pubescent

when young, glabrous or subglabrous in age, flowers axillary solitary, bracteoles 1-nerved subspathulate from shorter to much longer than the calyx glanduloso-pubescent, as is the calyx; calyx cleft to nearly the base 4 of the segments subequal in length 2 being subulate and 2 spathulate, the 5th segment much longer and spathulate, corol about 4-5 lines long infundibuliform, anthers versatile fixed to the filaments near the apex, filaments hairy, stigma bifid the lower tooth again inconspicuously bifid. Capsule linear glabrous 3-4 lines long.

Coorg, about Kiggatnad, not observed elsewhere.

PLATE No. CCXLV.

**ADENOSMA PINNATIFIDA.** (Dalz.) Herbaceous weak, stems obtusely 4-sided 1-2 feet all the parts glanduloso-pubescent, leaves 3-4 inches long 1-1½ broad petiolate deeply pinnatifid the segments 6-8 on each side linear-oblong obtuse, subentire or lobulate, flowers solitary in the axils sessile, or congested in heads at the apex of the branchlets, bracts and bracteoles oblong foliaceous entire or sub-lobulate a little shorter than the calyx, calyx segments linear entire or lobulate, corol 5 lines long the palate bullate, filaments hairy only at the very base, ovary and base of the style puberulous. *Nomaphila pinnatifida*, Dalz. in Hook. Journ. Bot. iii. 38.

Canara and Concan on the banks of streams.

PLATE No. CCXLVI.

**RUNGIA APICULATA.** (Bedd.) An erect plant stems lineolate 1-2 feet, leaves from ovate or ovato-lanceolate to narrow linear lanceolate acute or obuse membranaceous minutely lineolate entire or slightly scolloped 2½-4 inches long by 5-12 lines broad, petioles up to 1 inch long, spikes axillary and terminal minutely glanduloso-puberulous, more or less secund, bracts ovate or rhomboid ovate with a long subulate acumination and a diaphanous margin, bracteoles linear-subulate like the equal calycine segments but a little shorter, corol 5 lines long the upper lip much shorter than the lower emarginate the lobes rounded, the lower lip with 3 short rounded lobes, anther-cells unequal oblique the lower one spurred, capsule pubescent.

Tinnevelly hills, 2-3000 feet, beds of rivers, ovate and linear leaves often occur on the same individual.

PLATE No. CCXLVII.

**CALOPHANES DAZELLII.** (Anders. MS.) Shrubby, stems villous or woolly, all the parts except the capsule glanduloso-pubescent, leaves ovate 1½ inches long by ¾ inch broad, submembranaceous prominently nerved beneath, peduncles axillary generally 3-flowered, bracteoles shorter and broader than the calyx, calycine-segments subulate ½ as long as the corol, corol pubescent about 1 inch long, anthers spurless.

Poonah, on rocky hills, it has thicker, much smaller, more prominently veined, and more hirsute leaves, and fewer flowers than the common *C. vagrans*, and its spurless anthers at once distinguish it.

PLATE No. CCXLVIII.

**GYMNOSTACHYUM HIRSUTUM.** (Anders.) Stem erect 2-3 feet, leaves ovate acute attenuated at the base scabrous above, hirsute on the veins and veinlets beneath, 5-7 inches long by 2½-3 inches broad, petioles up to 2 inches long, panicles axillary and terminal very hirsute, bracts ovate foliaceous, bracteoles linear-subulate ciliate nearly equalling or a little longer than the calyx, calyx 5-cleft to nearly the base the segments like the bracteoles, corol greenish-yellow equalling or a little longer than the calyx, hairy on the outside, the limb shortly bilabiate the lobes rounded, filaments hairy at the base, anthers white, ovary and style glabrous, capsule 8-12 seeded. *And. in Thw. En. Pl. Zey. p. 233.*

Ceylon, central provinces, at 3-5000 feet elevation.

PLATE No. CCXLIX.

**GYMNOSTACHYUM OVATUM.** (Anders. MS. in Herb. Bedd.) Stem erect 4-sided glanduloso-hirsute as is the whole plant, leaves ovate acute attenuated at the base entire furnished with a few hairs above and hirsute on the veins beneath, 2½-3 inches long by nearly 2 broad, racemes terminal and axillary often paniculate rather lax and somewhat recurved, bracts and bracteoles small and subulate, calyx cleft to nearly the base the segments subulate and glanduloso-ciliate, corol 2-3 times as long as the calyx a little

hairy outside, limb shortly bilabiate, the lobes rounded, stamens included the filaments much dilated in the centre filiform below ciliate, anther cells oblique the connective hairy, capsule 6-8 lines long a little hairy, seeds about 8.

On the Myhendra hills, Berhampore, 2000-4000 feet elevation.

PLATE No. CCL.

**GYMNOSTACHYUM GLABRUM.** (Dalz.) Suffruticose glabrous or subglabrous except the inflorescence, stems obtusely 4-sided, leaves ovate to elliptic acuminate dentate decurrent in a wing down the petiole, 6-11 inches long (of which the petiole is  $1\frac{1}{2}$ - $2\frac{1}{2}$  inches), panicles glanduloso-puberulous terminal large up to nearly 1 foot long, bracteoles subulate small, calyx deeply 5-cleft  $2\frac{1}{2}$ -3 lines long, corol 8-9 lines long puberulous on the outside, white mottled with purple inside, the tube irregularly curved, limb bilabiate, upper lip 2-fid lower 3-fid, filaments and style hairy at the base, ovary and capsule glanduloso-pubescent, seeds numerous. *Dalz. in Hook. Journ. of Bot.* ii. 338.

South Concan, in shady places.

PLATE No. CCLI.

**GYMNOSTACHYUM PANICULATUM.** (Anders.)  $1\frac{1}{2}$ -2 feet generally all of a purplish tint, stem somewhat 4-sided, leaves ovate subacute attenuate at the base on to the petiole, a little hirsute or puberulous or quite glabrous, 3-7 inches long by  $1\frac{1}{2}$ - $2\frac{1}{2}$  inches broad, panicles terminal many-flowered, flowers crowded purplish, calyx 2 lines long cleft to nearly the base, segments short lanceolate glanduloso-tomentose, corol 7 lines long externally a little tomentose, tube curved, limb somewhat bilabiate the 5 lobes rounded, base of the filament and the ovary hairy, style glabrous, capsule 1 inch long hairy. *Anders. in Thw. En. Pl. Zey. p. 232.*

Ceylon, Saffragram and Galle districts, at 1000-2000 feet elevation.

PLATE No. CCLII.

**GYMNOSTACHYUM LATIFOLIUM.** (Dalz.) Suffruticose glabrous, stem 3-4 feet 4-sided, leaves exactly ovate to sub-orbicular acute entire or subcrenulate with the 3-4 inch petiole about 1 foot long by 5 inches broad, panicles or racemes axillary 3-5 inches long, bracts and bracteoles subulate minute, calyx segments 2-3 lines long subulate, flowers  $1\frac{1}{4}$  inch long slightly puberulous outside the limb very shortly bilabiate the upper lip slightly emarginate, filaments hairy except at the apex, anthers subincluded the cells parallel hairy and ciliate, ovary style and capsule glabrous, capsule 1 inch long many-seeded. *Cryptophragmium latifolium, Dalz. in Hook. Kew Journ.* ii. 137.

South Canara jungles about Eed, Mysore and Bombay ghats. In leaf very like *Phlogacanthus latifolius* of Wight, which is common in Coorg, but the flowers in that are much more numerous, more deeply bilabiate, the anthers glabrous and much exerted.

PLATE No. CCLIII.

**GYMNOSTACHYUM SERRULATUM.** (Nees.) The whole plant glanduloso-pubescent. Stem erect, leaves ovate acute serrate about 6-7 inches long by  $3\frac{1}{2}$  broad, petioles up to  $2\frac{1}{2}$  inches long, panicles axillary sub-spicate, flowers secund, bracts and bracteoles subulate scarcely longer than the very short pedicel, calyx cleft to nearly the base, segments subulate 2-3 lines long, corol 7-8 lines long, tube slightly curved, limb very shortly bilabiate the 5 lobes rounded, filaments hairy at the base, ovary and style hairy, capsule hairy 7-8 lines long the cells 12-seeded. *Cryptophragmium serrulatum, DC. Prod.* xi. 95.

South Canara ghats.

PLATE No. CCLIV.

**GYMNOSTACHYUM THWAITESII.** (Anders.) Stem very short tomentose, leaves subradical ovate obtuse unequal at the base hirsute about 4 inches long by  $1\frac{1}{2}$  broad, petioles  $\frac{1}{2}$  to 1 inch long tomentose, panicle pubescent terminal elongate many flowered naked at the base, the branchlets opposite cymiform lax, bracts sulcate, calyx  $1\frac{1}{2}$ -2 lines long the segments subulate, corol bilabiate 6 lines long, capsule 7-8 lines long a little hairy. *Anders. in Thw. En. Pl. Zey. p. 232.*

Ceylon, Ambagamwa district.

PLATE No. CCLV.



**BARLERIA PILOSA.** (Wall.) A small weak much branched undershrub, the young branches glanduloso-pilose, leaves exactly ovate inconspicuously toothed or subentire, acute, 1-2 inches long by  $\frac{1}{2}$ - $\frac{3}{4}$  inch broad glanduloso-pilose, petioles 3-5 lines long pilose, peduncles axillary very short 1-flowered, bracteoles linear reflexed much shorter than the calyx pilose, the larger calyx segment 6-8 lines long equal ovato-orbicular repando-dentate ciliate and slightly hairy subscariose and prominently 7-nerved and reticulated, the interior segments small narrow lanceolate dentate, corol about  $1\frac{1}{2}$ -2 inches long pale sky-blue glabrous or subglabrous, tube incurved, lobes obtuse, stamens 2 fertile, and 3 perfectly sterile apiculate staminodes, stigma truncate. *DC. Prod. xi. 234.*

Tinnevely, common on the hills about Courtallum, 1000-1500 feet elevation.

PLATE No. CCLVI.

**BARLERIA MONTANA.** (Nees.) Suffruticose, branches glabrous the nodes distant, leaves oblongo-elliptic acute attenuated into the petiole, sparingly hairy and the margin ciliate when young, at length glabrous but lineolate above, about 5 inches long by  $1\frac{1}{2}$  broad, petioles 4-10 lines long, flowers axillary solitary sessile, bracts linear small a little hairy, the larger calyx-segments herbaceous oblongo-elliptic  $1-1\frac{1}{2}$  inch long equal entire ciliate and a little hairy or glabrous, the inner segments linear subulate much shorter, corol  $2-3\frac{1}{2}$  inches long blue, lobes obtuse, staminodes 2 setaceous and without any approach to anthers. *DC. Prod. xi. 232.*

Anamallays and elsewhere on our Western ghats up to 4000 feet, but not common; also in Central India, Jubbulpore, &c.

PLATE No. CCLVII.

**BARLERIA BEDDOMEI.** (Anders. MS.) Shrubby, stems terete strigose, leaves lanceolate acute entire 3-4 inches long by  $1-1\frac{1}{4}$  broad strigose, petioles 2-3 lines long, flowers axillary subsessile solitary, bracteoles 2 small linear recurved strigose as is the calyx, the exterior calyx-segments large foliaceous lanceolate the lower one minutely bifid at the apex, the interior segments much smaller linear-subulate, corol hirsute on the outside  $3\frac{1}{2}$ -4 inches long pure white, tube long slender, the fertile pair of stamens nearly as long as the corol, a pair of very short effete stamens with the connective of the sterile anthers spurred at the back, a 5th minute perfectly effete filament between the latter.

Siughur, Bombay presidency.

PLATE No. CCLVIII.

**STROBILANTHES GARDNERIANUS.** (Nees.) 1-2 feet, stems hirsute upwards, leaves ovate obtuse subcordate at the base, sessile crenato-serrate scabroso-hirsute on both sides about 2 inches long by  $1\frac{1}{2}$  broad, spikes axillary and terminal, bracts large oval glanduloso-hirsute as are the calyx and bracteoles, bracteoles lanceolate large, calyx cleft about  $\frac{1}{2}$  way down, the segments lanceolate acute, corol purple about 1 inch long a little hairy outside the lower half of the tube much contracted. Stamens 4 monadelphous the 2 middle ones shorter, filaments hairy at the very base only, ovary hairy at the apex, style glabrous. *Endopogon Gardnerianus, DC. Prod. xi. 723.*

Ceylon, Hantani, at 4000 feet elevation.

PLATE No. CCLIX.

**STROBILANTHES VESTITUS.** (Nees.) Herbaceous hirsute. Stem erect, leaves oval or oval-oblong acuminate, the base obtuse or acute, dentate, hirsute on both sides, 5-8 inches long (without the petiole) by  $1\frac{1}{2}$ - $3\frac{1}{2}$  broad, petioles up to 3 inches long. Spikes axillary simple or branched the peduncles often geniculate at the apex, flowers 6-8 in a short oblong head, bracts oval sessile acuminate longer than the calyx densely ciliate and sparingly hairy, bracteoles lanceolate hirsute a third shorter than the calyx, calyx-lobes subequal lanceolate hirsute, flowers glabrous large  $1-1\frac{1}{2}$  inch long the tube contracted only at its base, the mouth widely campanulate, stamens monadelphous equal much exerted, filaments ovary and style glabrous. *Nees. in. DC. vol. xi. p. 180.*

Ceylon, Matturate, elevation 5-7000 feet.

PLATE No. CCLX.

## ACANTHACEÆ.

**STROBILANTHES ARNOTTIANUS.** (Nees.) Shrubby erect, the whole plant hispid with whitish hair, leaves very scabrous above hairy beneath, oval or ovate to cordate acute and dentate, about 2 inches long by  $1-1\frac{1}{2}$  broad, petioles unequal up to 1 inch long, peduncles axillary as long or longer than the leaves simple or branched geniculato-flexuose, spikes oval few flowered, bracts leafy oval, bracteoles linear lanceolate a little shorter than the calyx, calyx about 6 lines long cleft to nearly the base the segments linear-lanceolate densely albo-strigose, corol 1 inch long whitish, campanulate the tube not much contracted the mouth wide, stamens 4 exserted the inner 2 a little shorter than the outer ones monadelphous in a tube at the base, filaments glabrous, ovary and style hairy. *DC. Prod. xi. 179.*

Ceylon, Newera Ellia, allied to *S. Perottettianus* and *vestitus*.

## PLATE No. CCLXI.

**STROBILANTHES HOOKERII.** (Nees.) 5-6 feet high leaves oval to oblongo-elliptic acuminate crenate, 4-6 inches long by about 2 inches broad scabrous and a little hairy on both sides but particularly beneath, petioles  $1-1\frac{1}{2}$  inches long, spikes axillary naked below, leafy towards the apex glabrous, from shorter to about as long as the leaves, bracts sessile broad orbicular subglabrous or ciliate and more or less hairy, bracteoles spatulate small, calycine segments lanceolate acute equal a little hairy, corol about  $1\frac{1}{2}$  inches long broadly campanulate at the mouth much exceeding the bracts, lobes rounded retuse, white marked at the jaws with 3 purple longitudinal lines, stamens 4 all of the same length slightly monadelphous at the base, stamens exserted, filaments ovary and style glabrous. *DC. Prod. xi. p. 185.*

Ceylon, central provinces, elevation 7000 feet, nearly allied to *S. calycinus* and *Bolampattianus*.

## PLATE No. CCLXII.

**BARLERIA VESTITA.** (Anders.) Herbaceous 6-8 feet, hirsute the hairs patent, leaves ovato-elliptic attenuate at both ends, petiolate or subsessile entire, 6-12 inches long; cymes long peduncled axillary or terminal sparingly flowered lax a little shorter than the leaves, bracts very narrow lanceolate acute. Calyx fulvous strigose the segments acute unequal lanceolate, the two inner ones much smaller, the lower one entire or minutely bifid, corol white or pale purple narrow infundibuliform 3 inches long the lobes a little shorter than the tube, stamens 2 long and fertile and 3 very short and effete, filaments ovary and style glabrous. *Anders. in Thw. En. Pl. Zey. p. 230.*

Ceylon, central provinces and in the Saffragram districts up to 5000 feet elevation.

## PLATE No. CCLXIII.

**BARLERIA NUTANS.** (Nees.) Stem shrubby, leaves elliptic acuminate, glabrous and shining lineolate, 5-7 inches long by about 2 inches broad, petioles  $1-1\frac{1}{4}$  inches long. Spikes axillary and terminal as long or longer than the leaves naked below glanduloso-hirsute, bracts and bracteoles small linear acute, calyx divisions lanceolate acute the upper one longer than the others 5-nerved, the lower one bifid at the apex, the 2 lateral ones narrow, flowers 1 inch long bluish-purple, stamens 2 long and fertile 2 very short and effete, filaments and apex of the ovary a little hairy. *Nees in DC. xi. 227.*

Ceylon, central provinces, 1000-3000 feet elevation.

## PLATE No. CCLXIV.

**GYMNOSTACHYUM CEYLANICUM.** (Arnt. and Nees.) Stems pubescent 1-3 inches long rooting between the leaves, leaves spatulate to oblong or oval often decurrent down the petiole obtuse or subacute, 4-6 inches long by  $1\frac{1}{4}-2$  broad cano-pubescent beneath lineolate above, panicles terminal 6-10 inches long pubescent, flowers fascicled, calyx and corol pubescent, calycine segments subulate, corol 8-9 lines long the tube pale purple the limb greenish yellow, anthers white ecalcarate, filaments at the base and ovary a little hairy, capsule 5 lines long tetragonal 12-seeded. *DC. Prod. xi. 93.*

Ceylon, shady places in the hot drier parts of the island.

## PLATE No. CCLXV.

**RUNGIA LONGIFOLIA.** (Nees and Arnt.) Stems slightly pubescent branched from the base, leaves unequal the lower oval or orbicular very small, the upper linear spatulate 3-4 inches long by 3 lines broad scolloped lineolate, spikes small axillary or terminal solitary or twin, bracts 3 lines long broad oblong long-ciliate mucronate and with a membranaceous margin, bracteoles narrower and smaller ciliate, calyx glabrous, corol 4-5 lines long a little hairy on the outside, upper lip bifid, anthers a little hairy. *DC. Prod.* xi. 471.

Ceylon, Ramboda and Adam's Peak.

PLATE No. CCLXVI.

**PTYSSIGLOTTIS RADICOSA.** (Anders.) Stems creeping slightly pubescent, leaves distant oval obtuse lineolate and furnished with a few setæ on the upper side glabrous or subglabrous beneath.  $1\frac{1}{2}$  inches long by about 1 inch broad, petiole 4-6 lines long. Spikes terminal on longish peduncles (4-7 lines), bracts subulate, calyx segments subulate, corol white 6 lines long the upper lip bipartite segments acute, lower lip tripartite segments rounded, capsule 3 lines long, seeds tuberculate. *And. in Thw. En.* p. 235. *Rhytiglossa radicata*, *DC. Prod.* xi. 344. *Rostellaria sarmentosa*, *Zollinger Pl. Java.* ; *DC.* 370.

Ceylon, hot drier parts of the island.

PLATE No. CCLXVII.

**JUSTICIA HOOKERIANA.** (Nees.) Stem suffruticose 4-6 angled, glabrous in age, leaves narrow lanceolate obtuse or acute 2-2 $\frac{1}{2}$  inches long by 5-6 lines broad glabrous decurrent on to a very short petiole, spikes axillary flexuose longer than the leaves, flowers distant, bracts and bracteoles linear or subspathulate, corol 4-5 lines long. *Adhatoda Hookeriana*, *Nees. in DC. Prod.* xi. 403. *Justicia*, *Anders. in Thw. En. Pl. Zey.* 233. *Leptostachya Zeylanica*, *Nees in partim.*

Ceylon, abundant on banks of streams in the central provinces.

PLATE No. CCLXVIII.

**MONOTHECIUM ARISTATUM.** (Wall.) Stems puberulous, leaves elliptic oblong furnished with a few hairs on the veins, 2-2 $\frac{1}{2}$  inches long by 1-1 $\frac{1}{2}$  broad, petioles generally unequal up to 1 inch long, spikes terminal, bracts and calycine segments subulate glanduloso-pubescent, corol slightly puberulous on the outside white the lower lip blotched with red. *Justicia aristata*, *Wall. in Cat.* 2481. *Anthocometes aristatus*, *Nees in DC.* xi. 312. *Monothecium*, *And. in Thw. En. Pl. Zey.* p. 234.

Nilgiris and Ceylon.

PLATE No. CCLXIX.

GUTTIFERÆ.

**GARCINIA PURPUREA.** (Roxb.) A small tree, diœcious, leaves (red when young) lanceolate elliptic 3-4 inches long by 1-1 $\frac{1}{4}$  broad, penniveined the primary veins irregular and not conspicuous; *male*, flowers peduncled 3-8 (generally 3) in the terminal axils 2-4 in the lateral ones, stamens very numerous on an entire short column, anthers oblong 2-celled dehiscing longitudinally, rudiment of ovary none; *female*, flowers sessile solitary or 2 and 3 together, sterile stamens in 4 phalanges in a ring round the ovary each phalanx with 2-7 staminodes in 1-2 rows, ovary cells and stigmas 5-8. Fruit globose not furrowed 1-1 $\frac{1}{2}$  inches in diameter purple or white, edible. *Roxb. Fl. Ind.* ii. 624.

A very common tree throughout North Canara where it is called Kokum; there are 2 varieties, one with white and the other with purple fruit the fruit has a very agreeable acid flavor and is much eaten, and a syrup is made from it. The seeds furnish the kokum, a concrete oil or soapy substance useful in healing chaps; the tree flowers in November and December and the fruit ripens in the hot weather.

PLATE No. CCLXX.

MELASTOMACEÆ.

**KENDRICKIA WALKERI.** (Hook. f.) An epiphytic scandent shrub, leaves 5-nerved oblong or ovato-oblong narrowed at both ends obtuse furfuraceous when young, subentire, or ciliato-dentate when young, 1 $\frac{1}{2}$ -3 inches long paler beneath, petioles 2-3 lines long, pedicels about 1 $\frac{1}{2}$  inches long and with the bracts and calyx sparingly ferruginous, bracts oblong obtuse 2-3 lines long,

calyx red, petals fleshy ovato-rotundate about  $1\frac{1}{2}$  inches long rose colored. *Hook. and Benth. Gen. Pl. vol. i. 751. Mediulla? Walkeri, Wight Ill. i. 217. Pachycentria, Thw. En. p. 107.*

Ceylon, one of the most beautiful plants in the island, covering the trunks and branches of trees at 3000-5000 feet elevation.

PLATE No. CCLXXI.

#### STYRACEÆ.

**SYMPLOCOS OLIGANDRA.** (Bedd.) A small or middling sized tree much branched, gemmæ and young parts minutely puberulous, leaves coriaceous elliptic shortly pointed or rarely obtuse glabrous on both sides, shining above, pale beneath, quite entire or with a very inconspicuous tendency to crenation near the apex, about 2 inches long by 8 lines broad, petioles 2-3 lines long channelled on the upper side and puberulous, racemes puberulous very short scarcely longer than the petioles 3-6 flowered, calyx puberulous scarcely a line long segments unequal, corol glabrous about twice as long, stamens as long as corol 12 (rarely only 10-11) generally hexadelphous in pairs or irregularly pentadelphous, some in bundles of 2-3-4 the others solitary, ovary 3-celled, ovules 2, the upper one very small suberect the lower long and pendulous, fruit not seen. *Bedd. Fl. Sylvatica p. cl.*

PLATE No. CCLXXII.

#### MYRTACEÆ.

**EUGENIA SINGAMPATTIANA.** (Bedd.) A small dense tree, leaves opposite coriaceous oblongo-ovate to broad ovate subcordate at the base retuse or subacute at the apex deep green above, very pale beneath, perfectly glabrous, about 3 inches long by  $1\frac{1}{2}$ -2 inches broad, primary veins numerous and forming a continuous loop near the margin, flowers white in expansion about  $\frac{1}{2}$  an inch on very short terminal crowded racemes, calyx and bracts with a slight pubescence, petals 4 distinct, prominently veined and inconspicuously dotted.

I have only met this tree on the Singampatty hills (Tinnevely ghats) at 3000 feet elevation in moist forests.

PLATE No. CCLXXIII.

#### RANUNCULACEÆ.

**THALICTRUM DALZELLII.** (Hook.) Stem erect 1 foot high, leaves 3-foliolate rarely 2-ternate slightly sheathing at the base, leaflets  $1\frac{1}{2}$ - $2\frac{1}{4}$  inches in diameter reniform deeply cordate 7-9 lobed lobes crenate or toothed, stipules oblong free, panicle subsimple small, flowers white, fascicled at the ends of the branches, filaments clavate about 50, achenes about 38 not compressed sessile, ribbed, furnished with long straight beaks hooked at the top. *Hook. and Thom. Fl. Ind. 10.*

Bababooden hills and Canara ghats, also in the Bombay Presidency (Harrichander.)

PLATE No. CCLXXIV.

#### RUTACEÆ.

**PARAMIGNYA ARMATA.** (Thw.) A large scandent shrub, spines deflexed often recurved, leaves 1-foliolate ovato-oblong to ovate with a sudden acumination, the apex obtuse or mucronulate glabrous or slightly hairy on the under side and the costa puberulous, punctate, 1-3 inches long by  $1-1\frac{1}{2}$  broad, petioles articulated 8-9 lines long, flowers solitary or several together in the axils, pedicels slender articulate 3-12 lines long, calyx small 4-5-triangulari-lobulate or dentato-lobate puberulous, petals 4 oblong punctate imbricate. Stamens 8-10, filaments hairy apiculate towards the apex dilated below, anthers oblong, ovary pilose and punctate 3-4-5 celled seated on a large gynophore, ovules solitary pendulous, style thick punctate, stigma dilated, fruit rotundate about  $\frac{1}{2}$  an inch in diameter yellowish green when ripe. *Anthromiscus armatus, Thw. En. Pl. Zey. 47. Paramignya, Oliver on Aurantiaceæ p. 43.*

Common on our Western ghats, Wynad, Coorg, &c., up to 3-4000 feet elevation, also in Ceylon.

PLATE No. CCLXXV.

#### CAPPARIDEÆ.

**CAPPARIS PARVIFLORA.** (Hook. f. et Thom.) A spreading much branched large shrub, branches unarmed, leaves glabrous subcoriaceous very variable from narrow lanceolate to broad oblong or ovate, attenuate or cordate at the base more or less

suddenly acuminate at the apex, 3-5 inches long by  $\frac{1}{2}$ - $2\frac{1}{2}$  inches broad, veins prominently looped well within the margin, petioles about 2 lines long, flowers whitish about 5 lines in diameter in axillary or subterminal 3-6 flowered subsessile or shortly peduncled umbels, pedicels  $\frac{1}{4}$ - $\frac{1}{2}$  inch slender, calyx ciliate, petals oblong veined ciliate, stamens about 50, ovary oblong glabrous the gynophore  $\frac{1}{2}$  inch long, fruit pisiform scarcely  $\frac{1}{2}$  inch in diameter. *Flora of British India* p. 176.

Tinnevely and Travancore ghats, common in the Pooleary pass and about Courtallum, &c., the leaves are very variable, some of my specimens having them very narrow.

## PLATE No. CCLXXVI.

**CAPPARIS PEDUNCULOSA.** (Wall.) A spreading branched shrub, branches pubescent at length glabrous, thorns short generally recurved, leaves glabrous suborbicular cordate at the base obtuse or retuse penniveined  $\frac{3}{4}$ - $1\frac{1}{4}$  inches long by nearly as broad, shining above, petiole very short, flowers  $\frac{1}{2}$ - $\frac{3}{4}$  inch diameter in 2-6 flowered terminal or axillary and shortly ( $\frac{1}{8}$ - $\frac{1}{3}$  inch) peduncled umbels, pedicels 1- $1\frac{1}{2}$  inches long slender, sepals equalling the petals ciliate at length reflexed, petals oblong ciliate, stamens about 26, ovary oblong glabrous, gynophore 1 inch long, fruit size of a cherry globose, several seeded. *Wall. Cat.* 6,993;—*Fl. Brit. Ind.* p. 176.

Tanjore, Concar, &c.

## PLATE No. CCLXXVII.

## RANUNCULACEÆ.

**CLEMATIS TRILOBA.** (Heyne.) A large climber, silky, leaves small simple ternate or pinnate entire or 1-3-toothed or-lobed, 1-2 inches, elliptic ovate or cordate 3-nerved, panicle axillary many flowered, lower bracts leafy, flowers  $1\frac{1}{2}$ -2 inches in diameter white, sepals 4-6 spreading from the base, membranous oblong, silky outside, filaments about 30 narrow-linear glabrous or slightly hairy at the base, connective of anther not produced, achenes about 10, with long feathery tails. *Heyne in Roth. Nov. Sp.* 251;—*Fl. of Brit. Ind.* p. 3.

Concan ghats and Mawal district.

## PLATE No. CCLXXVIII.

## MALVACEÆ.

**DICELLOSTYLES AXILLARIS.** (Thw.) A middling sized tree, leaves entire ovato-lanceolate smooth  $2\frac{1}{2}$ - $4\frac{1}{2}$  inches long by  $1\frac{1}{2}$ -2 inches broad paler beneath, petioles 3-4 lines long, flowers axillary solitary, bracteoles 4 lanceolate subconnate at the base 1- $1\frac{1}{2}$  inches long by 3-6 lines broad, calyx cupuliform 5-toothed  $\frac{1}{2}$  inch long, petals 5 oblongo-spathulate ciliate and pubescent, staminal column short, ovary 2-celled cells 2-ovuled, style branches 2, stigmas large globose, fruit hispid. *Kydia axillaris*, *Thw. En. Pl. Zey.* p. 30. *Dicellostyles*, *Benth. Gen. Pl.* i. p. 207.

Ceylon, near Badulla, elevation 2000 feet.

## PLATE No. CCLXXIX.

**JULOSTYLIS ANGUSTIFOLIA.** (Thw.) A middling sized tree sparingly branched, leaves narrow oblongo-lanceolate entire, gradually acuminate at the apex stellately hirsute, paler beneath 5-8 inches long by  $1\frac{1}{2}$ -3 inches broad, petioles 3-5 lines long, panicles large terminal pendulous stellately pubescent, flowers  $\frac{1}{2}$  inch broad, corol cupuliform, pale colored with the lower half reddish inside, style densely hairy. *Thw. En. Zey.* p. 30. *Kydia angustifolia*, *Arnt. Pug. Pl. Ind. Or.* 4.

Ceylon, south of the island, not uncommon.

## PLATE No. CCLXXX.

## CAPPARIDÆ.

**CAPPARIS LONGISPINA.** (H. f. et Thom.) A shrub 4-6 feet, stems petioles leaves beneath costa of the leaf above base of the thorns rufo-pubescent, leaves coriaceous orbicular-cordate mucronate  $\frac{1}{4}$ - $\frac{3}{4}$  inches each way. Stipules or thorns as long or nearly as long as the leaf straight or slightly curved 2 to each leaf, pedicels slender glabrous 3-4 terminal on the branchlets and often 1 in the axil of the last leaf twice or nearly 3 times as long as the leaves, flowers glabrous, ovary oblong pointed glabrous, gynophore about  $\frac{1}{2}$  an inch.

Canara and Bombay ghats.

## PLATE No. CCLXXXI.

## ACANTHACEÆ.

**RUELLIA PROSTRATA.** (Poir.) Stems prostrate pubescent, leaves ovate obtuse or acute subentire or scolloped pubescent,  $\frac{3}{4}$ - $1\frac{1}{4}$  inches long by  $\frac{1}{2}$ - $\frac{3}{4}$  inch broad, penniveined, petioles 2-6 lines long, flowers white or bluish  $1\frac{1}{4}$  inches long axillary solitary on short peduncles, bracts oval petiolate longer than the calyx pubescent, calyx segments subulate pubescent 2-3 lines long, corol infundibuliform incurved puberulous outside, lobes obtuse regular, capsule glabrous or subglabrous 3 times as long as the calyx about 10-seeded. *Poir. Enc. Meth.* 6. 349. *Dipteracanthus prostratus*, DC. xi. 124, and *D. dejectus*, p. 125.

Common in the Cuddapah, Coimbatore and Tanjore Districts, also in Bengal and Ceylon.

## PLATE No. CCLXXXII.

## MYRTACEÆ.

**EUGENIA TERPNOPHYLLA.** (Thw.) A middling sized tree, branches terete, leaves submembranaceous lanceolate or oblongo-lanceolate with a long acumination and more or less narrowed at the base, the younger ones ferrugineo-pilose,  $2\frac{1}{2}$ -5 inches long by  $\frac{1}{2}$ -2 inches broad, primary veins 5-8 on each side looped near the margin, petioles  $\frac{1}{4}$ - $\frac{1}{2}$  inch long, peduncles axillary and terminal short few flowered rufo-pilose as is all the inflorescence, pedicels about as long as the petioles, petals distinct white twice as long as the sepals, fruit spherical puberulous nearly as large as a cherry generally 1-seeded. *Thw. En. Pl. Zey.* p. 114 and 417.

Ceylon, Ambagamwa and Ratnapoora districts and Reigam Corle up to no great elevation.

## PLATE No. CCLXXXIII.

**CAREYA HERBACEA.** (Roxb.) Stems annual only a few inches high from a permanent ligneous root, leaves short petiole obovate with a short acute point, serrulate, 6-7 inches long by 3-4 inches broad, racemes short terminal, peduncles 1-2 inches long, calyx 9 lines long, petals  $1\frac{1}{4}$  inches long, exterior filaments sterile and exceeding the fertile ones, ovary 1-celled with 4 parietal receptacles, fruit oblong  $2\frac{1}{4}$  inches long by  $1\frac{1}{2}$  inches diameter. *Roxb. Fl. Ind.* ii. 638.

Jubbulpore, Sumbulpore, &c., called Bui koombee; a very beautiful plant which should be introduced into our gardens.

## PLATE No. CCLXXXIV.

## SAPINDACEÆ.

**EUPHORIA GARDNERI.** (Thw.) A middling sized tree, leaves abruptly pinnate, subglabrous, leaflets 2-3 pair lanceolate coarsely and obtusely toothed, shortly petiolate glaucous beneath, about 3 inches long by 1 broad, racemes pubescent but the pubescence not stellate, sepals and petals acute and the latter much longer than the former otherwise as in *E. Longana*.—*Nepelium Gardneri*, *Thw. En. Pl. Zey.* p. 58.

Ceylon, Putlam.

## PLATE No. CCLXXXV.

**SCHMIDELIA ALLOPHYLLA.** (DC.) A small tree, leaves glabrous lanceolate, ovato-lanceolate or oblong acuminate entire or coarsely toothed near the apex, 5-10 inches long by  $1\frac{1}{2}$ - $3\frac{1}{2}$  inches broad, veins prominent and looped well within the margins,

petioles  $\frac{1}{2}$ -1 inch long, flowers small villous in axillary racemes 6-12 lines long, petals with a very villous scale on their inner face and with a long claw, disk of 4 large glandular lobes, berry round size of a pea red. *DC. Prod.* i. 611.

Ceylon, Ambagamwa and Hinidoon Districts up to 3000 feet elevation.

PLATE No. CCLXXXVI.

**SCHMIDELIA ACUMINATA.** (Thw.) A small tree, branches terete glabrous, leaves glabrous ovate obtusely rostrato-acuminate,  $2\frac{1}{2}$ - $4\frac{1}{2}$  inches long by 1-2 inches broad, petioles 4-7 lines long, racemes elongate subglabrous few flowered, the petals with a very densely villous scale. *Thw. En. Pl. Zey.* p. 55.

Ceylon, Galagama on banks of streams 2000-3000 feet elevation; the analysis in the plate gives only male flowers.

PLATE No. CCLXXXVII.

**SCHMIDELIA VARIANS.** (Thw.) A small tree, branches terete glabrous, leaves glabrous lanceolate acuminate entire 4-6 inches long by  $1\frac{1}{2}$ - $1\frac{3}{4}$  inches broad, petioles  $\frac{1}{2}$ -1 inch long, racemes puberulous 4-5 inches long, bracts very minute and very shortly pilose. *Thw. En. Pl. Zey.* p. 408.

Ceylon, central provinces, 2000-5000 feet elevation.

PLATE No. CCLXXXVIII.

**NEPHELIUM BIFOLIATUM.** (Thw.) A middling sized tree, 20-30 feet high, much branched, leaflets 1 pair, common petiole about 1 inch long glabrous entire lanceolate obtusely pointed shining above, reticulated, opaque and fuscous beneath, 3-5 inches long by  $\frac{3}{4}$ - $1\frac{1}{4}$  inches broad, petiolules 2-3 lines long, panicles pilose terminal and axillary as long or longer than the leaves, flowers 5-merous, calycine segments rounded glabrous ciliate, petals slightly longer oblong glabrous ciliate, with a sudden short claw and furnished with a small round long ciliate scale at the base, disk fleshy crenulate, stamens generally 7 the filaments hairy at the base longer in the male flower, ovary glabrous 2-lobed. *Thw. En. Pl. Zey.* p. 57.

Ceylon, Lower Badulla road from Kandy at no great elevation, in flower in April. I have what appears to be the same only in young bud from the Kolay Mallays in the Trichinopoly district of this Presidency.

PLATE No. CCLXXXIX.

#### DISCOREACEÆ.

**TRICHOPODIUM ZEYLANICUM?** (Thw.) Leaves bluntly hastate or triangulari-deltoid prominently 7-nerved, 4-5 inches long by 2-3 inches broad on petioles 4-7 inches long, flowers brownish red 4-5 lines long, fruit 12-14 lines long. *Thw. En. Pl. Zey.* p. 291?

Travancore hills (Singampatty) up to 3500 feet elevation. I have distributed specimens under the name of *T. Travancoricum*, and it appears to differ from Dr. Thwaites' description of the Ceylon plant in its larger flowers and in the greater number of nerves in the leaf. I have not seen Ceylon specimens, but Dr. Thwaites does not seem to think this distinct as a species.

PLATE No. CCXC.

#### CONVOLVULACEÆ.

**NEUROPELTIS RACEMOSA.** (Wall.) A large woody climber, stems glabrous in age, leaves ovate to lanceolate with a longish acumination entire glabrous in age but when young densely adpresso-pubescent above and sparingly hairy beneath, 3-5 inches long by about 2 inches broad, petioles  $\frac{1}{2}$ -1 inch long, racemes straight axillary or from the old axils solitary or several together densely rufo-pubescent 2- $3\frac{1}{2}$  inches long, flowers 3-4 lines long on peduncles 2 lines long which are furnished towards their apex with a large ovate acute cucullate bract, calyx about  $1\frac{1}{4}$  lines long rufo-pubescent as are the bracts and petals, corol nearly 3 times as long as the calyx deeply 5-cleft, lobes entire, ovary hirsute, fruit not seen. *Wall. in Roxb. Fl. Ind. ed. Wall.* ii. 44.

Near the foot of the Tambacherry ghat in the plains of Malabar, about Poodoopara. I have not seen the fruit, but as far as they go my specimens quite answer to Wallich's description of the Penang plant though it has not previously been found in India.

## PLATE No. CCXCI.

## LEGUMINOSÆ.

**ALYSICARPUS RACEMOSUS.** (Benth.) Stems pilose with longish golden hairs, the upper leaves trifoliate the lower simple, leaflets oval to orbicular glabrous above at least in age silky beneath, the terminal ones 14-15 lines long by 9 lines broad, the lateral ones small, petioles 3-5 lines long, stipules scarioso setaceous 4-5 lines long, racemes lax aureo-pilose, pedicels 8-9 lines long slender, calyx segments setaceous nervoso-striate, legume exserted 3-6-articulated the lobes reticulated. *Benth. in Linn. xxiv. 642.*

Bolampatty hills (Coimbatore) 2500 feet elevation, also on the Nilgiris.

## PLATE No. CCXCII.

**GEISSASPIS CRISTATA.** (WA.) Herbaceous procumbent, leaves equally pinnated, pinnæ 2 pair, cuneate obovate retuse slightly crenated, 5-6 lines long, racemes axillary and terminal on peduncles  $1\frac{1}{2}$  inches long, bracts large orbicular many-veined long ciliate on the margins, flowers solitary in each bract small yellowish, legume 1-2-jointed tumid in the middle. *WA. Prod. p. 218.*

Coimbatore, Malabar and Tinnevely.

## PLATE No. CCXCIII.

**STYLOSANTHES MUCRONATA.** (Willd.) Suffruticose branched spreading, branches shortly hirsute, stipules scarioso bristly on the back adnate, leaves trifoliate about 1 inch long, leaflets rigid oblongo-ovate stiffly mucronate slightly ciliate with short stiff bristles, in age glabrous, under side when young a little hairy, 6-8 lines long by 2-3 lines broad, veins prominent, flowers axillary sessile and solitary or forming small few-flowered terminal imbricated spikes, bracts ciliate rather short, calyx tube villous about 2 lines deep the plumose rudimentary floret a little longer. *Willd. Sp. 3 p. 1166;—WA. Prod. p. 218.*

A rather common undershrub in different parts of the Presidency, also in Africa.

## PLATE No. CCXCIV.

**MILLETIA SPLENDENS.** (WA.) A lofty climber, young parts petioles and racemes clothed with golden or fulvous tomentum, leaves unequally pinnate, leaflets 2-3 pair with a terminal one oblongo-ovate to oblongo-lanceolate suddenly acuminate, rather undulate at the margins, glabrous above, silky beneath, 5-7 inches long by  $2-3\frac{1}{2}$  broad, panicles axillary  $1\frac{1}{2}$  feet long many flowered, the lateral branches short few flowered, pedicels 2-3 lines long, calyx short 4 cleft the upper segment the broadest entire or bifid, vexillum silky outside, the wings hairy, ovary 5-ovuled, legume very velvety 2-4 inches long, 1-2 seeded. *WA. Prod. p. 263.*

Eastern slopes of the Nilgiris; the legumes in the drawing are very young.

## PLATE No. CCXCV.

**VIGNA WIGHTII.** (Benth.) Stems herbaceous climbing a little hairy or glabrous. Stipules very small lanceolate peltate, petioles  $1-2\frac{1}{2}$  inches long, leaflets 3 membranaceous clothed with adpressed grey hairs on both sides the terminal one ovate-lanceolate acute  $3-3\frac{1}{2}$  inches long, petioles 6-7 lines long, lateral ones more ovate and unequal sided a little smaller and on very short petiolules, peduncles much thickened 2-7 inches long, furnished at the apex with 3-4 flowers, flowers large ( $1\frac{1}{2}$  inch long) lilac very fragrant, calyx 5-6 lines long the teeth linear subulate nearly equalling the tube, the 2 upper ones slightly connate at the base the 3 lower equal all a little hirsute, corol 3-4 lines as long as the calyx, the inflexed auricles of the standard very prominent the keel curved at the point, pod linear straight terete 5 inches long blackish when ripe clothed with a very short pubescence, many seeded.

Wynad and elsewhere on our Western ghats up to 4000 feet, often called the Wynad sweet pea, its very fragrant beautiful flowers would render it a great favorite in gardens.

## PLATE No. CCXCVI.



**RHYNCHOSIA CODOORENSIS.** (Bedd.) Stems herbaceous climbing pubescent, stipules small setaceous deciduous, petioles  $1\frac{1}{2}$ - $1\frac{1}{2}$  inches long whitish-pubescent, leaflets 3 the central one broad ovate to rhomboid-ovate acute up to 3 inches long by 2 broad, the petiolule 6 lines long the lateral ones smaller and unequal-sided membranaceous furnished on both sides with adpressed short pubescence, reticulated and paler on the underside, racemes lax few flowered-nearly as long as the leaves, flowers in pairs, bracts ovate to suborbicular broader than long acute or obtuse caducous, calyx pubescent  $\frac{1}{2}$ - $\frac{3}{4}$  inch long the segments prominently veined ovato-lanceolate obtuse the 2 upper connate towards the base, the lowest a little longer than the others, corol yellow not equalling the calyx, pod 3-4 lines broad 2-seeded not equalling the calyx slightly puberulous.

Codoor hills, Cuddapah District, rare.

PLATE No. CCXCVII.

MELASTOMACEÆ.

**SONERILA GARDNERI.** (Thw.) Stems terete, generally simple erect rather woody glanduloso-hirsute, reddish-black, 1- $1\frac{1}{2}$  feet high, leaves ovate or rotundate acute subcordate serrulate  $\frac{1}{2}$ - $1\frac{1}{4}$  inches long 4-8 lines broad hirsute on both sides paler beneath, petioles 1-3 lines long glanduloso-hirsute, pedicels hirsute shorter than the calyx each furnished with a foliaceous bract, flowers 9-12 lines long, the calyx glandulose-hirsute, petals reddish lanceolate acute, the centre nerve on the outside with a few glandular hairs, anthers cordato-lanceolate subacute capsule ovoid gibbous obscurely 6 costate muricato-hirsute. *Thw. En. Pl. Zey. p. 107.*

Ceylon, below Horton Plains towards Galagama on wet rocks, elevation 5000 feet.

PLATE No. CCXCVIII.

**SONERILA LANCEOLATA.** (Thw.) Suberect sparingly branched very glabrous, leaves 3-nerved linear-lanceolate serrulate above the middle, cordate at the base very shortly petioled,  $1\frac{1}{2}$ -3 inches long by 3-8 lines broad, racemes simple or branched, flowers 8-10 lines long, petals red rotundate apiculate, anthers subulate, capsule rather long and with the thickened pedicel deeply 6-sulcate. *Thw. l. c. p. 107.*

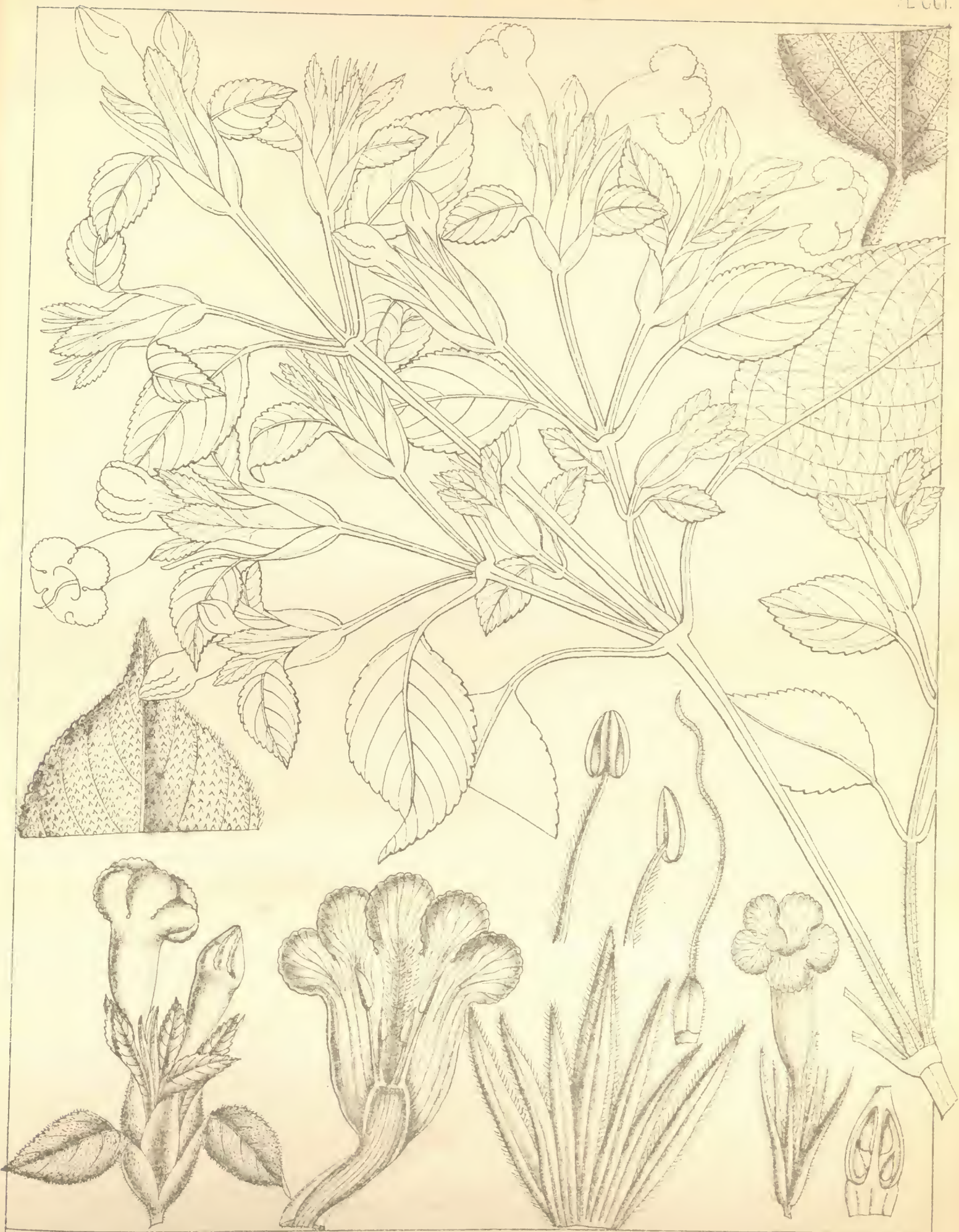
Ceylon, Carawette Kanda near Ratnapoora, elevation 1000 feet.

PLATE No. CCXCIX.

**SONERILA ARNOTTIANA.** (Thw.) 1-2 feet suberect subligneous, branched, branches more or less glanduloso-pilose, leaves 3-5-nerved lanceolate or ovato-lanceolate ciliato-denticulate a little oblique and unequal, above glabrous beneath sparingly glanduloso-hirsute on the nerves,  $\frac{3}{4}$ -3 inches long by 4-10 lines broad, paler beneath acute at both ends or the base rather rounded, petioles 8-12 lines long more or less glanduloso-pilose, racemes simple or forked glanduloso-pilose, petals ovate acuminate purple  $3\frac{1}{2}$  lines long, anthers cordato-oblong shortly acuminate, capsule hypocrateriform 6-ribbed muricato-setose about equalling the pedicel. *Thw. l. c. p. 108.*

Ceylon, central provinces 4000-7000 feet. Anamallay mountains 5000 feet elevation.

PLATE No. CCC.

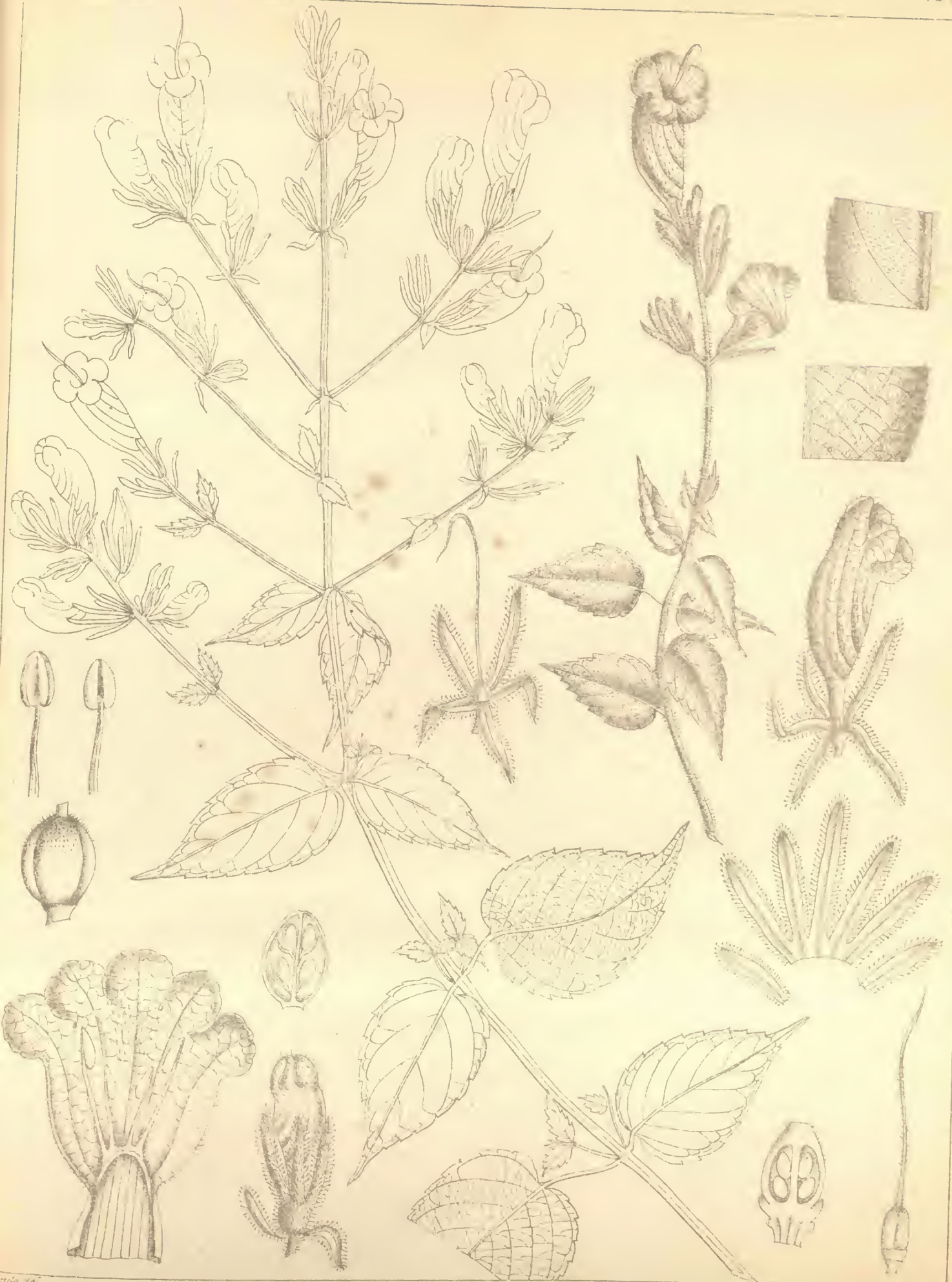


Giuseppe Del.

*Trochilanthus papillatus Anders!*

Giuseppe Del.





*Strobilanthus crenatus, Sieber*

W. & A. G. Smith





Coimbra Bot.

Scamphy. Lith.

*Strobilanthes ixiocephalus* (Bonth.)





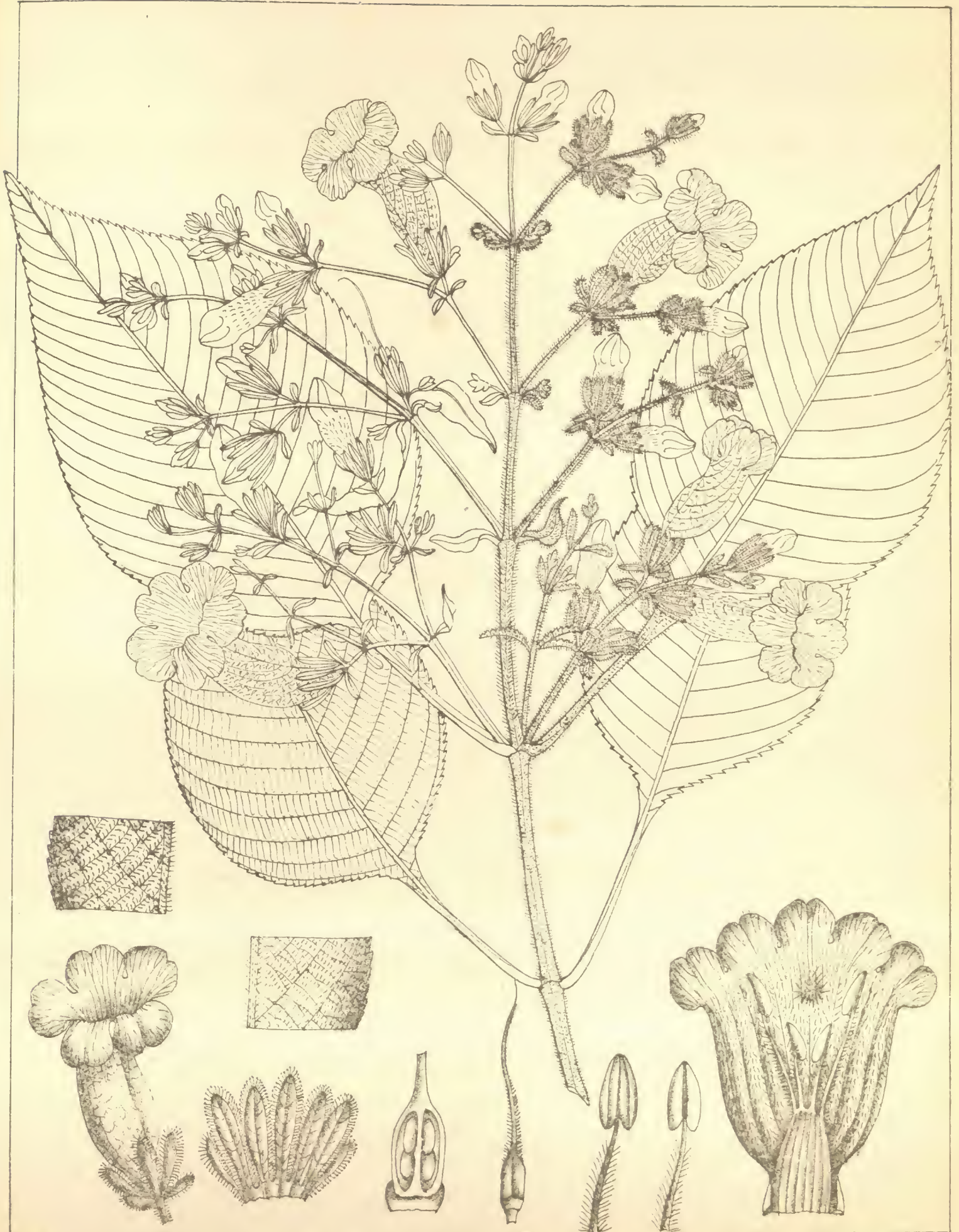
Ando del.

Dumort. Lecte.

*Trobilanthes anceps*, Nees.







*Strobilanthes violaceus*, Bidd.

copied del

L. W. J. J. J.





*Strobilanthes linearis*

C. 1001. 1001.





Severino del.

*Strobilanthes gracilis* var. *gracilis*





Choisy del.

*Arbutus Andersonii* Benth.

21. 22. 23. 24. 25.







*S. calycinus*

Handy 2110

Bot. 1880





Compositae del.

*S. auriculatus*

Wiegmann del.





Reynolds del.

Swainson sculp.

*Anemone ciliolata* Vis





*Strobilanthus barthelemyi* DC.

Verardo del.

1870







Cavanilles del.

*S. candidatus*

Roemerian. Scell.





Boissier 402

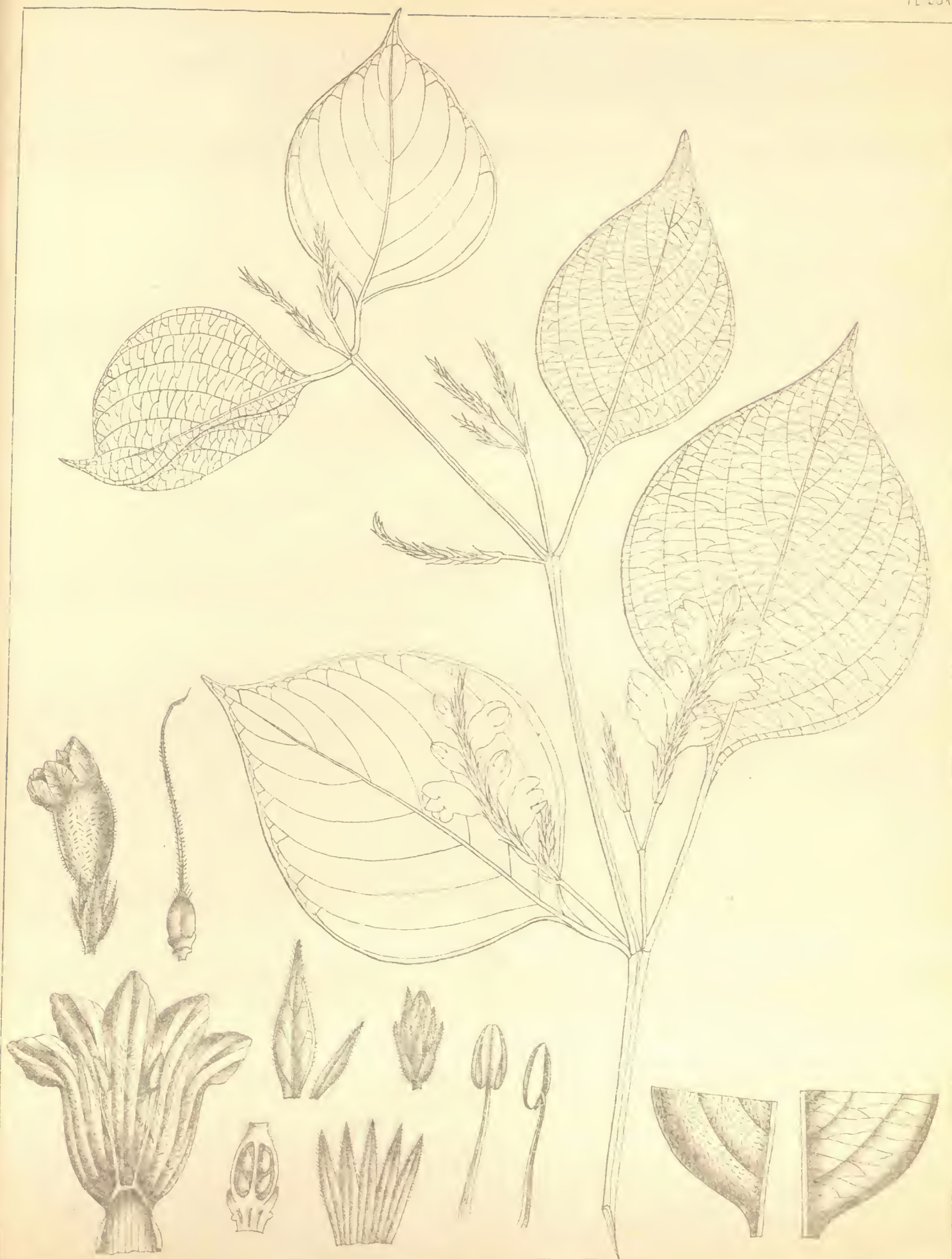
*Amelanchier canadensis* Mill.





*S. Canariensis*





Wardle del.

*S. consanguinea*  
*S. consanguinea*

Wardle del.







*S. nigrescens*

Dissecta 1868





Griseb. det.

*S. deflexa*  
*Sida deflexa* (L.) Hitchc.

Scampery. Litt.



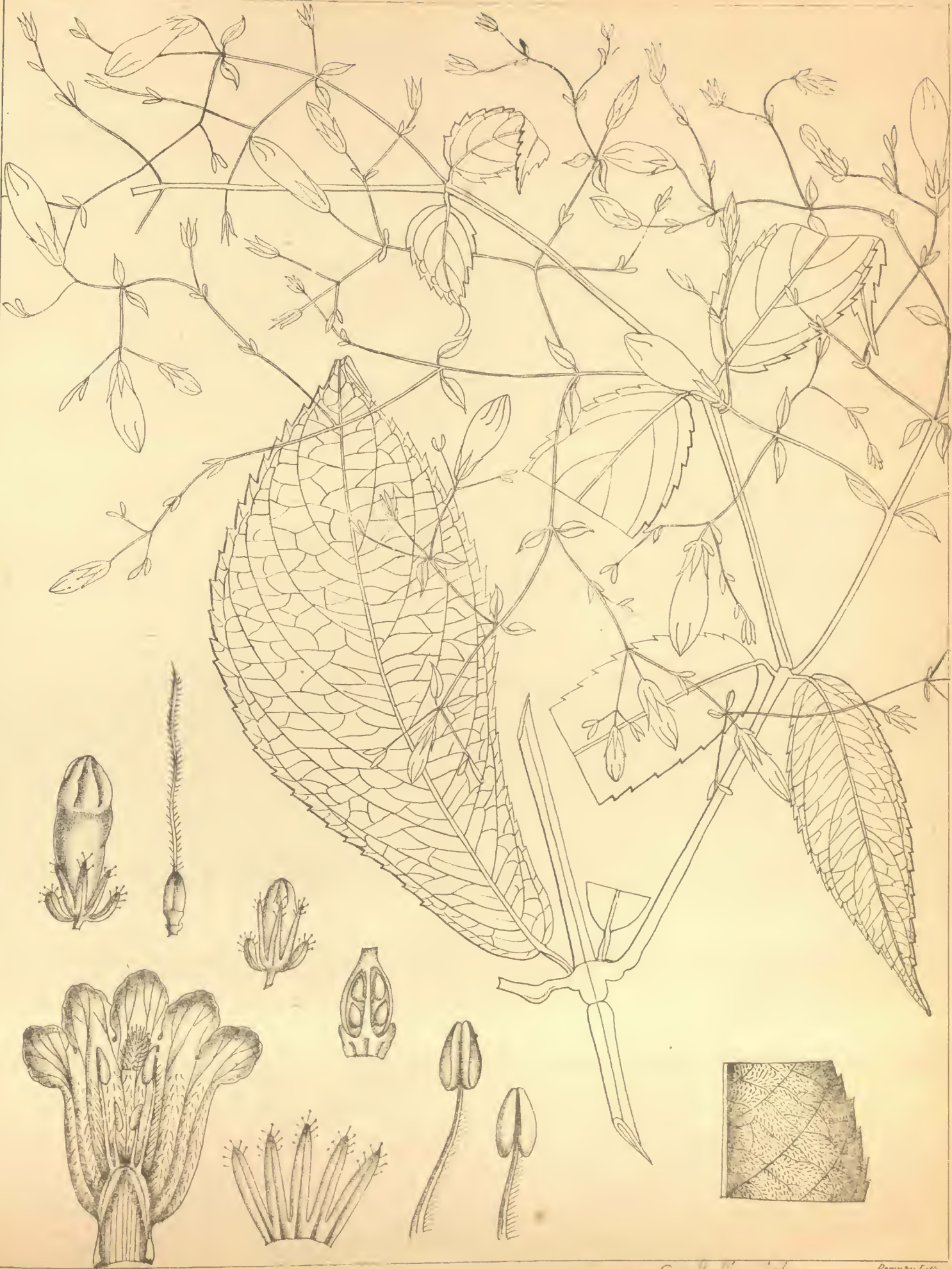


Crossed del

Linnaeus del.

*Sprobilanthus Kewatesu* Anders





Grounds del

*S. helicoides*

Dumort. & Ledeb.







Griseb. del.

*Strobilanthes cuspidatus* Benth.

Dumort. L. 184





Bourne & Co. del.

D. Don & J. Smith sculp.

*Strobilanthes Walkeri* / Nic.





*Spribilanthes lacus* (Anders.)

Howland del.

Parsons sculp.





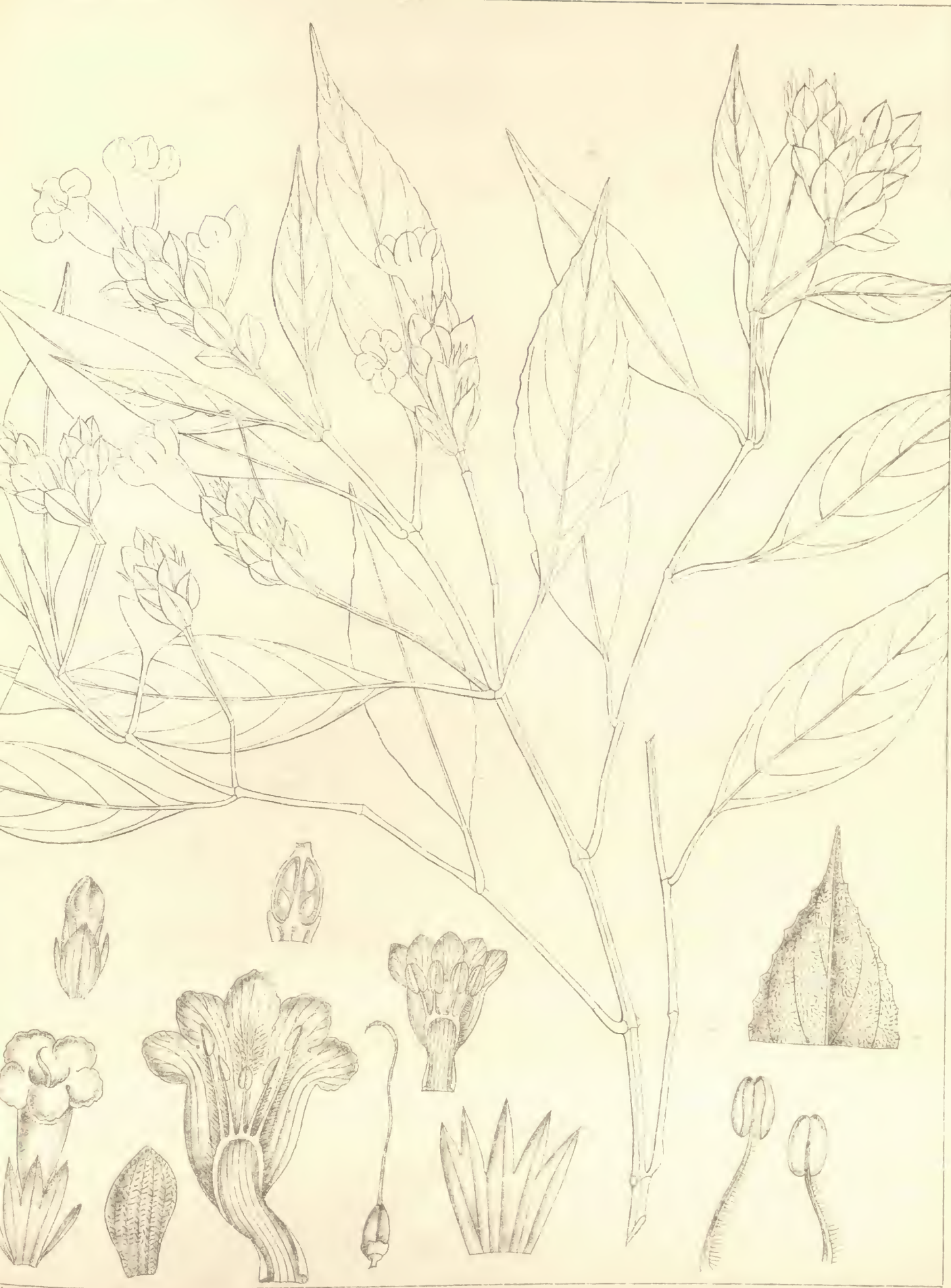
Griseb. det.

*Arbolanthes Zeylanica, Anders.*

Jarvisky Lith.







*Strobilanthes adenocephalus* (Vacc.)

Dumort. 1847





*Lepitayubhis grandiflora* (Duba)

Dumortier del.





W. G. D. del.

W. G. D. del.

*Lonicera cuspidata* W. G. D.





*Lepidagathis paniculata* Lam.

120 del.

W. G. Smith del.

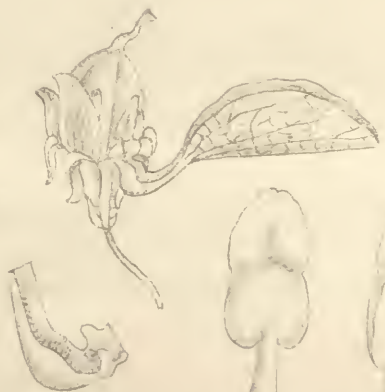






*Lupinus micranthus* Guss.





Disegnato dal

*Amidium Swartzianum* Wedd

Deering L. d.





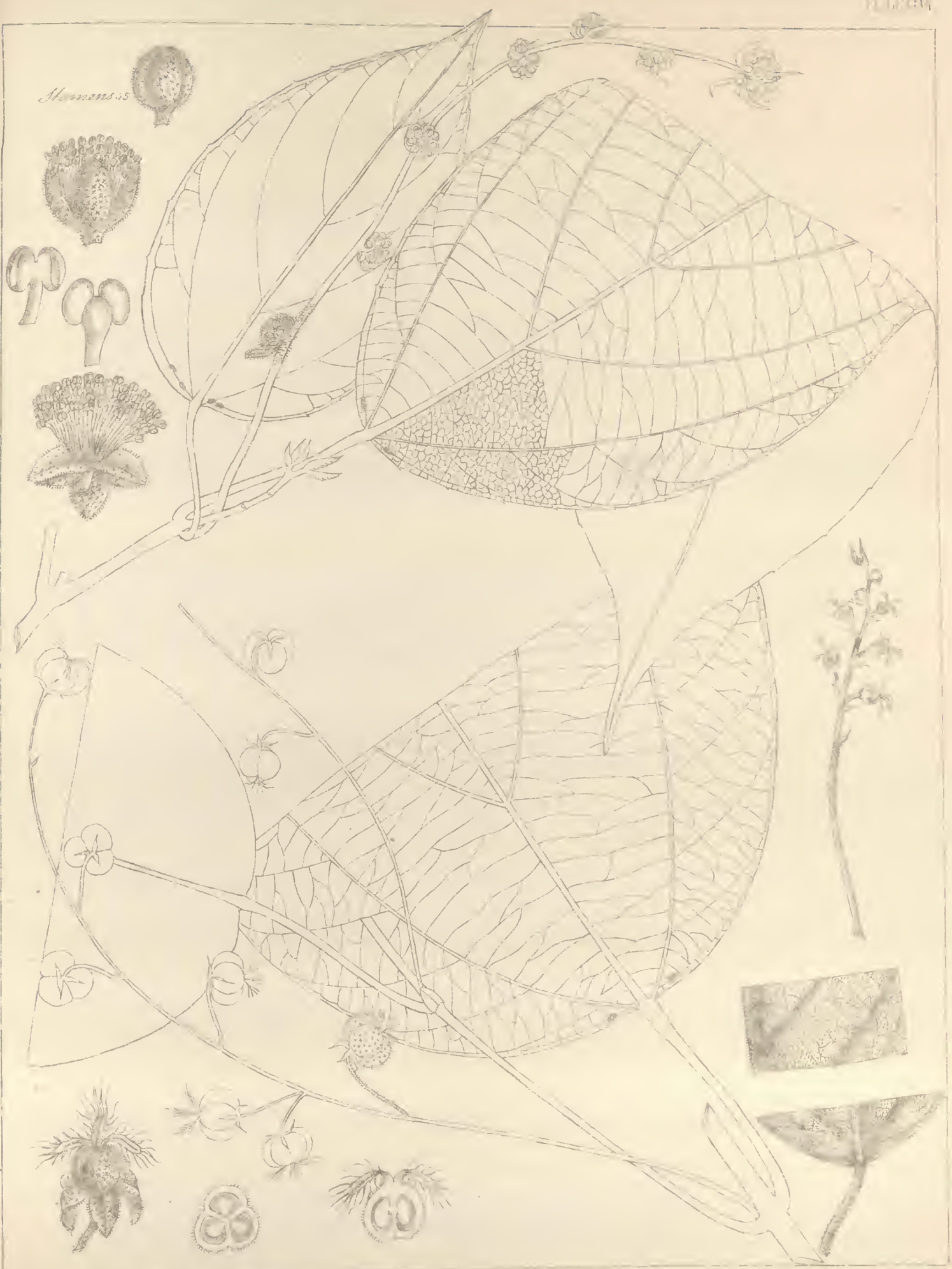
W. H. S. del.

W. H. S. sculp.

*Claoxylon Indicum (Poir.) Polak*



*Memens 55*

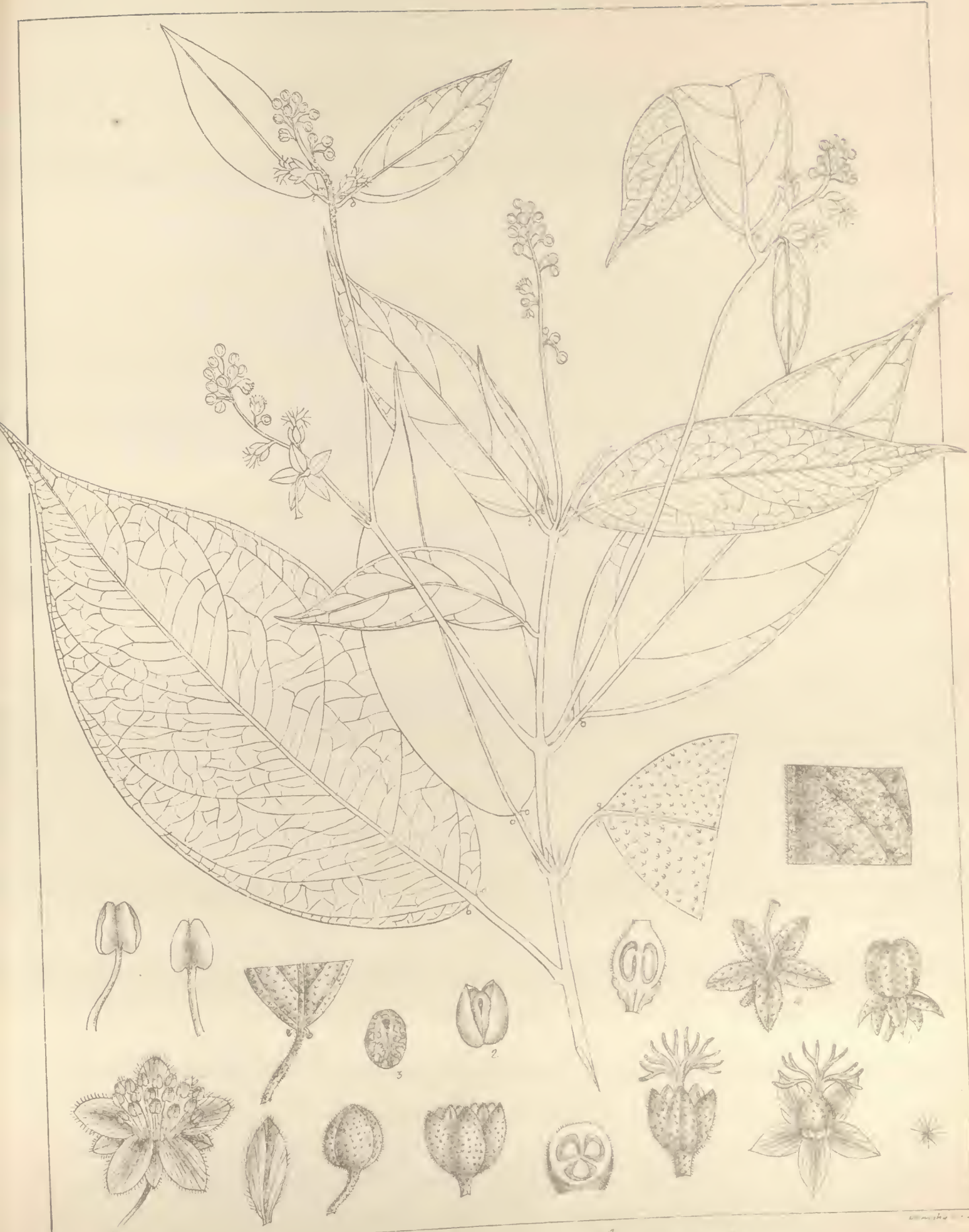


*Cor. v. d. d.*

*Mollis distans*







Griseb. del.

*Croton stipulatum* Mill.





Corinda del.

*Cryptantha hermannioides* Benth.

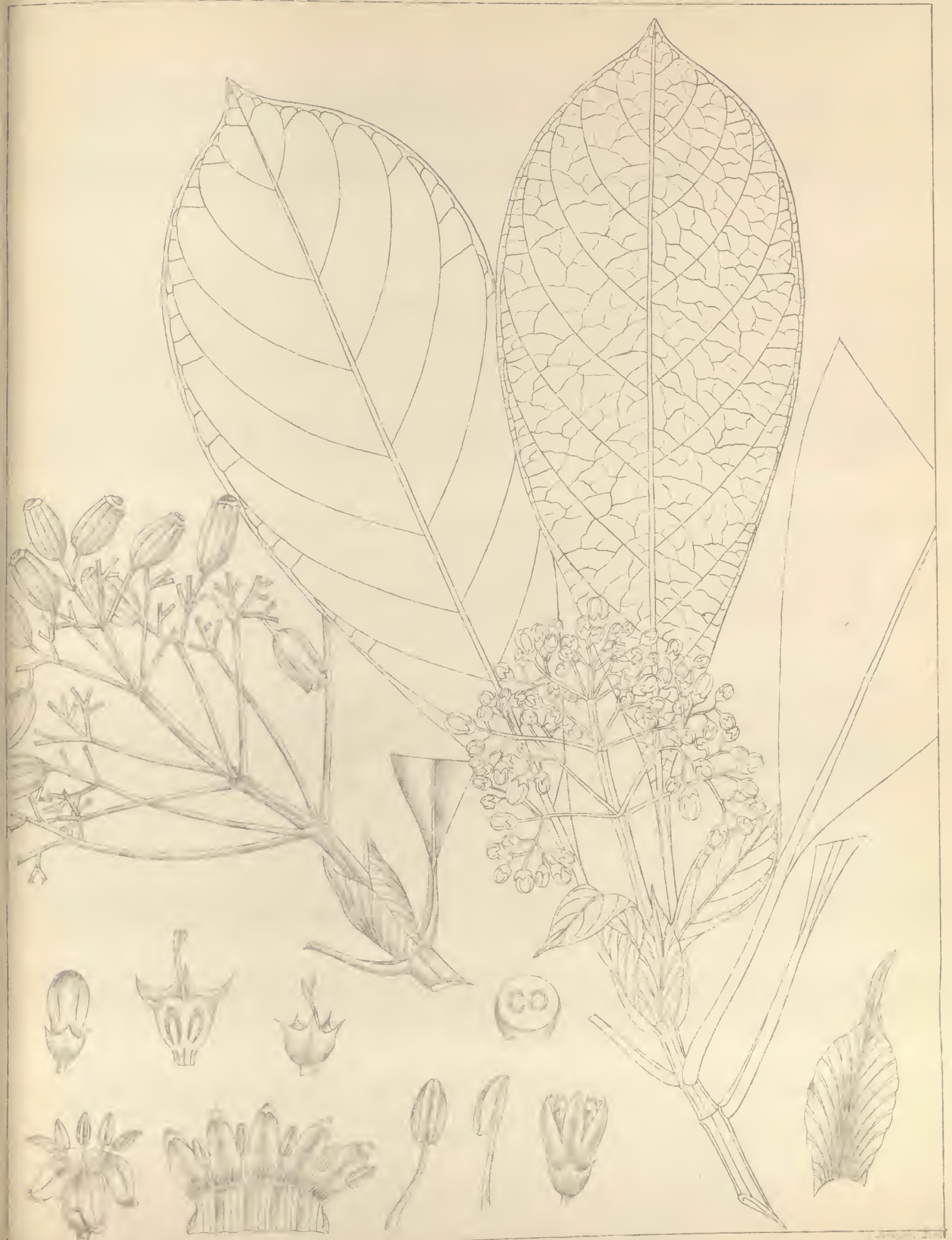
Parsons del.





*Conocarpus palmifolius* (L.)





*Psychotria Anomala* (Sw.)







*Randia Peccariensis, Bull.*

Wardell del.

Sampl. 2. 19



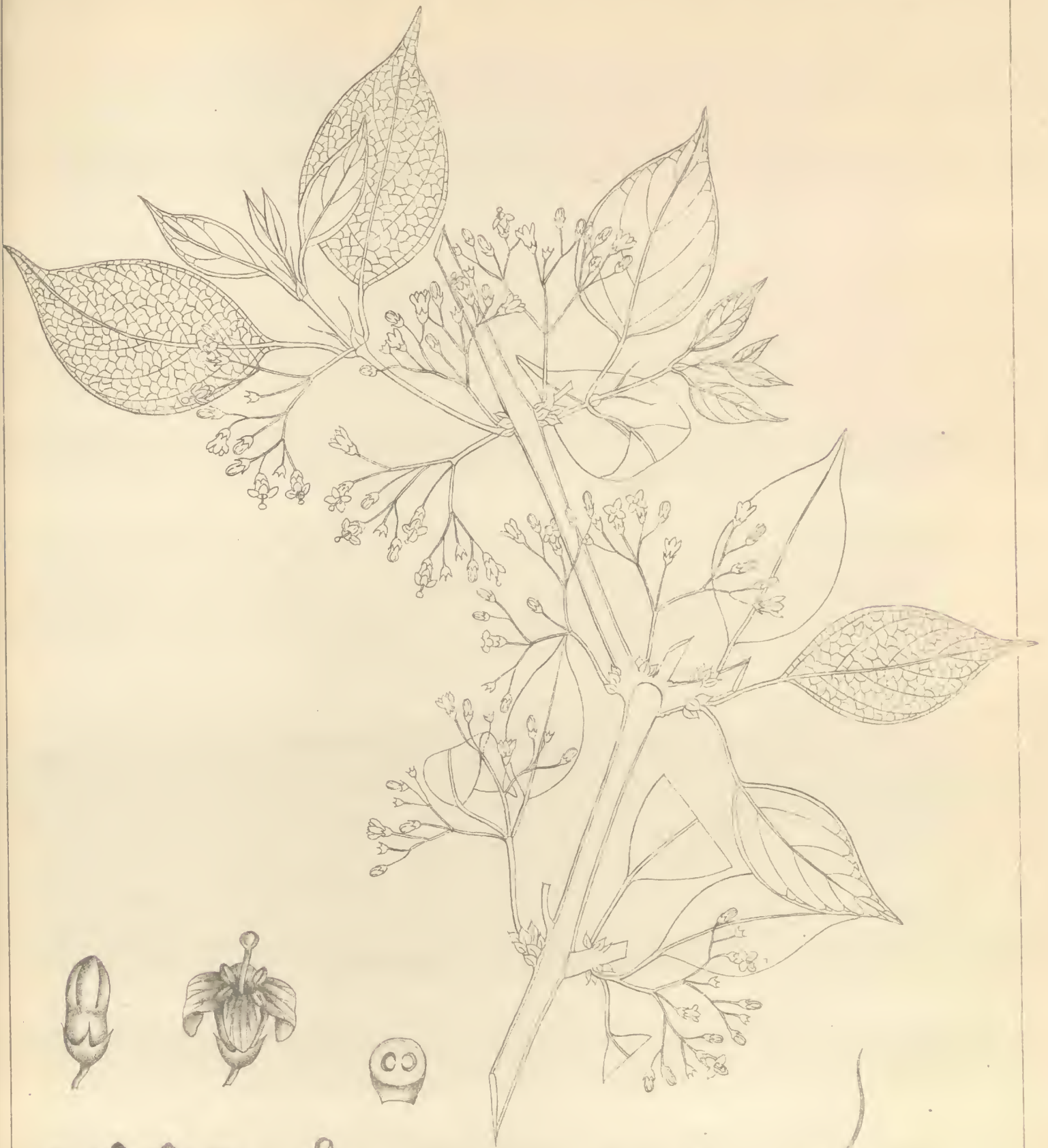


copiedo del

*Neotoma macrocarpa* Thu

Swartz. Linn

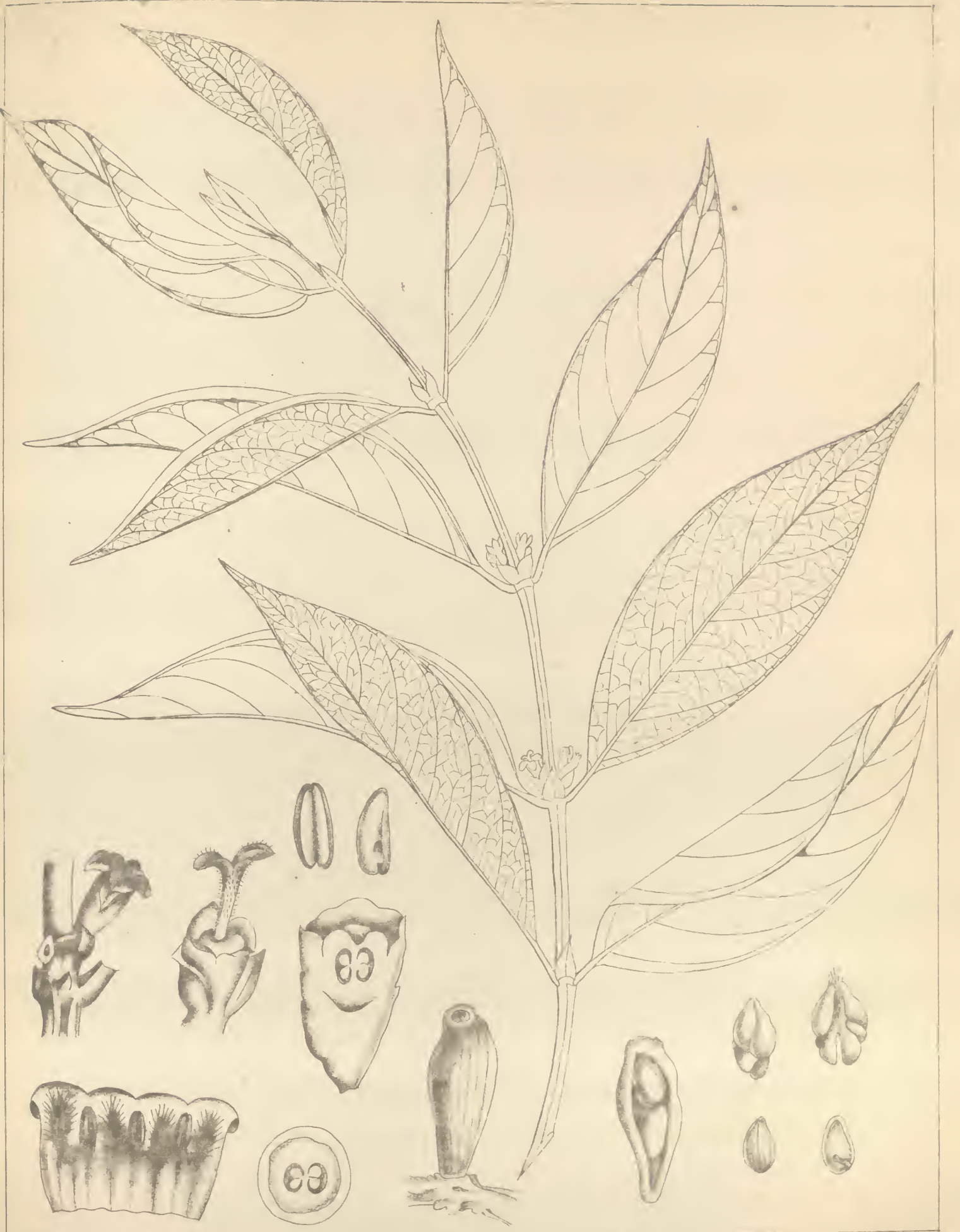




Invencido del

*Pectromia Swainsonii* Wedd.





Guerrero 1861

Samuel J. Lill

*Scyphostachys coffeoides* Mu









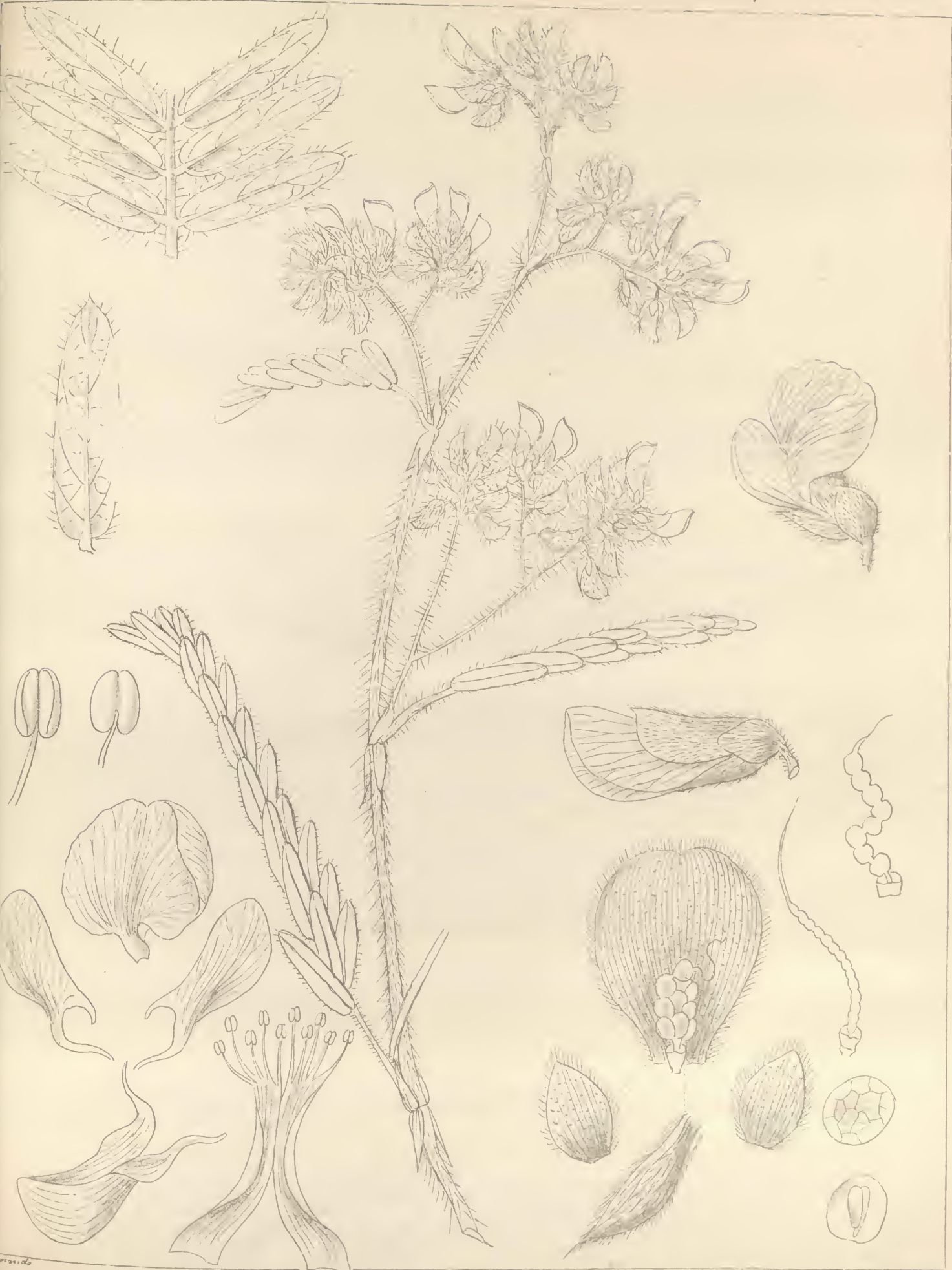


Gravando del

W. H. H. 214

*Asteriostigma macrocarpa* / Bull.





*Smithia setulosa* (Pursh)

Drawn by J. G. Smith





W. G. D. del.

Dumortier 246

*Smittia capitata* Dalzell







Boissier del.

Flower, Fr. & Seed

*Ebermaiera ligulata* (Benth)





*Alnosma pinnatifida* Dubz!

Wierzbicki del.

Wierzbicki del.





Grande del.

Amboina del.

*Rungia Apiculata* (Radd.)





*Mimulus Nuttallianus*







C. G. D. C.

Boylex 1881

*Gymnostachyum leucostachyum* Boylex





*Hyptis stachyoides* (L.) S. & H. var. *stachyoides*

W. G. & A. S. 1850







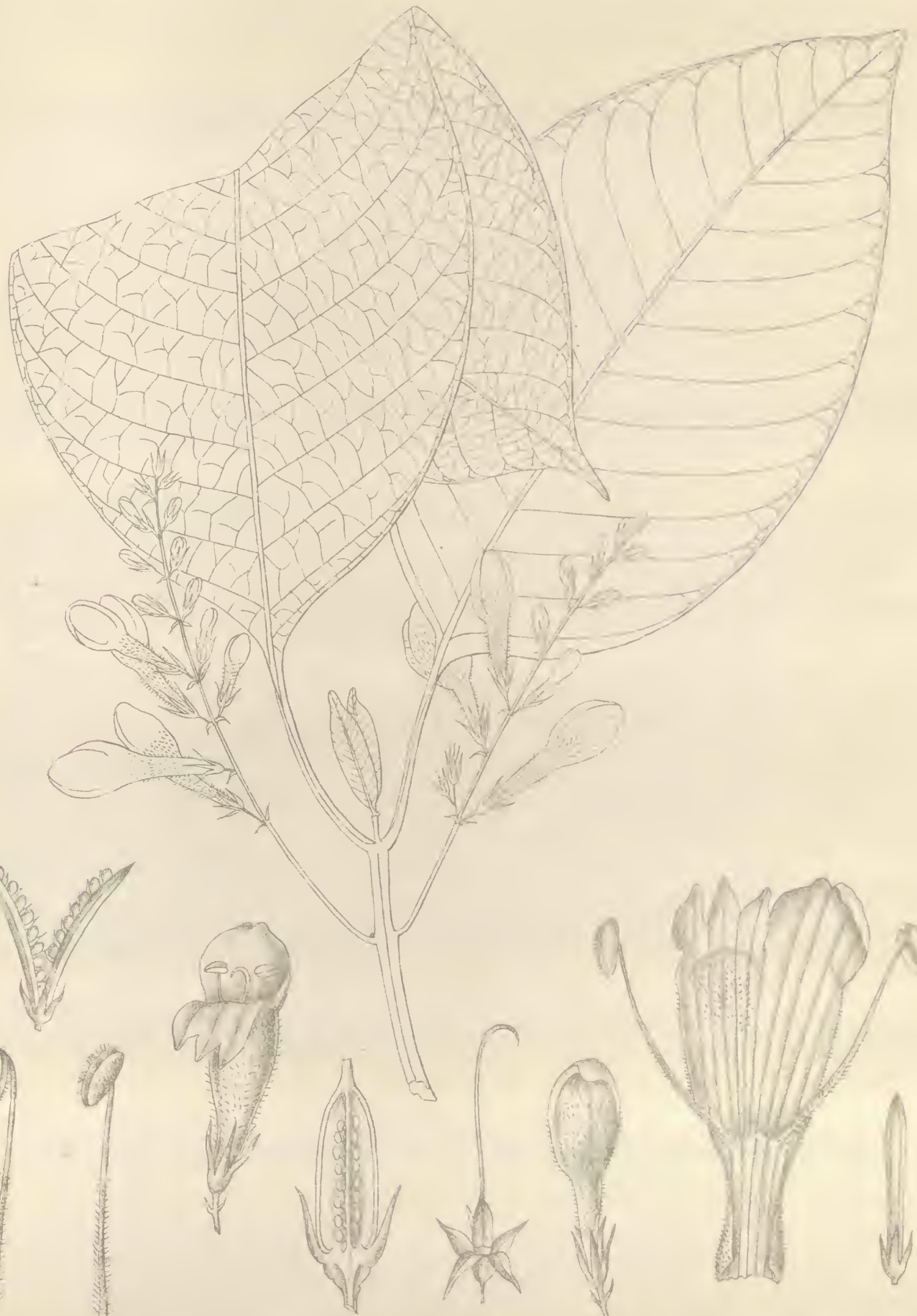


Gymnostachyum

*Gymnostachyum paniculatum* Anders.





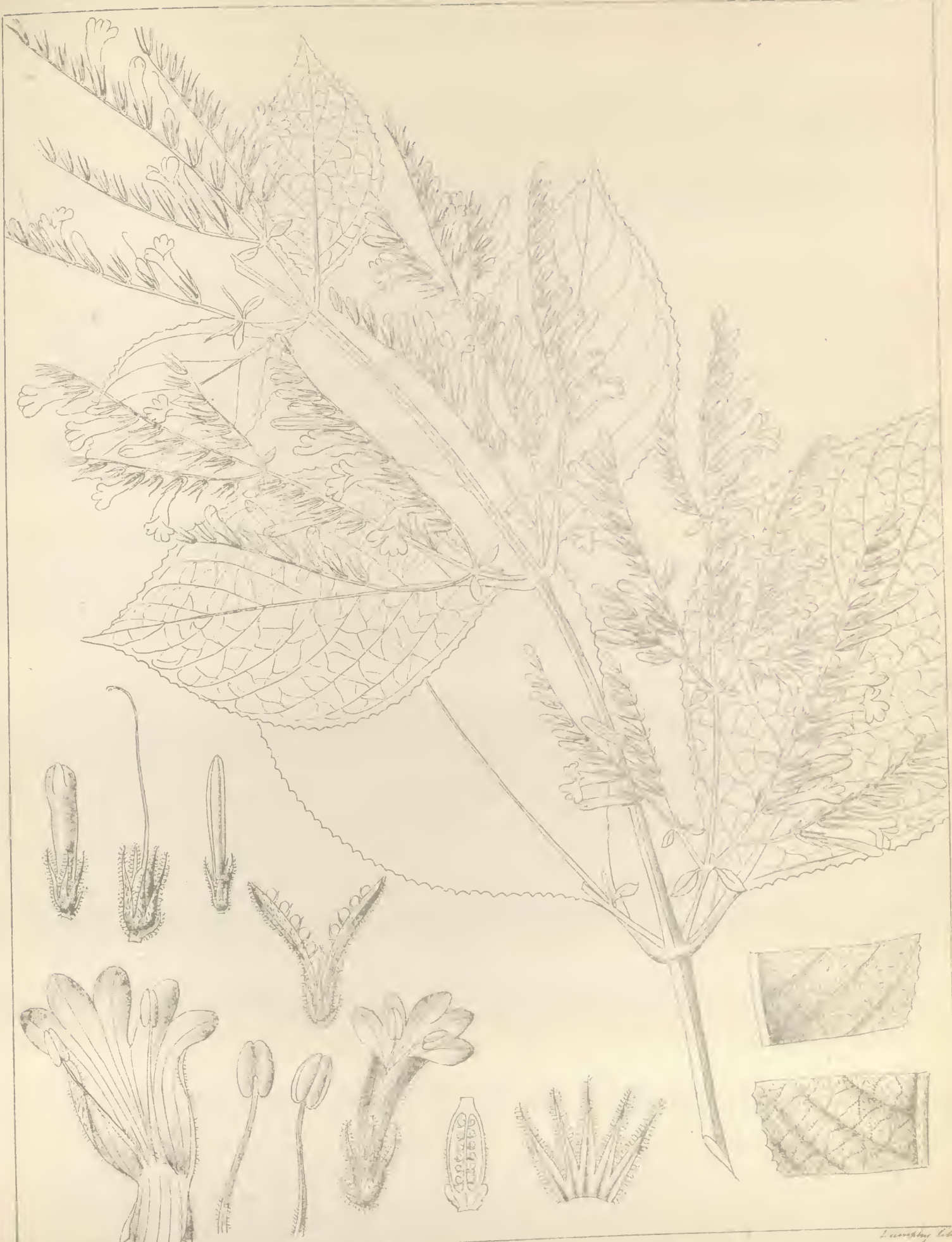


Sovando del

2000/10/10

*Lymnastachyum latifolium* (Dru.)





Schubert 111

L. Comstock del.

*Gymnastichyum serrulatum* (Vahl)





See cards 20-2

*Gymnastachyum thuribosum* (Lam.)





*Quercus pubescens* Moench







*Barbarea montana* Pers.

Cop. n. 20. 1844

T. G. M. 1844





Comunicado del

*Burrelia Buddomei*, (Anders.)

Dr. van der K. v. d. K.





*Spoblanthus Gardnerianus, Nees!*

Cochran del.

W. Gardner coll.





*Strobilanthes carinata*, Steud.







*Plantago lanceolata* L.



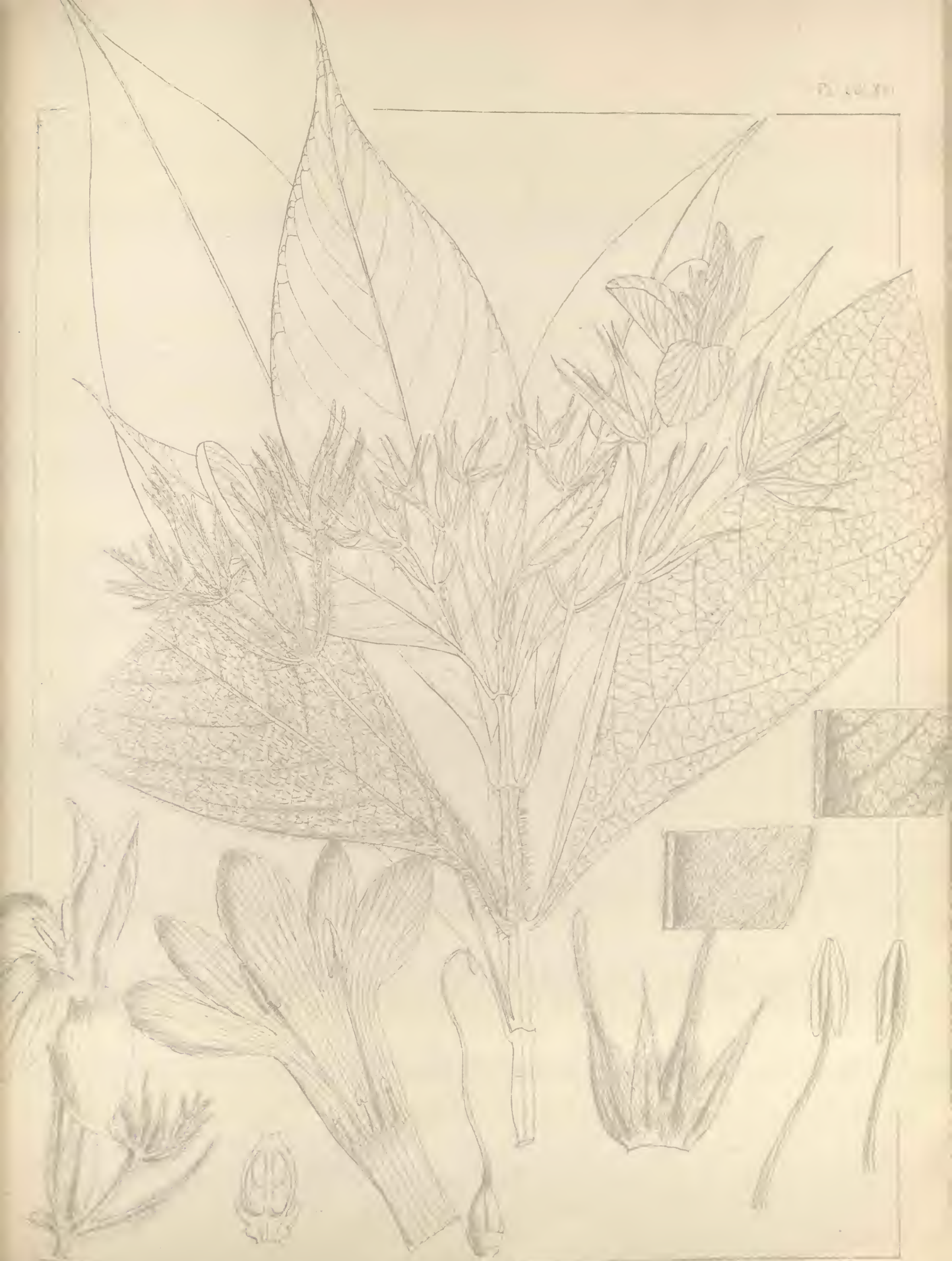


Guimpard del.

*Hibiscus hybridus* Linn.

Barren & Co. Lith.





*Barleria vestita*





*Psilostachya nutans* (Baker)

Harvey & Zook, Madras







*Gymnostachyum* ...





*Ranunculus longifolius* (L.) A. N. S. P.





W. A. C. del.

Barnes & Co. Lith. Phila.

*Physiclis radicans* (L.) Anders.





*Verbena stricta* (L.)

Bot. Beechey







COVINDO DEL

SANSI N. 2. 1851. 17. 4480

*Monothecium aristatum* (Hall)





HERB. BOT. GARDEN, HAWAII

*Citrus purpurca*, Benth.





var. *hillebrandii*

*Hibiscus hillebrandii* Hook

Barrett & G. Smith, Madras





Handen del

Barren & C. Lith. Madras

*Simplicia oligandra* (Poir.)







100 del

*Eugenia singampallana* Pold.

1122





*Ranunculus sceleratus* Hook.

Barneby & S. Wats. Bot. Calif.





*Paramignya armata*

Baron. P. 24. Kuhn

vidos. la!





del

*Capparis pauciflora* Hook. & Arn.

Caric. 3. 1. 1825. 1825.







18400 (lat)

See also 1. 18400 (lat)

*Capraea pedunculata* Hall





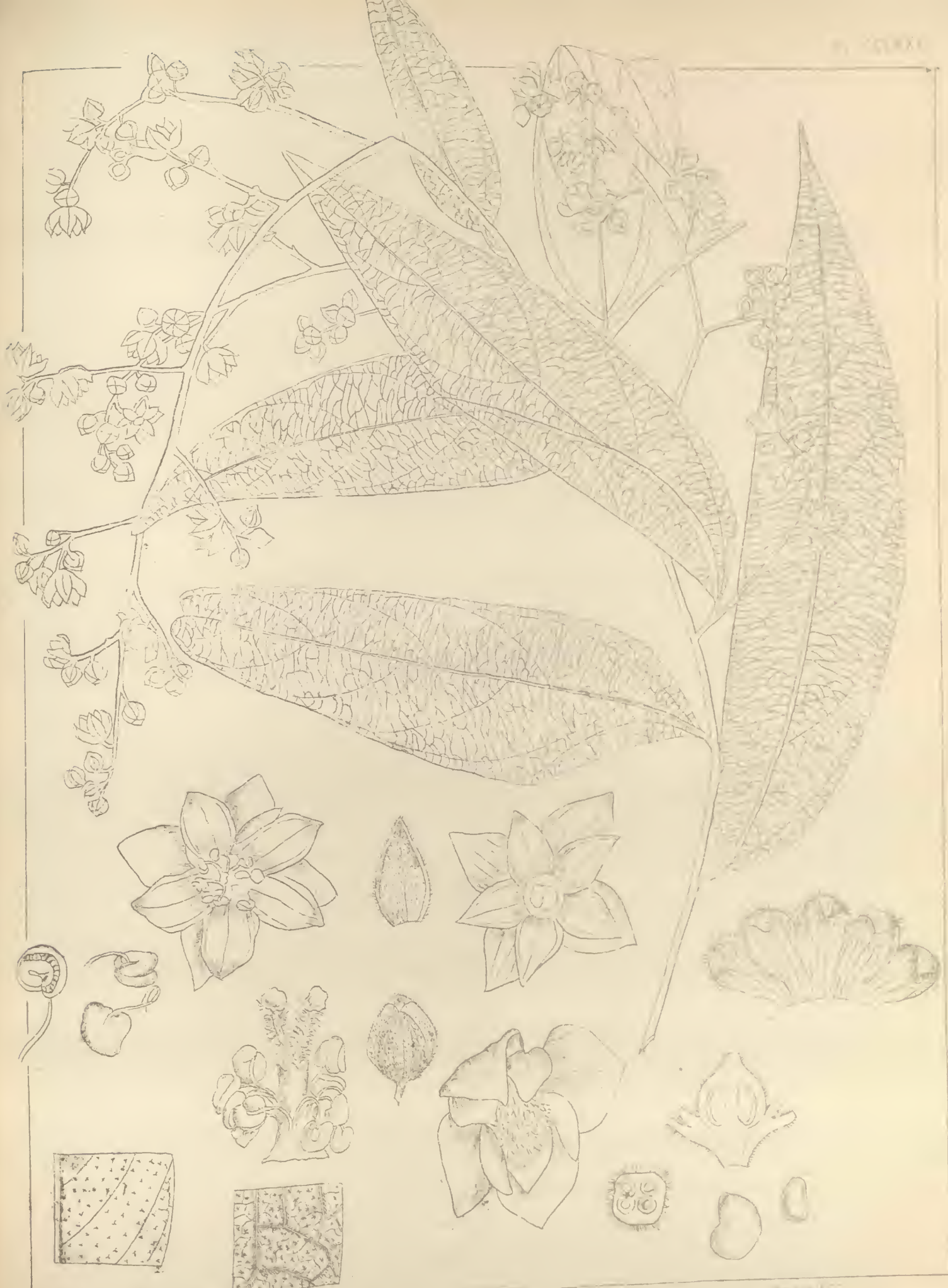
*Clematis triloba*





*Dicellaestylis axillaris*





1894-100 1/2

*Glastylis angustifolia* (Thun.)





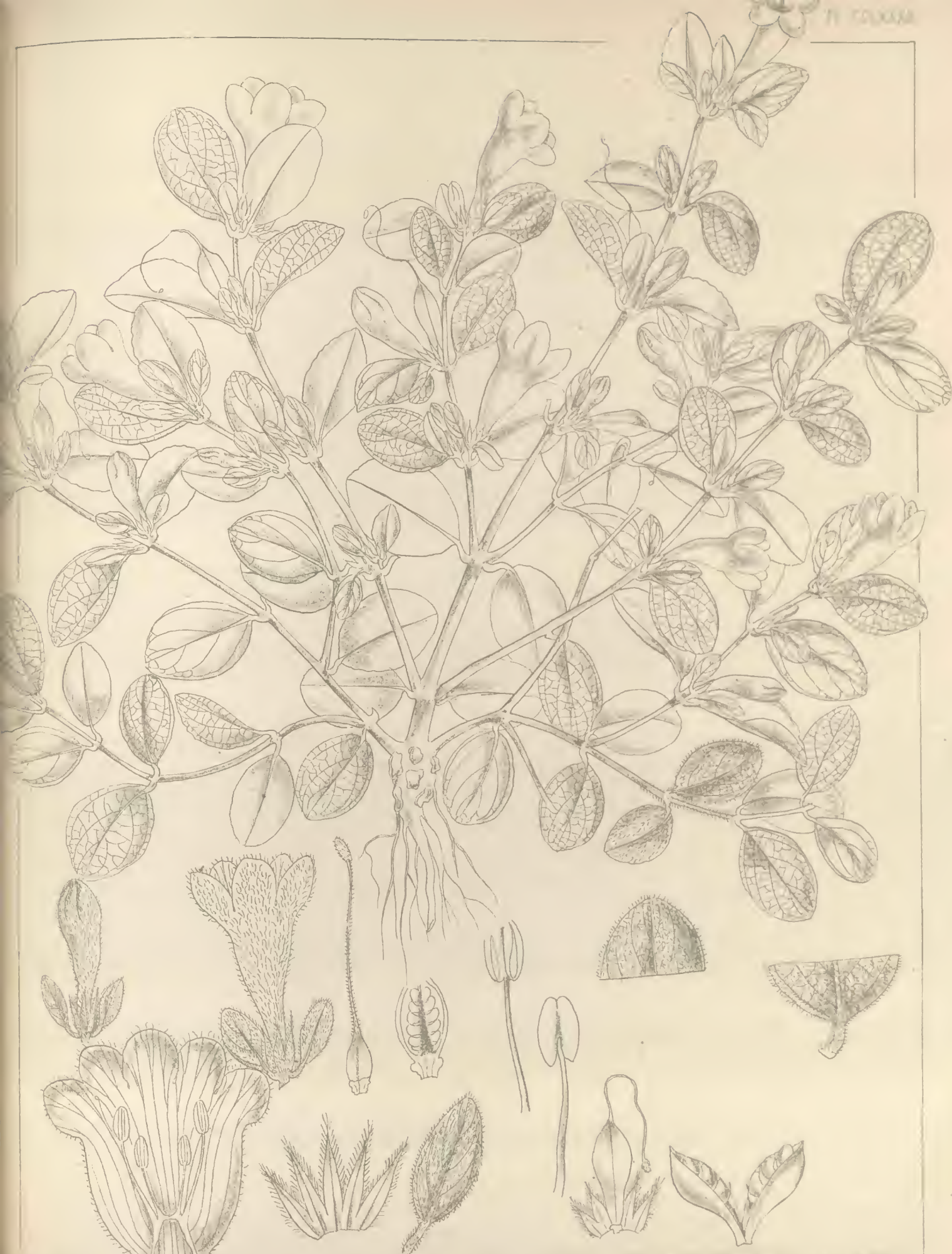


Gerardo del

*Cajupati longispina* M. & A.

Paris 1843





W. Lindley del.

Barren & L. L. Woodras

*Ruellia prostrata* L.





*Eugenia aspericlylla* Thunb.





*Curatella herbacea* (L.) Kunt.

185400 1857







*Euphorbia lasiocoma* Sm.

W. & A. G. S. 1850

W. & A. G. S. 1850





Wm. Del.

*Stemodia ulophylla* W.





*Stemodia acuminata* Mac





100 del

W. & A. G. B. Wood

*Schmidelia varians* (Kun.)







*Nephelium bilobum*.





Handoo del.

Handoo del. 1005

*Trichopodium hololeucum* (L.)





4452 doo 24

*Nausipeltis racemosa* (Willd.)

Barber & Ziegler





*Castanopsis racemosa* Lindl.





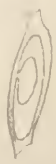
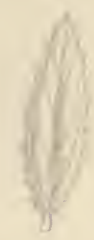


*Vicia sativa* L.

1840

Botanical Illustration





*Trifolium micranthum* Willd.

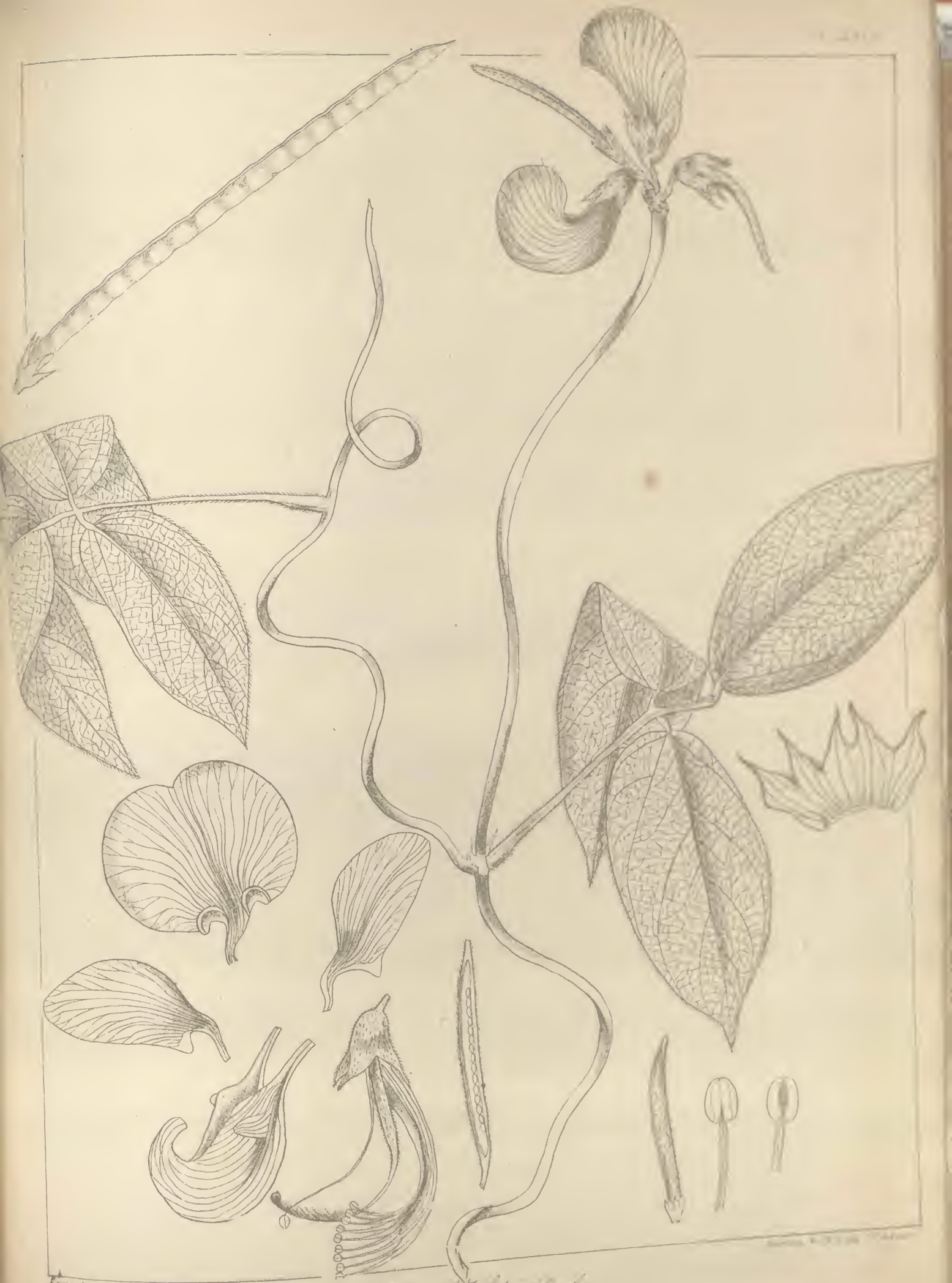
dm. 182





*Millettia splendens* DC.



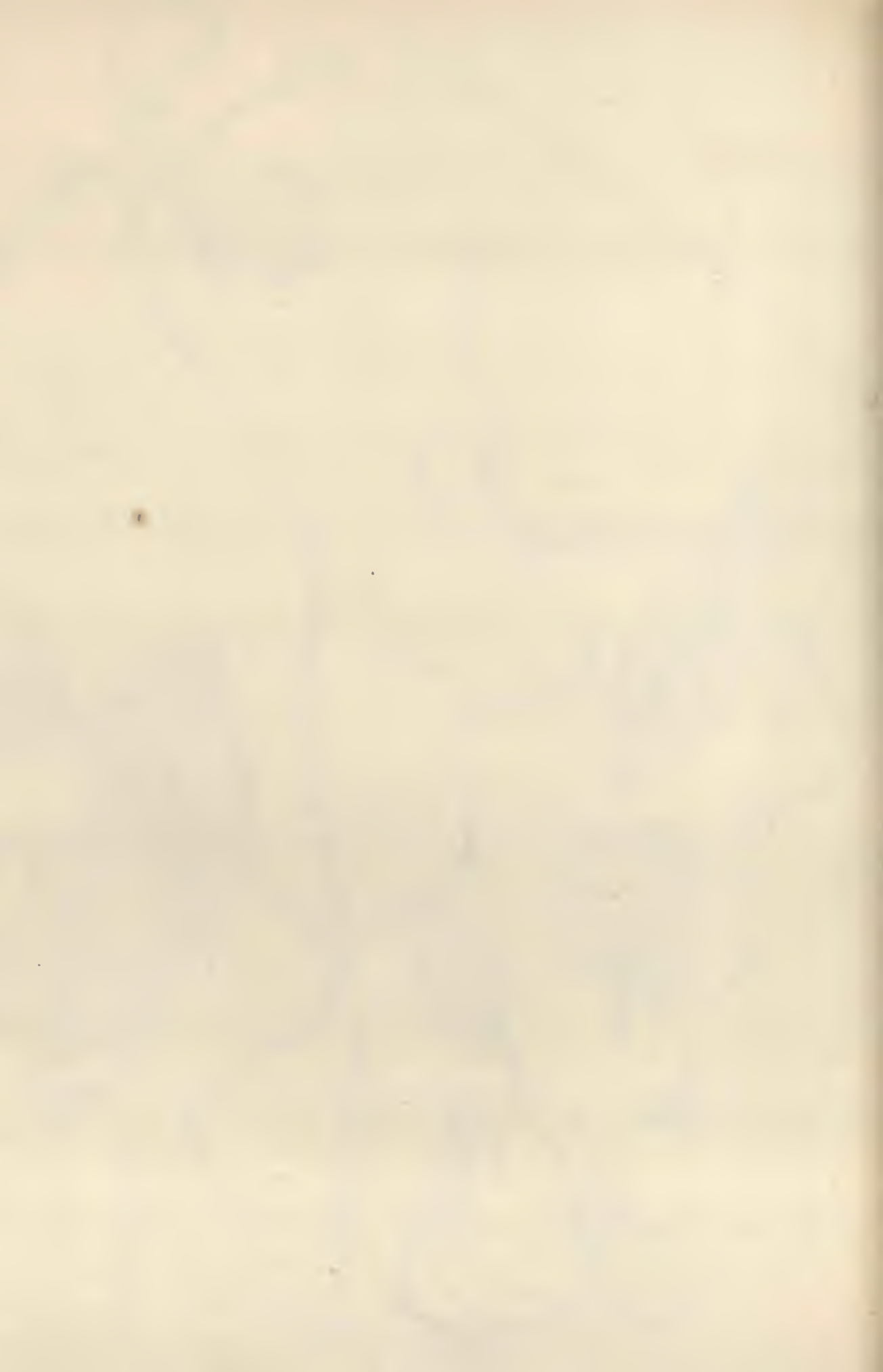


W. H. S. del.

*Vigna hughesii* Hook.

Botanical Magazine, London, 1846, Plate 100





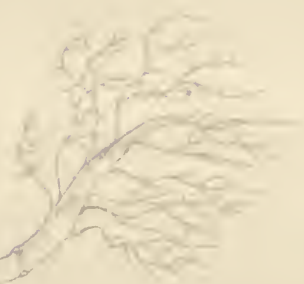


Widdowson del.

*Rhynchosia latifolia* Willd.

James Smith del.









*Quercus agrifolia* L.

Wm. H. Burser





de2

Herbar. 1875. Berlin. Bot. Mus.

*Conoclinium tenellum* L.



