

A-18

**ICONE PLANTARUM INDIAE
ORIENTALIS**

**OR
FIGURES OF INDIAN PLANTS
Vol. 3**

Acc. No. A-809

A-18

829. FLEMINGIA STRICTA (Roxb.) shrubby, erect: stems numerous, with few erect branches; branches triangular: leaves trifoliolate; leaflets broadly lanceolate, acuminate, glabrous; under side minutely black dotted, the nerves numerous and densely pubescent: petiole channelled, with a short margin: stipules large, a little shorter than the petiole, lanceolate-acuminate, concave, sheathing, deciduous: racemes speciform, solitary, the length of the petioles or sometimes longer, peduncled: bracteas lanceolate-subulate, acuminate, longer than the flowers, caducous: legume without glands, nearly glabrous.—W. & A. Prod. p. 241.

1 Flowering branch *natural size*—2 a flower—3 the petals detached and separately represented—4 stamens and ovary, the calyx divided and thrown back to bring them into view—5 anthers—6 and 7 legume opened, showing the position of the seed—8 a seed—9 the same, part of the testa removed to show the radicle—10 cotyledons.

330. TNDIGOFERA GLANDULOSA (Roxb.) suffruticose diffuse, young parts softly pubescent or villous: leaves petioled, trifoliolate; leaflets oblong obovate, rather longer than the petioles, under side more hairy and glandular dotted: stipules setaceous: racemes sessile, oval, dense, many-flowered, scarcely so long as the petiole: calyx segments short-subulate: legumes oval about twice as long as broad, hairy, 4-angled; angles slightly winged and toothed: seeds 2, ovate and truncated at one end.—W. & A. Prod. p. 199.

1 A branch with flower and fruit—2 a dissected flower—3 a legume *natural size*—4 the same *magnified*—5 split open to show the position of the seed and the transverse septum between.—Copied from Roxburgh's drawing.

331. TNDIGOFERA PAUCIFOLIA (Delile. I. ARGENTIA Roxb.) shrubby, erect, much branched, all hoary with short adpressed whitish pubescence; branches terete: leaves pinnate; leaflets 1-5, alternate, oblong-lanceolate, the terminal the largest: racemes solitary, sessile, somewhat spiked, longer than the leaves, many-flowered: flowers very small: calyx-segments short and acute: legumes linear, slightly compressed, torulose, pendulous, and curved upwards, 5-8 seeded: seeds reniform, flat-fish, shining.—W. & A. Prod. p. 201.

1 A branch with flowers and fruit *natural size*—2 the keel showing the spur on each side *magnified*.

332. INDIGOFERA ASPALATHOIDES (Vahl.) shrubby, erect, young parts whitish with adpressed hairs: branches slender, numerous, spreading in every direction: leaves sessile, digitately 3-5-foliolate; leaflets narrow-cuneate, small, the upper surface glabrous, under with a few scattered hairs: peduncles solitary, 1-flowered, about the length of the leaves: flowers very small; corolla soon deciduous: legumes cylindrical, pointed, straight, nearly glabrous, 4-6-seeded.—W. & A. Prod. p. 199.

1 A branch *natural size*—2 keel of the corolla showing the spur—3 a legume.

333. INDIGOFERA UNIFLORA (Ham.) perennial; stems prostrate, slender, long, coloured: leaves sessile, pinnately 3-5 foliolate; leaflets narrow, cuneate-oblong, acute, upper side glabrous, under sprinkled with a few white hairs: peduncles solitary, filiform, 1-flowered, twice the length of the leaves: flowers small: legumes linear-oblong, terete, straight-pointed, nearly glabrous, nearly 4 times as long as broad, about 3-seeded.—W. & A. Prod. p. 499.

1 Branch *natural size*—2 keel—3 peduncle and calyx—4 legume—5 a leaf and flower *magnified*.

334. SANICULA ELATA (Ham.) stem dichotomous at the apex: leaves 3-partite or ternate, glabrous; segments sessile, ovate, acute, lobed and serrated, cuneate at the base, the lateral ones often bipartite: umbels usually 3-fid, few-flowered: flowers polygamous, the males pedicelled.—W. & A. Prod. p. 317.

1 Plant *natural size*—2 a detached flower and ovary showing the hooked prickles with which the *mericarps* are clothed—3 the corolla detached but erroneously represented with a petal—4 a detached petal showing its long inflated point—5 stamens—6 ovary cut vertically showing the pendulous ovules—7 ovary cut transversely—8 a detached *mercarp* and seed.

335. PIMPINELLA INVOLUCRATA (W. & A.) stem erect, dichotomous, glaucous: leaves ternate; segments cut and pirated, or sometimes entire in the upper leaves; lobes in the lower leaves linear-oblong and short, in the upper oblong-linear and elongated: umbels with 6-8 rays; leaflets of the involucre and involucre few (about 6,) subulate, entire, much shorter than the rays: styles reflexed: fruit slightly ribbed, minutely muricated all over.—W. & A. Prod. p. 369.

1 Portion of a plant *natural size*—2 an expanded flower—3 a detached petal—4 stamens back and front views—5 ovary cut vertically—6 *mericarps* not yet mature—7 *mericarps* about separating and showing the bifid *carpo-phore*—8 the same cut transversely—9 a *mercarp* cut vertically, showing the minute embryo at the apex of the large albumen—10 embryo detached—11 a leaf.

336. EXACUM PEDUNCULARE (Linn.) (*E. carinatum* and *E. sulcatum* Roteb.) stem erect, ramous, 4-sided: leaves lanceolate, corymbs nearly naked (not leafy) corolla 4 cleft, segments oval, capsule globose—*flowers smallish, blue or yellow.*

1 Plant *natural size*—2 corolla and stamens—3 ovary, style and stigma—4 capsule cut transversely.

337. LEUCAS CEPHALOTIS (Spreng.) herbaceous, somewhat hispid: leaves ovate, oblong, slightly serrated: verticillasters solitary, large, globose, densely many-flowered: bractiae ovate-lanceolate, acute, imbricated, ciliated with bristly hairs: calyx villous, striated at the apex, 10-toothed, ciliated on the margin, mouth oblique, teeth subulate, short, nearly equal.—Benth. Lab. 617.

1 Portion of a full grown plant, *natural size*—2 corolla opened to show the form and insertion of the stamens—3 calyx split open showing the ovary and style—4 a seed cut across.

OBS. The analysis of this genus is rather imperfect, other opportunities will occur of representing them.

338. LEUCAS VESTITA (Benth.) herbaceous, erect: stem densely clothed with reddish hairs, leaves ovate-oblong, crenately serrated, hairy, green, or whitish beneath; bractiae linear, hispidly ciliated: calyx mouth truncated, nearly equal, very hairy within, teeth subulate, about equal, stellately reflexed at the apex.—Benth. Lab. 613.

1 Portion of a flowering plant, *natural size*—2 corolla split open showing the stamens—3 calyx opened to show the ovary, style and stigma.

339. ZIZYPIUS RUGOSA (Lam.) leaves broadly oval, serrated, young ones downy beneath, old ones nearly glabrous except on the nerves: prickles short, usually solitary on the branches, with a broad densely pubescent base: cymes long-peduncled, forming on the leafless branches a large terminal panicle: ovary 2-celled: styles 2, united at the base: drupe obovate, with a very thin 1-celled, 1-seeded putamen.—W. & A. Prod. p. 162.

1 Flowering branch, *natural size*—2 an expanded flower showing the disk, stamens, and semi-superior ovary—3 anthers—4 ovary cut vertically—5 young fruit cut transversely—6 & 7 nut divided transversely and longitudinally, one seeded—8 cotyledons the testa removed—9 one cotyledon showing the radicle—10 embryo detached.

OBS. Figures 7-8 and 9 show the seed inverted with the embryo superior in place of inferior.

340. SONNTRATIA ACIDA (Linn.) branchlets 4-angled; leaves oval-oblong: petals 6, narrow-lanceolate: stigma concave.—W. & A. Prod. 327.

1 Flowering branch *natural size*—2 a flower vertically showing the insertions of the petals and stamens, and situation of the ovary—3 a portion of an ovary, cut transversely—4 a fruit considerably advanced—5 the same cut transversely—6 a seed cut longitudinally showing cotyledons.

341. PIMPIVILLA CANDOLEAXA (W. & A.) perennial? : stem erect, slightly branched, and the petioles densely pubescent or shortly villous: leaves very pubescent on both sides, hard and firm, cartilaginously toothed; radical and lower cauline ones reniform cordate, entire; middle cauline ones tripartite, the segments cut and sometimes lobed; upper ones small and divided down to the sheath: umbels with many (10-16) very pubescent rays; leaves of the involucre \gg , subulate, deciduous, much shorter than the rays; of the involucre somewhat permanent, about the length of the rays: styles at length reflexed: fruit densely covered with small granular tubercles.—W. & A. Prod. p. frtt.

1 An entire plant, natural size—2 an unexpanded flower—3 a flower the petals removed, to show the disk and insertion of the anthers—4 a petal, back view hairy on the mid-rib—5 stamens—6 ovary—7 the same cut vertically, ovules pendulous—8 a full grown fruit—9 the same, the mericarps separated and showing the bifid carpophore—10 a mericarp cut vertically—11 the same cut transversely, showing the vitta.

342. HERACLEUM PEDATUM (R. W.) stem branched, glabrous towards the base; the ends of the branches petioles and top of the peduncles hairy: leaves pedate; leaflets ovate, acute, doubly serrated, the middle one sometimes 3-lobed, all slightly pubescent on both sides: leaflets of the involucre linear-lanceolate: calyx 5-toothed, teeth lanceolate enlarging with the fruit: flowers of the centre of the umbels equal petaled, male or sterile, those of the circumference unequal-petaled, bi-sexual and fertile.

Alpine jungles Shevagherry, flowering in September. This species differs so widely in some points from the other species of the genus, as to render its removal to form the type of a new genus, not improbable—for the present, however, I prefer retaining it here.

1 Flowering branch, natural size—2 a fertile flower side view—3 same front view—4 a sterile flower—5 stamens—6 ovary and petal—7 an immature fruit—8 cut transversely—9 the same cut vertically showing the half grown seed.

343. LORANTHUS ELASTICUS (Dear.) glabrous, dichotomous: branches terete: leaves sessile, oblong or ovate lanceolate, usually attenuated with a blunt point at the apex and acute at the base, thick and coriaceous, obscurely 5-nerved; two of the lateral nerves from the base, the other two from the mid-rib below the middle: flowers sessile or nearly so, fascicled around the knots of the branches: ovary with a solitary adpressed bract at its base: limb of the calyx entire, cup-shaped: corolla infundibuliform, 4-cleft, one of the fissures deeper than the others; segments long, narrow-linear, elastically revolute: limb before expansion tumid at the base, then tapering and forming a long sharp beak as long as the tube: anthers oblong-linear: fruit ovoid.—Y. & A. Prod. p. 386.

1 Flowering branch—2 a dissected flower—3 ovary, style and stigma—4 ovary cut vertically.

344. SOLANUM RIBRUM (Roxb.: Nees.) annual, ramous, diffuse: stem angular, with the angles and ribs of the leaves denticulated: leaves ovate-oblong, attenuated at the base and apex, repandly toothed, fructiferous pedicels, divaricate, shorter than the slender common peduncle (pollen yellow).—Nees. Lin. Trans.

Obs. The angles of the stem are much more evident in the dried than the recent specimen from which this drawing was made, the denticulations mentioned in the character are not seen in the drawing, they consist of minute cartilaginous points or prickles.

1 Flowering branch—2 a flower—3 the same split open to show the insertion of the stamens—4 stamens—5 ovary—6 cut vertically—7 a fruit cut transversely.

345. SOLANUM TORVUM (Swartz.) shrubby, prickles small, (sometimes wanting) retrayed, tomentose at the base: leaves in pairs sub-cordate, ovate, sinuately lobed, or angular, tomentose, having the mid-rib prickly: peduncles extra-foliaceous, corymbose many-flowered, and the calyx are unarmed, segments of the calyx ovate acuminate.—Nees Lin. Trans.

Obs. This drawing is imperfect in not representing the tomentum with which I have always observed the plant more or less clothed. The prickles in this species are usually very few and minute/

1 Flowering branch—2 a flower cut open to show the stamens—3 ovary and calyx—4 a fruit-cut transversely.

346. SOLANUM INDICUM (Lin.) shrubby, armed: prickles of the stem compressed, recurved: leaves solitary or twin, oblong or ovate, tomentose, discoloured, sinuately lobed, or pinnatifid, unequal at the base, racemes interfoliaceous, sub-cymose, calyx prickly with straight-linear reflexed segments: berries globose, corolla quinquefid.—Nees Lin. Trans.

1 Flowering branch—2 stamens—3 calyx and ovary—4 a berry cut transversely.

347. PORANA VOLUBILIS (Lin.) suffruticose, twining: leaves cordate, acuminate, glabrous, panicles many-flowered: sepals ovate, obtuse, glabrous, equal: corolla 5-cleft, longer than the calyx.—G. Don, Diet. p. 4.

Obs. The character of the genus Porana, (of which I believe this is the type) is to have a 1-celled ovary, but in this species I have ascertained beyond all doubt, that it is 2-celled, with 2 erect ovules in each. If the other species have 1-celled ovaries then this must be removed from the genus.

1 Flowering branch—2 a flower, both natural size—3 stamens—4 corolla split open—5 calyx and ovary showing the style divided nearly to the base—6 the ovary cut transversely—7 cut vertically.

348. HETEROSTEMMA TANZANITICUM (W. & A.) twining glabrous: leaves broadly ovate or oblong, short acuminate obtuse or cordate at the base; peduncles shorter than the leaves, few-flowered: leaflets of the crown spreading, broad truncate, furnished within with a tongue-shaped process, follicles devaricate, slender, glabrous, hooked at the point.—Wight's Contrib. p. 42.

1 A flowering branch—2 a detached flower slightly magnified—3 the same more magnified—4 corolla and calyx removed, the stamens thrown back to show the pollen masses *in situ*—5 pollen masses detached*

349. GYMNEMA SYLVICUM (Brown) twining, clothed with soft down on every part except the upper surfaces of the leaves from oval attenuated at the base and apex, to ovate or cordate, acute peduncles equal in length to the petioles: umbels twin, sub-capitate, many-flowered: flowers small: stigma bluntly conical, much longer than the stamens: follicles slender, attenuated, glabrous.—Wight's Contrib. p. 44.

A widely distributed plant in India and Ceylon, and, I now think, identical with the much older species *G. lactiferum*, regarding which I learn no plant possessing the lactiferous properties attributed to it, is now found in the island.

1 Flowering branch—2 a detached flower slightly magnified—3 a dissected flower, with calyx and ovary—the corolla split open showing double lines of hairs decumbent from the divisions—and the stamens and stigma detached from the ovary—4 pollen masses—5 an ovary cut vertically.

350. LEPTYDTONIA RIFTCTILATA (W. & A.) twining; bark of the older branches corky glabrous, young branches, clothed with cinereous down, and sometimes with tomentum: leaves ovate or lanceolate, acute, usually smooth-ish and sometimes clothed with short white down: umbels lateral many-flowered, about equal in length to the petioles: segments of the corolla with revolute edges, and a bearded process near the point, scales of the throat simple, short; stigma blunt: follicles subcylindrical oblong, obtuse, often solitary by abortion.—Wight's Contrib. p. 17.

I now suspect this is not specifically distinct from the Bengal species—*L. imberhls*—which I now find is also a native of the Peninsula.

1 Flowering branch, natural size—2 a flower—3 the same dissected, the corolla removed, the stamens forcibly thrown back, to bring the pollen masses and their cells into view—4 another figure showing the inverted position of the pollen masses while the process of impregnation is going on—5 the position of the pollen before impregnation—6 calyx and ovary.

351. TYLOPHOEIA CARNOSA (Wall.) twining, glabrous; stems and branches slender: leaves fleshy, ovate or subcordate, mucronate, shining, pale beneath; peduncles flexuose bearing at the flexures several filiform pedicels: flowers small, leaflets of the crown fleshy, sub-orbicular: pollen masses ascending: stigma convex, follicles glabrous, usually solitary by abortion.—Wight's Contrib. p. 49.

1 Flowering—2 a flower showing the form of the coronal leaflets as seen from above—3 front view of the stamens and stigma, the anthers forcibly thrown back to show the pollen masses and cells—4 the staminal column as seen after removing the corolla—5 ovary—6 pollen masses.

352. PENTATROPIS MICROPHYLLA (W. & A.) twining, glabrous: leaves rather fleshy, ovate, mucronate, rounded at the base or subcordate: umbels almost sessile, few flowered: pedicels long, filiform: calyx minute: corolla spreadingly reflexed: segments acute, leaflets of the corona broad, averse at the base, cuspidate and incurved at the apex, equal to the gynostegium.—Wight's Contrib. p. 53.

1 Flowering branch—2 a partially dissected flower—the corolla removed to show the column of fructification and form of the coronal leaflets, one of which is removed, and the other turned back to show the pollen masses *in situ*—3 staminal tube removed showing the ovary, styles and stigma—4 pollen masses.

353. CEROPRIGIA TUBEROSA (Roxb.) herbaceous, glabrous, twining: leaves from nearly orbicular, to oval or ovate, cuspidate, sometimes lanceolate, acuminate: peduncles usually twined, few or many-flowered, longer or shorter than the leaves: calyx small, with subulate segments: corolla ventricose at the base, having the tube widened upwards, segments of the limb narrow, nearly linear, villous, one half shorter than the tube; gynostegium bipartite; middle lobes of the leaflets of the crown legulate, lateral ones short, cohering with the primary one, follicles slender.—Wight's Contrib. p. 32.

1 Flowering branch—2 a dissected flower, corolla removed to show the stipitate gynostegium and form of the crown—3 pollinia—4 calyx and ovary—5 ovary cut vertically—6 a follicle in the act of shedding—its seed—7 a seed with its pappus.

354. CYNANCHUM PAUCIFLORUM (R. Br.) twining, glabrous: leaves ovate, acuminate, reniformly cordate at the base, the auricles diverging: umbels few-flowered; peduncles shorter than the petioles: flowers glabrous on short pedicels: crown equaling the corolla with a 10-cleft plicate border, naked inside; lobes opposite the anthers lanceolate acuminate, bifid at the point, the alternate ones very short and emarginate or truncate: pollen masses attached beneath their apices (erroneously represented here) stigma apiculate, obtuse.—Wight's Contrib. p. 56.

1 Flowering branch—2 calyx and ovary—3 corolla detached and split open—4 crown similarly shown—5 staminal column as seen after the removal of the crown—6 pollen masses.

X55. HUTCHINIA INDICA (Wight's Contrib. p. 34.)

The essential character of this genus is to have the staminal crown in a double series, the inner consisting of 5 simple lobes resting on the anthers, the outer of 5 lobes alternate with the inner series, but each 3-cleft, with the middle segment smaller, thus making together a 20-lobed corona—This, being the only species of the genus, has no specific character.

1 Flowering plant, natural size—2 gynostegium showing the double corona, but not well represented—3 ovary—4 stigma and anthers, the latter thrown back to show the pollen masses *in situ*—5 side view of the gynostegium encased in the corona—6 and 7 different views from above of the same—8 pollinia showing the pellucid angle.

356. MAKSIJKNIBRUNONIANA (W. & A.) twining, glabrous: leaves broad, cordate, acuminate: peduncles shorter than the petioles: flower cymose, laxish, glabrous: segments of corolla obtuse: coronal leaflets attenuated, about equal in length to the gynostegium, stigma bluntly apiculated.—Wight's Contrib. p. 40.

1 Flowering branch—2 a dissected flower, calyx and gynostegium as seen after removal of the corolla—3 corolla detached and split open—4 staminal tube; the anthers turned back to show the pollen masses *in situ*—5 pollinia.

357. DICHROSTACHYS CINEREA (W. & A.) thorns solitary: pinnae of the leaves 8-10 pair; leaflets ciliated, 12-15 pair: petioles pubescent: spikes usually solitary, rarely 2-3 together, drooping, somewhat cylindrical, rather shorter than the leaves: petals scarcely cohering by their margins, and forming a 5-cleft corolla.—W. & A. Prod. page 271.

1 Portion of a branch, showing both flowers and legumes—2 a flower—3 stamens showing their staked gland—4 a flower cut open to show the insertions of the stamens and ovary *in situ*—5 an ovary—6 cut transversely—7 cut vertically—8 a seed natural size—9 the same magnified—10 cut transversely, albuminous.

358. DILLBORNIA BRACTEATA (R. W.) arboreous: leaves from oval, obtuse to obovate, tapering towards the base, crenate, glabrous on both sides: peduncles axillary from the summits of the branches, several flowered, pedicels pubescent, jointed, furnished with 2 cuneate bracts below the joint: sepals coriaceous, obtuse, silky on the back, stamens all equal, styles and carpels 5, many-seeded.

Balahaut mountains, near Madras—This is a very handsome species, nearly allied to *D. reiusa*, but I think, certainly different.

1 Flowering branch, natural size—2 a flower the petals removed to show the ovary and styles, and unguiculate petal—3 a stamen—4 the ovary with 1 carpel opened to show the ovules—5 a half grown fruit surrounded at the base by a ring of persistent filaments, the anthers having fallen off—6 a filament magnified—7 a young fruit cut transversely—8 cut vertically—9 a seed—10 cut vertically—11 cut transversely—12 seed exarillate.

ISONANDRA (R. W.) No. Sapotaceae.

GEN. CHAR. Calyx deeply 4-parted: corolla 4-cleft: stamens 8, all fertile, others posticous: ovary 4-celled, with a solitary erect ovule in each cell: nut echartaceous, by abortion, one celled, one-seeded: seed obovate, erect; cotyledons foliaceous, enclosed in a copious albumen; radicle inferior—Trees with alternate somewhat coriaceous, glabrous or pubescent leaves, and small flowers. Flowers forming axillary clusters or capitula, generally found mixed with fruit in nearly all stages, from the fall of the corolla to perfect maturity, flowers yellow or whitish.

This genus is readily distinguished from all other of the order by its perfectly symmetrical flowers, and the stamens all perfect (hence the name) in place of one half sterile. In habit and also in structure, it is allied to *Sidneyxylon*, but the quaternary, not quinary, arrangement of the flowers and the absence of abortive stamens in any form, sufficiently separate them.

359. ISON4NURA LANCEOLATA (R. W.) arboreous, leaves lanceolate, acute or sub-acuminate, glabrous hflow-
• ers, in axillary few-flowered clusters, short pedicelled segments of the calyx, lanceolate, acute.

1 A branch with flowers and fruit—2 a flower before opening, side view—3 corolla, Hmb expanded, showing the oblong, acute, projecting anthers—4 the same split open—5 stamens, back and front views, anthers 2-celled, cells approximated, dehiscing longitudinally—6 calyx, and ovary—7 cut vertically, showing the attachment of the solitary o. Xile—8—Scut transversely—ia fruit not quite mature, cut vertically showing it 1-celled, with a solitary ovule—10 seed cut transversely showing the embryo enclosed in albumen—11 embryo detached, cotyledons foliaceous.

360. ISONANDRA villosa (R. W.) arboreous, young branches, petioles and under surfaces of the leaves clothed with rusty brown villi: leaves coriaceous elliptical or nearly orbicular: flowers numerous on small axillary capituli (orange coloured.)

1 Flowering branch—2 flower side view—3 corolla, split open to show the insertion of the stamens—4 stamens back and front, cells of the anther remote on the edge of a broad connectivum—5 ovary and calyx—6-7 ovary cut transversely and vertically—8 a fruit nearly mature, cut vertically 1-seeded—9 seed cut transversely albuminous—10 embryo detached.

SCEPA Lindley.

GEN. CHAR. Flowers dioicous, *male*, flowers amentaceous, with a 4-leaved perigonium imbricated in aestivation: stamens 2, anthers 2-celled, dehiscing longitudinally, *female*, flowers in short, axillary, racemes perigonium 4-6 leaved in a double series: ovary free 2-3 celled with 2 collateral ovules in each; style very short; stigma 4-6-cleft, (2 segments to each cell): ovules, pendulous from the apex of the partitions, each furnished with a scale projecting from the placenta and covering the micropyle: (not shown in the figure) fruit a friable indehiscent capsule 2-3 celled, with a single seed in each, seed compressed, somewhat winged, testa membranaceous, embryo enclosed in a copious albumen, cotyledons foliaceous, radicle next the hilum. *Shrubs—widely diffused in India and in Ceylon.*

Dr. Lindley views this genus as forming the type of a new order which he designates *Sepacm*: L prefer, however, adopting Endlicher's arrangement, as the more correct, by whom it is referred to *Antidesiaceae*.

361. SCEPA LINDLEYANA (R. W.) The specific character cannot be given at present.

1 Flowering branch, female plant—2 portion of a male anient before the expansion of the flowers to show the scales with which they are covered - 3 an amentum *natural size*—4 *magnified*—5 a flower with its scale—6 the same more fully opened—7 stamens—8 ovary and calyx, but the calyx perhaps incorrectly represented—9 the ovary cut vertically, showing the pendulous ovules, but the scales covering the apex not shown—10 ovary cut transversely—11 a portion of a branch with fruit nearly ripe—12 a capsule cut transversely- 13 a seed showing the winged testa—14 the same, cut transversely—15 embryo detached.

362. SYMPHOREMA INVOLUCHATA (Roxb.) corolla about 7-cleft, stamens 7, alternate with the segments, leaves ovate, nearly glabrous above, pubescent or sub-tomentose beneath. (R. W.)

1 Flowering branch, *natural size*—1 corolla split open, to show the number and insertion of the stamens—3 anthers—4 calyx cut and forcibly opened, to show the ovary—5 the ovary cut vertically, showing it 1-celled with an erect central 4-angled column-like placenta, bearing the ovules pendulous from its apex - 6 the placental column and ovules removed, but the column represented a little too thick—7 an ovule detached—8 a fruit enclosed in the persistent calyx—9 the seed removed—10 the same cut transversely, a copious albumen hollow in the centre, perhaps from shrinking of the immature embryo—11 cut vertically, showing the space occupied by the embryo 12 the embryo removed from its place, but inverted by the draftsman—13-14 portions of a leaf *magnified* to show the starry pubescence.

363. SYMPHOREMA POLYANDRA (R. W.) corolla many (14-18) cleft: stamens equalling the number of segments: leaves from broadly ovate, sub-acuminate to nearly orbicular, stellately hairy above, thickly tomentose beneath.

This & altogether a larger plant than the former, and a very distinct species—Ballaghaut hills, near Madras.

1 Flowering branch, *natural size*—2 corolla split and forcibly opened—3 anthers—4 calyx opened showing the ovary *in situ*—5 ovary cut transversely, apparently 4-celled owing to the angles of the column extending to the walla, and erroneously represented as cohering—6 ovary cut vertically, showing the column and pendulous ovules—7 the column and ovules detached—the angles of the former, seen projecting between the pairs of ovules, but difficult to show—8 an ovule detached—9 a fruit enclosed in the persistent calyx—10 the same cut transversely, a large albumen hollow in the centre—11 cut vertically, showing the form and relative size of the embryo and albumen, the embryo apparently far from maturity—12 a young branch to show the foliage—13-14 a portion of the upper surface of a leaf *magnified*, to show the hairs and a tuft of hair—15-16 under surface and hairs.

The place which this genus ought to occupy in the natural system, does not seem well determined. Hitherto, it has been referred to *Verbenaceae*, but I think there is much reason to doubt the propriety of this distribution. To me it seems probable that this should *Congia* Roxb. will unite to form a small but very distinct order, but whose affinities I have not yet made out.

364. STERCULEA FETIDA (Linn.) when I figured this plant No. 181, I had not a good specimen of the fruit, I am therefore induced to give this additional figure of that plant, to show the *natural size* of the full grown fruit—2 a follicle after dehiscence, but before the seed have fallen out—3 a seed—4 the same cut transversely, showing the embryo enclosed in a copious albumen—5 a seed divided vertically between the cotyledons, showing the minute radicle at the apex—6 whole embryo detached.

365. INDIGOFEBA TINCTORIA (Linn.) suffruticose erect, branched, sprinkled with short whitish pubescence; branches terete, firm: leaves pinnated; leaflets 5-(>-pairs, oblong-obovate, cuneate at the base, slightly decreasing in size towards the apex of the leaf: stipules subulate, erect or incurved: racemes shorter than the leaves, sessile, many-flowered: flowers small, approximated at the base of the raceme, more distant and deciduous towards the apex: calyx-segments broad, acute: legumes approximated towards the base of the rachis, nearly cylindrical, slightly torulose, deflexed and more or less curved upwards: sutures thickened: seeds about 10, cylindrical, truncated at both ends.—W. and A. Prod. p. 202.

1 Flowering branch—2 legume, copied from Roxburgh's drawing.

366. INDIGOFEBA CIERUTEA (Roxb.) shrubby, erect; branches terete, closely covered with adpressed whitish pubescence: leaves pinnated; leaflets 4-5-pairs, obovate, emarginate, the lower the smaller, the terminal largest; upper surface glabrous; under paler, covered with depressed hairs: racemes solitary, sessile, shorter than the leaves, many-flowered: flowers small, pretty close, the upper ones deciduous: calyx-segments short, acute: legumes terete, short, about 5 times as long as broad, deflexed and falcate upwards, approximated towards the base of the rachis, slightly torulose, 3-4-seeded.—W. and A. Prod. p. 203.

1 Flowering branch—2 dissected flower—3 stamens detached—4 keel petals showing the spurs—5 a raceme of fruit—6 a single legume slightly *magnified*. Copied from Roxburgh's drawing.

367. INDIGOFERA ri-nuhLLA. (Roxb.) large erect shrub or small tree, young parts usually whitish with short adpressed hairs; branches angled: leaves pinnated; leaflets 8-10-pairs, obovate or broad elliptic, emarginate, mucronate: racemes about the length of the leaves, sessile, many-flowered, springing from the axils of the leaves and from the former years' leafless branches: flowery large, at first crowded, afterwards more distant: calyx-segments short and acute: petals many times longer than the calyx, patulous and resembling a bilabiate corolla: legumes scattered along the rachis, slightly deflexed, nearly cylindrical, thick, straight, sharp-pointed, 10-12-seeded; sutures callous, thick.—W. and A. Prod. p. 203.

1 Flowering branch—2 a split of flowers and legumes detached. Copied from Roxburgh's drawing.

361. INDir.mrKA ARBORIA (Roxb.) arboreous; leaflets pin mm-; leaflets from 6 to 6 pair, oval emarginate; r.v. emarginate the length of the leaves, wing expanded: legume fluted, straight, smooth.—Kuxt. FL Ind. J p. 131

1 Flowering branch—2 a dissected lloycr. Copied from Roxburgh's drawing.

369. INDir.mrKA ARBORIA (Roxb.) arboreous; leaflets erect: leaves pinnate: leaflet from 8 to 8 pairs, oval, smooth: racemes when in flower as long as the leaves, in seed twice their length: legumes cylindrical, straight, reflexed, from 8 to 8 seeded.—Haxb. FL Ind. 3 p. 311.

1 Flowering branch—2 a portion of a raceme, «itli2 pods—3 a pod after dehiscence. Copied from Roxburgh's drawing.

370. TEPHOSIA SBTIOOJI (Linn.) shrubby, dense, nearly glabrous; leaves pinnate: leaflets 1-3 pairs, obcordate, the terminal one the largest: upper blade glabrous, under whitish with a very fine pubescence: stipules subulate: flowers in pairs, axillary, toward the extremities of the branches nearly sessile: calyx-segments subulate: legumes compressed, glabrous, slightly curved at the point.—W. and A. Prod. p. 211.

1 Flowering branch—3 dissected flower—3 legume—the some open, copied from Roxburgh's drawing.

371. TKPIROSU INPASA (Graham Galuga in Roxb.) shrubby, diffuse, every where except the upper surface of the leaves tomentose or woolly: leaflets pinnate; leaflets about 6 pair, obovate, reflexed; upper side pubescent or silky, under woolly: stipules lanceolate, reflexed: raceme terminal, elongated, interrupted, many-flowered: flowers fasciated, almost sessile: calyx villous, with king fulmia hair: segments tabulate, several times longer than the tube: vexillum silky: legumes divided into 2 curved upwards, «itli2 fulvous-woolly, li-a-needed.—W. and A. Prod. p. 212.

1 Flowering branch—2 legume open.—Copied from Roxburgh's drawing.

372. TEPHOSIA SPIKOSA (Purs.) shrubby; branches numerous, woody, rigid, spreading in every direction: flowers white soft adpressed somewhat tomentose hairs: leaves pinnate; leaflets 4 pair, cuneate, emarginate; upper side glabrous, under clothed with adpressed white silky hairs: stipules subulate, patent, rigid, spinous (in the wild plant: flowers united together, short peduncled: calyx hairy; legume subulate, about the length of the tube: vexillum hairy: legumes ependymous, much compressed, linear, falcate, more or less clothed with somewhat adpressed hairs, j-w-seeded.—W. and A. Prod. p. 214.

Copied from Roxburgh's drawing.

373. DSSVONTM CKPTIILYNA (Wall) (Hedyrum cephalotes, Roxb.) arboreous: branches densely clothed when young with adpressed white silky pubescence, afterwards more glabrous: leaves tripartite: leaflets oblong or oblong-lanceolate, clothed with woolly or silky hair when young, soon glabrous; nerves parallel, woolly beneath: stipules, itariote, aequimistate: peduncles axillary, several times shorter than the petioles, many-flowered: lower calyx-segments narrower mid longer than the others: legumes (tensely villous, 2-3-jointed.—W. and A. Prod. p. 214.

1 Flowering branch—2 cluster of legumes—3 a single legume. Copied from Roxburgh's drawing.

374. DBSHOOIBU BBCOSVATDM (Roxb.) shrubby: branches recurved, clothed with short adpressed hairs: flowers triquetrous: leaves trifoliate: leaflets ovate or oval, glabrous above, pubescent beneath: stipules lanceolate, mucronate: racemes teraudal, drooping before the flowers expand, afterwards very long (1-U-feci): bracts lanceolate: Kirroutidiig several smaller setaceous ones: Sowers several together: legumes narrow-linear, straight: both sutures, clothed with short hooked hairs; joints more than twice as long as broad.—Graliatu Prod. p. liiO.

Copied from Roxburgh's drawing.

375. OSBECKIA TRUNCATA (Don.) herbaceous, annual: stems slightly branched, 4-angled: the angles clothed with adpressed hairs: leaves spreading or deflexed: leaflets 3-4 pairs, ovate, strigose, quite entire, ciliate, 3-nerved, the (bur upper one unnotched and forming a kind of involucre under the flowers: flowers (very small) terminal, sessile, aggregated: calyx 5-lobed: Dute, covered with spreading simple or palmate long bristles; segments 4, deciduous: appendages deciduous, striate, crowned with bristles: anthers 8, truncated (without any beak!) ovary crowned with 10-20 bristles.—W. and A. Prod. p. 322.

1 Plant in fruit—2: flower partially dissected—3 anthers bare and front view—4 ovary cut vertically—5 capsule natural view—6 cut vertically—7 cut transversely—8 a seed.

376. OSBECKIA WATSONI (Don.) shrubby: branches straight, twiggy, 1-angled, hispid: leaves petioled, lanceolate or ovate-lanceolate, 8-nerved, quite entire; upper side sprinkled with adpressed hairs: lower side on the nerves, otherwise glabrous: flowers aggregated: calyx-tube urceolate, sprinkled with simple and 2-3-jointed spreading bristles, sometimes naked; segments 5, deciduous: appendages deciduous, being usually deeply trifid of sometimes simple bristles: anthers 10, shortly beaked; ovary crowned with numerous bristles: style incurved near the apex.—W. and A. Prod. p. 323.

1 Flowering branch—2 dissected flower—3 anthers bare and front view—4 capsule—5 cut vertically—6 cut transversely—7 a seed.

377. OSBECKIA ASPERA (Blume) shrubby: branches obscurely 4-angled, rough from short strigose bristles: leaves shortly petioled, oblong-ovate, or obovate-lanceolate, acute, obtuse at the base, 3-nerved; upper side copiously clothed with adpressed bristles; under hirsute: nerves, and especially pubescent between the flowers on the pedicels, terminal, somewhat racemose: calyx-tube cup-shaped, copiously clothed with adpressed rigid pubescence; segments 5, ovate-oblong, obtuse, deciduous: appendages deciduous, consisting of a tuft of few (sometimes only 1) bristles: stamens 10; anthers acuminate but scarcely beaked; style incurved at the apex; ovary crowned with numerous bristles.—W. and A. Prod. p. 323.

1 Flowering branch—2 dissected flower—3 capsule cut transversely—4 cut vertically—5 a seed—6 the fruit cut longitudinally—7 embryo detached.

378. LOITAMM TOMSHOSB (Heyne) all over greyish with starchy tomentum: branches terete: leaves alternate, roundish-lanceolate, obtuse, somewhat cuneate at the base, petioled, at length nearly glabrous on the upper side: peduncles axillary, bearing an umbel of 3-5 pedicelled villous flowers: bracts inflexed, truncate larger than the ovary, unilateral, equal to the ovary, eumistate (obovate, obtuse: calyx-b'rab 5-lobed: corolla tubular, gibbous on one side above the middle, curved, split into 5 linear recurved unilateral segments, one of the lobes much deeper than the others: filaments inserted: anthers linear.—W. and A. Prod. p. 325.

In this plate three varieties are presented—varying in the form, of the leaves and of the bracts, but agreeing in all having large (liliaceous) bracts.

1 Flowering branch—2 a flower with its attached bract—3 a dissected flower—4 stamens—5 ovary after the full of the corolla.

379. CAVPABIS MCSKII (Graham) shrubby, diffuse, armed with short recurved (orange coloured) prickles: flowers tomentose: leaves email, roundish, glabrous: flowers huge; upper epa larger than the lower: berry long peduncled, oval, ribbed.

For the drawing of a solitary specimen of this very distinct species, I am indebted to the late Mr. John Graham of Hoinbay. It is found in ravines at Mabbalshwara hills. "Flowers white, beautifully suffused with red, large and showy." Ninuno in Graham's catalogue.

1 Flowering branch—2 anthers—3 ovary cut longitudinally.

380. *HYPOCHARTA GRANA MU* (R. W. III. Inti. Hot. 13.) shrubby, twining, glabrous: leucis coriaceous, entire, from broadly ovate to sub-orbicular, acuminated panicles! numerous, many-flowered, cinnegstixl towards the Ktastuits of (lie bunces, petals linear; sithulate, iituse-, cur]els obovate, obtuse, slightly emarginate.—Bomb: y.

1 Flowering branch—2 a flower seen from above—1 the same, the petals removed—4 a stamen, anther iraiis-verse—3 ovary cut vertically—6 cut transversely—7 oioing carpels—8 one of them o] ened showing the position of the seed at this early ML:—J a carpel farther advanced cut twusvsevselv—10 a seed, the v.in^ beginning o tbriu

381. *Hi HA: A]I>IC** (Roxb.) leaves broadly oiate, more or Its* acuminated, shinsj, glabrous on both sides: panicle IB asillaiy ur terminal: cntyx without glands: cirpels each rrou tided with tin ubtong-liuear (-mire wing, —R b W. aud A. p 108.

1 Flowering iroocb—2 a flower, natural site—8'the same magnified, and partially open—I the same somewhat forcibly opened—5 aoth, 0TB~*fl calyx, ovary and styles—7 ovary cut transversely—s cut vertically, ovules JCIHWIUKIS —i) a cluster of fruit—10 one of them cut transversely—i. /ecMrpcl cut transversely — U a fruit with me carpel separated to show the mode of union—13 side view of one—14 one carpel attached lo the pedicel—15 n seed letacfaed.

382. *CKUSTHTJS MOKTAH4* (Koxb.) : horny; young jnnohes occasionally unarmed, smooth (purplish): leaves jlliptical or obovate, tapering at the base into the petiole, minutely and rather sharply crenate-tternued, coriaceous, glabrous, whitish-glaucous (when dried): cyms aHarv, ax, pednncd, about twice as long us the petiole: style k?eplv divided: capsules somewhat globose, 3-4 ngloil about the size of a pea, black when dry.)—W. and A. Prod p. 159.

1 Flowering branch—2 a flower¹, fide view—3 thesnrne front view—4 stamens—5 ovary cut vertically - (j cut ransversely—7 an ovary in which out of the cdh have kborted.

383. *CsoTALAKTA OIITBCT** (Graham) suffruticose, :rect, covered all over with u short dense tomentum: irsncei terete: stipules a>1 bractoa Betaceos, milute: eaves oval, mucTonate: racemes terminal, elongated: flowers numeroru, approxinmtct: btacteoles on the midlie of the pedkels, Bttaceoun: calyx deeply 5•left, tensely covered with rusty totncntuii: segmenta all 'litiuci, linear-actuni ated, falcate: legumes sessile, oblong, atber broader upwards, about foi r times as long ai the calyx, deu• iy tomentose, many-seeded.—W. and A. Prod. p. 185.

1 Fluui-rring brantrli^2 dir^ftted flower—3 en anther —i the style and stigma—\$ ovary cut lengthwise—6 a egnome atmUarly cut—7 a seed—8 the same cut longltudina Uy.

384. *TIUGON LA CORACUL V* (UnD.) annual: stem some what erect, sometimes rtesuose or dirRise, glabn : leaflet 9 obovate, toothed or serrated towards the apex: stipules lanceolate, nearly entire or toothed: peduncle xilhiry, longer than the lt:ui B, trucsonate at the apex: raceme a many-flowered, itt firdt duos* and umbillifonn, Aerwai ds lengthening: corolla thrice the length of the idy: legumes compressedi, declinate, falcate, short pointed, trawverselyveined: seed ftn, rogo8ej n> (ick prominent.—W. and A. Prod, p. 183.

Copied from Roxburgh's drawing,

385. *INDIOO IK£» PBNTAPiTu.A* (Linn.) Bufruticose: fuilulji-iiit, terete, glabn • except the young p:irta: LE&vs pinn:ied; leaflets 1-2-jaiir=. oval; both sides hut more p utkularly the andei hoary from w litisbsouh hairs: stipules Jascuelati—subulate, baity: peduDdes about the length of the leafes, bearin^ about 24S rather distiut flowers: Liiys-Mtu nents shirt, 8ubulat<: legumes straight, cyliniiricnl, inucroiisitL', glabrouH: seeds 10-12, cylindrical, truncated at both ends.—W. aud A. Prod, p. 200.

] Banco with hv>wre aud fruit—2 a dissected flower —: a legume opened.

386. *isiuGuiBKA TRiii* (Linn.—I. citiorea Itwtb.) herbaceous or suffruticose, erect, rigid, more w les hoary from short adpressed p:iciscon*: (eavis pinnately trifoliate: leaflets oval or oblong, rtrncroTiaJ: racemes sessile, about the length of the leaves, many-flowered: flowers small, upper ones deciduou: calyx-segments long and subulate: legumes ttenexed or liomoi tal, closely approximated at the base of tV rchus, 4-ang; ted, straight, rigid, and sharp-pointed: seeds numerous (6-10), 4-sided, truVcated at both ends.—W. und A. Prod. p. & 13.

I Branch with flowers mid fruit—2 the keci of the corolla ajmrrred on each nd.

387. *hn>iaorsKA PLACCIDA* (U oxb.) suffruticu* e, sparingly covered with lulprcsHcdshort hairs: stems and branches usnall] weak, the ?•river terete, the latter angled: leaves pinnate-; leaflets 2-3-paij opposite, oval, acute. bristle-}•luted: stipules loi g, setaceous, erect: racemes peduncled, elongated, twice the length of th< leaves: Bowers, email, recurved, rather distant: calyx segments long and tubulate: I egumes scattered on the lower half of the roth is, drooping/long-lraear, sleu Ier, 4-angled, pointed, mail y-seeded.—W. and A. Prod, p. *204

1 Flowering hrn.nuh—2 spurred keel of the corolla.

388. *TapHBoetA TTNCTWIA* (Linn—Galega Heynana Roxb.) shrubby, erert, branched, everywhere except the upper surface of the leaves clothed with a silky white or fulvous tomentum: branches fleastipules linear-lanceolate: leaves pinnated: leaflets 1s pairs, or occasional' redmcl to the terminal i<nlt-t, oblong-oval, terminal one longest, the lower pair or the base of the pedole and smaller than the others; upper side glabrous, under white and toraentose; peduncles amally longer than iht* leaves, axillary, erect, bearing a short spike-like raceme at the spex: calyr-segmei its subub ite: flowers small, on pedicels shorter than the bracteas: vaxillara silky: leeuun's tlai, necut y straight, spreading, uni lateral) 8-12 iceded.—W. and A. Prod. p. all.

•• Vnr n branches shorter, more rigid: hairs on the yoang pans falvoua leaflets shorter, smaller, J to 1 1/2 inch long, more coriaceous.

1 Flowering branch—2 dissected flower—8 legume opened.

389. *Furnuai i v wi* (Roxb.) suffruticose, >A<LE a very short ligneovn stem, and few ihart branches: IMVCS ternate: leaflets sub-ovat••, petiole-•inged: micemea axil' lary crowded: legume covered with red clammy :lands. —Ro.\b. Fl. luil.;),),;39.

1 Flowfirin^ branch—2 legume. Copied from lloi- burgh's drawing.

390. *FLEMINIA CONGESTA* (Roxb.) s' irabby, eon what orect, 3'oung pans rillous; rca trifoliolau; leaflets ova(e-lanceol; itc: upp<r side nearly glabrous; underpu- bescel, dotted with i numerous black jrlands, the densely pube^eent and^iather distant: i etiole nearly fe- "rote: Stipules kincolnti; subulate, b-ii times short er than the petiole, ckduous: racemes di use, oblong, rather shorter than the petiole, ;i •ost sessile, aggregate: bracteis ocatc- cuspidate, shorter than the Dowers, eaducous: legume eglandular.—W. and A. Prod p. 2J 1.

1 Flowering branch—2 spike of fruit—i Eegume—4 same opened.

391. *DALBBVGIA OoofiiNKssis fRosb.)* Icavt, teri- nate; lcflets sub-rotund: racemes terminal and axillary: flower 3-folia: audary: legume linear.—J Roxb. Fl. Ind. i j. i20. ^

1 Flowering branch—2 hWer-buds with their ncom- panying bractea, to show the ternary nrran^enient—3 n dissected flower—4 a one-seeded legume—5 a legume opened to show the seed.

392. *CESALPINIA MIMOSIOTIDES* (Lam.—C. Simora Ham.: Roxb.) scandent; stem and branches armed with numerous straight prickles; young parts coloured, armed with prickles and glandular hairs or bristles: pinnae of the leaves 12-30 pair; leaflets 8-16 pair, linear-oblong, obtuse, glabrous: common petiole armed with usually 3 prickles at the insertion of each pair or pinna?, two of them on the under side recurved, one on the upper bent upwards: stipules ensiform: racemes simple, leaf-opposed and terminal: legumes short, obliquely truncated, cuspidate, about a half longer than the breadth at the top, tergid, somewhat hairy, 2-seeded.—W. and A. Prod. p. 211.

1 Flowering branch—2 dissected flower—3 legume—4 the same opened—5 a seed cut transversely—6 vertically showing the radicle and plumule at the base—7 radicle and plumule removed.

393. *TABERNEMOSTANA PAUCIFLORA* (Roxb.) shrubby, dichotomous: leaves broad, lanceolate, tapering upwards to an obtuse point: peduncles in pairs at the forks, few-flowered: segments of the calyx ensiform.—Roxb. Fl. Ind. II. p. 25.

1 Flowering branch—2 a dissected flower—3 calyx and ovary—4 ovary cut transversely—5 stigma.

394. *MELODINUS MONOGYNUS* (Roxb.) glabrous, climbing, leaves lanceolate, shining, acuminate: panicles axillary and terminal, sub-globular, brachiate crowded: corolla 5-parted, segments sab-falcate; scales in the mouth of the tube entire ensiform: style short: stigma ovate, bifid, or emarginate at the top.—The pulp of the fruit is edible. G. Don Diet. 4, p. 101.

1 Flowering branch—2 a dissected flower—3 calyx, ovary, style and stigma—4 ovary cut transversely—5 a full grown fruit—6 the same cut transversely—7 a seed—8 cut transversely—9 cut longitudinally showing the embryo embedded in a copious albumen.

895. *ECHITESCYMOSA* (Roxb.) *AGANOSMACYMOSAG* (Don Diet.) shrubby hairy: leaves elliptic, acuminate: cymes terminal, shorter than the leaves, segments of the corolla oblique-ensiform: nectary cup-shaped, 5-toothed. Flowers small white, calyx and corolla hoary outside. Roxb. Fl. Ind. 2, p. 216

1 Flowering branch—2 dissected flower—3 calyx, ovary, style and stigma, ovary enclosed in its cup-shaped disk—4 disk opened to show the ovary—5 ovary cut transversely. Copied from Roxburgh's drawing.

396. *ECHITES PANICULATA* (Roxb.) leaves broad, lanceolate, bluntly acuminate: panicles axillary and terminal, trichotomous throughout; the extreme divisions three-flowered: foliicles sub-ovate, few-seeded: hypogynous scales combined into a cup-shaped 5-toothed urceolus.—G. Don Diet. 4, p. 75.

1 Flowering branch—2 dissected flower—3 calyx split open, showing the urceolus enclosing the ovary—4 ovary cut transversely—5 foliicles—6 a seed with its coma—7 cut longitudinally, showing the embryo embedded in albumen.

397. *RANDIA ULIGINOSA* (DC. *Gardenia uliginosa* Roxb.) arboreous, armed: branches straight, 4-angled; branchlets decussating, horizontal, terete, bearing 1-4 thorns and 1-3 short-pedicellate flowers at their extremity: leaves short-petioled, oblong, somewhat cuneate at the base, glabrous, shining: limb of the calyx tubular, bluntly 5-toothed or nearly quite entire, a little shorter than the tube of the corolla: corolla villous in the mouth: berry oval, drupaceous, even.—W. and A. Prod. p. 398.

1 Flowering branch—2 dissected flower—3 anthers back and front views—4 calyx split open and thrown back to show the disk, style and stigma—5 ovary cut transversely—6 cut vertically.

598. *GUTTERIA KORINTI* (Dun.) shrubby, climbing: leaves ovate-oblong, acuminate, coriaceous, glabrous; upper side shining, under prominently icticulated with veins: flower-bearing foots elongated, leafy, with several flowers; peduncles axillary, solitary, pubescent: petals equal, about twice as long as the calyx, elliptic-oblong, obtuse, margins recurved: carpels 6-12 globose, on stalks longer than themselves.—W. and A. Prod. p. 10.

1 Flowering branch—2 a flower blown—3 a flower after the fall of the petals and stamens cut vertically, showing the position of the ovaries on the thalamus or receptacle—4 an ovary detached—5 and 6 the same cut vertically showing the solitary erect ovule—7 cut transversely—8 stamens truncated on the apex—9 a carpel with its pedicel—10 a seed removed from the carpel—11 cut transversely—12 cut vertically, showing the embryo at the base.

399. *ABELMOSCHUS MOSCHATUS* (Moench) stem herbaceous, hispid with spreading hairs, not prickly: leaves, and long petioles, hispid with rigid hairs but otherwise glabrous, unequally and coarsely toothed, deeply 5-7 lobed; lobes all spreading, oblong or lanceolate, acuminate: pedicels harshly pubescent, axillary, about as long as the petioles: involucel-leaves 6-10, linear, hairy, somewhat persistent: capsule oblong, acuminate, hairy.—W. and A. Prod. p. 53.

1 Flowering branch—2 an anther—3 ovary cut vertically—4 a capsule—5 cut transversely—6 a seed—7 dissected showing the embryo *in situ* the embryo detached.

400. *ERIODENDRON ANFRACTUOSUM* (DC.) trunk at the base prickly: leaflets 5-8, quite entire or serrulated towards the point, lanceolate, mucronate, glaucous beneath: anthers versatile, anfractuose.—W. and A. PrQd. p. 61.

1 Flowering branch—2 ovary cut transversely—3 mature capsule dehiscing—4 carpels showing the position of the seed—5 seed with its wool—6 a seed detached from the wool—7 cut vertically, showing the twisted folded cotyledons—8 cut transversely.

401. *SCHMIDELEA VILLOSA* (Ornitrophe villosa Roxb.) shrubby, tomentose: leaves ternate; leaflets oblong, ventricose, remotely serrulate on the anterior margin: racemes axillary and terminal, simple: petals cunifform the whole of the inside woolly.—Chittagong.—Roxb. Fl. Ind. II. p. 265.

1 Flowering branch—2 a dissected flower, the petals thrown back, and part of the stamens removed to show the ovary—3 ovary cut vertically—4 back view of the flower. Copied from Roxburgh's drawing.

402. *CUPANIA ROXBURGHII* (R. W. Schlichera pentaphylla Roxb.) leaflets from three to four pair, sub-alternate, lanceolate, flowers 5-petaled: capsule 1-seeded.—Roxb. Fl. Ind. II. p. 275.

1 Flowering branch—2 a male or sterile flower—3 a bisexual or fertile flower—4 ovary cut vertically—5 cut transversely—6 capsule and seed after dehiscence—7 the same as seen before perfect maturity—8 a seed—9 & 10 the same dissected. Copied from Roxburgh's drawing.

403. *INDIGOFBRA ENNEAPHYLLA* (Linn.) perennial, procumbent, all the young parts and leaves pubescent with adpressed whitish hairs: branches prostrate, two-edged: leaves pinnate, sessile; leaflets 3-5 pairs, obovate-oblong: stipules lanceolate, acuminate, scariose: racemes sessile, short, ovnl, dense, many-flowered: calyx* segments long-subulate: legumes oval, scarcely twice as long as broad, pubescent, not winged: seeds 2, ovate and truncated at one end.—W. and A. Prod. p. 199.

1 Flowering branch—2 legume—3 spurred keel of the corolla. Copied from Roxburgh's drawing.

40>. INDIGOPERA VISCOSA (Lam.) suffruticose, erect, much branched; branches, petioles, peduncles, and legumes glutinous, with rigid gland-tipped hairs: leaves joetioled, pinnated: leaflets 4-8 pairs, elliptic-oblong, pubescent from white adressed hairs, particularly on the under side: racemes peduncled about the length of the leaves or longer: flowers distant, small: calyx-segments short-subulate: legumes cylindrical, horizontal, straight: seeds 6-12, cylindrical, truncated at both ends.—W. and A. Prod. p. 200.

• 1 Flowering branch—2 dissected flower—3 nine stahens united into one brotherhoods spurred keel of the corolla.

405. i)scHYOMENE INDICA (Linn. Hedysarum Nali-Tali, Roxb.) annual, diffuse, branched: branches slender, glabrous: young shoots, petioles, and peduncles, often slightly mucronated: leaflets 15-20 pairs, linear, obtuse at both ends: peduncles axillary, slender, few-flowered, often with a small leaf at the base of the pedicels: calyx and corolla glabrous: legumes long-stalked, 6-10-jointed: joints at first smooth, afterwards with a few glandular dots, when mature rough with irregular confluent warts, tumid in the middle, thinner at the edge.—a; Branches thicker, more spongy, ascending, arising from the root and along the main branch.—W» and A. Prod. p. 219.

Copied from Roxburgh's drawing.

406. DESMODIUM POLYCAHPUM (DC. Hedysarum purpureum Roxb.) suffruticose, procumbent, branched, often rooting at the joints: branches slightly angled, usually with white adressed pubescence, but often with "white spreading hairs on the young shoots: leaves trifoliate; leaflets from exactly oval and obtuse at both ends to obovate-retuse or mucronate; upper side glabrous or very sparing!} pubescent; under reticulately veined, usually pubescent, sometimes covered with long soft "white silky down; lateral leaflets rather smaller than the terminal one, sometimes wanting: petiole slightly margined: stipules acuminate, deciduous: racemes axillary and terminal, many-flowered: bractees broadly ovate, pointed, pubescent, before expansion densely imbricated: pedicels nearly dabrous: keel narrow, straight, incurved at the apex, longer than the alae: legumes erect, hispid, 5-6-jointed, straight on the one margin, notched into the middle on the other.—W. and A. Prod. p. 227.

Copied from Roxburgh's drawing.

407. DESMODIUM PATENS (Hedysarum patens Roxb.) perennial, diffuse: leaflets oblong: racemes terminal: bractees three-fold, one-flowered: legume from 5 to 6 jointed, notched underneath, hamose bristled.—Roxb. Fl. Ind. III. p. 363.

Copied from Roxburgh's drawing.

408. FLEMINGIA PROCUMBENS (Roxb. Fl. Ind. Hedysarum procumbens Roxb. M Ss. non Fl. Ind.) perennial, procumbent, 3-sided, particularly when dry, racemes axillary, length of the leaves, legumes and calyx be-sprinkled with garnet-coloured grains.—Roxb. Fl. Ind. III. p. 338.

I Flowering branch—2 dissected flower—3 legume—4 th* same opened.

40f). DESMODIUM DIFFUSUM (DC* Hedysarum diffusum Roxb.) herbaceous, procumbent, diffuse, branched: branches 4-5-angled, hispidly pubescent: leaves trifoliate; leaflets oval, pubescent on both sides: stipules large, foliaceous, auricled and stem-clasping: pacemes terminating every bianch, very long: bractees small, lanceolate, 2-3 together: flowers in pairs or threes: legumes ascending or nearly erect, 5-6-jointid, notched on both sutures, hispid with short hooked hah*?; jointg orbicular, tumid in the middle when mature: seeds oval, compressed, with the hilum at one of the narrow ends.—W. and A. Prod. p. 226.

Branch copied from Roxburgh's drawing.

410. CASSIA NODOSA (Roxb.) leaves bifarious; leaflets ten-paired oblong: stipules obliquely crescent-shaped, with a bristle at each, angle: racemes lateral: three lower filaments with a globular swelling near the middle. Chittagong Roxb. Fl. Ind. I p. 336.

* This like the other species of the section *Cathartocarpus* has albuminous seed.

1 Flowering branch—2 stamens—3 portion of the ovary—4 legume.

411. URARTA PTCTA (Desv. Hedysarum pictum Roxb.) shrubby, erect, young parts clothed with hooked hairs: leaves simple and pinnated; simple ones oblong-ovate; leaflets of the compound ones 2-4-pair, linear-lanceolate, obtuse, upper side clouded, under a little reticulated and pubescent?: racemes terminal, very long, spike-like, rigid: bractees below the raceme persistent, ovate-lanceolate, 'acuminated, rigid: pedicels covered with short hooked hairstr mucl* incurved" at the apex after flowering: calyx-segments bearded with long-hairs, lanceolate-setaceous, the lower ones at length about twice as long as the upper: legume 3-6-jointed.—W. and A. Prod. p. 221.

Flowering branch, copied from Roxburgh's drawing.

412. PUERARIA TUBEROSA (DC. Hedysarum tuberosum, fyoxb) root tuberous, very large: stems woody, twining: leaflets roundish, pubescent above, beneath silky-villous: stipules cordate: racemes simple or branched, the length of the leaves, from the cicatrices of the fallen leaves: flowers (blue) in threes: calyx 4-cleft, silky; segments about equal, ovate, the upper one the broadest and almost entire: legumes very hairy, linear, pointed, 2-6-seed, much contracted between the seeds.—W. and A. Prod. p. 205.

1 Flowering branch—2 a leaf—3 legume. Copied from Roxburgh's drawing.

413. LAGERSTRCEMIA REGIN^E (Roxb.) leaves oblong, glabrous: panicle terminal: calyx tomentose, longitudinally furrowed and plaited: petals orbicular, waved, shortly unguiculate: stamens all about equal, broadly ovoid, 6-celled.—W. and A. Prod. p. 308.

1 Flowering branch, *natural size*—2 a flower the petals removed—3 anthers, one dehiscing—4 ovary—5 the same cut transversely—6 cut vertically—7 capsules nearly full grown—8 the samft cut vertically—9 cut transversely—10 mature and dehiscing—11-12 seed *natural size* and *magnified*.

414. PERGULARIA ODOBATISSIMA (Smith) twining branches softly pubescent: leaves cordate, acuminate, pubescent on the veins: cymes short peduncled, many-flowered: corolla segments short, obtuse, tube twice as long as the gynostegium, furnished within with five lines of deflexed hairs, decurreit from the sinuses: crown of the stamens as long as the gynostegium.—Wight's contrib p. 43.

1 Flowering branch, *natural size*—2 a dissected flower corolla removed and the calyx opened to show the gynostegium—3 corolla opened—4 gynostegium detached—5 the same, the anthers turned back to show the pollen cells and pollen masses *in situ*—6 the stigma and pollen masses, anthers removed—7 detached pollen masses—8 ovary cut vertically—V one carpel cut transversely.

415. DIOSPYROS KAKI (Koenig) leaves bifarious, ova^e, cordate, downy: male peduncles three-flowered: stamina about 20: hermaphrodite, solitary, octandrous: style four-cleft; stigmas bifid.—Roxb. Fl. Ind. II. p. 527.

Upper figure—1 flowering branch, male plant—2 a dissected flower—*Lower figure*—1 flowering branch bisexual plant—2 corolla split open—3 anther—4 ovary and styles—5 detached stigma—6 calyx—7 a fruit full grown seen from above—8 the same seen from below—9 cut transversely 8-celled—10 a seed—11 the same cut longitudinally, the embryo in the apex of a large albumen.

41*6. DIOSPYROS RACEMOSA (Roxb.) leaves from oblong to lanceolar, obtuse, glossy: both male and hermaphrodite flowers on axillary, cymose racemes: the fVmer with 20 or 30 stamina, the latter with 12 or 16: germ 4-celled; style none, stigma 4-cleft: berries round, smooth, with as many as four seeds—Roxb. Fl. Ind. II. p. 536.

OBS. The figure of the hermaphrodite plant differs from the character of the species, in having solitary rot cyroose flowers.

Upper figure^1 male plant flowers and leaves—2 corolla and stamens—3^calyx—*Lower figure*—1 flowering branch, bi-sexual plant—2 corolla split and forcibly opened showing the stamens—3 ovary and calyx—4 cut vertically—5 cut transversely—6 full grown, fruit seen from below—7 cut transversely 4-celled—8 a seed—9 the same cut longitudinally showing t*- embryo. Copied from Roxburgh's drawing-

EXPLANATION OF PLATES.

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417. *CASTANEA INDICA* (Roxb. *Nikari, sibheetee*) Leaves oblong, acute, mucronate-serrate, polished above hoary underneath: Amints subtinninal paniced: flowers polygamous. Roxb. Fl. Ind. 3 p. 643.

1 Flowering branch—2 a male flower seen from above—3 hermaphrodite flower, showing the calyx surrounded by its cal involucre—4 the same cut vertically—5. ovary cut transversely—6 a fruit the spines removed from the front aspect—7 a fruit with wo nuts in the same capsule—8 a fruit with one nut, nut cut vertically to shew the inferior attachment of the seed—9 a seed cut transversely—10 cut vertically showing the embryo—11 embryo detached.

418. *DICERMA puiCHELLUM* (DC.) stem erect: stipules free from the petiole and from each other: leaves long-petioled, pinately trifoliolate: leaflets elliptic-oblong, pubescent beneath, glabrous above, terminal one the iaiges*, all furnished with partial stipules. floral leaves bi. bliolate, the odd one abortive, the lateral ones orbicular and brae tea-like, the petiole ending in a bristle nearly as long as the lateral leaflets: flowers aggregated: pedicels short: bracteoles caducous: legumes 2- or sometimes 3 jointed, glabrous on the sides, villous on the sutures.—W. and A. Prod. I. page 230.

1. Flowering branch—2 floral leaves forcibly opened to show the flowers—3 a legume—4 a seed—5 and 6 the same slightly *magnified*.

419. *DICERMA BIARTICULATUM* (DC.) diffuse: stipules free from the petiole, but coh(ring together to near their apex: leaves short petioled, palmately trifoliolate: leaflets nearly equal in size, without partial stipules, obovate-oblong, obtuse, nearly glabrous: floral-leaves abortive: flowers 2-4 together in the axils of stipules, and forming naked racemes: legumes 2-jointed, clothed with adressed hairs—W. and A.,Prod. I. page 230.

1. The long tapering root full length with a single flowering branch.

420. *PONGAMIA ELLIPTIGA* (Wall. *Galedupa eUiptica* Roxb. M.S.S and Fl. Ind. 3 p. 242) Twining: leaflets opposite from four to five pair*, cuneate oblong: racemes paniced, axillary: partial peduncles from 2 to 5 flowered: calyx bowl-shaped almost entire: banner with 2 scales at the base: legume elliptic. Hoxb. Fl. Ind. 1. c. native of Amboyna and Malay Islands.

1 Flowering branch—2 legume opened showing the seed.

421. *CROTALARIA TRIFOLIASTRUM* (Willd.) suffruticose: stems several, woody, erect or ascending: branches long and nearly simple, straight and twiggy, tomentose: stipules minute, setaceous: leaves rather distant, trifoliolate, long-petioled: leaflets cuneate, obcordate, shorter than the petiole, (from half an inch to an inch long): upper side glabrous: under paler, sprinkled with minute adressed hairs: racemes terminal, elongated (3.5 inches long), many flowered, with occasionally a few flowered peduncle in the axils of the upper leaves: flowers distant (pretty large): bractees subulate.—W. and A. Prod. I. page. 191.

1 Branch with flowers and fruit—2 a flower—3 and 4 the same dissected—5 oval anthers of the longer series of stamens—6 subulate anthers of thaphorter—7 ovary cut open to show the position of the ovules—8 legume opened showing the seed.

422. *ASTONIA SCHOLARIS* (R. B. *EcMtes scliolaris* Roxb.) leaves 5 — 7 in a virwrl ^obovate oblong obtuse ribbed and having the veinst, approximating the margin: cymes on short peduncles corolla a little bearded: follicles*very long—G. Don, Diet. 4 p. 86.

1 Flowering branch—2 a dissected flower.

423. *ECHITES PAIVFLORA* (Roxb.) leaves lanceolate: panicles terminal and axillary, brachiate: tube of corolla gibbous towards the base: segments of the limb linear, falcate—G. Don, Piety. 4 p. 757

1 Flowering branch—2 Corolla tube opened to show the position of the stamens.

424. *AGANOSMA ACUMINATA* (G. Don—*Echites acuminata* Roxb.) leaves from oblong to broad-lanceolate, acuminate, glabrous: panicles axillary, longer than the leaves, trichotomous. diffuse: segments of corolla linear, falcate, curled — G. Don. Diciy. 4 p. 77.

1 Flowering branch — 2 calyx opened to show the ovary and style—3 corolla detached, tube opened to show the stamens—4 ovary cut transversely—5 follicles -6 a seed, coma next the hilum—7 seed * ut longitudinally.

425. *AGANOSMA MARGIN AT A* (G. Don. *Echites marginata* Roxb.) leaves lanceolate, smooth, having the tops of the veins forming a waved line within the margin of the leaf: panicles terminal, lax, corymbose, at first sub-trichotomous, and then diehotomous, glabrous: segments of corolla linear, falcate: nectary annular. G. Don. Diet. 4 p. 77.

1 Flowering branch -2 calyx dissected to show the ovary—3 corolla dissected to show the stamens—4 ovary cut transversely.

426. *CARISSA CARANDAS* (Linn.) subarborescous: leaves ovate, mucronate, or elliptic, obtuse, glabrous: spines often 2-forked: corymbs terminal and axillary, few-flowered: cells of fruit 4-seeded—G. Don. 1. c. p. 104.

1 A branch bearing flowers and fruit—2 calyx and ovary—3 corolla dissected.

427. *CARISSA DIFFUSA* (Roxb.) shrub diffuse, spiny, with diehotomous branches: leaves almost sessile, roundish-ovate, cordate, mucronate, polished: corymbs terminal, rarely axillary, many flowered: cells of berry 2-seeded—G. Don. I.e. p. 104.

1 Flowering branch—2 calyx dissected showing the ovary 3 corolla dissected—4 a stamen—5 a berry—6 cut transversely 2 seeded—7 cut longitudinally.

428. *HUNTERIA CORTIMBOSA* (Roxb.) leaves oblong, lane olate, obtuse, pointed, glabrous: corymbs terminal, decussate: lobes of calyx ovate—G. Don. 1 c. p. 105.

1 Flowering branch—2 dissected flower—3 fruit, one cut transversely.

429. *VALLARIS PERGULANA* (Burm—*Echites hircosa*, Roxb.) leaves ovate, elliptic, acute, glabrous: corymbs axillary, trichotomous, downy *:" segments of corolla roundish, (i. Don 1. c. p. 79.

1 Flowering branch—2 calyx and ovary—3 dissected flower and stamens—4 ovary—5 ovary cut transversely.

430. ICHNOCARPUS FRUTESCENS (R. Br. *Echites frutescens*, Roxb.) stem twining: leaves oblong-lanceolate, tapering to both ends, glabrous: peduncles axillary, very long, racemose: pedicels fascicled: follicles variable—G. Don. 1. c. p. 78.

1 Flowering branch—2 detached flower *magnified*—3 the same dissected showing the ovary and hypogynous filaments—4 follicles—one dehiscing.

431. CALPICARPUM ROXBURGHII (O. Don—*Cerhera fruticosa* Roxb.) leaves opposite, remote, oblong to lanceolate, glabrous, acuminate: 1: corymbs at first terminal, but afterwards in the forks, with sub-trichotomous, short divisions—G. Don. 1. c. p. 100.

1 Flowering branch—2 calyx dissected showing the ovary—3 corolla tube cut open—4 detached ovary—5 ovary cut transversely—6 cut vertically—7 follicles, one aborted—8 mature follicle opened, one-seeded—9 seed detached.

432. CHONEMORPHA MACROPHYLLA (G. Don. *Echites macrophylla* Roxb.) stems twining: leaves large, roundish, acuminate, downy beneath; cymes terminal.—G. Don, 1. c. p. 7b*.

1 Flowering branch—2 detached ovary and stigma—3 dissected corolla, tube and anthers—4 ovary cut transversely.

433. TABERNEMONTANA DICHOTOMA (Roxb.) leaves oblong, obtuse, coriaceous, shining, with many parallel nerves beneath: cymes elongated, dichotomous: calyx segments obtuse: segments of corolla oblong-falcate, about equal in length to the tube. G. Don. 1. c. p. 91.

1 Flowering branch—2 calyx and ovary—3 corolla dissected, and stamens—4 a follicle opening—5 a seed—6 ovary cut transversely and vertically—7 a seed cut transversely—8 cut longitudinally showing the embryo *in situ*,

434. STRYCHNOS COLUBRINA (Lin.) scandent: tendrils simple: leaves from oval to oblong, bluntly acuminate, triple-nerved, polished: berries many-seeded.—G. Don 1. c. page 65.

1 Flowering branch—2 calyx, ovary, style and stigmas—3 corolla dissected, anthers in the throat—4 ovary cut transversely—5 a full grown fruit—6 the same cut transversely—7 a seed cut longitudinally.

435. EL'GENIA (J. JAMBOS) Lin Wight's Illustrations 2, p. 14—(*Jambom vulgaris* DC.) leaves narrow-lanceolate, attenuated at the base, acuminate towards the apex: racemes cymose, terminal: (flower's white): fruit globose.—W. and A. Prod. I. page 332.

1 Flowering branch—2 a dissected flower—3 stamens—4 ovary cut vertically—5 cut transversely—6 a full grown fruit—7 the same cut transversely—8 portion of a leaf *magnified*, pellucid dotted.

436. ALSTONIA VENKNATA (R. Br.—*Echites venenata* Roxb.) leaves 4 in a whorl, oblong-lanceolate, acuminate, attenuated at the base: cymes dichotomous: tube of corolla widened upwards; limb acute, beardless: follicles attenuated at both ends, hardly equal in length to the leaves.—G. Don, 1. c. page 87.

1 Flowering branch—2 detached flower—3 calyx dissected showing the ovary—4 corolla dissected—5 a branch with fruit—6 follicles—7 a seed.

437. CARISSA VILLOSA (Roxb.) shrub*downy, tender parts villous: leaves from broad-lanceolate to oblong, acute, soft from down, particularly while young: flowers terminal, by threes or sevens: seeds of fruit 2-seeded.—G. Don, 1. c. p. 104.

1 A flowering branch and a young villous shoot 2 calyx dissected showing the ovary—3 dissected corolla 4 ovary cut vertically—5 cut transversely—6 a berry—7 cut transversely—8 a seed—9-10 and lid dissections of the same.

438. VALLARIS DICHOTOMA (Wall *Echites dichotoma* Roxb) leaves lanceolate-oblong, glabrous: raceme axillary, dichotomous: segments of corolla roundish: filaments bearded and woolly—G. Don. 1. c. p. 79.

1 Flowering branch—2 dissected flower—3 stamen front view—4 back view of the same—5 side view showing the fleshy protuberance—6 a follicle dehiscing—7 a seed—8-9 the same dissected.

439. CHONEMORPHA (?) *ANTIDYSEPTERICA (G. Don. *Echites untidyseptica* (Roxb.)* shrubby erect angular: leaves ovate-lanceolate, with obsolete crenulated edges, glabrous on both surfaces: corymbs axillary, dichotomous: calyx and corolla downy—G. Don. 1. c. p. 76.

1 Flowering branch with follicles—2 a dissected flower.

440. AGANOSMA ROXBURGHII (G. Don—*Echites caryophyllata* H.) leaves ovate, cordate, acuminate: having the petioles and veins red, glabrous, pale beneath and shining above: with the principle nerves running from the base to the apex of the leaves: corymbs terminal: segments of corolla triangular—G. Don. 1. c. p. 77.

1 Flowering branch—2 dissected flower showing the hypogynous disk—3 calyx seen from below.

441. CERBERA ODOLLUM (Gaert: Roxb—*Tanghinia odollum* G. Don.) leaves lanceolate, approximate, shining: corymbs terminal: calyx segments linear, lobulate: segments of corolla sub-falcate. G. Don. 1. c. p. 98.

1 Flowering branch—2 dissected flower—3 a mature fruit, outer coat much torn—4 the same outer coat removed—5 cut transversely.

442. WRIGHTIA COCCINEA (Sims—*Nerium Coccineum* R.) leaves almost sessile, ovate-oblong: flowers 3-4 together, terminal: corona in the throat 5 lobed, lobes crenulated: follicles distinct, rough: tube of corolla short.—G. Don. 1. c. p. 86.

1 Flowering branch—2 calyx and flower before expansion—3 calyx, ovary, style and stigma—4 dissected corolla—5 anthers back and front views—6 ovary cut transversely—7 a follicle dehiscing—8 a seed—9 testa removed cotyledons spirally convolute.

443. WRIGHTIA TOMENTOSA (G. Don *Nerium tomentosum* R.) leaves oblong, acuminate, downy: corymbs terminal, small: tube of corolla larger than the calyx: corona fleshy, lacerated into obtuse segments: follicles scabrous; distinct.—G. Don, 1. c. page 86.

1 Flowering branch—2 dissected calyx, ovary, style and stigma—3 dissected corolla, anthers on the throat—4 a detached petal showing the crown—5 follicles dehiscing—6 a seed.

444. WRIGHTIA TINCTORIA (R. Br. *Nerium tinctorium* Roxb.) leaves elliptic-lanceolate, and ovate-oblong, acuminate, glabrous: panicles terminal, branches and corymbs delineate: tube of corolla twice longer than the calyx: follicles distinct, but united at the apex.—G. Don, 1. c. page 86.

1 A flowering branch—2 a flower dissected—3 calyx—4 anthers, back and front views—5 follicles—6 a seed and crown.

445. DUMASIA CONGESTA (Graham) branches, petioles, peduncles, and leaves, shortly villous: leaflets* ovate, slightly inclining to lanceolate: racemes longer than the leaves, many-flowered: a leaf and keel strongly cohering for a little space by their limb.—W. and A. Prod. 1. page 206

1 A flowering branch—2 a detached flower—3 the same dissected—4 detached petals—5 stamens—3 anthers—7 ovary cut lengthwise—8 a mature legume—9 a portion of the same opened showing the seed *in situ*—10 a seed cut lengthwise—11 cut transversely—12 embryo detached—13 and 14 upper and under surfaces of the leaves *slightly magnified*.

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146. ADENOSMA BALSAMEA (Spreng.—Nees) stem erect, glabrous: leaves petioled, lanceolate serrated, glutinous: flowers verticelled bracteate.

1 Flowering plant, *natural size*—2 corolla split open to show the stamens and variegated lip 3 calyx and bractea—4 stamens—5 ovary cut vertically—6 capsule *natural size*—7 the same dehiscent *natural size*.—8 the same *magnified*, showing the numerous seed—9 i. detached seed, *magnified*.

147. DVCHORISTE LITORALIS (Nees, Wall. Pl. As. Rar. 3. p. 81 *Rue/Ha* Lin) stem fruticose, diffuse: leaves unifonn retuse, dentate towards the apex, glabrous.

1 Flowering branch *natural size*—2 calyx and bractea—3 corolla split open showing the stamens—4 stamens—5 calyx split open showing the ovary *in situ*—6 ovary cut vertically—7 capsule burst, 4 seeded.

148. PHLEBOPHYLLUM KUTHIANUM (Nees 1. c.) a small erect shrub with obsoletely 4 sided branches, oval sub-undulate acutely serrated leaves, coarsely venoso-reticulated, and clothed with whitish tomentum beneath: flowers pale bluish sometimes nearly white. On hill pastures at great elevations, I have rarely met with this plant under .000 feet of elevation.—R. W.

1 Flowering branch—2 corolla cut open showing the 2 stamens—3 a stamen—4 calyx and bractea—5 ovary style and stigma—6 ovary cut vertically—7 cut transversely.

149. ASTER ACANTHA LONGIFOLIA (Nees 1. c. p. 91) A herbaceous annual usually growing in water or marshy places. FLOWERS light purple or pink about an inch long.

1 Flowering plant—2 calyx split open to show the inequality of the sepals and the ovary—3 corolla split open—4 anthers—5 ovary cut vertically—6 capsule dehiscent.

1450. BARLERIA ACUMINATA (R. W. Nees 1. c. p. 93) shrubby, tomentose: leaves ovate or cordate, acute, sometimes prolonged into a slender acumen, whitish beneath: peduncles axillary, cymosely 2 or 3 cleft: bracteoles linear-lanceolate reflexed: larger segments of the calyx oblong, and like the interior shorter lanceolate ones, reticulated. (Perhaps too nearly allied to both *B. tomentosa* and *longiflora* K. W.)

1 Flowering branch, *natural size*—2 dissected flower, showing the calyx, ovary, style and stigma, and tube of the corolla split open, to show the insertions of the stamens—3 stamens—4 ovary divided vertically—5 capsule dehiscent.

1451. BARLERIA CUSPIDATA (Klein Nees. 1. c. p. 93) shrubby, bractea and bracteoles spinous, fascicled: leaves lanceolate or oblong lanceolate, spinously mucronate, sprinkled with a few appressed hairs: flowers axillary subsolitary: segments of the calyx quite entire spinously acuminate.—Nees.

1 Flowering branch—2 corolla split open to show the form and insertions of the stamens—3 calyx and bractea—4 long stamens—5 the short ones—6 ovary cut vertically—7 capsule dehiscent—8 a seed—9 the same cut vertically showing the testa and immature embryo—10 cotyledons removed from the testa.

1452. BARLERIA FRIKTI (Linn. Nees 1. c. p. 93) shrub I say, the sterile spinous bractea and bracteoles in 4-cleft fascicles; the fertile bracteoles subulate spinous: leaves elliptic-oblong, attenuated at both ends, glabrous beneath, on the line* arid margins slightly hairy, flowers sessile, axillary, verticelled, the terminal ones spicate: larger segments of the calyx ovate, spinously cuspidate, quite entire, glabrous.—Nees.

1 Flowering branch—2 tube of the corolla split open—3 anthers of the longer stamens—4 shorter stamens—5 calyx and bractea—6 ovary cut vertically—7 capsule dehiscent—8 a seed—9 the same cut transversely—10 cut longitudinally—11 cotyledons separate.

1453. BARLERIA CRISTATA (Linn Nees 1. c. page 92) herbaceous, clothed with appressed bristles: leaves petioled elliptic, attenuated at both ends: peduncles axillary very short, few flowered: bractea linear subulate ciliate: larger segments of the calyx unequal, elliptic-oblong ciliate-serrated.—Nees. 1. c.

1 Flowering branch, *natural size*—2 corolla split open—3 anthers—4 shorter stamens—5 bractea and calyx—6 ovary cut vertically—7 stipna—8 capsule dehiscent, but apparently immature*

1454. BARLERIA NITIDA (Nees. 1. c. p. 91) stem fruticose, strigous: leaves ovate or elliptic, petioled, the younger ones clothed with scattered bristles: flowers spicate, bractea ovate-elliptic acute, denticulate, ciliate, shining: the larger segments of the calyx unequal, rhomboid-ovate somewhat acute ciliate and strigous.—Nees. 1. c.

1 Flowering branch—2 corolla split open to show the stamens—3 calyx and bractea—4 capsule dehiscent—5 a seed, hairy—6 cut longitudinally—7 cut transversely—8 cotyledons detached.

1455. LEPIDAGATHIS CRISTATA (Willd. Nees 1. c. p. 96) stem suffruticose, diffuse, and with the linear lanceolate leaves glabrous: spikes capitate-congested, conglomerated near the root, on the branches axillary woolly bractea and bracteoles conformable, oblong, mucronate: calyx 4-parted, segments mucronately aristate, the inferior one bifid.—Nees.

1 Flowering plant—2 corolla split open, to show the insertions of the stamens—3 anthers, showing the cells distinct—4 calyx, one segment detached and thrown back to show the ovary—5 bractea and bracteole—6 calyx and bracteoles together—7 ovary cut vertically—8 mature capsule, *natural size*—9 the same *magnified* and opened to show the seed—10 a seed, hairy—11 the same cut longitudinally—12 embryo detached.

1456. LEPIDAGATHIS PUNGENS (Nees 1. c. p. 97) stem shrubby, very ramous: leaves (small) spinously dentate: spikes binate or ternate, capitate > congested, axillary villous: dorsal bractea ovate, and like the fertile ones, and bracteoles oblong-lanceolate, rigid, spinous at the apex: calyx 4-parted, segments mucronate, spinulose, the inferior one bifid at the apex.—Nees.

1 Flowering branch—2 corolla split open showing the insertion of the stamens—3 back and front views of the anthers—4 bracteoles and calyx—5 an immature capsule opened.

1457. LEPIDAGATHIS SPINOSA (Nees 1. c. p. 95) stem shrubby and like the under surface of the ovate ripand leaves pulverulently tomentose: spikes terminal, capitate, involucrate. All the bractea inembraneous and like the segments of the 4-cleft calyx, shortly armed, the interior one deeply bifid acuminate.—Nees.

1 Flowering branch—2 corolla split open—3 calyx and ovary—4 stamens—5 ovary cut vertically—6 stigma,

1458. BLEPHARIS BOERHAAVIA (Juss. Nees 1. c. p. 97) bractea uniform* flat, bristly, ciliate at the apex.—Nees.

1 Flowering branch—2 calyx and bracteoles—3 corolla split open to show the insertions of the stamens—4 and 6 anthers different views—6 ovary and ovules—7 capsule dehiscent, seed rough.

1459. DILIVARIA IUCIFOLIA (Juss. Nees 1. c. p. 98) shrubby, spinous or unarmed, glabrous: leaves elliptic, serrately dehiscent, spinous: spikes many-flowered: flowers bractea and bracteolate.

1 Flowering branch—2 corolla and stamens—3 anthers *natural size*—4 one *magnified*—5 calyx and ovary—6 ovary and ovules—7 a capsule dehiscent.

460. *CROSSANDRA AXILLARIS* (Nees. 1. c. page 98) young stems somewhat scabrous, leaves quaternate, oblong, glabrous, even: spikes axillary subsessile alternate, shorter than the leaves: bracteas pubescently scabrous margin naked.—Nees.

1 Flowering branch—2 calyx and corolla—3 corolla tube split open to show the stamens—4 an anther *more magnified*—5 bracteas and calyx—6 immature capsule—7 mature capsule, dehiscing, showing the rough seed—8 a seed *more, highly magnified*—9 the same cut longitudinally—10 embryo detached.

461. *CROSSANDRA INFUNDBULIFORMIS* (Nees. 1. c. p. 98) stem pubescently rough, leaves in whorls of 3 or 4 obovate oblong, punctulately rough and scabrous, bracteas ciliate, spikes long peduncled.—Nees.

1 Flowering branch—2 calyx and corolla—3 corolla tube split open to show the stamens—4 an anther 5 bracteas and calyx—6 a young fruit opened—7 mature capsule dehiscing—8 a seed, scaly, rough.

462. *GONDARUSSA TKANQUKBARIEKMS* (Nees. 1. c. p. 105) shrubby clothed with whitish pubescence: flowers axillary solitary rising into a terminal spike: bracteas orbicular retuse; the linear bractioles equaling the calyx: inferior cells of the anthers ciliate, leaves roundish, small.—Nees.

1 Flowering branch—2 calyx and bractioles—8 corolla split open—4 anthers—5 ovary and calyx—6 ovary opened—7 capsule dehiscing—8 a seed—9 cut longitudinally—10 embryo.

463. *JURTICIA ECBOLIUM* (Linn. Nees, 1. c. p. 108) spike terminal 4 sided: bracteas oval entire, ciliate, mucronate, equaling the fruit: leaves elliptic oblong, attenuated at both ends, pubescent: upper lip of the corolla linear reflexed.—Nees.

1 Flowering branch—2 corolla split open dividing the upper lip—3 calyx and ovary—4 stamens—5 pollen—6 ovary cut vertically—7 capsule dehiscing—8 a seed—9 cut transversely—10 cut longitudinally—11 embryo detached.

464. *RHINACANTHUS COMMUNIS* (Nees 1. c. p. 101) panicles axillary and terminal, trichotomous: upper lip linear-straight, leaves ovate oblong.—Nees.

1 Flowering branch—2 corolla, tube split open showing the insertion of the stamens—3 calyx and ovary—4 stamens—5 ovary opened—(J capsule after dehiscence).

465. *RUNGIA REPENS* (Nees 1. c. p. 310) bracteas ovate cuspidate, nerveless, margin broad, silvery, subciliate: bracteoles lanceolate: leaves oblong-lanceolate, acute: stem creeping.—Nees.

1 Flowering branch—2 corolla opened—3 stamens—4 calyx and bracteas—5 ovary opened—6 capsule dehiscing—7 a seed, rough and furrowed—8 divided lengthwise showing the embryo—9 embryo detached.

466. *ERANTHIMUM MONTANUM* (Roxb. Nees. 1. c. p. 107) stem roundish, and like the oblong attenuated at both ends repandly crenulate leaves, glabrous: peduncles terminal and with the spikes clothed with viscid pubescence: bracteas lanceolate-attenuated ciliate.—Nees.

1 Flowering branch—2 tube of the corolla opened to show the stamens—3 calyx, bracteas and ovary—4 stamens—5 ovary divided vertically—6 capsule dehiscing.

467. *ANDRAGRAPHIS ECHIOIDES* (Nees. 1. c. p. 117) herbaceous hairy; leaves oblong, subsessile, somewhat crenate: racemose reflexed capsules 4 seeded.—Nees.

1 Flowering branch—2 corolla split open showing the insertion of the stamens—3 calyx forcibly opened showing the ovary—4 ovary opened—5 capsule dehiscing—6 a seed *magnified*—7 the same cut transversely—8 cut longitudinally—9 the embryo detached.

468. *GENDARUSSA TULGARIS* (Nees 1. c. p. 104) shrubby: spikes terminal, flowers somewhat whorled, leafy at the base: bracteas small: leaves lanceolate glabrous.—Nees.

1 Flowering branch—2 flower split open from behind, showing the stamens and variegated lip—3 bracteas and calyx—4 stamens—5 ovary divided longitudinally.

469. *CROSSANDRA SERRATA* (Roxb. Fl. Ind. 1. page 591) arborious tender parts hairy: leaves ovate cordate, serrate, acute: corymbs lateral: flowers sub-octandrous; with the coral from 7 to 9 cleft.—Roxb.

1 Flowering branch—2 corolla split open showing the stamens—3 corolla removed, calyx split open to show the ovary—4 ovary cut vertically—5 cut transversely.

470. *TABERNEMONTANA CRISPA* (Roxb.) leaves oblong, undulated. peduncles few-flowered: pedicels elongated: calyx deeply 5-parted: segments broad-ovate, foliaceous. G. Don. 1. c. p. 11.

1 Flowering branch—2 corolla opened showing the stamens—3 dissected calyx, ovary, style and stigma—4 follicles—5 a follicle opened showing the seed.

471. *PLUMERIA ACUMINATA* (Aiton) leaves scattered, lanceolate, acuminate, glabrous, flat: flowers corymbose, terminal.—G. Don 1. c. p. 91.

1 Flowering branch—2 dissected flower—3 follicle.

ECHALIUM (R. W. *Nerium* Roxb.)

GEN. CHAR. Calyx 5-parted, segments acute. Corolla inferior, hypocrateiform, limb 5-parted, tube crowned with 5-forked scales, alternate with the segments of the limb. Stamens 5, inserted near the bottom of the tube included; anthers oblong pointed, slightly sagittate at the base. Ovary 2-lobed, 2 coiled, with numerous ovules in each, attached to an elevation down the centre" (Roxb.) style short: stigma capitate bitid. Follicles ovate, inflated; seed numerous, compressed with a broad membranaceous margin—albumen thin, membranous. Cotyledons round cordate, radix cylindrical next the crown.

This plant belongs to the suborder *Eimpoeynece*, the character is taken from Roxb. figure and description which proves the plant distinct from the other genera of the order, and shows that it does not even belong to the same section with *Wrightia* the genus in which G. Don has doubtfully placed it. It wants the awucd anthers of *Nerium* and the exerted ones of *Frigitilla*, exclusive of belonging to a distinct section. To no other genus does the character or the crown permit it to approach

472. *ECHALIUM PISCIDIUM* (R. W. *Nerium piscidium* Roxb. *Wrightia? frigitilla* . iion *Echitu Jsihefee*.)

1 Flowering branch—2 dissected flower—3 calyx ovary, style, and stigma—4 ovary cut transversely—5 cut vertically—6 a follicle—7 a seed, coma next the radicle—8 a seed dissected, coma removed.

473. *URCEOLA ELASTICA* A (Hoxb. Endlicher *vahea* G. Don, not Lamarck.)

1 Flowering branch—2 a detached flower—3 the same dissected—4 anthers back and front views—5 ovary and calyx, style and stigma—6 follicles one of them partially dissected showing the numerous seed.

474. *HOTA PENDULA* (W. and A. *Asclepias pendula* Roxb.) twining: leaves fleshy, glabrous, from oblong-oval acute to broad ovate, acuminate, with revolute edges: peduncles pendulous, a little longer than the petioles, many-flowered; corolla downy inside; leaflets of corona oboval, very blunt, depressed, having the inner angles short and truncate at the apex: stigma apiculated.—G. Don 1. c. p. 125.

1 Flowering branch—2 ovary, detached stigma and erect pollenia—3 a stamen and its crown—4 and 3 different views of detached crown and leaves.

475. TOXOCERMIS ROXBURGHII (W. and A. *Asclepias longisigma* Roxb.) branches clothed with rusty down: leaves broad, oval, acuminate: corymbs on short peduncles, with divaricate branches, about equal in length to the leaves: flowers almost sessile: throat of corolla hairy: segments ligulate, glabrous: leaflets of corona ovate, acutish, bearing: each a short, thick, acute, hardly exserted segment inside, which is equal in length to the anthers: stigma beaked, twisted, equal to the tube of the corolla.—G. Don. 1. c. page 160.

1 Flowering branch—2 a dissected flower.

476. TABERNEMONTANA RECUSVA (Roxb.) leaves oblong-lanceolate, undulate, glabrous: calycine teeth ovate: segments of corolla convex, of two forms, crenulate: cymes divaricate; flowers drooping.—G. Don. L. c. p. 91."

1 Flowering branch.

477. TABERNEMONTANA CORONATA (R. B.) leaves elliptic or oblong, bluntly acuminate: peduncles from the forks of the branches twin, 1-3 flowered: bractees deciduous: calycine teeth very short, rounded: anthers exserted: stigma undivided: follicles torulose.—G. Don. 1. c. p. 90.

1 Flowering branch—2 dissected flower—3 follicles one burst—4 a young seed cut transversely—5 a mature seed similarly cut—6 cut longitudinally showing the embryo in copious albumen—7 a seed—8 the same enclosed in its arillus—9 specimen of a double flower.

478. ANAPHAMB NEELGERRYANA (DC. Prod. 6, p. 272 *Gnaphalium*—Wight's contributions) stem shrubby low, very ramous: floriferous branches erect tomentose: lower leaves close, pressed, retrorsely imbricated, linear, sub obtuse, glabrous; the upper ones along the floriferous branches erect, tomentose, somewhat distant, acute, capitula congested into a dense terminal corymb: scale of the involucre oblong-linear, sub-acute, longer than the disk, white, bristles of the pappus pectinate at the point.—DC.

1 Plant *natural size*—H a capitulum before expansion—3 after expansion—4 sterile flowers and scale detached—5 fertile flower—6 the same dissected—7 anthers back and front views—8 a bristle of the pappus *more highly magnified* showing the pectinate apex.

479. AMBKBBOA INDICA (DC. Prod. 6, p. 558) stem erect, ramous, sulcately angled, naked towards the apex, and like the leaves glabrous or somewhat rough: leaves lanceolate coarsely dentate, the upper ones, few and distant, linear entire.

1 Flowering plant—2 a detached flower with its scaly unequal pappus—3 corolla split open to show the stamens—4 detached anthers—5 pollen—6 ovary, style and stigma—7 a pappus scale—8 ovary cut open showing the erect ovule.

480. CROTOLAEIA LUNIKVTA (Heyne) suffrutescent, erect, much branched, clothed all over with glutinous soft hairs patent on the branches and addressed on the leaves: stipules and bractees permanent, deeply cordate-ovate, amplexicaul, reflexed, shining and viscid on the upper side: leaves from oblong-oval obtuse to oval-lanceolate: racemes with the lower flowers abortive, forming a large panicle: bractees alternate, more pointed than the stipules: bracteoles similar to the bractees, on the middle of the pedicel: calyx deeply 5-cleft shorter than the corolla; margins of the segments scarcely recurved: vexillum silky: legume roundish-oblong, about the length of the calyx, sessile, silky, 1-seeded.—W. and A. Prod. I. p. 183.

1 Flowering branch—2 dissected flower—3 detached petals—4 short stamens—5 long ones—6 a legume—7 ovary cut open showing the ovules—8 a legume opened—9 a seed, cut lengthwise—10 embryo detached—11 portions of leaves *magnified*.

481. CAPITALARTA PULCHERRIMA (Roxb.) shrubby, erect, branched, covered all over with fulvous shining soft hairs: stipules none: leaves cuneate-obovate, obtuse: racemes elongated, terminal, on panicked axillary 1-2-leaved branches; lower flowers abortive: bractees alternate, cordate, acuminate, reflexed, upper surface viscid: bracteoles on the middle of the pedicels, similar to the bractees: calyx deeply 5-cleft, shorter than the corolla, and like the vexillum silky with fulvous hairs: segments oblong-lanceolate, terminal, scarcely recurved: legumes sessile, oblong, glabrous, hid in the permanent calyx, few-seeded.—W. and A. Prod. I. p. 184.

1 Flowering branch—2 expanded flower, *natural size*—3 the same dissected—4 and 5 stamens—6 petals detached—7 ovary opened—8 legume and persistent calyx—9 Legumes opened—10 a seed—11 cut longitudinally to show the embryo—12-13 upper and under surfaces of the leaves *slightly magnified* to show the pubescence.

482. GALACTEA LONGIFOLIA (It. W.) slightly pubescent, leaflets linear-lanceolate, cordate at the base, peduncles axillary, slender, nearly as long as the leaves, few-flowered, calyx pubescent, campanulate at the base, 5-cleft segments subulate, legume slightly pubescent.—Balaghaut hills near Madras.

This species seems intermediable between *G. tenuiflora* and *villosa* but amply distinguished from both by its leaflets which are from 3 to 5 inches long and scarcely 4 lines broad.

1 Flowering branch *natural size*—2 detached petals—3 stamens—4 calyx and bracteoles—5 ovary with the remains of the stamens—6 ovary divided lengthwise—7 a ripe legume after dehiscence—8 a seed—9 the same cut transversely—10 cut lengthwise—11 embryo detached.

483. PAROCBETUS MAJOR (Don) leaflets obovate, re-use, crenulate.—W. and A. Prod. I. page 252.

1 Flowering branch—2 a detached flower—3 detached petals—4 calyx, ovary and stamens—5 stamens detached—6 anthers back and front—7 ovary opened—8 a legume opened—9 a portion *more highly magnified* to show the position of the seed—10 a seed—11-12-13 the same dissected.

484. NOTONIA CORYMBOSA (DC. Prod. G page 442) leaves broadly elliptic, obtuse, floriferous branches naked, bearing a many headed bracteate corymb on the apex, capitula longer than their pedicels. DC. (I am doubtful if this is really distinct from *N. Grandiflora*.—R. W.)

1 Flowering branch—2 a young flower before the separating of the stigmas—3 another flower somewhat further advanced *but less magnified*—4 corolla detached and split open to show the stamens—5 detached stamens—6 style and stigmas—7 ovary opened showing the erect ovule—8 ovary—9 a bristle of the pappus.

485. COCCULUS CORDIFOLIUS (D.C.) twining; bark corky, slightly tubercled: leaves roundish cordate with a broad sinus, shortly and sharply pointed, glabrous: racemes axillary or lateral; of male flowers longer than the leaves, pedicels several together; of female scarcely so long as the leaves, pedicels solitary: petals undulate; unguis linear, slightly margined upwards; limb triangular-ovate, reflexed: stamens 6; filaments thickened at the apex; anther-cells divaricating; ovaries 3: drupes 2-3, globose: embryo small, cotyledons orbicular approximate, fleshy.—W. and A. Prod. I. page 12.

1 Male plant *natural size*—2 a detached flower—3 the same, one of the petals thrown back to show the inner series and stamens—4 a stamen with its attached scale—5 detached anthers back and front views.

488. COCCULUS CCRDIFOIUS (D C.) 1 Female plant—2 flower and apocarpous ovaries—3 the same, petals removed showing ovary and attached scales—4 front view of the flower—5 side view, the four series of floral envelopes detached—6 young fruit, one cut vertically showing the pendulous ovule—7 cut transversely—8 fruit cut longitudinally—9 transversely.

487. STERCULIA GUTTATA (Roxb.) leaves between broadly ovate and oblong, obtuse or with a longish sudden acumination, entire, prominently nerved and veined beneath; upper side shining, under young leaves densely pubescent: racemes somewhat fascicled, nearly simple: pedicels short: calyx deeply 5-cleft, tomentose; segments lanceolate, distinct: ovarium stalked: carpels obovate.—W. and A. Prod. I. page 62.

1 Flowering branch—2 a male flower split open to show the insertion of the podocarp and stamens—3-4 back and front views of the stamens—5 detached anthers—6 calyx and ovary of a fertile flower—7 ovary cut vertically—8 cut transversely—9 young fruit carpels separating—10 part of a raceme with several fruit—11 a young fruit opened longitudinally—12 cut transversely, ovules collateral.

488. BITTNEEIA HERBACEA (Roxb.) stem herbaceous, without prickles; leaves not glandular, toothed, ovate, acuminate, cordate, rounded or cuneate at the base: sepals linear-lanceolate, reflexed: ligulate production of the petals subulate, erect, about as long as the calyx: free part of the antheriferous filaments very short, recurved: lobes of the urceolus (sterile stamens) ovate.—W. and A. Prod. I. page 65.

1 Flowering branch *natural size*—2 flower buds—3 the same, the sepals forced open showing the petals—4 petals opened showing the dilated base and bringing the anthers and urceolus into view—5 petals back and front views for the purpose of showing the dilatation at the base, but not successfully executed as it is 2-lobed and embraces the neck of the anther cells on each side—6 anther, the cell separated by a broad connective—7 ovary detached—8 cut vertically—9 cut transversely—10 fruit half grown—11 a detached carpel back view—12 front showing the seed—13 a mature fruit—14 one carpel detached—15 a seed—16 dissected showing the foliaceous cotyledons—17-18 upper and under surfaces of the leaves *magnified*.

489. PTEROSPERMUM HEYNKANUM (Wall.) leaves cuneate-oblong, acuminate, slightly cordate and 4-5-nerved at the base, and sometimes a little oblique, coarsely toothed or lobed towards the apex; under side clothed with a roughish tomentum; veins slightly prominent: petioles short, attached a little within the margin: peduncles axillary, very short: involucrel-leaves and bracteoles imbricated round the base of the flower-bud, palmatifid and lacinated, deciduous: petals obovate, patent: sterile filaments linear: capsule oblong, acute; outside encrusted with a furfuraceous pubescence: seeds 8 in each cell.—W. and A. Prod. I. p. 69.

1 Flowering branch—2 flower before expansion showing the bracteoles—3 a detached flower, petals removed to show the calyx and stamens—4 calyx removed showing the stipitate stamens and ovary—5 anthers—6 ovary cut vertically, ovules ascending—7 cut vertically—8 a capsule, *natural size*—9 a seed with its wing—10 testa removed showing the seed *insitu*—11 embryo detached to show the foliaceous cotyledons.

490. VITTMANI AFRICANA (W. and A.) Prod. I. p. 166.

1 Flowering branch—2 a detached flower side view—3 the same, front view—4 a stamens and its attached petal 0 anthers—6 ovary cut vertically—7 cut transversely.

401. BATATAS CHOISYANA (R. W.) stems either procumbent, or twining if near support, everywhere clothed with coarse hairs: leaves petioled, ovate, acute, hairy above, tomentose beneath, peduncles axillary solitary. 1-3 flowered, longer than the perianth, sepals lanceolate, hairy, much shorter than the corolla. Balaghaut hills near Madras.

Flowers purple*—I have not seen the fruit.

1 Flowering branch—2 tube of the corolla opened to show the stamens—3 anthers—4 calyx and bracteas—5 stigma—6 ovary and its cup-shaped disk—7 ovary cut vertically—8 cut transversely, 4-celled, with one ovule in each.

492. CAITROPIS HERBACEA (Wight—*Asclepias herbacea* Roxb.) herbaceous, erect, smooth: leaves petiolate, oblong: umbels compound: corolla with a globular tube, which incloses the corona: segments or petals triangular, spreading: leaflets of corona shorter than the gynostegium, acute and spreadingly curved at the base, but tricardate at the apex, and lying upon the gynostegium.—G. Don. 1. c. p. 147.

1 Flowering branch—2 flower dissected.

493. CRYPTOLEPS ? PAUCIBLORA (R. W.) *Nerium pauciflorum* Roxb. shrubby twining; leaves lanceolate-ovate, peduncles axillary 6-7 flowered, nectary 5 conical scales, follicles long slender horizontal.—Roxb. M.S.S.

1 Flowering branch—2 calyx and ovary—3 corolla detached and opened showing the stamens and crown—4 another view, *more highly magnified*.

By an oversight Roxburgh's name was omitted in the plate.

494. CRYPTOLEPS PUCHANANI (Roem. and Sch. *Nerium reticulatum* Koxb.) flowers small, yellow; leaves oblong, white and veiny beneath; corymbs inter-petiolar, almost sessile.—G. Don, 1. c. page 82.

1 Flowering branch—2 dissected flower—3 follicles.

495. BOUCFROSIA UMBELLATA (W. and A.—Contribution-) segments of corolla glabrous.—G. Don. 1. c. p. 123.

1 Flowering plant, *natural size*—2 a dissected flower, corolla and calyx removed presenting a side view of the stamens and crown—3 front view of the same, showing the double series of coronal appendages—4 stamens and pollen mass detached—5 a single staminal crown—6 gynostegium and pollen masses—7 follicles—8 a seed.

496. CUCUMIS PIRENÆENSIS (Willd.) stems scabrous: leaves somewhat reniform, repandly and acutely toothed, slightly angled, the angles obtuse or acute, petals slightly acute: fruit oval, obtuse at both ends, terete, spotted, more or less pubescent, (about 1 or 1½ inch long.) W. and A. Prod. I. page 342.

1 Flowering branch, *natural size*—2 corolla male flower split open to show the stamens—3 a detached stamen—4 female flower and ovary—5 ovary cut longitudinally—6 fruit cut transversely, but contrary to the usual form 4-carpelled, perhaps a mistake of the draftsmen.

497. CUCUMIS TRIGONUS (Roxb.) stems scabrous: leaves 5 lobed; lobes rounded, repandly and sharply toothed; male flowers 5-merous; female solitary: fruit oval, rounded at both ends, obsoletely S-angled, 10-striated, glabrous, (about 1½ inch long and 1 inch thick.)—a; lobes of the leaves very broadly obovate, and almost touching each other at their broadest part, sinus rounded.—W. and A. Prod. I. page 342.

1 Flowering branch *natural size*—2 male flower dissected—3 an anther back and front views—4 female flower, corolla removed, tube cut to show the styles—5 ovary cut longitudinally—6 cut transversely—7 a fruit—8 the same cut transversely—9 a seed, cut transversely—10 ifeseed—11 cut lengthwise—12 embryo detached.

498. CITRULLUS COLOCYNTHIS (Am. *Cucumis colocynthis* Linn.) stems scabrous : leaves glabrous and nearly quite smooth above, copiously mucronated* beneath with small white and often hair-bearing tubercles*, many-cleft and lobed, the lobes obtuse : tendrils short and simple : female flowers solitary : calyx-tube globose and hispid ; segments of the limb narrow-linear : fruit globose, glabrous ; flesh very bitter.—W. and A. Prod. I. pag» 342.

1 A branch with flowers and fruit, *natural size*—2 a male flower—3 the same, petals removed to show the anthers—4 anthers detached and separated to show the connectiva—5 female flower front view, showing the styles, stigmas and abortive anthers—6 ovary cut transversely three-celled, but with six placentiferous margins—7 a full grown fruit cut transversely—8 a seed, *natural size*—9-10-11 dissections of the same.

499. LITTEA PKINTANDIM (Roxb.) lower leaves acutely angled, upper ones palmate with lanceolate segments: male racemes (large) on a long peduncle; stamens distinct : calyx-segments of the female flowers covered with glands: fruit linear-oblong, smooth, marked with longitudinal lines but not ribbed, (1-3 feet long and about 3 inches thick) : seeds (uray) with elevated dots and sharp waved margins.—W. and A. Prod. I. page 343.

1 Portion of a branch with flower and fruit—2 male flower—3 female flower, corolla removed in both cases—4 ovary cut transversely—5 a portion cut longitudinally—6 a seed *natural size*, cut longitudinally—7 a seed cut transversely.

500. BRYONIA LACINIOSA (Linn.) stems glabrous: tendrils bifid: leaves slightly scabrous, palmately 5-lobed; segments oblong-lanceolate, acuminate, serrated : petioles shorter than the leaves, inuricated: male flowers fascicled ; female solitary in the same axil: berries (size of a cherry) spherical, glabrous, 3-celled seeds few in each cell, with a pulpy arillus, tuberos margins, and gibbous suberose sides.—W. and A. Prod. I. page 3*5.

1 Flowering branch—2 male flower opened and spread out showing the connectiva of the anthers—3 male flower, corolla removed to show the anthers *in situ*—4 female flower, front view—5 styles and stigmas—6 corolla, female, spread out showing the rudimentary stamens—7 young fruit cut transversely 2-celled, with one seed in each by abortion?—8-9 different views of the seed—10-11 the same dissected.

501. BRYONIA SCABRELLA (Linn.) stems, petioles and peduncles hispid and scabrous : tendrils simple : leaves cordate, lobed or angled, scabrous on the upper side, scabrous and hispid on the under : flowers short-peduncled ; males fascicled; female 1-4, in different axils from the male: berry globular, (size of a pea), glabrous or oprinkled with a few bristly hairs: seeds several, surrounded by a narrow zone, rugose from numerous shallow hollows.—a, *Plukenetii*; leaves acutely 5-lobed, the middle lobe often longer than the others; berries usually 2-4-together.—W. and A. Prod. I. p. 345.

1 A branch in flower and fruit—9 male flower, side view—3 the same opened and spread out to show the stamens and rudimentary ovary—1 stamens front, back and side views—5 female flower—6 the same, calyx and corolla removed showing the style, stigmas and disk—7 ovary cut transversely 2-celled—8 cut vertically—9 a berry, *natural size*—10 the same cut transversely—11 a seed, *natural size*—12-13-14 and 15 dissections of the seed.

502. BRYONIA AMPLEXICAULIS (Lam. *Karivia amplexicanlis* *Arn.) monoecious : stems glabrous ; tendrils simple : leaves on very short petioles, or almost sessile, deeply cordate or sagittate at the base (the lobes much longer than the petiole), ovate or oblong, entire or angled, mucronate, sinuate and toothed, callous-dotted and slightly scabrous on the upper side, glabrous and smooth on the under, somewhat coriaceous : male flowers in an umbel at the apex of a slender peduncle shorter than the leaves ; pedicels short, without bracteoles ; calyx campanulate : females solitary, very short-peduncled, in the same or different axils from the males : berry (smaller than a hazel-nut) broadly ovate, rostrate, few-seeded : seeds oval, thick, compressed, surrounded with a thick corky closely warted end rugose zone, the sides flattish, sprinkled with little tubercles.—W. and A. Prod. I. page 346.

1 Flowering branch, *natural size*—1 male flower split open showing the stamens—3 female flower similarly opened—4 a fruit cut transversely—5 a seed, *natural size*—6 a seed and arillus opened—7 the same cut transversely.

503. BRYONIA ERIOGONIA (Rottl. *Achmandra epigyna* Am.) stem glabrous, often very flexuose at the joints : tendrils simple: leaves somewhat fleshy, on longish petioles, cordate, sometimes only obtusely angled, usually 3-lobed, densely covered on both sides with short bristly hairs ; lobes rounded, the lateral ones the broadest and slightly 2-lobed, all remotely and slightly toothed : male flowers shortly racemose at the apex of a long thickish peduncle ; calyx campanulate : females, shortish peduncled, solitary, in the same or different axils from the males : berry ovate, rostrate, glabrous, few-seeded : seeds (white) compressed, with the sides slightly convex.—W. and A. Prod. I. page 346.

1 Flowering branch—2 male flower front view—3 corolla detached and opened to show the stamens—4 female flower and ovary—5 ovary cut transversely 2-celled—6 fruit cut transversely—7-8 a seed.

504. MOMORDICA CHARANTIA (Linn.) stems more or less hairy or villous: leaves palmately 5-lobed, sinuate-toothed, when young more or less villous on the under side, particularly on the nerves : peduncles slender with a reniform bracteole; male ones with the bracteole about the middle, female with it near the base : calyx-segments oblong: fruit oblong or ovate, tapering at both ends, more or less tubercled or mucronated: seeds with a thick notched margin and red arillus. —a; fruit longer and more oblong, tubercled. W. and A. Prod. I. page 348.

1 Flowering branch—2 male flower, corolla removed—3 the same, calyx removed showing the stamens—4 cut vertically showing the tubular calyx—5 female flower, petals removed and calyx drawn back showing the sterile anthers and the deeply 2-lobed stigmas—6 a fruit divided transversely—7 a seed, *natural size*—8-i) the same dissected.

505-506. MOMORDICA DIOICA (Roxb.) dioecious : root tuberous, perennial: stems glabrous or rarely slightly hairy : leaves longish petioled, cordate at the base, from entire to 3-4-lobed, toothed, upper side slightly scabrous, under smooth or nearly so : petioles without glands : peduncles slender, with entire bracteoles; male with the bracteole close to the flower, cucullate, and concealing the lower part of the flower; female with a smallish one near the base : calyx-segments sub-illate : petals lanceolate : fruit (about the size and shape of a partridge-egg) ovate, mucronated : seeds oval, surrounded with a large red arillus —a; leaves cordate, acuminate, usually entire.—W. and A. Prod. I. page 318.

505—1 Flowering branch of male plant—A flower and its bractea, petals removed.

506—1 Branch of a female plant with flowers and fruit—2—flower, petals removed—3 ovary cut lengthwise—4 cut transversely—5 a seed—6-7 the same dissected.

Obs. These and some of the other figures were prepared by Rungiah not under my superintendance, hence the dissections are less perfect than desirable.

507. CUCURBITA MAXIMA (Duch.) leaves cordate, rugose, harshly and densely pubescent on the under side: petioles hispid: flowers campanulate, broad at the base: segments of the calyx often dilated at the apex into an obovate-oblong toothed foliaceous limb: divisions of the corolla recurved: fruit large, roundish, glabrous, torulose.—W. and A. Prod. I. page 351.

1 Flowering branch—2 male flower corolla removed—3 stamens removed to show the glandular disk—4 anthers, outside view—5 inside view—6 female flower, corolla removed showing the disk and rudimentary stamens?—7 ovary cut transversely—8 cut longitudinally.

508. CARDIOSPERMUM HALICACABUM (Linn.) annual: stem, petioles, and leaves, nearly glabrous: leaves biternate: leaflets oblong, much acuminate, coarsely cut and serrated: glands of the disk roundish: fruit broadly pyriform.—W. and A. Prod. I. page 109.

1 Branch in flower and fruit—2 a flower side view—3 front view—4 ovary cut vertically—5 cut transversely—6 capsule showing the seed *in situ*—7 ^a seed *natural size*—8 a seed cut transversely, but not well represented

509. VISENIA UMBELLATA (Blume *Glossospermum velutnum* Wall.) The only species of the genus, a beautiful and richly flowering tree of very rapid growth, a native of Java. Leaves cordate, acuminate, serrated, canes erect, from being thickly clothed with appressed silky hairs, corymbs umbellate, flowers very numerous of ^a pale pink or flesh colour. The specimen from which the figure was taken was raised in the Horticultural Society's garden from seed sent by Dr. Wallich.

1 Flowering branch—2 an expanded flower—3 the same, the calyx divided and drawn back to show the glandular thickening at the base of the petals—4 still further dissected to show the ovary and staminal tube—5 anthers—6 a capsule—7 the same cut transversely—8 a seed, *natural size*—9 the same *magnified*—10 cut transversely—11 embryo detached.

510. POLYCARPUEA SPICATA (R. W.) glabrous, stems numerous, slender, diffuse: bearing one or two fascicles of leaves and peduncles: radicle and cauline leaves fascicled, glaucous, somewhat succulent, spatulate, oblong obtuse, or somewhat acute: ^a stems imbricately spiked: spikes several fascicles on the summits of the branches: sepals scarious, nerved on the back much longer than the subulate petals: filaments detached at the base forming with the corolla a ring round the ovary.

My specimens of this plant were gathered by my collectors and the exact locality not ascertained.

1 A flowering plant—2 a specimen far advanced in fruit—*Analysis*,

1 A flower and its branches—2 the sepals spread out showing the corolla and stamens surrounding the ovary but so much shrunk in drying that they give an imperfect idea of their size—3 stamens—4 a petal detached—5 a capsule—6 the same opened showing the seed *in situ*—7 a seed—8 the embryo detached.

511. ACLAIA ODERATA (Lour, Adr. de Juss.) leaves pinnate leaflets 5-7 obovate glossy.—D. C.

The specimen figured is from Ceylon but whether native or introduced is uncertain.

1 Flowering branch *natural size*—2 a flower—3 the same petals removed to show the stamiferous tube—4 stamiferous tube removed showing the disk and ovary—5 tube opened showing the anthers—6 detached anthers.

The ovary is one celled with a single ovule, but so minute and fragile that I could not succeed in making a sufficiently perfect section to show that part of the structure.

512. AMARANTHUS POLYGONOIDES (Willd. Roxb. Fl. Ind. 3, p. 602) leaves obovate: glomerules axillary, 2-parted, capsule, bristly, equalling the acute lanceolate leaflets of the calyx.—Roxb.

1 Flowering branch, *natural size*—2 a male flower and bractea—3 anthers—4 female flower—5 capsule—6 the same opened showing the solitary seed *in situ*—7 seed *natural size*—8 the same *magnified*—9 testa removed showing the embryo curved round the albumen—10 seed cut transversely—11 embryo detached.

513. AMARANTHUS SPINOSUS (Willd. Roxb. 1. c. p. 611) erect, ramous, round, with sharp spines on the axils of the leaves: spikes terminal, simple, with sessile axillary glomerules.—Roxb.

1 Flowering branch *natural size*—2 male flower—3 female flower—4 a mature fruit, upper portion of the capsule removed to show the seed.

514. AMARANTHUS TRISTRIS (Willd. Roxb. 1. c. p. 604) erect very ramous near the ground: leaves rhomb-oval, obtuse, emarginate: glomerules axillary and on terminal spikes, calyces dagger-pointed, longer than the capsules.—Roxb.

1 Portion of a flowering plant, *natural size*—2 male flower—3 anthers—4 female flower—5 capsule and enclosed seed—6 seed *natural size*—7 the same *magnified*—8 cut transversely—9 cut longitudinally showing the curved embryo and enclosed albumen—10 embryo detached.

EXPLANATION OF PLATES.

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515. *FCENICULUM VULGAEB* (Gaertn.) biennial: stijn terete at the base : segments of the leaves linear-filiform, elongated: umbels with 13-20 rays: involucre wanting.—W. and A. Prod. I. page 371.

1 Flowering branch—2 expanded flower, side view—3 the same, front view—4 mericarps entire—5 cut transversely—6 commissure with two vittae.

516. *CORIANDRUM SATIVUM* (Lin.)

This plant is cultivated in various parts of India, and the seed is at all times to be found in every bazaar being extensively used as an ingredient in curry stuffs.

1 Plant *natural size*—2 disk flower, front view—3 ray flower, front view, petals unequal—4 stamen—5 and 6 semi-superior ovary with the unequally t<>thed calyx—7 mericarps before maturity—8 mature fruit cut transversely, but not very well represented—9 mericarp separating adhering by the apex only—10 commissure of the mericarp concave constituting the distinctive character of the tribe.

M7- *ANDROGRAPHIS RERPYLLIFOLIA* (R. W. *Erian- Uwa* Nees) stem procumbent; leaves suborbicular, subsessile : flowers axillary, pedicels from 1 to 3 flowered.—Nees in Wall. Pl. As. Rar.

The essential distinction between *Eriantherd* and *Andrographi** is, that the anthers of the former are 1, those of the latter 2 celled. The anthers in this species being decidedly 2 celled I have accordingly removed it from the genus in which Nees placed it to the one with whose character it conibrms.

1 Portion of a plant, *natural size*—2 calyx and corolla a little magnified—3 corolla split open to show the insertion of the stamens—4 calyx opened showing the ovary *in Situ*—5 back and front views of the anthers—6 capsule after dehiscence showing the seed *in situ*.

518. *ANDROGRAPHIS PANICULATA* (Wall.) herbaceous glabrous: leaves lanceolate attenuated into a petiole: racemes axillary, bifid, or dichotomous: capsule many seeded.—Nees in Wall. Pl. As. Rar.

1 Flowering branch, *natural size*—2 corolla split open to show the insertion of the stamens—3 calyx opened showing the ovary—4 stamens, anthers conate at the base—5 a detached stamen—6 capsule dehiscing with the seed *in situ*—7 a single seed detached with a portion of the placenta adhering.

519. *VITEX NEGUNDO* (Lin.) leaves digitate quinate, leaflets lanceolate entire; three larger petioled, two smaller sessile: flowers racemously panicled.—Lam. Kn. p. (H)2.

1 Flowering branch — 2 corolla split open showing the stamens—3 calyx opened showing the ovary—4 anthers back and front views—5 ovary cut transversely—6 cut vertically—7 a fruit, *natural size*—8 cut transversely.

520. *BRAGANTIA WALLICHII* (R. Br.) dioicous : leaves oblong-lanceolate, 3 nerved at the base : tube of the perianth smooth, lobes of the limb apurish: anthers 9, triadelphous, united by threes : male pistil very short, stigmas 9 radiating, united at the base, three of them bifid, fruit terete.—W. and A. Ed. Phil. Jour. July 1832.

1 Flowering plant *natural size* — 2 an expanded flower front view—3 calyx removed showing the stamens—4 and 5 capsule dehiscing—6 placenta with the seed adhering—7 a seed—8 the same cut transversely.

521. *NELTTRIS PANICULATA* (Lindl.) leaves oblong acuminate: panicles terminal and axillary: calyx 4 toothed : petals 4, pellucid dotted : ovary 8'celled with a single ovule in each.—R. W. Illust. Ind. Bot. vol. 2. page 12.

1 Flowering branch *natural size*—2 expanded flowers—3 the same, the petals removed to show the perygynous stamens—4 anthers back and front view—5 a panicle of immature fruit—6 *a berry cut vertically—7 cut transversely.

522. *JVkrRTos TOMENTOSA* (Ait.) branches downy: leaves ovate, 3-nerved, the lateral nerves near the margin, upper side when young downy, under tomentose and hoary: peduncles 1- or occasionally :J-flowered, bearing 2 ovate bm^teoles under the flower: calyx downy, 5 cleft: petals slightly downy off t!e ^outside : berry 3-celled : seeds compressed, forming two rows iu each call.—W. and A. Prod. I. page 328.

1 Flowering branch—2 flower, petals removed—3 a detached petal—4 stamens—5 ovary cut vertically showing the ovules superposed—the series of ovules are usually more numerous than here represented—6 ovary cut transversely, 3-celled with 2 rows of ovules in each—7 young fruit—8 cut transversely—9 seed—10 the same cut longitudinally, showing the form and position of th? cotyledons.

523. *JOSSINIA INDICA* (R. W.) leaves short petioled, obovate spatulate, glabrous on both sides : peduncles axillary, solitary, or congested, sometimes, from abortion of leaves, corymbose on the en Is of the branches, one flowered: tube of the calyx globose, clothed with short whitish tomentum, limb 4-lobed, lubes persistent: ovary and fruit 2-celled, seed several in each : testa polished soft: cotyledons foliaceous. •

1 Fructiferous branch, *natural size*—2 a young fruit cut vertically to show the seed *in situ*—3 a fruit cut transversely 2-celled—4 one somewhat less advanced cut vertically showing the remains of numerous aborted ovules adhering to one about half grown—5 a seed not quite mature—6 the same cut lengthwise, showing the cotyledons *in situ*—7 cotyledons detached.

MONOXORA (R. W. III. Ind. Bot. 2. p. 12.)

GEN. CHAR. Flowers quaternary : ovary one celled with two parietal placentas : ovules numerous: fruit drupaceous, containing several nuts (4 in two that I examined) nuts 3 or by abortion 1-celled, with a cylindrical curved seed in each cell. Shrubby plants. Leaves opposite, 3-nerved, ovate-oblong, obtusely acuminate, acute at the base, coriaceous, glabrous above, greyish beneath; peduncles axillary, congested, one-flowered; flowers small, calyx tube hairy, 4-lobed, with 2 bracteas at the base ; petals 4, stamens numerous ; style solitary pointed.

524. *MONOXORA sPECTABILia* (R. W. *Myrtus spectabU Us* Blume).—The plant here figured is the only species of the genus. Its one-celled ovary (whence the name) with parietal placentae and several celled nuts readily distinguish it from all the other genera of the order.

1 Flowering branch *natural size*—2 flower—3 the same, the petals and bracteas removed—4 stamens—5 ovary cut vertically—6 cut transversely—7 a fruit, *natural she*—8 cut transversely, showing 4 nuts—9 a nut detached—10 cut transversely, 3-celled—11 a cell opened showing the seed *in situ*

525. *EUGENIA* (J) *HEMSPERrca* (R. W.) leaves petioled, lanceolate, acuminate at both ends: cymes axillary solitary or paired, shorter than the leaves : calyx tube short, semiglobose: petals orbicular, reflexed : fruit — *Ceylon*.—R. W. III. Ind. Bot. 2, p. 14.

1. Flowering branch *natural size* — 2 a flower bud before expansion—3 a somewhat dissected flower—4 a flower cut vertically—5 stamens—6 ovary cut vertically *more highly magnified*—7 cut transversely.

526. *EUGENIA* (J) *PAUCIFLORA* (R. W.) leaves short-petioled, lanceolate, attenuated towards the base, ending in a long slender acumen: pedicels solitary from the extreme axils, one-flowered : calyx tube cylindrical long and slender, lfmb 4-cleft, fruit oval.—R. W III. Ind. Bot. 2. p. 14.

Ceylon—*Courtaltum*. This species seems very nearly allied to the following, but the solitary one flowered pedicel common to this plant, both as found in Ceyloa and on the continent, at qnee distinguishes it.

1. Flowering branch *natural size*—2 a flower buO' cut vertically—3 stamens—4 ovary cut vertically—5 cut transversely—6 an immature fruit—7 divided vertically to show the seed *in situ*—seed detached and coty-

527. EUGENIA (J) CYLINDRICA (R. W.) leaves short petioled, ovate, acuminate at both ends: cymes terminal or from the axils of the last two or three pairs of leaves: calyx tube cylindrical long and slender: fruit ?—111 W. III. Ind. Bot. 2. p. 14.

Ceylon. The tube of the calyx in both these species is nearly an inch long, slightly ventricose near the middle, where the ovary is situated, and thence tapering downwards to a point.

1. Flowering branch *natural size*—2 a flower cut vertically—3 the same partly dissected—4 stamens as seen in the bud before expansion—5 stamens after expansion—6 ovary cut vertically—7 cut transversely.

528. EUGENIA (A) LEPTANTHA (R. W.) leaves oval, acute or acuminate at both ends, finely parallelly veined: racemes biplicate, lateral, from naked branches: calyx tube long, clavate, finely attenuated towards the base; limb dilated and much produced beyond the ovary, margin slightly repand: petals usually 5, caducous, calyptriform? Fruit? *Mergui*—Griffith.—K. W. III. Ind. Bot. 2 p. 15.

1 Flowering branch, *natural size*—2 a flower before expansion—3 the same cut vertically with two of the petals remaining attached—4 stamens—5 an expanded flower after the separation of the petals, cut vertically—6 detached petals all cohering—7 a separate petal—8 ovary cut transversely—9 cut vertically—10 ovules and placenta detached.

529. EUGENIA (A) WIGHTIANA (E. W. III. Ind. Bot. 2. p. 15.—<%. *Wightianum* Wall.—W. and A.) leaves elliptic-oblong, slightly tapering at both ends, thinly coriaceous, inconspicuously dotted, marked beneath with the transverse veins: flowers scarcely pedicellate, about 3 together at the apex and 2-3 at the side of each peduncle; the peduncles arranged on the leafless branches or shoots, so as to form a narrow racemose cyme: calyx glabrous, elongated, clavate, repandly 4-5 lobed: petals 12, or fewer by abortion, the outer ones occasionally expanding.—V. and A. Prod. I p. 330.

1 Flowering branch *natural size*—2 an unexpanded flower—3 the same cut vertically—4 anthers—5 ovary cut transversely—6 a detached petal—7 diagram of the flower—8 an immature fruit—9 the same cut vertically cotyledons conferruminate—10 seed cut transversely—11 seed detached—12 portion of a leaf *magnified* showing the pellucid dots.

530. EUGENIA (A) LANCEOLATA (Lam. R. W. III. Ind. Bot. 2. p. 15. *Syzygium lanceolatum* V. and A.) leaves lanceolate, almost sessile, glabrous but not shining, pellucid dotted: peduncles terminal and lateral, branched, few-flowered: calyx turbinate, 4-lobed.—W. and A. Prod. I. p. 330.

1 Flowering branch *natural size*—2 petals found adhering to a calyx, in form of a calyptra, carefully separated and figured—3 ovary with the petals represented in fig. 2 still attached—4 ovary cut vertically—5 ovary cut transversely.

531. EUGENIA (A) BRACIOLATA (R. W. III. Ind. Bot. 2 p. 15.) ramuli 4-sided, angles subacute: leaves short petioled, elliptic-lanceolate, acute or slightly acuminate at both ends, pellucid dotted: cymes terminal and from the upper axils, the extreme division terminating in a cluster of from 5 to 6 sessile flowers; each division and each flower furnished with two minute, persistent, acute bracteoles: calyx tube conical 4 sided, limb repandly 4 lobed.

1 Flowering branch *natural size*—2 a corymb of flowers, each with its bracteoles—3 an unexpanded flower—4 an expanded one the petals cohering lid form—5 anthers—6 ovary cut transversely—7 cut vertically.

532. EUGENIA (S) SYLVESTRIS (Moon) leaves obovate obtuse or spatulate, coriaceous, shining, short petioled: cymes corymbose, congested towards the summits of the branches and extreme axils, longish peduncled: fruit about the size of a crab-apple, redish.—II. W. III. Ind. Ict. 2. p. 15.

Ceylon.—Most of the above character is copied from Moon's notes on this species.<

•OBS.—The leaves of the specimen figured do not accord with the usual form, and are I suspect indebted to the draftsman for some part of the discrepancy. The usual form is that described but they certainly vary considerably in their outline.

1 Flowering branch—2 a flower dehiscing, petals calyptriform—3 an expanded flower—4 anthers—5 ovary cut vertically—6 cut transversely—7 petals detached.

533. EUGENIA (S) NKKSIANA (R. W. III. Ind. Bot. p. 15.—*Syzygium Neesianum* Arnott's pugillus) leaves subsessile, oblong lanceolate, blunt pointed, subcoriaceous, pellucid dotted, penninerved: cymes terminal, laxly corymbose, trichotomous, peduncles 4-sided, the partial ones umbellately 3-7-flowered, pedicels half the length of the shortly turbinate slightly 4-lobed calyx—Arnott. *Ceylon.*

1. Flowering branch *natural size*—2 & flower bud just before expansion—3 an expanded flower with a detached petal—4 anthers—5 ovary cut transversely—6 diagram of the flower showing its 4 lobed calyx and 4 petals.

534. EUGENIA (S) ROVOLUTA (R. W.) leaves short petioled, obovate, very obtuse, revolute on the margin, very coriaceous, penninerved, polished above, dull glaucous beneath: cymes terminal, longish peduncled, flowers sessile, congested on the points of the floriferous ramuli: calyx 4-5-toothed: petals usually free, sometimes cohering.—R. W. III. Ind. Bot. 2. p. 17.

Ceylon—Colonel Walker.

1. Flowering branch *natural size*—2 an expanded flower with the petals distinct—3 a flower the petals detached—4 anthers—5 ovary cut vertically—6 cut transversely—7 a diagram showing the relative position of the calyx lobes and petals.

535. EUGENIA (S) JAMBOLANA (Lam. R. W. III. Ind. Bot. 2. p. 16.—*Syzygium Jamhotanum* OC.) arborescent, leaves oval or oblong, more or less acuminate or obtuse, feather-nerved, coriaceous: cymes pannicled, lax, usually lateral on the former year's branches, occasionally axillary or terminal: calyx short, turbinate, truncated: berry olive-shaped, often oblique.—W. and A. Prod. I. page 329.

1 Flowering branch *natural size*—2 a flower in act of expansion, petals cohering—3 cut vertically—4 anthers—5 ovary cut transversely—6 petals separated to show their form and number—7 a cluster of fruit—8 a fruit cut vertically to show the lobed solitary seed *in situ*—9 cut transversely—10 fruit of a large fruited variety, but between which and the one figured I cannot detect any sufficient specific difference.

536. EUGENIA (S) WALLICHII (R. W.) young branches 4 sided, leaves lanceolate, acuminate, acute at the base, coriaceous, glabrous: cymes corymbose, axillary and sometimes terminal, much shorter than the leaves? calyx deeply cleft, lobes persistent: petals frequently expanding before falling: fruit.—R. W. III. Ind. Bot. 2. p. 17.

1 Flowering branch *natural size*—2 a flower bud just before expansion—3 the same, the petals separated all cohering—4 expanded flower—5 stamens—6 ovary cut vertically—7 cut transversely—8 petals detached.

537. EUGENIA (S) ALTERNIFOLIA (R. W.) leaves alternate! suborbicular, thick and coriaceous, penninerved: cymes lateral, longish peduncled, corymbose, dense, sometimes congested near the apex of year & branches: calyx truncated, entire: petals calyprated. *BalaglwutMountuim*. -R. W. 111. Lid. Bot. 2. p. 16.

This figure gives a most imperfect idea of this species.

1 Flowering branch *natural size*,—a very small one being selected as the outline of the leaf below will show—2 a flower opening—3 the same the lid removed—4 stamens—5 a flower bud cut vertically showing the involute stamens and ovary—6 ovary cut transversely—7 the petals detached and separately figured—8 a diagram of the flower.

OBS. The lobes of the calyx are represented too large in the figure. The dissections show that this is 411 error of the draftsman.

538. EUGENIA (S) RUBICUNDA (R. W.—*S. rubicundum* W. and A.) shrubby: leaves narrow oblong, attenuated at both ends, obtuse at the very point, coriaceous, pellucid dotted, striated with numerous parallel transverse veins: cymes corymbose, terminal, longer than the leaves: flowers minute: calyx repand, 4-lobed, shortly turbinate.—W. and A. Prod. I. p. 330.

1 Flowering branch—2 a flower bud before expansion—3 the same the petals separated as a lid—4 stamens—5 an unexpanded flower cut vertically—6 cut transversely—7 the lid of cohering petals—8 the petals detached—9 a portion of a leaf *magnified*.

539. EUGENIA (S) SALICIFOLIA (R. W. *S/Z. Salidfo-Hum* Graham's Cat. Bombay plants) leaves linear lanceolate, tapering towards both ends, obtusely acuminate, transversely finely parallel veined, pellucid dotted, cymes numerous, trichotomous, small, from the scars of fallen leaves: flowers small: fruit—*Ghauts near Bombay*. Graham—R. W. 111. Ind. Bot. 2. p. 16.

1 Flowering branch *natural size*—2 a flower bud before expansion—3 the same cut vertically—4 anthers 5 ovary cut transversely—6 lid detached—7 the petals of which it is composed separately figured.

540. EUGENIA (S) CARYOPHYLLLEA (R. W. *Syz. caryophyllceum* Uertn.) leaves obovate, obtuse or with a very short sudden blunt acumination, tapering towards the base, somewhat coriaceous, inconspicuously dotted; the upper side becoming black by drying: cymes corymbose, trichotomous, terminal, lax: calyx shortly turbinate, inconspicuously repand or 4-toothed: fruit globose, 1-seeded.—W. and A. Prod. I. p. 329.

1 Flowering branch *natural size*—2 an expanded flower the calyptre adhering to one side—3 the same dissected, but badly—4 a cluster of fruit—5 one cut vertically—6 cut transversely—7 a detached seed—8 one of the cotyledons.

544. EUGENIA (S) RETICULATA (R. W.) leaves ovate lanceolate, acuminate, thick and coriaceous; when dry, brownish beneath and finely reticulated with slender whitish veins: cymes axillary, corymbose, trichotomous: limb of the calyx much dilated, 4-toothed: flowers large. *Assam*.—R. W. 111. Ind. Bot. 2. p. 16.

1 Flowering branch *natural size*—2 a flower in the act of expansion—3 an expanded flower—4 anthers—5 ovary cut vertically—6 cut transversely—7 a diagram of the flower—8 a portion of a leaf *slightly magnified* to show the reticulation.

542. EUGENIA (S) TODDALIOIDES (R. W.) leaves lanceolate, attenuated towards the base, ending in a long acumen above, coriaceous, transversely parallelly veined, pellucid dotted: cymes lateral di-trichotomous, each branch bearing 1-2 or 3 flowers: limb of the calyx much dilated, tube contracted not thicker than the pedicel. *Margui*.—R. W. 111. Ind. Bot. 2. p. 16.

1 Flowering branch *natural size*—2 a flower bud cut vertically after the petals have been forcibly separated and opened to show their relative size—3 anthers—4 an expanded flower—5 the petals separated—6 ovary cut transversely—7 cut vertically.

543. EUGENIA (S) ALTANIHA (R. W.) leaves penninerved oval lanceolate, tapering at the base, bluntly acuminate, coriaceous, dotted, shining above, dull somewhat glaucous beneath: cymes numerous, short, many-flowered, several springing together from the scars of fallen leaves: calyx 4-left, petals 4, constantly expanding before falling: fruit. *Mergui*.—R. W. 111. Ind. Bot. 2. p. 17.

1 Flowering branch *natural size*—2 a branch of the cymose panicle—3 an expanded flower—4 anthers—5 calyx and a petal—6 ovary and cup-shaped limb of the calyx cut vertically.

OBS. The figure given a very imperfect idea of the numerous flowers of this species, which in some specimens, are so dense as nearly to conceal the branch which bears them. It seems very nearly allied to *E. S. balsomeu* from which I fear on further acquaintance it will be found scarcely distinct.

544. EUGENIA (S) CORDIFOLIA (R. W. *Calyptanthus cordifolia*, Moon) leaves coriaceous penninerved, ovate, acuminate, sessile, cordate, stem clasping, at the base: cymes corymbose, longish peduncled, axillary, shorter than the leaves: calyx limb very slightly 4-toothed, petals calyptiform.—R. W. 111. Ind. Bot. 2. p. 16.

Ceylon. Moon and Colonel Walker.—This is a large handsome species. The leaves are upwards of 6 inches long and nearly 3 broad, very coriaceous, revolute on the margin; flowers pretty large; the fruit I have not seen.

1 Flowering branch *natural size*—2 a flower bud about the time of expansion—3 the same after the separation of the petals—4 ovary cut vertically—5 anthers—6 ovary cut transversely—7 a diagram of the flower.

545. EUGENIA (E) WILDENOWII (DC. *Eugenia Zeylanica* Willd.) leaves shortly petioled, oblong, narrowed at the base, acuminate with the point blunt, coriaceous, shining, veined, not dotted: peduncles filiform, 1-flowered, solitary or in pairs, axillary or on the leafless branchlets, with two short subulate bracteoles under the calyx.—W. and A. Prod. I. p. 331.

1 Flowering branch *natural size* but a small one selected—2 an expanded flower—3 the same cut vertically to show the ovary—4 anthers—5 ovary cut transversely—6 a fruit *natural size*—7 the same cut transversely, 2-celled with one seed in each—8 cut vertically—9 a detached seed—10 the same, testa removed to show the form of the cotyledons.

546. EUGENIA (J) MUNRONII (R. W.—*J. aquea*, Munro's MSS.) racemes cymose terminal, tube of the calyx much attenuated at the base, lobes of the limb somewhat membranous, obtuse: leaves subsessile, slightly cordate at the base, lanceolate upwards, ending in a short blunt acumen, penninerved; veins meeting and forming a thick coarse nerve within the margin; pellucid dotted.—A slender tree from 12 to 20 feet high, flowers large and conspicuous, apparently from the dried specimen, reddish. Fruit eatable.—R. W. 111. Ind. Bot. 2. p. 14.

1 Flowering branch—2 an expanded flower—3 the same cut vertically—4 anthers—5 ovary cut transversely—6 a diagram of the flower—7 a detached petal *magnified* to show the pellucid dots.

547. BXRINGTONIA SPECIOSA (Linn.) leaves shining, cuneate, oblong, obtuse, quite entire: flowers (large) forming a lax simple raceme or thyrsus: pedicels elongated, several times longer than the flower, 1-bracteate at the base: calyx 2-3-cleft: ovary 4-celled, two of the dissepiments being often imperfect in the middle: ovules attached to the inner angle of the cell, near its apex: fruit acutely 4-angled, pyramidal; endocarp fibrous, resembling a putamen, separating from the epicarp.—W. and A. Prod. I. p. 333.

1 Flowering branch *natural size*—2 a partially dissected flower—3 a fasciculus of stamens—4 anthers—5 ovary cut transversely—6 ovary cut vertically—7 a fruit nearly mature copied from Gartner.

548. EUGENIA (J) ALBA (Roxb. R. W. *HI. Ind. Bot.* 2. p. 14.—*Jambosa alba* W. and A) leaves almost quite sessile, elliptic-oblong; peduncles lateral and terminal, brachiate, several-flowered: (flowers white): fruit turbinate, depressed.—W. and A. *Prod. I.* p. 332.

1 Flowering branch—2 fruit seen from the apex—3 seen from the base—4 cut vertically.
Copied from Roxburgh's figure.

549. EUGENIA (J) PURPUREA (Roxb. R. W. *III. Ind. Bot.* 2. p. 14).—Trunk straight: leaves smooth: flowers in lateral sessile fascicles: berries oval.

Differs from *E. Malaccensis* in the shape of the fruit only. The fruit is as large as in that species, the colour a very dark purple.—Roxb. *Fl. Ind. II.* p. 483.

1 Flowering branch—2 fruit seen from the apex—3 fruit *natural size*—4 cut transversely showing the seed.
Copied from Roxburgh's figure.

550. EUGENIA (J) AQUEA (Roxb. R. W. *III. Ind. Bot.* 2. p. 14.—*Jambosa aquea* DC.) leaves almost sessile, oblong-lanceolate, narrower and somewhat cordate at the base: peduncles terminal or from the upper axils, 3-7* flowered: (flowers white); fruit turbinate, flattened at both ends.—W. and A. *Prod. I.* p. 332

1 Fruit bearing branch—2 a panicle of flowers—3 ovary cut transversely—4 fruit seen from the apex—5 cut transversely.

551. EUGENIA (E) MOOMANA (R. W.) shrubby, glabrous, leaves pellucid dotted, short petioled, ovate, tapering at the base, acuminate; acumen either short and blunt or prolonged and tapering to a fine point: peduncles axillary, solitary or sometimes paired, one flowered: flowers small, calyx tube ventricose, oblong, limb 4-cleft, segments reflexed pointed: fruit globose about the size of a cherry, seed conferruminate.—R. W. *III** *Ind. Bot.* 2. p. 13.

1 Flowering branch, with a tuft of moss growing on the stem *natural size*—2 an unexpanded flower bud—3 a flower after the fall of the petals and stamens—4 a perfect flower—5 anthers—6 ovary cut vertically—7 cut transversely—8 a fruit cut transversely, one seeded—9 a seed—10 cut vertically to show the position of the embryo—11 diagram of a flower.

552. EUGENIA (S) OPERCULATA (Roxb. R. W. *III. Ind. Bot.*—*Syz. nervosum* DC.) leaves elliptico-ovate, attenuated at the base, acuminate at the apex, suborbiculate, penninerved, the lateral nerves slightly prominent: peduncles lateral, laxly cymosely paniced, calyx entire.—DC. *Prod.*

OBS. I have restored Roxburgh's specific name, now that I have reverted to his generic one.

1 Flowering branch—2 a flower, petals separating—3 ovary with the petals forcibly opened—4 vertical section of the calyx and ovary—5 transverse section of the same—6 a fruit—7 the same cut transversely.

553. EUGENIA (S) CARYOPHYLLIFERA (Lam. Roxb.) leaves elliptico-ovate, acuminate at both ends, coriaceous, feather-nerved: peduncles lateral, densely cymosely paniced, calyx repand, somewhat hyaline on the margin.—DC. *Prod.*

OBS. In our prodromus Dr. Arnott and I viewed this as only a small fruited variety of *Syz. Jambolanum*, to this opinion I am still disposed to adhere, but having an opportunity of publishing Roxburgh's figure I think it better to allow Botanists to decide for themselves.

1 Flowering branch—2 an unexpanded flower—3 a flower in the act of expansion—4 the ovary and calyx partly removed.

551. EUGENIA (S) FERRUGINEA (R. W.) ramuli compressed, leaves oblong-lanceolate, acuminate, tapering, or sometimes obtuse at the base, coriaceous, glossy above, dull glaucous beneath: peduncles axillary from the upper pairs of leaves, several times longer than the petiols, trichotomously branched, flowers fasciculated on the ends of the branchlets ^ calyx 4-lobed, lobes obtuse on the margin, caducous: petals expanding ^ be expansion.

Mergui—Griffith.

This is the plant alluded to (*III. Ind. Bot.* 2. p. 17) under *E. rubens*, I had not when that was printed seen either a specimen or figure of Roxburgh's plant. A comparison of my plant with his figure shows them different though nearly allied species. My plant has 8 petals but I am unable to say whether they all expand or partially fall off as a lid. This can only be ascertained by a careful examination of recent flowering specimens.

1 Flowering branch—2 unexpanded flower—3 an expanded flower—4 stamens 5 calyx and ovary cut vertically—6 cut transversely—7 a diagram showing that the flower is 8-petaled.

555. EUGENIA (S) CYMOSA (Lam. not Roxb.) leaves short petioled, finely transversely veined, oval, acuminate, somewhat waved on the margin, acumen blunt pointed: cymes corymbose, contracted, trichotomous, few-flowered: flowers subsessile, clustered on the points of longish peduncles: calyx slightly lobed: petals free expanding. — *Mergui*—Griffith.—R. W. *Jll. Ind. Bot.* 2. p. 17.

This is certainly a beautiful plant, and though in character not easily distinguished from *E. S. pylvantha* is yet very distinct. The leaves want the course conspicuous nerves, being quite even on both sides, the nervation resembling that of a *Calophyllum*, the mid rib only conspicuous. The cymes, though as a whole small, yet seem to have long branches, the flowers being confined to their points and capitulate. The fruit I have not seen. Cymes terminal or from the axils of young shoots.

1 Flowering branch—2 expanded flower showing the petals—3 a flower, but the petals removed to show the positions of the stamens before expansion—4 anthers—5 ovary and limb of the calyx cut vertically—6 ovary cut transversely.

556. CAREYA SPHRICA (Roxb.) arboreous: leaves obovate obtuse glossy: berries globular and crowned with the inflated flattened segments of the calyx.—Roxb. *Fl. Ind.* 2. p. 336.

1 Flowering branch—2 a fascicule of anthers—3 a full grown fruit—4 fruit cut transversely.

557. CAREYA HERBACEA (Roxb.) herbaceous: flowers peduncled: leaves obovate, cuneate, serrulate.—Roxburgh's *I. c.*

1 Flowering branch—2 ovary with the calyx partially removed—3 stamens and petals—4 ovary cut transversely—5-6 a full grown fruit cut vertically showing the remains of the persistent calyx.

558. SKMECARPUS ANACARDIUM (Linn.) leaves cuneate-obovate, rounded at the apex, whitish beneath but scarcely downy: enlarged torus turbinate: fruit sessile, cordate ovate, with a slight notch on one side under the apex.—W. and A. *Prod. I.* p. 18.

1 Flowering branch—2 male flower—3 fertile flower front and back views—4 a fruit with its dilated receptacle—5 the same cut vertically.

559. SKMECAUPUS CASSUVIUM (Roxb.) leaves alternate, lanceolar, entire and very smooth: nut resting on a depressed fleshy broad turbinate receptacle.—Roxb. *Fl. Ind.* 2. p. 85.

1 Flowering branch—2 expanded bisexual flower—3 ovary cut vertically—4 cut transversely—5 ovary further advanced, cut vertically—6 a fruit full grown resting on its fleshy receptacle—7 the same cut vertically—8 cut transversely—9 a seed the lobes separated to show the embryo—10 embryo detached.

560. Rhus SUCCIDANEA (Linn.) leaves 5-7-paired somewhat permanent, petiol wingless; leaflets obltnfng-lanceolate, acuminate, shining, beneath reticulately veined of a uniform colour.—DC. Prod. 2. p. 68.

1 Flowering branch—2 a magnified flower.

561. RHUS BUCKI-AMELA (Itoxb. *R. senrialala* var *7 lloxburglrfi* DC.) arboreous: leaves pinnate, leaflets 5 pairs ovate, serrate, villous, exterior half of the peioli winded: panicle terminal: berries orbicular, compressed viscid.—Roxb. Fl. Ind. 2. p. 99.

^ I Flowering branch—2 expanded flower—3 the same dissected to show the ovary—4 ovary cut vertically—5 a fruit—6 cut transversely—7 a seed detached.

562. VAHLIA OLDENLANDIODES (Roxb.) stem erect, slightly pubescent: leaves linear-lanceolate, spreading, pubescent; peduncles solitary, rather shorter than the leaves, 2-flowered: capsules nearly globose: seeds minute.—W. and A. Prod. I. p. 364.

1 Full grown plant, natural size—2 a flower—3 a fruit natural size—4 capsule cut vertically—5 cut transversely.

563. VAHLIA VISCOSA (Roxb.) stems diffuse or somewhat erect, pubescent, slightly glutinous: leaves oblong-lanceolate or linear, pubescent: flowers in pairs, almost sessile: capsules nearly globose: seeds minute.—VV. and A. Prod. I. p. 364.

1 Flowering plant natural size—2 expanded flower—3 capsule cut vertically—4 cut transversely.

564. HYDROCOTYLE ROTUWDTIPOLIA (Roxb.) filiform, creeping: leaves long petioled, round, lobate, crenate, smooth: umbels erect from 8 to 10 flowered: involucre of 3-4, or more, minute leaflets.—Roxb. Fl. Ind. 2. p. 88.

1 Portion of a flowering plant—2 a flower—3 a cremocarp—4 the same cut transversely.

565. HYDROCOTYLE ASIATICA (Linn.) leaves attached by the margin, orbicular-reniform, equally crenate, 7-nerved, glabrous, or slightly villous on the under side when young: petioles and peduncles f iscidled, sprinkled with soft hairs: umbels capitate, shortly peduncled, few (3-4) flowered: fruit orbicular, reticulated, with 4 ribs on each of the flat sides.—W. and A. Prod. I. p. 366.

1 Flowering branch—2 an umbel with one flower blown—3 cremocarp—4 the same cut transversely.

366. PTYCHOTIS AJOWAN (DC. *Ligusticum Ajowan* Roxb.) stem erect, dichotomous: leaves few, cut into numerous linear or filiform segments; the uppermost simply pinnate: umbel with 7-9 rays: involucre few-leaved; leaflets linear, entire: fruit strongly ribbed, covered with small blunt tubercles.—W. and A. Prodi, p. 364.

1 Flowering plant natural size—2 an expanded flower—3 the ovary after the fall of th* petals—4 cremocarp—5 a single mericarp—6 cut vertically—7 cut transversely.

567. APIUM INVOLUCRATUM (Roxb.) annual, glaucous, villous: superior leaflets filiform, both general and partial involucre about six leaved—Roxb. Fl. Ind. 2. p. 97.

Ous. The plant figured No. 0J5 of this work 'differs so much in its general appearance from th3, which is the true *Hoxburgtan* one, that I have thought it just towards Roxburgh to publish his own figure, even at the risk of giving plates of 2 varieties of the same plant.

1 Flowering branch—2 expanded flower—3 cremocarp—4 the same cut transversely.

568. ^ DAS^LOMA BENGALENSE (DC. Sessile Bengalensis Roxb.)

OBR. DeCandolle distinguishes two species of this genus one *D. Bengalense*, by its umbels being sessile—the other *D. flaucum* by its umbels having, a distinct peduncle. As this is Roxburi^h's plant, therefore the true *D. Bengal'euse*, and all the^ umbels' have peduncles, it seems probable that the two are but varieties, or if not that DeCandolle's characters are insufficient for their discrimination.

1 Flowering branch—2 an expanded flower—3 cremocarp—4 the same cut transversely.

569. CNIDIUM DIFFUSUM (DC. *Ligusticum diffusum* Roxb.) stem diffuse striated: leaves pinnatifid, segments pinatifid, laceneoe cuneate obtusely dentate at the apex: peduncles opposite the leaves: leaves of the involucre numerous linear sub-membranaceous.—DC.

1 Flowering plant—2 flower—3 a young cremocarp—4 the same near maturity—5 cut transversely.

570. FCEVICULUM PANMORIUM (DC. *Anatheum panmorium* Roxb.) stem erect ramous: leaves supra decom-pound rays of the umbel from 10 to 20 unequal: fruit oblong deeply furrowed, wingless.—DC. Prod. 4. p. 142.

1 Flowering branch—2 expanded flower—3 mericarp suspended from the carpophore—4 detached mericarp—5 the same cut transversely.

571. OENANTHB STOLONIFERA (DC. *Phellandrium stoloniferum* Roxb.) stem piped striated, repent at the base, afterwards ascending: leaves bi-pinnatifid, the upper ones pinnatifid, lobes lanceolate acuminate at both ends course,ly and widely serrated: umbels opposite the leaves, exinvolucrate: fruit obovate-oblong shorter than the pedicels.—DC. Prod. 4. p. 138.

1 Flowering branch, natural size—2 an expanded flower—3 a cremocarp crowned with the calyx lobes—4 the same cut transversely.

572. ANETHEUM SOWA (Roxb. DC.) fruit oblong, almost destitute of a membranaceous margin—DC.—Annual: leaves supra- decom-pound: umbel of from 5 to 15 rays equally elevated: seeds flat with a membranous margin and 3 ribs on the back.—Roxb. Fl. Ind.

1 Flowering plant—2 a flower—3 a young cremo* carp—4 the same full grown—5 transverse section of the same—6 transverse section of a single mericarp.

573. PANAX FRUTICOSUM (Linn. Roxb.) shrubb', unarmed: leaves pinnately decom-pound; leaflets petioled, oval oblong, acuminate, very acutely serrated, often variously lacinated: panicle corymbose, the branchlets bearing umbels at the apex: styles 2-3: ovary and berry 2-3 lobed and celled.—W. and A. Prod. I. p. 376.

1 Flowering branch—2-3 back and front views of the flower—4 immature berries—5 transverse section of the same with three cells—6 transverse section of one with 2 cells.

574. GARDENIA ENNEANDRA (Keen. W. & A. G. *latifolia* Roxb. not Aiton) arboreous, unarmed: leaves opposite or in threes, nearly sessile, from ovate toobovate, glabrous, with a hairy gland in the axils of the nerves on the under side: flowers terminal, 1-3 together, nearly sessile: limb of the calyx short and irregularly divided: corolla hypocrateriform; tube long, glabrous; limb 7-11 cleft, the divisions the length of the tube: berry even, nearly globose, crowned with the base of the limb of the calyx; nut thin, with 5 parietal receptacles.—W. and A. Prod. I. p. 394.

1 Flowering branch—2 dissected flower—3 fruit cut transversely.

51?). GARDENIA LucrDA (Roxb. W. and A.) arborescent, unarmed, with resinous buds : leaves very shortly petioled, oblong, oval or obovate, obtuse or with a short blunt point, glabrous, hard, shining, with simple parallel nerves and connecting prominent veins: flowers somewhat terminal, solitary, rather shortly pedicelled (pedicels from J to an inch long): limb of the calyx with 5 long subulate divisions, sprinkled internally with erect short stout bristles : corolla hypocrateriform ; tube long, glabrous, striated ; limb 5-partite, divisions obovate-oblong, as long as or a little shorter than the tube, glabrous : stigma entire : berry drupaceous, even, oblong, crowned with the whole limb of the calyx ; nut very hard, thick and bony, with 2 parietal receptacles.—W. and A. Prod. I. p. 395.

1 Flowering branch—2 dissected flower—3 a stem detached—4 a fruit full grown—5 the same cut transversely.

57§. GARDENIA GUMFFKRA (Linn. G. arborea Roxb., arborescent, unarmed, with resinous buds : leaves sessile from narrow elliptic-oblong to ovate-oblong, obtuse or very shortly and bluntly pointed, puberulous and slightly scabrous when young, afterwards shining, with simple parallel nerves : flowers terminal, 1-3 together, almost sessile : calyx densely puberulous and slightly scabrous ; limb short, with 5 ovate acuminate divisions : corolla hypocrateriform; tube long, slender, widened at the mouth, sparingly pubescent; limb 5-partite, segments narrow oblong, more than half the length of the tube, almost glabrous; stigma clavate, entire, striated : berry drupaceous, even, oblong, crowned with the whole limb of the calyx; nut with 4 or 5 parietal receptacles.—W. and A. Prod. I. p. 395.

1 A leaf bearing branch—2 a flowering branch—3 a dissected flower—4 a berry cut transversely.

577. GARDENIA MONTANA (Roxb.) arboreous with short rigid spines : leaves oblong, obtuse, nearly sessile, "with the margins revolute; upper side glabrous and shining, under a little pubescent: flowers 3-6 together, fascicled, springing from the young leafless shoots, shortly pedicelled : calyx with about 5 teeth: corolla 5-7-cleft, glabrous in the throat: anthers included : stigma bifid : berry drupaceous, roundish; nut hard and bony, with 4-6 parietal receptacles. — W. and A. Prod. I. p. 396.

1 Flowering branch—2 dissected flower—3 a fruit cut transversely.

578. GARDENIA CAMPANULATA (Roxb.) shrubby the ramuli short, spinous towards the apex : leaves lanceolate smooth acuminate at both ends : flowers fascicled, short pedicelled, axillary and sub-terminal: limb of the calyx campanulate acute and shortly toothed: corolla sub-campanulate 5 lobed, berry roundish ovate. —Flowers pale yellowish, anthers included, berry one celled with 5 parietal placentas.—DC

1 Flowering branch—2 dissected flower—3 a berry full grown—4 the same cut transversely.

579. GARDENIA TUKGIDA (Roxb.) arboreous armed, bark thick: leaves obovate attenuated at the base into a petiol, smooth : flowers loral, sub-solitary : calyx limb tubular, 5 toothed: corolla hypocrateriform; anthers included.—DC Prod.

1 Flowering branch—2 ovary, calyx and style—3 corolla detached and split open showing the enclosed stamens—4 a full grown berry—5 the same cut transversely.

580. RANDIA DUMETORUM (Lam. Gardenia dumetorum Roxb.) spines opposite : leaves oval, somewhat obtuse, cuneate at the base, glabrous 6V when young slightly pubescent: flowers solitary, terminal on the young shoots, shortly pedicelled : limb of the calyx campanulate, lobes oblong: corolla hirsute on the outside; tube rather longer than the segments of the calyx, furnished on the inside near the base with a ring of erect dense hairs: fruit usually globose, rarely oblong, crowned with the limb of the calyx.—W. and A. Prod. I. p. 397.

1 Flowering branch—2 dissected flower—3 ovary cut transversely—4 a berry full grown—5 cut transversely.

581. RANDIA NUT INS (DC. Posoqueria nutans Roxb.) spines opposite) horizontal: young branches long, drooping, pubescent : leaves from uniform-oblong to round, glabrous : flowers short pedicelled, at the extremity of short leafless or few leaved axillary young shoots : calyx with a short hairy cylindrical tube : corolla silky on the outside; tube scarcely longer than the calyx segments, with a dense circle of white hairs internally near the base : fruit globose, crowned with the whole limb of the calyx.—W. and A. Prod. I. p. 397.

1 Flowering branch—2 a portion 6T—the same—3 corolla split open—4 calyx and pistil—5 ovary cut transversely—6 a full grown berry—7 the same cut transversely—8 a dissected seed—9 embryo detached.

582. RANDIA LONVSISPINA (DC. Gardenia longispina Roxb.) spines opposite or occasionally Alternate, horizontal: young branches drooping : leaves from obovate to oblong, cuneate at the base, glabrous or pubescent on the nerves : flowers shortly pedicelled, generally 1-3 at the extremities of the young short axillary shoots, occasionally solitary and axillary : limb of the calyx campanulate, lobes ovate, with often a small tooth between them in the sinus : corolla silky on the outside; tube rather longer than the segments of the calyx, with a dense ring of hairs near the base on the inside : fruit drupaceous, shon ovoid and slightly retuse at the base, crowned with the permanent limb of the calyx.—a, *culta* ; tube of the calyx and ovary glabrous. - W. and A. Prod. I. p. 398.

Ons. The spines in the wild variety are short and the tube of the calyx and ovary hairy.

1 Flowering branch—2 directed flower—3 a full grown fruit—4 the same cut transversely.

583. RANDIA FLORIBUNDA (Posoqueria floribunda Roxb.) spines axillary, rigid: leaves opposite and fascicled, obovate, cuneate at the base, glabrous: flowers shortly pedicelled, 4-6 on each of the small lateral leafless young shoots: calyx glabrous; tube cylindrical, segments of the limb somewhat lanceolate, acuminate, persistent: corolla silky on the outside; tube rather shorter than the segments of the calyx, with a circle of erect hairs about the middle on the inside : fruit ovate-cordate, shining, crowned with the limb of the calyx.—W. and A. Prod. I. p. 398.

1 Flowering branch—2 dissected flower—3 ovary cut transversely—4 a berry—5 cut transversely—3 a seed dissected showing the embryo *in situ*.

584. STYLOCORYNE WEBERA (A. Rich. Webera corymbosa Roxb.) shrubby, glabrous: leaves lanceolate-oblong, shining: corymbs trichotomous, terminal: calyx-limb 5-cleft: tube of the corolla short, about twice the length of the calyx-tube, slightly widened and bearded at the mouth ; segments of the limb recurved, oblong, villous at their base along the middle, about twice as long as the tube : style slightly hairy; stigma with 10 longitudinal somewhat winged angles : berry 2-celled, with 4-8 seeds in each cell.—W. and A. Prod. I. p. 401.

1 Flowering branch—2 detached flower—3 corolla dissected—4 ovary and calyx.

585. PERGULARIA PALLIDA (W. and A. Asclepias pallida Roxb.) twining, branches slender, softly pubescent : leaves cordate acuminate : cymes short peduncled many flowered : segments of the corolla legulate, tube glabrous within, longer than the gynostegium : crown of the stamens exceeding the apiculate stigma.—Wight's Contributions.

1 Flowering branch —2 dissected flower showing the column and staminal crown—3 ovary and stigma, the crown and filaments removed—4 stamens and crown.

586. HOYA VEINDFLOIA (H. Brown.) twining : leaves ovate or cordate, acuminate, membranaceous glabrous - corolla glabrous, with ovate acute lobes : leaflets of the staminal crown flattened above, obovate, obtuse, interior angle short, blunt, "follicles divaricated, thick, obtuse rusty coloured.—Wight's Contributions.

1 Flowering branch—2 a flower partly dissected showing by the removal of 2 coronal leaves and filaments the pollen masses and ovary—3 detached pollen—4 stamen with its-crown—5 follicles, one opening.

59.9. STROPHANTHUS DICHOTOMIS (DC.—Nerium. caudatum Roxb.) shrubby, scandent: leaves oblong, smooth: cymes terminal: segments of the corolla ending in a long filiform point.—Roxb. Fl. Ind. 2. p. 10. -
1 Flowering branch—2 calyx, style and stigma-stamens detached—4 portion of a corolla, seen from within.

600. ADENEMA HYSSOPIFOLIUM (G. Don.—Gentiana verticillata Linn. fl. Roxb. Exacura hyssopifolium Willd.)

GEN. CHAR. "Calyx 5 parted, corolla funnel shaped, 5 cleft. Stamens 5 enclosed; filaments short, furnished with a gland at the insertion of each; anthers incumbent. Stigma 2 lobed, seeds scobiform.

^ An erect perennial plant with creeping roots, sessile, lanceolate, decussate, 7 nerved leaves, tetragonal, simple stems, and axillary sessile small white flowers, generally 3 in each axil and therefore appearing verticillate."—Dons Gardeners Dictionary.

This is the only species of the genus, which until separated by Don had been confounded with *Gentiana* and *Exacum*.

1 Flowering branch—2 dissected flower—3 detached stamen—4 capsule *natural size*—5 the same cut transversely *magnified*.

601. HYDROLEA ZEYLANICA (Linn.—Nama Zeylanica Roxb.) herbaceous, glabrous, diffuse, rooting at the joints; floriferous branches ascending: leaves from oval obtuse to lanceolate acute: flowers racemose on the ends of the ramuli, occasionally solitary and leaf opposed between them: flowers deep blue.

OBS. This is I believe the only Indian species, the above must therefore be viewed as a brief description rather than a specific character.

1 Flowering branch—2 expanded flower, front view—3 back view of the same—4 calyx and ovary—5 capsule cut transversely.

602-603. CATALPA ORIENTALIS (Willd.) polygamous arboreous: leaves bifarious, obliquely cordate, serrate, rice pointed, villous underneath.—Roxb. Fl. Ind. 2. p. 65.

The male and female of this plant are usually found on different trees. I have therefore followed Roxburgh in giving figures of each on separate plates.

602. 1 Male plant flowering branch—2 a male flower—3 a leaf and cluster of female flowers.

603. 1 Female plant flowering branch—2 a dissected flower—3 a fruit enclosed in its calyx—4 fruit cut transversely—5 the same detached.

604. CARALLIA LANCEFOLIA (Roxb. DC.) leaves lanceolar, acutely serrulate, nerved, shining: peduncles many-flowered.—Roxb. Fl. Ind. 2. p. 481.

1 Flowering branch—2 dissected flower, showing the thickened base of the style, resembling a superior ovary with which the true ovary is crowned—3 an advanced ovary cut transversely, 5 celled—4 cut vertically.

OBS. It seems probable this must constitute a new genus the ovary being truly 5 celled with 2 collateral ovals in each. The one figured has three of the cells with a single ovule in each, the others having aborted, the remaining 2 cells have each two ovules but apparently both aborted.

605. CARALLIA LUCIDA (Roxb.) leaves opposite, oblong, serrulate, peduncles many-flowered.—Rox. Fl. Ind. 2. p. 481.

1 Flowering branch—2 dissected flower—3 a fruit—4 cut vertically, showing the solitary curved seed *in situ*—5 seed detached.

606. EUGENIA (A) CLAVIFLORA (Roxb.) leaves lanceolar: corymbs lateral, subsessile, umbelliform: flowers clavate: berries long ovate, crowned with the cyathiform base of the calyx.—Roxb. Fl. Ind. 2. p. 488.

1 Flowering branch—2 flower cut vertically, showing the position of the ovary—3 ovary cut transversely—4 a berry fully grown—5 cut vertically—6 the embryo detached.

607. EUGENIA (A) ACUTIMINATA (Roxb.) leaves broad lanceolar, acuminate, polished, finely veined: peduncles axillary, terminal, many-flowered: corolla apiculate: berries round.—Roxb. Fl. Ind. 2. p. 492.

OBS. This species ranks with *E. grata* and *E. oblata* from the last of which it seems principally to differ in the size of the fruit and apiculate, not expanding, corolla. I have not seen the plant and only know it through the figure and Roxburgh's short character above quoted.

1 Flowering branch—2 flower—3 berry.

608. EUGENIA (J) AMPLEXICAULIS (Roxb.) leaves stem-clasping, oblong, obtuse: peduncles lateral, 3 or 9 flowered: berry spherical.—Roxb. Fl. Ind. 2. 483.

A stately tree, "the cultivation of which cannot well be recommended on account of its fruit but the tree is one of the most handsome of the genus" It is only known to me by the figure and Roxburgh's description.

1 Flowering branch—2 a full grown fruit—3 the same cut transversely—4 a detached seed—5 the same, the lobes separated to show the embryo.

609. EUGENIA (J) LAURIFOLIA (Roxb.) leaves subsessile, oblong, glossy, obtusely acuminate: peduncles lateral three flowered; pedicels clavate, length of the peduncles: berries oblong. Roxb. Fl. Ind. 2. p. 489. "The pulp of the fruit is in small quantity, and scarce eatable; the shape however of the berries in this species together with its dark brown bark immediately point it out."—Roxb.

The figure differs somewhat from the specimens sent to me by Dr. Wallich but not specifically.

1 Flowering branch—2 a fruit—3 cut vertically—4 a seed lobe showing the embryo.

610. EUGENIA (J) POLYPETALA (Wall.—E. Angustifolia Roxb. not Lamarck) leaves tern linear-lanceolar: peduncles lateral, from three to four flowered: corolla many petaled.—Roxb. Fl. Ind. 2. p. 490.

OBS. I formerly (Illustrations 2. p. 14) expressed a doubt of this species being justly referable to the genus, further experience does not confirm that suggestion, numerous petals being found in several other species.

1 Flowering branch—2 ovary cut vertically—3* cut transversely, showing an accidental variety with three cells—4 another representing the usual 2 celled form.

611. ELGONIA (J) TERNIFOLIA (Roxb.) leaves tern sessile, oblong: flowers lateral.—Roxb. Fl. Ind. 2. p. 489.

A large tree a Native of Chittagong and Assam "there are two varieties one with white flowers called by the people where the tree grows Phool-jamb; the other with lovely rosy flowers they call Lai phool-jamb. Their leaves are among the largest of the genus being from 6 to 15 inches long and from 3 to 6 broad."—Roxb.

1 Flowering branch—2 ovary cut transversely,

612. EUGENIA (J) MACROCARPA (Roxb.) leaves subsessile, lanceolate, acuminate, base narrow cordate: peduncles terminal, few-flowered: berries spherical, of the size of a large orange, crowned with the 4 lobed permanent calyx.—Roxb. Fl. Ind. 2. p. 407.

Native of Chittagong where it is called Chalta-jamb the fruit ripens in August and is eaten by the natives.

1 Flowering branch—2 ovary cut transversely—3 full grown fruit—4 fruit cut transversely, several seeded, which is unusual in the genus.

613. EUGENIA (J) LANCEOLATA (Roxb.) leaves short petioled, narrow lanceolar: flowers terminal about 15, corymbose fascicled: berries irregularly round lobate.—Roxb. Fl. Ind. 2. p. 494.

Flowers very large, rosy and somewhat fragrant, which with the elegant foliage renders it one of the prettiest of the genus: the fruit though as large as a small apple is not eaten, the pulp being small in quantity and tough.—

1 Flowering branch—2 ovary cut transversely—a full grown fruit—4 cut transversely, apparently several seeded, but probably with but one, many lobed seed all uniting in a single, central embryo.

6H. EUGENIA (S) GBATADIS (R. W. III Ind. Bot. E. cymosa Roxb. not Lamarck) leaves oblong, polished, hard : cymes terminal and axillary crowded.—Roxb. Fl. Ind. 2. p. 492.

OBS. The leaves of the specimen figured, seem to have been pointed those of the specimens I examined were broadly oval with an abrupt obtuse acumination not at all like those of the figure but which in other respects the figure agrees so well with the specimens that I am disposed to view that discrepancy as an accidental variation.

1 Flowering branch—2 an expanded flower seen from below—3 the same, dissected seen from above—4 ovary out transversely.

65. EUGENIA (S) CERASOIDES (Roxb.) leaves short petioled from oval to oblong, remotely course veined: panicles lateral brachiate : fruit round of the size and appearance of small black cherries.—Roxb. Fl. Ind. 2. p. 483.

The timber is used for various purposes in Chittagong where it is a native, and the fruit are very generally (jaten. This species, which much resembles some forms of *E. Jambolana* is readily distinguished by its free expanding petals, a character not noticed by Roxburgh.

61H. EUGENIA (S) PANALALA (Roxb.) leaves broad lanceolar, acuminate, coarsely veined : panicles lateral, brachiate : flowers in little heads : berries oval.—Roxb. Fl. Ind. 2. p. 480.

This is a very large tree a native of Chittagong. The fruit are about the size of a gooseberry and very juicy. In this also the petals expand before falling.

617. EUGENIA (S) THUMRA (Roxb.) leaves lanceolar, polished : panicles terminal, extreme, remote, many-flowered : divisions of the calyx sub-rotund : petals reniform sessile.—Roxb. Fl. Ind. 2. p. 495.

Hab : Pegue, where it is called Thumra.

1 Flowering branch—2 a flower seen from below—3 front view partly dissected—4 cut vertically showing the ovary—5 ovary cut transversely.

618. EUGENIA (S) MYRTIFOLIA (Roxb.) shrubby, leaves lanceolate, taper., obtusely pointed, lucid : peduncles axillary, compound, many flowered : berries spherical.—Roxb. Fl. Ind.

A native of Sumatra.—The specimen figured differs somewhat from that sent to me by Dr. Wallich, which induced me to refer this species to the section with terminal flowers, though it seems preferably to belong to that with axillary ones.

619. EUGENIA (S) PROCOX (Roxb.) leaves opposite petioled, lanceolar, rather obtuse, coarsely veined : panicles lateral and axillary, brachiate half the length of the leaves.—Roxb. Fl. Ind. 2. p. 488.

A native of Chittagong flowering in January.

620. EUGENIA (S) OBTUSIFOLIA (Roxb.) leaves elliptic obtuse, polished: panicles below the leaves : corolla calyprate: berry oblong one-seeded.—Roxb. Fl. Ind. 2. p. 485.

Native of the Moluccas.

Roxburgh remarks that this only differs from *E. Jambolana* in the leaves being obtuse and frequently emarginate, which he has illustrated by the introduction into his drawing of figures of two forms of leaves of the true *E. Jambolana*. In all other respects they are the same and I should therefore suggest the propriety of reducing this as an obtuse leaved variety of that species.

1 Flowering branch—2 calyx and ovary cut vertically—3 cut transversely—4 a full grown berry—5 the same cut vertically—6 a detached seed—7 the same divided to show the embryo—8 leaves of *Eugenia Jambolana*.

621. EUGENIA (S) LANCEJEFOLIA (Roxb.) leaves short petioled, lanceolate with the base rounded, acuminate smooth : panicles axillary and terminal, globular, shorter than the leaves, berries oblong crowned, with the entire calyx.—Roxb. Fl. Ind. 2. p. 494.

A native of Silhet where it is called Psora-jumb. Flowering time November and ripens its fruit in February "this I am inclined to consider one of the most elegant and most useful species of this extensive and truly superb genus" Koxb. The young shoots appear quadrangular and the petals expand.

622. EUGENIA (S) OBLATA (Roxb.) leaves opposite, broad lanceolar, obtusely acuminate : panicles terminal, with smaller axillary, corymbiform, fascicles all shorter than the leaves: berries transversely oval.—Roxb. Fl. Ind. 2. p. 943.

Native of Chittagong where it is called Goolam and cultivated for its fruit which ripens in June and July. The wood is also in some estimation.—Roxb.

623. EUGENIA (S) INOPHYLLA (Roxb.) trunk straight to the top of the tree : leaves from oval to oblong, finely veined and polished: panicles terminal, corymbiform : calyx obscurely from four to five lobed, corolla from four to five petaled : berries turbinate.—Roxb. Fl. Ind. 2. p. 406.

Native of Moluccas "although it resembles the clove tree it possesses no kind of fragrance" fruit not eatable.—Roxb.

1 Flowering branch—2 a flower cut vertically showing the limb of the calyx much produced and the petals adherent—3 ovary cut transversely—4 a berry full grown—5 cut transversely one seeded.

624. EUGENIA (S) FRUTICOSA (Roxb.) shrubby: leaves from broad oblong to oval finely veined : panicles lateral : flowers numerous : calyx entire : peduncles and pedicels square, corolla four petaled, but generally deciduous in form of a lid.—Roxb. Fl. Ind. 2. p. 487/

Native of Chittagong. Berries small one seeded.

1 Flowering branch—2 dissected flower—3 portion of a peduncle—4 a berry natural size—5 cut transversely slightly magnified.

625. EUGENIA (S) VENUSTA (Roxb.) arboreous : with numerous drooping branches : leaves broad lanceolar, obtusely acuminate : panicles axillary and terminal, brachiate, shorter than the leaves : ultimate divisions three flowered.—Roxb. Fl. Ind. 2. p. 491.

From Tippara. An elegant tree, flowers like those of the common myrtle and about the same size, calyx 4 toothed. Corolla of 4 short Hawed, orbicular, concave, redish petals.—Koxb. I have suggested that this might be *Eugenia cymosa* of Lamarck, an opinion which more attentive examination does not tend to confirm.

626. EUGENIA (S) JJKACHIATA (Roxb.) arboreous: leaves elliptic, obtuse pointed : panicles lateral: peduncles and pedicels four sided : calyx entire : berries spherical.—Roxb. Fl. Ind. 2. p. 488.

A native of Aniboyana. "The fruit are about the size of peas, dark purple or black and of an astringent taste."—Roxb.

1 Flowering branch—2 a berry full grown—3 cut transversely—4 cut vertically showing the embryo in the centre of the seed—5 embryo detached.

627. EUGENIA (S) CORVMKOSA (Roxb.) leaves ovate-lanceolate, entire, smooth : corymbs terminal compound : calyx with huge round divisions : berries globular.—Roxb. Fl. Ind. 2. p. 497.

A native of the Moluccas.

1 Flowering branch—2 expanded flower seen from below—3 the same dissected—4 ovary cut transversely.

628. EUGENIA (S) rutCHEIAA (Roxb.) leaves broad lanceolar, acuminate, finely veined, lucid: panicles terminal, divided in a triternate form: peduncles and pedicels four sided: berries spherical.—lloxb. Fl. Ind. 2. p. 496.

Native of the Moluccas. A beautiful small tree, flowers in March and April, and ripens its fruit which is like the black currant in June and July.

1 Flowering branch—2 dissected flower—3 a full grown fruit,

629. EUGENIA (S) GLANDUIJFERA (Roxb.) shrubby: leaves broad lanceolate, highly polished: panicles terminal brachiate; ramifications simple and umbelliferous: calyx five toothed, and with the germs and pedicels glandular.—Boxb. Fl. Ind. 2. p. 496.

A native of Sumatra.

1 Flowering branch—2 dissected flower—3 ovary cut transversely.

630. EUGENIA (S) RUBENS (Roxb.) leaves short petioled, opposite, and subalternate, lanceolar, obtuse, fine veined, hard and glossy: panicles terminal, ultimate divisions often umbelliferous.—Roxb. Fl. Ind. 2. p. 490.

Native of Chi^tagong. A large timber tree: flowers in April, fruit, which is eaten by boys, ripens in June and July.

1 Flowering branch—2 ovary cut transversely.

631. PETEROSPERMUM ACERIFOLIUM (Lanwck) leaves roundish, entire or coarsely toothed, cordate at the base, usually more or less peltate and 10-12 nerved at the insertion of the petiole; under side clothed with tomentum; veins conspicuous; petioles elongated: pedicels axillary, much shorter than the petiole: involucel leaves at a little distance from the flower, very caducous: petals linear-revolute: sterile filaments club-shaped: ovary oblong, 5-angled, with 12-14 ovules in each cell: capsule oblong, 5-angled; outside encrusted with a furfuraceous pubescence.—W. and A. Prod. 1. p. 69.

Doubtfully a native of the peninsula, but certainly of Siam and China.

EXPLANATION OF PLATES.

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0)32. *Ficus POLYCARPA* (Roxb. not Jacq. *F. copiosa*, Steud. Noin. Bot.) Arboreous: leaves oblong some of them slightly waved, or serrulate, both sides scabrous: fruit in fascicles from the trunk or woody branches.—*fl. FL Ind.* 3. 006.

Moluccas.—In the Calcutta garden, in fruit about the end of the rains. Leaves scabrous from the same sort of bristles and glands as cover the bark of the young parts; furnished with a green gland in the axils of the **LEAVES.**

633. *Ficus ASPERRIMA* (Roxb.) leaves oval, often scolloped, very scabrous: fruit axillary, paired, peduncled, round, downy.—*R. FL Ind.* 3. *So-i.*—*flort. Mal* 3. 60.

Native of the moist valleys of Malabar and the Circars.—A large tree—fruit downy, size of a gooseberry, when ripe, yellow.

634. *Ficus CARICOIDES* (Roxb.) Sub-arboreous: leaves cordate, crenate, villous: fruit axillary, solitary or paired, peduncled, trigonal, turbinate, wrinkled: umbilicus shut with three cordate scales: calyx from 5 to (j) leaved.—*fl. FL Ind.* 3. 529.

Lucknow.—Introduced, by General Martin, into the Calcutta Botanic Garden.

1 Flowering branch—2 a detached fruit with its peduncle—3 a single female floret detached, showing the perianth, obliquely seated ovary, style, and forked stigma.

635. *Ficus HUMILIS* (Roxb.) Perennial creeping: leaves short petioled, oblong, remotely dentate-serrate, harsh, obtusely acuminate: fruit paired, peduncled, oblong, with an elevated umbilicus.—*R. Fl. Ind.* 3. 535.

Sumatra.—A small cespitose species, in fruit all the year. In this species Roxburgh found only female florets.

1 Flowering branch—2 a seed detached from the 5-cleft calyx.

636. *Ficus REPENS* (Roxb. Willd.) somewhat shrubby, creeping: leaves, obliquely cordate, lobate, serrate-dentate: fruit solitary, peduncled, long obovate.—*R. FL Ind.* 3. 533.—*Willd. sp.* 4. J149.

Calcutta.—Pasture grounds and borders of tanks.

1 Flowering branch—2 detached fruit.

637. *Ficus RAPIFORMIS* (Roxb.) Arboreous smooth: leaves solitary and in pairs, petioled, oval, pointed, entire; a ring of scabrous specks below the insertions of the stipules: fruit axillary, solitary, short petioled, turnip-shaped.—*R. FL Ind.* 3. 551.

Moluccas*. In 5 years, young trees introduced into the Calcutta Bot. Garden were from 10 to 20 feet high, and produce fruit about the close of the rains in September and October.

638. *Ficus OPPOSITIFOLIA* (Roxb. Cor. Pl. Willd. *F. hispida*. Lin. fil.) Leaves opposite, oblong, serrate: fruit in axillary pairs, or on cauline racemes, round, peduncled hairy.—*R. FL Ind.* 3. 561.

A small tree, native of banks and rivulets where the soil is moist and rich. It or *F. deemonia* is frequent in such situations about Madras: they much resemble each other, and I may have confounded them.

1 A leafy branch—2 a fructiferous one with 2 racemes of fruit—3 a male flower—^ a female one —both magnified.

639. *Ficus RACEMIFERA* (Roxb.) Arboreous: leaves alternate, cordate, crenulate: fruit on compound glomerate racemes, from the woody part of the tree below the leaves.—*R. FL Ind.* 4. 560. *Rumph. Bb. Amb.* 3. + 93.

Sumatra.—Trees small and in fruit most part of the year * leaves deciduous during the cold season.

640. *Ficus CORDIFOLIA* (Roxb. not Blume. *F. Rumpfii* Blumé) leaves long, slender petioled, ovate-cordate, acuminate, glossy: fruit paired, sessile, round, smooth, black.—*fl. FL Ind.* 3. 548.

Calcutta.—A large ramous spreading tree. Trunk while young, round and straight, but when old deeply furrowed as if composed of many coalesced trunks.—*fl.*—Roxb.

641. *Ficus DOSMONA* (Roxb. Kon. Vahl) shrubby: leaves, generally opposite, cuneate, oblong, and oblong pointed, serrate, above scabrous, downy underneath, with a green gland in the axils of the veins: fruit in pairs on long radical racemes, above very hairy, of the size of a nutmeg.—*fl. FL Ind.* 3. 562.

Tanjore—in sandy lands near the sea coast. In the Calcutta Bot. Garden they produce fruit all the year round.

1 A leafy branch and portion of the stem with a radical fructiferous raceme attached—2 a male flower—3 a female one.

642. *Ficus NITIDA* (Roxb. Mst. Willd. ? Thunb ? *F. Benjamina* ? Roxb. *FL Ind.*)

Oia. This species though figured, is omitted in the Flora Indica, unless it be the plant there called *F. Benjamina*, with the description of which it accurately corresponds, except that the leaves are said to be slightly 3-nerved which is not shown in the figure. If this surmise is correct, it may be inferred that the two plants are very like each other. This figure corresponds closely with specimens taken from a large handsome umbrageous tree, frequent in Mysore and the Southern Provinces of India, remarkable for the immense profusion of roots dropping from its branches, which, like those of *F. Indica*, descend to the ground and become trunks. So far as I can make out, Willdeiw's characters and descriptions of both *F. Benjamina* and *nitida* are equally applicable to this tree: it is probable therefore his two species are but varieties of one. This opinion is strengthened by the following remark of Willdenow under the former. "*F. nitida et pertusae valde snllis a quibus caute distinguandu.*"* The following are his specific characters of these two species.

"*F. Benjamina* (Lin.) leaves elliptic, oblong, entire, narrower at the base, obtusely acuminate at the apex, slenderly parallelly veined, glabrous, marked above with white dots: fruit globose subsessile.

F. nitida (Thunb.) leaves obovate, entire, shortly and obtusely acuminate, marked beneath with slender parallel veins, shining, glabrous.

The differences in the shape of the leaves form no distinction, all the forms mentioned in both and many more being found on the same tree. The white dots on the leaves of *Benjamina*, the only remaining character, being derived, not from the examination of an extensive series of specimens, but from a single plant growing in a hot house is surely not entitled to have so high a value assigned to it, I therefore propose uniting these two under the older name, quoting the more recent as a synonyme thus:

***Ficus BENJAMINA* (Linn. Willd. Roxb.) Leaves oval and obovate obtuse, polished: fruit axillary paired, smooth. *R. FL Ind.* 3. 550. *F. Nitida* Thuub. Willd. Roxb. Icon, et Mst.**

A large tree widely diffused over Southern India, very umbrageous and much used as an avenue tree. Roxburgh describes the leaves as slightly 3-nerved at the base: this I find is the case, though it is not shown in the figure. In the lithograph copy the parallel veins are represented too strong and rigid.

643. *Ficus SCANDENS* (Roxb.) shrubby scandent: leaves short petioled, ovate entire: fruit in axillary pairs round, peduncled: common calyx 3-toothed. *R. FL Ind.* 3. 536.

Silhet—a ramous climbing shrub running over email trees, shrubs &c.

1 A flowering branch—2 a female flower—3 anule one.

644. *Ficus CONGESTA* (Roxb.) arboreous, smooth : leaves petioled oblong, entire, smooth : fruit roundish-turbinate, sessile, heaped on radical and cauline, short leafless, ramous branchlets or panicles.—*r. Fl. Lid.* 3. 560.

Amboyna.—Introduced into the Calcutta Botanic Garden in 1802, where in 7 years they attained the height of from 8 to 12 feet, the bark was then smooth and dark brown coloured.

1 A branch with a solitary fruit—2 a raceme or rather panicle of fruit—3 a male flower—4 female, stigma terminal large—5 a fruit cut vertically.

645. *Ficus LANCEOLATA* (Roxb. Buchan.) shrubby : leaves lanceolate, smooth, entire : fruit in fascicles near the root, as well as on the trunk and larger branches, peduncled, verrucose, compressed, turbinate, with the umbilicus in a deep concavity.—*R. Fl. Ind.* 3. 557.

Chittagong.—In the Calcutta garden it is in fruit more or less all the year but chiefly about the beginning of the rains.

1 A leafy branch, and a fructiferous portion of a branch—2 a fruit cut vertically.

646. *Ficus QUERCIFOLIA* (Roxb.) perennial creeping : leaves reflected, oblong, irregularly sinuate, scabrous underneath : fruit solitary, peduncled, short-oval of the size of a pea.—*Roxb. Fl. Ind.* 3. 534.

Sumatra.—Bears fruit all the year round, some of the florets bisexual diandrous.

1 Flowering branch—2 female floret, ovary detached from the 5-cleft calyx—3 a bisexual floret, stamens and ovary detached from the calyx.

647. *Ficus TOMENTOSA* (Roxb. Willd.) Branches dropping small roots: leaves oblong cordate, pointed, very downy underneath : fruit axillary paired sessile woolly.—*R. Fl. Ind.* 3. 550.

A large and handsome tree with fine umbrageous head—Extensively diffused over the Southern provinces of India, but not abundant any where.

648. *Ficus CUNIA* (Buch. Roxb.) arboreous : leaves short-petioled alternate, bifarious, oblong, semicordate at the base, acutely serrate : fruit turbinate, ribbed, pedicelled and generally in pairs, on compound, prostrate, radical and cauline, leafless branchlets.—*it. Fl. iW.* 3. 501.

Nepaul.—Whence it was introduced by sc'd into the Calcutta garden. The only tree which was reared was about 20 feet high, uncommonly well clothed with long spreading branches down to the ground and constantly loaded with fruit.—Roxb.

649. *Ficus VIRGATA* (Roxb.) shrubby : leaves broad cordate, obtuse, serrate-eremite, three-nerved, downy : fruit axillary and lateral, peduncled, solitary, oval, smooth.—*Roxb. Jbl. Ind.* 3. 530.

Rohilcund.—Flowering time dry season. In this species the perianth is 3 to 5 leaved, and the male florets triandrous.

1 Flowering branch—2, a 5-leaved male perianth stamens removed—3, a male flower complete, perianth 4-leaved—4, a 3-leaved perianth—5 ovary and style.

650. *Ficus KCXCELSA* (Vahl Roxb. Fl. 3. 552. *F. Attimeeraloo* Roxb. Mst.) Arboreous, smooth : leaves short-petioled, bifarious, obliquely oblong, smooth : fruit solitary or paired, peduncled, sub-turbinate ? a calyx of the peduncle trideutate : navsl round.—*R. FL Ind.* 3. 552.

Moluccas and Malabar. The fruit appears about the beginning of the rains.

651. *Ficus TUBERCULATA* (Roxb.) leaves short petioled, oblong, entire, acute, rough: fruit in pairs, peduncled, roundish, the size of a large pea, tubercled, the umbilicus elevated.—*Roxb. FL Ind.* 3. 554.

Covoinaudel mountains.—A small but very ramous tree.

652. *Ircus AMPELOS* (Roxb. K6n. Mst.) Branches dropping fibrous roots: leaver obliquely oval, scabrous : fruit paired, axillary, pedicelled, pisiform, smooth, yellow.T-i*. *FL Ind.* 3. 553.

A large tree, native of mountainous countries.

653. *Ficus HEDBRACEA* (Roxb.) shrubby scandent rooting : leaves ovate, smooth, but hard : fruit axillary, one or two, subsessile, round, the size of a cherry and scarlet coloured —*R. Fl. Lid.* 3. 538.

Chittagong.—Climbs over trees and like ivy, emitting numerous small roots by which its very extensive ramifications are supported.

1 Flowering branch—2 male flower—3 a female one.

654. *Ficus FRUTICOSA* (Roxb.) shrubby : leaves petioled, sub-ovate, entire, void of pubescence but harsh : fruit in axillary pairs, rather long peduncled round.—*R. Fl. Ind.* 3. 633.

Chittagong.—A bushy spreading shrub, five or six feet high : shows no tendency to climb, male flowers numerous, mixed with the females, diandrous: stigma 2-toothed.

1 Flowering branch—2 male floret—3 female floret.

655. *Ficus VAGANS* (Roxb.) shrubby, scaudent, rooting to other trees : leaves long petioled, exactly cordate, villous underneath : fruit axillary, peduncles solitary or in pairs, sub-globular, the size of a nutmeg.—*R. Fl. Ind.* 3. 537.

Chittagong—a stout rambling species, rooting on trees for support. Female florets only found, long pedicelled, mixed with stiff tawny hairs which line the inside of the fruit—style clavate, stigma perforated.

1 Flowering branch—2 a female floret.

656. *Ficus LACCIFERA* (Roxb.) arboreous : leaves long petioled, from cordate to oval, obtuse pointed, lucid, 3-nerved : fruit in axillary pairs, sessile, oval, smooth, scaly on the inside.—*R. Fl. Ind.* 3. 545.

Silhet. — A large tree : fruit appears during the hot season and ripens in the rains. Female florets only are found. Perianth of 4 oblong leaflets scarcely longer than the ovary ; style subulitate, stigma acute.

1 Flowering branch—2 female floret.

657. *Ficus RAMKNTACEA* (Roxb.) arboreous, branches dropping roots : leaves long ovate—cordate, acute, entire, in the bud hirsute, when expanded smooth, strongly marked with simple parallel veins; petioles short and ramentaceous : fruit in short peduncled axillary pairs, smooth, the size of a small cherry and red.—*R. FL Ind.* 3. 516.

Chittagong.—In drying, the leaves become particularly glossy, while, until pretty well expanded, the large vein* are wry hairy.

658. *Ficus COMOSA* (Roxb. Willd.) leaves oblong ventricose, pointed, smooth : fruit in pairs, generally terminal, turbinate, smooth, red.—*R. FL Ind.* 3. 652.

Circar mountains.—A large tree with a spreading very branchy top: branchlets slender often pendulous. Roxburgh states that he has seen a hood over the young fruit which falls as it begins to swell.

659. *Ficus HETERORHYLLA* (Roxb.) shrubby, subscandent : leaves variously divided : fruit axillary, paired, peduncled, rough.—*Roxb. Fl. Ind.* 3. 532.

An extensively distributed plant, native of thickets, banks of rivers and water courses—a weak straggling shrubby species. A very polymorphous plant. Roxburgh suspects that *Ficus denitculata*, *truncata*, *serrata* and *aqoticu* of Vahl and Willd. and probably *F. catmabina* Lour, are varieties of it.

660. *Ficus AUGUSTIFOLIA* (Roxb.) leaves subopposite, lanceolate, smooth, acute : fruit axillary paired long-peduncled, turbinate smooth.—*R. FL Ind.* 3. 554.

Circar inoutaius—a large tree.

661. *Ficus SCABRELLA* (Roxb.) shrubby scandent: leaves alternate, short petioled, oblong, remotely serrulate-dentate, scabrous: fruit axillary, solitary, peduncled turbinate, tubercled, of the size of an olive; scales of the umbilicus ciliate.—*Roxb. FL bid.* 3. 532.

Chittagong—An extensive rambling species depending on other plants for support. Male florets few round the mouth, monandrous, females numerous over the whole, smooth, inside of the receptacle.

662. *Ficus OBTUSIFOLIA* (Roxb.) arboreous: leaves alternate, short petioled, from cuneiform to linear oblong, thick, hard and glossy: fruit axillary, paired or single, sessile, round, smooth, the size of a small gooseberry and yellow.—*R. FL Ind.* 3. 546.

Chittagong.—A large elegant tree. Male flowers monandrous mixed among the sessile female ones: perianth 3-leaved, style long with a tapering acute stigma.

1 Flowering branch—2 male floret—3 female floret.

663. *Ficus ELASTICA* (Roxb.) leaves from oval to oblong, pointed, thick, firm and glossy: fruit in axillary pairs, sessile, oval, smooth, the size of an olive: stipules nearly as long as the leaves, smooth and rosy.—*EoxO.FL hid.* 3. 541.

Mountains of Siihet.—A large handsome tree now cultivated in most parts of Southern India, every part abounds in rich milky juice which furnishes about one-third of its weight of caoutchouc, roots descend from the larger branches. Male florets monandrous, female with an oblong ovary, terminating near the apex in a curved style and large stigma. The rosy coloured long Stipules of this species is very peculiar.

1 Flowering branch—2 female floret—3 male—4 receptacle* cut longitudinally.

664. *FICUS EXASPERATA* (Roxb.) arboreous: leaves short petioled, oblong, acuminate, repand-serrate, rough on both sides: fruit axillary, solitary, or in pairs, peduncled, round, size of a pea.—*ft. FL Ind.* 3. 556.

Eastern parts of India - Stem and branches covered with a rust coloured smooth bark.

665. *Ficus INFECTORIA* (Willd.) leaves ovate-oblong, acute, waved, smooth: fruit paired, axillary, sessile, round, smooth, white.—*if. FL Ind.* 3. 551.

Bengal—A large and beautiful tree, sometimes dropping roots of considerable size from the trunk and branches.

666. *Ficus WASSA* (Roxb.) shrubby straight: leaves broad lanceolate, often lacinate, sub-serrate, scabrous: fruit axillary, peduncled, solitary or paired, sub-rotund.—*Roxb. FL Ind.* 3. 539.

Moluccas.—A small straight species: the fruit appears during the hot season.

667. *Ficus GLOMERATA* (Roxb. Willd.) leaves broad, lanceolate, smooth: fruit in bundles from the trunk and large branches, peduncled, downy, turbinate.—*itek bL Ind.* 3. 554.

A large tree widely distributed over the Southern provinces of India, usually growing in moist ground near the bank* of rivers and water courses. I though I have often seen the tree, I have rarely observed the fruit so large as here represented.

668. *Ficus TSIELA* (Roxb. *Ficus indica* Willd. not Lin.) leaves long petioled, ovate-oblong, acute, polished, veins parallel simple: fruit paired, axillary, sessile round-turbinate.—*to&. FL Bd.* 3. 549.

A large and very handsome tree, widely diffused over Southern India. It is very generally planted by road sides for the sake of its shade, and by not sending down roots from the branches is in so far superior to either *Ri^Jca* (banyan tree) or *F. Henjamina*, the pendulous roots of which are often dangerous impediments on a road.

660. *Ficus CONGLOMERATA* (Roxb.) arboreous, leaves alternate, subsemirordate, cuspidate, rough and hard: fruit roundish, tubercled, crowded on long procumbent, or drooping, dicompound, cauline, leafless branches.—*Roxb. Fl. I.*d.* 3. 559.

Chittagong.—hi the Botanic Garden of Calcutta this tree is loaded with fruit the svhole year.

670. *Ficus HIESUTA* (Roxb.) arboreous, tender parts hirsute: leaves round cordate, from three to five-lobed, serrate-dentate; lobes acuU: < fruit axillary, paired, sessile, oval, shaggy.—*Uoxb. FL Ind.* 3. 528.

Siihet.—The fruit is eaten by the natives.

1 A branch with young fruit—2 male flower—tt female, ovary separated to show the caly.i—4 full grown receptacle with its bracts—5 the same cut vertically.

671. *Ficus RADICANS* (Roxb.) shrubby, scandent, and rooting: leaves oblong, entire, long-linear, acuminate: fruit globular without a common calyx, long peduncled: male flowers monandrous.—*Roxb. FL Ind.* 3. 536.

Siihet.—Where it grows on old walls, bushes, trees &c. like the ivy in Europe, but generally has its inain. root in the ground.

1 Fruitful branch—2 male flower—3 female flower.

672. *Fiscus HIRTA* (Roxb.) arboreous, tender parts very hairy: leaves long petioled, cordate, ciliate, serrate: fruit axillary, paired, sessile, ovate, shaggy.—*R. FL Ind.* 3,531.

Siihet.—Grows to a great size, and is beautiful during the dry season.

673. *Ficus MACROPIITLLA* (Roxb. not Desf.) arbo-reous: leaves round cordate, thin, nerved: fruit collected in bundles near the root, turnip shaped, from eight to twelve ribbed, hairy.—*Roxb. FL Ind.* 3. 556.

Nepaul—Siihet—Chittagong.—Roxburgh only knew this from the plants growing in the Calcutta Garden. In them female flowers only were found, and these without any obvious perianth. Stigma single hairy, of a beautiful rose colour. Where the tree is indige-nous, the fruit is eaten by the natives in their curries.

674. *MORUS INDICA* (Lin.) dioecious, subarboreous: leaves ovate, cordate, long taper pointed, serrate, smooth: aments oval: style single, half two-cleft.—*Roxb. FL Ind.* 3. 596.

This species is much cultivated all over India for feeding silk-worms.

675. *MORUS TABTARICA* (Willd.) dioecious arbore-ous: leaves cordate-serrate, rather obtuse, mostly entire, though sometimes senuate, or even lobate.—*Roxb. FL Ind.* 3. 598.

This species is only found in gardens in India, and that only as a curiosity, the leaves not being employed for feeding silk-worms and the small fruit are in too little estimation to encourage any one to cultivate it.

676. *MORUS PANICULATA* (Roxb.) arboreous, dioe-ceous: leaves alternate, long petioled, cordate, serrate, hoary underneath: panicles axillary: female calyx urceolate entire: berries round, pellucid, white.—*Roxb. FL Ind.* 3. 599.

Moluccas.—Whence it was brought to the Calcutta Botanic garden, a very ramous tree—ripe fruit sweet, but rather insipid.

1 Flowering branch female plant—2 panicle of the male—3 male flower—*magnified*—4 female flowers, one cut transversely to show the ovary enclosed in the urceolate calyx—5 female panicle.

677. *MORUS ATROPURPURIA* (Tfoxb.) leaves cordate very rarely lobate, serrate, smooth: aments cylindrical: fruit cylindrical, dark purple.

China.—This species is frequently met with in gardens where it is cultivated for the sake of its large succulent berries.

678. *ARTOCARPUS INTEGRITOLIA* (Lin. fil.) leaves oblong, entire : flowers cauline.—*II. FL Ind.* 3. 522.

Roxburgh remarks of this tree ** much cultivated throughout Southern India, and all the warmer parts of Asia. Where it is wild, or originally from, I know not." From having repeatedly met with this tree, in the course of my excursions, in the wildest jungles and high on almost inaccessible hills, I had come to the conclusion that it is actually a native of India. This opinion may however be erroneous, as the seed of a fruit so generally esteemed might easily be conveyed to and propagated in very wild and retired situations. This is a most valuable tree—the fruit affording an abundant store of nourishment, and the stem a beautiful and valuable timber.

679. *ARTOCARPUS LANCEOEFOLIA* (Roxb.) leaves broad-lanceolar, or oblong, acuminate, entire : fruit terminal spherical.—*Roxb. Ft. Ind.* 3, 527.

Prince of Wales' Island.

680. *ARTOCARPUS ECHINATA* (Roxb.) leaves oblong entire : male and female aments round : fruit spherical echinated.—*Roxb. FL Ind.* 3. 527.

Prince of Wales' Island and other parts east of the Bay of Bengal. This species seems very closely allied to *A. hirsuta* the Angelee of Malabar. The fruit is eaten by the natives.

1 Flowering branch—2 fruit—3 the same cut transversely.

681. *ARTOCARPUS LAKOOCHA* (Roxb.) leaves entire, oval: aments axillary, globular: fruit nearly round somewhat lobate and almost smooth.—*Roxb. FL Ind.* 3. 524.

Bengal.—Where it is common. Stem short and thick with a large spreading head. The fruit is eaten by the natives, the male spadix which is acid and astringent they dry and eat in their curries. The roots dye yellow.

682. *ARTOCARPUS CHALASHA* (Roxb.) leaves in the adult obovate entire, in the young pinnatifid : aments axillary, long, peduncled, subrotund : fruit spherical.—*Roxb. FL Ind.* 3. 525.

Tipparah and Chittagong.—A tree of the first magnitude from the trunk of which canoes are made: the wood is used for various other purposes. Roxburgh does not state whether the fruit are eaten.

683. *URTICA PULCHERRIMA* (Roxb.) dioecious shrubby : leaves alternate lanceolate, serrate, three-nerved, veins reticulate; underneath hoary and pitted: spikes axillary, paired, compound, glomerate, recurved: male flowers pentandrous.—*Roxb. FL Ind.* 3. 588.

Chittagong.—This species, or one very nearly allied, is common in subalpine jungles in the Peninsula. It seems referable to the sub-genus *Urea* Gaudirhau but from my not having specimens at hand, to compare with the character, I am unable with certainty to determine. The Peninsular plant is a moderate sized tree with capitate fruit each composed of a congeries of small yellowish succulent berries.

684. *URTICA NAUCLEIFOLIA* (Roxb. *Conocephalus* Blume) dioecious, shrubby, twining: leaves alternate, cordate entire : glomerules globular compact; the male ones panicled.—*Roxb. FL Ind.* 3. 593.

Chittagong.—A large scandent woody plant, with beautiful fragrant flowers. This plant has been recently removed from the genus *Urtica* and referred to the new order *Artocarpeae*, along with the fig, jaek, &c. In the accompanying plate the small heads of flowers are male, the larger ones female.

685. *URTICA INVOLUCRATA* (Roxb.) arboreous: leaves alternate, broad-cordate, downy, sub-entire : stipules opposite, subulate : peduncles axillary, drooping, bearing a few female flowers in an involucred head.—*Roxb. FL Ind.* 3. 592.

Malay Islands.—Whence it was introduced into the Calcutta Botanic Garden, no male flowers have been produced and the seed do not ripen.

686. *URTICA CKENULATA* (Roxb.) shrubby, dioecious, erect: leaves alternate, oblong, acute, crenate : spikes axillary compound dichotomous.—*Roxb. Ft. Ind.* 3. 591.

Eastern parts of Bengal.—Roxburgh had not seen the male flower.

687. *URTICA HETEROPITTLA* (Willd. Roxb.) annual: leaves alternate, cordate, variously lobed, grossly serrate : male and female flowers on distinct, glomerate, peduncled spikes : every part armed with stiff acute burning bristles.—*Roxb. FL Ind.* 3. 586.

Alpine jungles in most parts of the Peninsula and table land of Mysore.—I have rarely seen it at lower elevation than 2000 feet above the sea. It was introduced into the Botanic Garden from the mountains of Malabar.

688. *URTICA TENACISSIMA* (Roxb.) shrubby, erect, ramous : leaves alternate, long-petioled, broad cordate, grossly serrate, hoary underneath : panicles axillary; flowers in round fascicles; the male ones on the lower panicles, and the female ones above.—*Roxb. FL Ind.* 3. 590.

Sumatra and Eastern Archipelago.—Where it is cultivated on account of its bark which abounds in strong and fine fibres.

689. *URTICA DECUMANA* (Humph. Roxb.) shrubby: leaves alternate, cordate, serrate, rugose, bristly : female spikes composed of alternate bifarious ramifications.—*Roxb. Ft. Ind.* 3. 587.

Moluccas.—Whence it was introduced into the Calcutta Botanic Garden. The leaves are armed on both sides with clear sharp stinging bristles. Female flowers numerous, congested, intermixed with small bristly coloured bractes, seed compressed.

690. *URTICA PARVIFLORA* (Roxb.) dioecious, herbaceous, erect, armed with numerous strong, harsh, pellucid stinging bristles: leaves opposite, ovate, lanceolate, serrate: stipules undivided : female spikes quatern compound, glomerate.—*Roxb. FL Ind.* 3. 5M.

Rohilcund.—Whence it was introduced into the Calcutta Botanic Garden, but had not ripened seed apparently for want of the male plant.

691. *URTICA SCABRELLA* (Roxb.) shrubby, spreading: leaves opposite, cordate, serrate, harsh, three-nerved : spikes axillary erect, cylindrical, the male ones crowded, short and in the lower axils, the female ones above and generally solitary.—*Roxb. FL Ind.* 3. 581.

Chittagong.—Though harsh to the feel it does not sting.

692. *URTICA INTERRUPTA* (Linn. Roxb.) annual, erect, bristly: leaves cordate, serrate: racemes compound; partial racemes corymbed: stipules solitary 2-cleft : seeds compressed, obliquely cordate.—*Roxb. FL Ind.* 3. 585.

Bengal near Calcutta.—The bristles of this species sting like the common nettle. Roxb. I suspect Roxburgh's plant is different from the Linnaean, one specimen of which, I believe, I possess, and have met with at different times in the Southern provinces. I have not at this moment a specimen by me to refer to, but I think my plant does not sting like the nettle.

693. *URTICA ALIENATA* (Linn. Roxb.) annual, erect while young; branches brachiate : leaves opposite, petioled, ovate, three-nerved, entire : flowers axillary sessile, female calyx urceolate.—*Roxb. FL Ind.* 3. 582.

Ceylon, Roxb.—This habitat is I suspect much too confined for this species, unless closer examination shows that a plant agreeing entirely in habit, and which I have frequently found in alpine situations, is distinct*

091. UBTICA SUFFRUTICOSA (Roxb.) suffruticose: leaves villinate, lanceolate, broadest at the base, entire, three-nerved, smooth; flowers axillary crowded, subsessile: female calyx one-leaved, ribbed, mouth bidentate.—Roxb. *Fl. hid.* 3. 584.

Sumatra—Whence it was introduced into the Calcutta Botanic Garden, 'ibis plant or one exceedingly like, but which I have usually referred, with some others agreeing in habit, to *Parietaria*, is very frequent in dam) alpine jungles throughout the higher ranges of hills of the Peninsula.

695. UUTICA VESCICARIA (Roxb.) shrubby, erect: leaves alternate, broad lanceolate, three-nerved, entire, downy: flowers axillary, crowded, sessile: female calyx with an inflated swelling round the base.—Roxb. *FL Ind.* 3. 587.

Circar Mountains.—This species is, I believe, found as far south nearly, as Cape Comorin, in similar situations dark shady moist alpine forests.

696. UUTICA PENTANDUA (Roxb.) Perennial diffuse: leaves opposite and alternate, subsessile, linear, small, three-nerved: flowers axillary, pentandrous; the male ones peduncled; the female ones sessile, with calyx winged.—Roxb. *FL Ind.* X. 583.

Found about Calcutta among bushes in wet places. The unusual development of the limb of the calyx before expansion, as shown in the upper figure, and the winged fruit render it probable, this will form the type of a new genus.

697. URTICA TUBEROSA (Roxb.) root tuberous: leaves alternate, oblong, three-nerved hairy: flowers axillary sessile: seed much pointed.

Native of the banks of water courses, hedges, &c. widely distributed over Southern India. This with the three preceding species and *U. alienata* seem all more justly referable to *Parietaria* than *Urtica*.

Ons.—As the following figures of Jasmines are all copied from Roxburgh's drawings I adopt his specific characters in preference to those of more modern writers, even when I think the latter better, as I think it but just towards that excellent Botanist to define the plants he has so successfully illustrated from living specimens, in his own words.

698. JASMINUM ANGUSTIFOLIUM (Willd. Roxb. *Nyc. mthes* Linn.) shrubby, twining, polished: leaves opposite, petioled, ovate, smooth, of a shining deep green: flowers terminal, one, two, or three, corolla 8 or 9-cleft, berries single [or paired] ovate.—Roxb. *FL hid.* 1. 96.

A common and beautiful species, found in most parts of Coromandel among hedges and bushes. Flowers during the hot season.

699. JASMINUM VRIIORESCENS (Roxb.) arborescent: leaves opposite and three-fold, oblong, downy: flowers terminal, numerous, corymbiform, border from ten to twelve cleft, stigma two-lobed.—Roxb. *FL Ind.* 1. 95.

More elevated parts of Bengal, flowering the beginning of the hot season. This species has no tendency to twine or climb by which it is distinguished from *J. latifolium* Roxb.

700. JASMINUM AURICULATUM (Linn. Ptoxb.) shrubby, twining: leaves subternate, leaflets ovate, the pair minute or wanting: border of the calyx with 5 obscure glandular teeth: corolla 7-cleft: berries globular.—Roxb. *bl. Ind.* 1. 98.

Less common than *J. angustifolium* but usually found in similar situations. In the Southern provinces it can scarcely be considered uncommon. Its flowers are much more abundant than that, but smaller, and the plant is less graceful,

701. JASMINUM ELONGATUM (Linn. Roxb.) scandent: leaves opposite and alternate, lanceolate, villous on both sides: corymbs terminal: corolla 8 or 12-cleft, segments linear: stigma bifid.—Roxb. *FL Ind.* 1. 90.

In forests near the mouth of the Hooghly in Bengal.

702. JASMINUM HIRSUTUM (Linn. Willd. Smith *J. pubescens* Willd. Roxb.) leaves cordate, downy: umbels terminal, sessile, many flowered.—Roxb. *FL hid.* 1. 91.

Native, of both China and Bengal, from the former it was introduced into the Calcutta Botanic Garden. Willdenow seems to have described the same plant under two different names, the older of which is here adopted. It appears a very handsome species apparently very nearly allied to *J. elongatum*.

703. JASMINUM LATIPOLIUM (Roxb.) shrubby, twining: leaves opposite, petioled, cordate: corinbs terminal: calyx segments from 5 to 8, subulate: those of the corolla from 10 to 12 linear and cuspidate: berries kidney shaped.—Roxb. *FL hid.* 1. 95.

Roxburgh only found this in the mountainous parts of the Circars. I have specimens of a species found on the Neilgherries, much resembling this except in the length of the calyx segments, in this they are short, in mine long and subulate, more resembling those of *J. urborescens*, but from which it differs in being an extensive climber. It may perhaps prove an intermediate form, tending to shew that these two are mere varieties of one species.

704. JASMINUM SAMBUC (Alton & Ilox.) shrubby, twining: leaves opposite, subsessile, from cordate to oblong, acute or obtuse: segments of the calyx subulate: berries globular.—Roxb. *FL Ind.* 1. 83.

A common plant—some varieties much cultivated by the Natives for presentation at the shrines of their deities.

705. JASMINUM SIMPLICISFOLIUM (Forst. Roxb.) shrubby, spreading: leaves oblong, polished: flowers from three to many, terminal: border of the corolla of from six to eight, linear, acute, segments, equaling the tube in length.—Roxb. *FL hid.* 1. 97.

Friendly Islands and Eastern Archipelago, whence brought to the Calcutta Botanic Garden.

706. IXORA ACUMINATA (Roxb.) shrubby: leaves petioled, lanceolar, acuminate, smooth: floral pair stem clasping and broader: corymbs super-dicompound, much crowded and smooth: calyx segments ensiform.—Roxb. *FL hid.* 1. 383.

Forests near Silhet. A fine shrubby species, blossoms during the hot season, very fragrant.

1 Flowering branch—2 corolla dissected—3 bracteate calyx style and stigma—4 ovary cut vertically—5 cut transversely—6 a fruit full grown—7 cut transversely showing the semi-lunar embryo—8 embryo detached.

707. IXORA ALBA (Linn. Roxb.) leaves sessile, lanceolar: corymbs decomposed, dense, sub-hemispheric: lacineae of the corolla obovate and reflexed.

I. STRICTA (Roxb.) shrubby straight: leaves subsessile oblong: corymbs dense, compound, hemispheric: lacineae of the corolla round, spreading: anthers bristle pointed.—Roxb. *FL huL* 1. 379.

Both these species were originally brought from China to the Calcutta Botanic Garden, and Roxburgh supposes they may perhaps be only varieties of the same plant. Much difference of opinion exists among Botanists on this point. We have in our Prodrum considered them distinct and both of Indian origin, referring *I. alba* to our *I. parviflora* while *I. stricta* is retained as a distinct species nearly allied to *L. coccinia* and confounded with that species by some writers. Whether we are correct is a point to be determined, but in justice to Roxburgh, I have thought it right to adduce his own evidence in support of his opinion by the publication of his figures.

708. IXORA UNDULATA (Roxb.) shrubby: leaves broadly lanceolate, much waved on the margin, glabrous: corymbs trichotomous, decomposed, open; branches pubescent: flowers (small and white) numerous at the extremities of the ultimate divisions; calyx-segments short-lanceolate, acute: lobes of the corolla narrow-oblong, reflexed: filaments exserted: style glabrous, scarcely exserted; divisions of the stigma linear, recurved: berries transversely oval.—W. and A. *Prod.* 1. 428.

Bengal, flowering time, the hot season.

1 Flowering branch—2 dissected flower—3 a berry—4 the same cut transversely.

709. *IXORA CUNEIFOLIA* shrubby : leaves oblong-lanceolate, more or less cuculate at the base, pointed, glabrous : corymbs trichotomous, open; flowers (small and whitish) fasciated at the extremities of the ultimate subdivisions: segments of the calyx narrow-oblong, thrice the length of the tube : tube of the corolla slender (more than half an inch long) lobes oval, obtuse : filaments lightly exerted, divisions of the stigma linear, recurved : berry roundish-turbinate.—*W. and A. Prod.* 1. 428.

Introduced into the Calcutta Botanic Garden from Dacca, but is also found in Coromandel.

1 Flowering branch—2 dissected flower—3 ovary cut vertically with two sepals remaining—4 cut transversely—5 a fruit full grown—6 cut transversely—7 cut vertically—8 embryo detached.

710. *IXORA BRACHIATA* (Roxb.) shrubby with opposite spreading branches : leaves shortly petioled, lanceolate-oblong, obtuse, tapering at the base, glabrous : stipules triangular, acute: corymbs sessile, trichotomous, open; primary branches long, the lateral ones horizontal ; flowers (small, white) numerous on the ultimate divisions : calyx with 4 small broad acute teeth: tube of the corolla (3-4 lines long) slender ; lobes obovate, retuse, during aestivation forming a globose head : anthers sessile : style scarcely exerted, glabrous ; divisions of the stigma oblong, short, erect.—*TV. and A. Prod.* 1. 429.

A native of forests of Bengal and also of Coromandel, a rather large handsome shrub.

1 Flowering branch—2 detached corolla—3 ovary style and stigma—4 ovary cut transversely—5 full grown fruit—6 the same cut transversely—7 a dissected seed—8 embryo detached.

711. *IXORA PARVIFLORA* (Roxb.) arboreous : leaves short-petioled, from linear-oblong to cuculate-obovate, bluntish or with a short point, often slightly cordate at the very base, coriaceous and hard, shining: stipules with a long subulate point: corymbs or panicles terminal, trichotomous, sessile or peduncled, with often foliaceous bractes subtending the primary branches : flowers (small and white) crowded on the extreme subdivisions : calyx with 4 obtuse small teeth : corolla (scarcely half an inch long) with a slender tube; lobes oblong-linear, obtuse, reflexed, forming an oval head during aestivation : style hairy ! exerted; divisions of the stigma oblong, erect: berry somewhat didymous.—*W. and A. Prod.* 1. 427.

Widely distributed over the Indian Peninsula—a handsome shrub, the wood of which, dried and split is much used by travellers in place of torches.

1 Flowering branch—2 corolla magnified—3 ovary, style and stigma magnified—4 fruit natural size—5 cut transversely.

712. *POLYCARPÆA CORYMBOSA* (Lam. *Celosia corymbosa* Roxb.) stems ascending or erect, simple or with a few simple branches; young parts glabrous or tomentose: leaves narrow-linear or setaceous, mucronate: cymes terminal, dichotomous, rather lax: sepals entirely scarious, lanceolate, acuminate, 2-3 times longer than the capsule.—*W. and A. Prod.* 1. 358.

A native of dry sandy lands, and is in flower all the year. Between this and *P. spadicea*, I have not been able to discover any good discriminating character.

1 A flowering plant natural size—2 an expanded flower magnified, and showing the filaments free to the base—3 and 4 stamens and ovary of a species of *Celosia* apparently introduced in conformation of an opinion expressed by Roxburgh that " this would better form a separate genus than a species of *Celosia*"—5 capsule dehiscing.

713. *AMARANTUS TRISTIS* (Linn. Willd. Roxb.) erect, very ramous near the ground : leaves rhomb-oval, obtuse emarginate : glomerules axillary, and on terminal spikes: calyces daggered longer than the capsules.—*Roxb. FL Ind.* 3. 604.

Generally cultivated. Roxburgh remarks that he has never found it wild. It is much esteemed by all ranks of Natives as a pot-herb. *A. campestris* and *A. polystachyus* Willd. Roxburgh suspects are only varieties of this species.

NOTE. The genus *Amaranthus* being a large and very natural one, the species are in many instances very difficult of discrimination. The difficulty is occasionally increased by some species being, as in this instance, only found in a cultivated state while others, occurring as weeds in every kind of soil and aspect, presents such endless variations of form as renders their limitation by the unwholesome specific characters nearly impossible.

Willdenow paid much attention to this genus and in his *Historia Amarantorum* gave figures of many of the species. He, however, working with dried specimens far from their place of growth, seems to have fallen into the too common error, under such circumstances, of being more anxious to multiply species, taking his distinctive characters almost entirely from the foliage, (the part of all others most liable to mislead through variations in its forms) than to retrench existing superfluities by an attentive study of structure and a careful application of structural differences to the definition and limitation of his species.

Roxburgh has in several instances expressed doubts of the goodness of Willdenow's species, but I suspect, has not altogether avoided his error. He certainly does not seem to have been more successful in his verbal distinctions but has left figures of most of his species to aid his written characters. Having got copies of several of his drawings, I have determined to publish the whole, including *A. tristis* and *A. polygonoides*, (see 512 and 514) to guard my readers against the error into which I seem to have fallen, of applying Roxburgh's characters to other than his own plants. This I feel the more necessary, as, my never having studied this genus with the minute attention its acknowledged difficulty demands, disqualifies me from offering any decisive opinion on the goodness or otherwise of these species. Judging, however, simply from the series of figures now before me, it strikes me, my *A. polygonoides* (512) is not identical with Roxburgh's, plant but seems rather an intermediate form between that and *A. tristis* (514) while my *A. tristis* (514) seems to be another intermediate form between 512 and 713 : again, between 713 and 714 I can see no satisfactory difference unless, in the form and mode of attachment of the anthers, distinctions not alluded to in the specific characters and possibly not existing, except in the drawing, thus leaving it doubtful whether, in truth, they do not all represent but varying forms of one species.

714. *AMARANTUS POLYGAMUS* (Linn. Willd. Roxb.) diffuse: leaves rhomb-ovate emarginate: glomerules axillary or on terminal spikes : calyces daggered, longer than the capsules.—*Roxb. FL Ind.* 3. 602.

A very generally diffused plant and I can scarcely avoid thinking the wild state of the former. So far as can be learned from Roxburgh's specific characters there is no difference, except in habit, which cultivation might change.

715. *AMARANTUS OLERACEUS* (Linn. Willd. Roxb.) erect with a few branches above the middle : leaves from broad rhomboidal to ovate lanceolate : glomerules axillary and on a terminal spike : calyces cuspidate and rather longer than the rugose capsules.—*Roxb. FL Ind.* 3. 005.

Roxburgh, though he quotes Willdenow's authority for this species, seems yet to think this plant is not identical with his. He says Willdenow's figure of *A. Oleraceus* " does not by any means agree with what König and myself have always considered to be that plant. His *A. inamœnus* is much more like it, and if the leaves were emarginate, it would be a very excellent representation of this species." The leaves in Roxburgh's own figure are acute, not emarginate, hence it seems not improbable, the species of this genus are very unnecessarily multiplied. There are several varieties of this species distinguished by their colours. One has red stem and veins, another has them white—in a third, of which the accompanying figure is a representation, has them green;.

716. *AMARANTUS LANCKOLATUS* (Roxb.) straight : leaves lanceolar, plain green : glomerules triandrous axillary : calyx daggered, longer than the swelled rugose capsules.—*Roxb. FL Ind.* 3. 607.

A native of Bengal.

717. AMARANLUS FASCIATUS (Roxb.) erect, ramous above the middle: leaves rhomb-ovate: panicles terminal, composed of a few simple cylindrical branches: bracts minute, shorter than the obtuse three-leaved calyx; which is shorter than the obtuse rugose capsule.—Roxb. *Fl. hid.* 3. 609.

A common weed: green in every part except a crescent-shaped cloud of paler green crossing the centre of the leaves.

718. AMARANTUS TENUIFOLUS (Willd. Roxb.) annual, diffuse: leaves wedge shaped, emarginate: glomerules axillary: male flowers diandrous, with a two-leaved calyx; the female ones irregular.—Roxb. *FL hid.* 3, 602.

In cultivated ground near Calcutta.

1 Flowering branch—2 male flower—3 D female flower the perianth of which h's aborted—4, 5 two others one with a one-leaved perianth, the other with two—6 a capsule not circumsessile—7 a seed.

719. AMARANTUS POLYGONOIDES (L'ICI. Willd. Roxb.) diffuse: leaves obovate: glomerules axillary, two-parted: capsule bullate, equaling the acute, lanceolate, leaflets of the *cn*yx.—Roxb. *FL Ind.* 3. 602.

A common weed every where, is much used by the Natives as a pot herb.

720. AMARANTUS FRUMENTACEUS (Buchanan Roxb.) pentandrous, annual: stem and branches erect: leaves broad lanceolar: panicles erect: leaves of the calyx daggared: capsule wrinkled, seed pellucid, with callous white margins.—Roxb. *FL Ind.* 3. 609.

A large species, much cultivated on the slopes of the higher hill* in several districts of Southern India. In Coimbatore, Salem, and Madura, I have frequently met with large fields of it, often *n very steep slopes. In such situations it often grows upwards of six feet high. The seed ground into meal forms the principal food of the wild inhabitants of these hills.

721. LEIOSPKRMCJM FERRUGINEUM (Wall. *Achyranthes* Roxb.) annual, flaccid: leaves opposite, obovate: spikes subconical, peduncled and sessile: nectary 5-toothed, each tooth ending in a proper antheriferous filament: stigmas entire.—Roxb. *FL Ind.* 1. 673.

A small annual wild, about the borders of cultivated pnds near Calcutta.

722. CENTROSTACHYS DTANDRA (Wall. *Achyranthes* Roxb.) annual diffuse: leaves opposite, linear-lanceolar: spikes terminal: flowers reflected and pressed close to the rachis: stamina two, alternate with the two multifid lobes of the nectary.—Roxb. *FL Ind.* 1. 677.

Native of Ceylon.

723. AERUA LANATA (Juss. *Achyranthes* Roxb.) annual, erect, ramous, woolly: leaves alternate, orbicular: spikes crowded: nectary 10 parted, alternately atheriferous: stigma two-cleft.—Roxb. *FL hid.* L. 676.

A very common weed every where.

724. AERUA SCANDENS (Wall. *Achyranthes scandens* Roxb.) perennial, climbing, downy: leaves alternate, oblong-ventricose: spikes axillary, solitary, sessile: calyx hairy: nectary 10-parted: stigma &-lobed.—Roxb. *FL Ind.* 1. 676.

Native of hedges near Calcutta.

725. AKJHA MONSONIA; (Mart. *Achyranthes* Roxb.) tetandrous, coespitose, very ramous: leaves subulate, tufted: spikes terminal sub-cylindrical.—Roxb. *FL Ind.* L. 673.

A very common weed in dry sterile and sandy soils.

726. AERTRANTHES SERICEA (Koi. Roxb.) stem erect downy: leaves opposite, broad cordate, acute, covered with much much silky down: peduncles axillary, longer than the leaves, bifid or tritid, many flowered.—Roxb. *FL Ind.* 1. (373).

A large straggling an, nua? growing in shady places in dry soil.

The leaves are erroneously said to be " broad lanceolate in the specific character in place of broad cordate acute" as in the description, which I have altered.

727. ALTSRNANTUERA SESSILIS (R. B. *Achyranthes triandr'a* Roxb.) annual, creeping: leaves opposite, sessile, lanceolate, smooth: flowers triandrous: capsules winged.—Roxb. *FL Ind.* 1. 678.

A common weed usually found in moist or even marshy soils: in such situations flowering at all seasons.

728. DBERINGIA CELOSIOIDES (R. Br., Roxb.) perennial, scandent: leaves alternate, cordate: spikes terminal, panicled: styles three: berries three seeded.—Roxb. *FL IvqL.* 1. 682.

Bengal—Found near Calcutta.—This sometimes attains a large size: Roxburgh mentions one plant which he saw climbing over a tree sixteen or eighteen feet high.

729. DEERJNGIA TET^AGYNA (Roxb.) shrubby, scandent: leaves ovate cordate: flowers axillary: styles four cleft.—Roxb. *FL Ind.* 1. 683.

Moluccas.—Thence introduced into the Calcutta Beta-lie Garden. Seeds *Cr&yi* one to 4, usually one.

1 Flowering branch—2 an expanded flower with small bracts (calyx Roxb) detached and separately shown—3 stamens and ovary of a tetandrous flower—4 a berry with the persistent calyx and bracts—5 berry cut transversely—6 cut vertically showing the pedicelled seed.

730. CELOSIA CERNUA (Roxb.) annual, erect, ramous: leaves lanceolate acute: racemes cylindrical, with long sterile, ramous, pendulous tails: capsules operculated many seeded.—Roxb. *FL Ind.* 1. 680.

Rajmahal Hills. Whence it was introduced into the Calcutta Botanic Garden, by Mr. W. Roxburgh Junr. It seems nearly allied to *Celosia comosa*, Retz. but Roxburgh thinks it distinct.

731. DESMOCHOSTA ATROPORPURBA (D C. *Achyranthes lappacea* Roxb.) bi-ennial, straggling: leaves opposite, petioled, ventricose-oblong, smooth: spikes terminal: Bowers remote, generally in pairs, with three fascicles of coloured hooked bristles to the pair.—Roxb. *FL Ind.* 1. 673.

A common plant, usually met with in hedges and among bushes, often in such situations from 6 to 8 feet high.

732. DESMOCHCETA MURICATA (D C. *Achyranthes alternifolia* Roxb.) annual, diffuse: leaves alternate, ovate-oblong: spikes axillary, longer than the leaves: two variously horned bodies between the corolla and calyx: nectary none.—Roxb. *FL Ind.* 1. 674.

A very common procumbent plant, frequent in cultivated ground. The leaves and tender tops are used by the Natives in their curries.

This seems to be a species of *Digera*, Forsk. perhaps identical with the Egyptian one he describes. Seed globose with a crustaceous testa: embryo annular embracing a farinaceous albumen, radicle inferior.

733. DESMOCHETA PROSTRATA (D.C. *Achyranthes prostrata* Linn. Roxb.) annual diffuse: leaves opposite, spikes filiform: flowers reflexed with fascicles of bristles adjoining: nectary with five bidentate horns, alternating with the filaments.—Roxb. *FL Ind.* 1. 674.

Introduced into the Calcutta Botanic Garden from the Moluccas, but a9 it is figured in the Hort. Mai. 10t. 79 (fid. Roxb.) it seems also to be a native of Malabar.

734. CHIONANTHUS HAMIFLORA (Roxb.) arboreous, leaves opposite, broad-lanceolar, entire: panicle below the leaves.—Roxb. *FL Ind.* 1. 107.

Moluccas.—Flowering March and April.

1 Flowering branch—2 expanded flower—3 baciv view of the same—4 corolla detached—5 ovary and calyx—6 a mature fruit—7 the drupe—8 nut cut transversely, showing the seed.

735. OLEA ROXBURGH (R. and S. *Olea paniculata*, Roxb. not R. Br.) leaves opposite, petioled, oblong, entire, smooth: panicles axillary: bractias deciduous: lobes of the stigma divaricate.—Roxb. *FL Ind.* 1. 105.

Native of the Circar Mountains.—Roxb. I think I have also found it in the mountain forests of the Southern Provinces.

736. OLEA CLAVATA (G. Don. *Phyllyrea paniculate* Roxb.) arboreous: leaves opposite, ovate oblong, entire, smooth: panicle terminal.—Roxb. *FL Ind.* 1. 100.

A native of China, and thence introduced into the Calcutta Botanic Garden. The genus *Phyllyrea*, not being found sufficiently distinct from *Olea*, has been incorporated with that genus, and there being already an *O. paniculata*. Don has changed Roxburgh's specific name substituting one descriptive of the stigma which is club-shaped.

A808



நிலநாயகசூடு
Nilnāyakaśūṭu

Plausia Chelidonia D.C.



ترومفیتا انگولاتا
Lam.

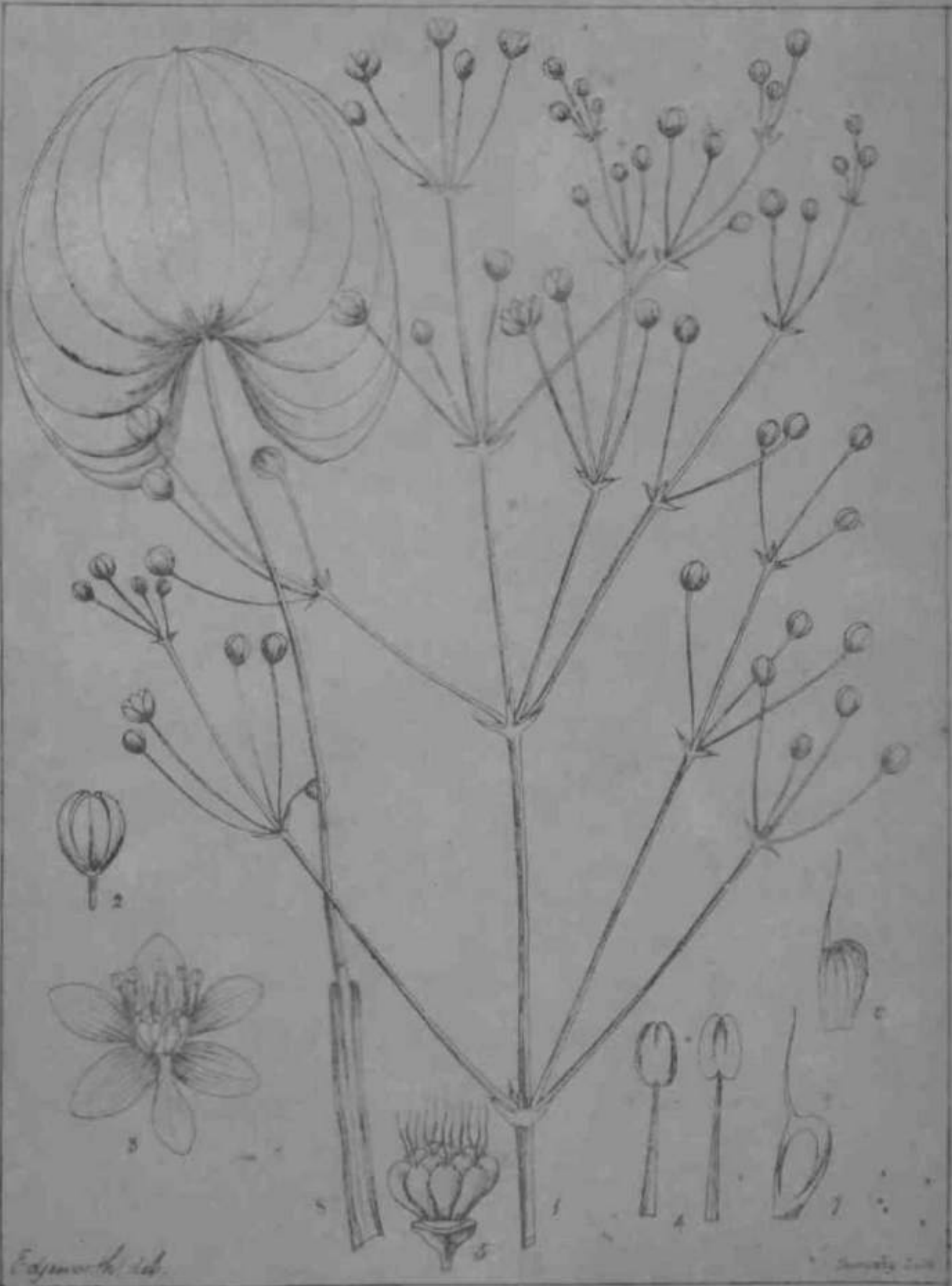
Triumphetta angulata Lam.



Engelm.

Wright

Salacia henricoides (P. B.)
Ternstroemia henricoides (P. B.)



Edgeworth del.

Alisma reniformis (Don)



Edwards del.

228

Impatiens salicaria? (W.C.)

17808



Esperotheca

Drummond

Geranium Wallichianum Sweet.



Edgeworth, del.

Barth, sculp.

Salvia lamata (Reich.)

Papilionacea

Liguminesae

Phaseola 326

Reichbiana



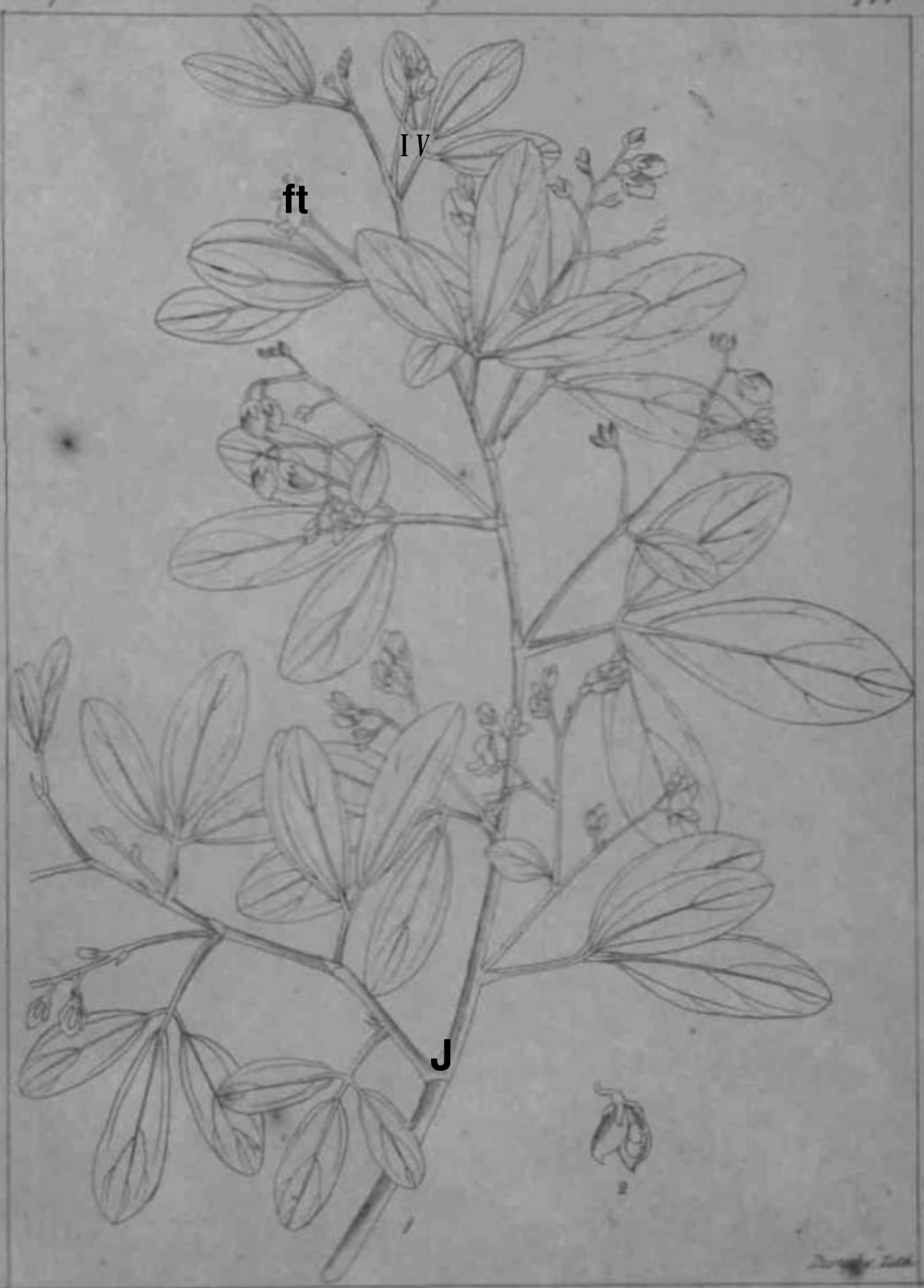
Dumortier, Icon.

Flemingia semialata (Reichb.)

Papilionaceae.

Liguminosae

Phaseolae. $\frac{327}{744}$



ft

IV

J

Flemingia strobilata (Roxb.)

W. & A. G. & Co. Lith.

Leguminosae

Leguminosae

Dalbergiaceae

325
800



Kangra 1881

Kangra 1881

Pongamia ovalifolia (W & A)

Leguminosae.

Leg. *M* hae.

Phaseolae

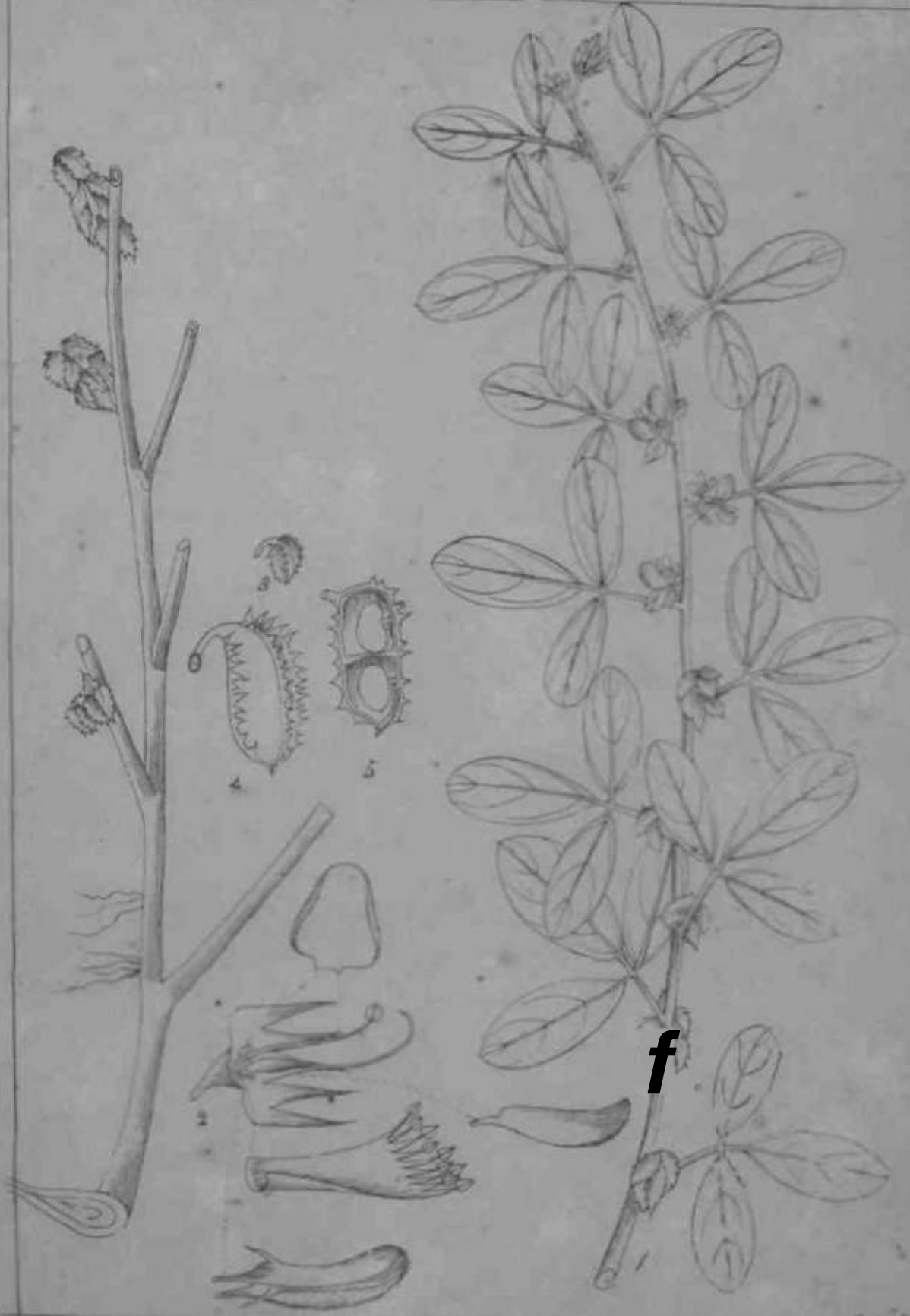
329
739



Kunze del.

Dumortier del.

Flemingia sticta (Red)



Indigofera glandulosa (Roxb.)

Lotia

Leguminosae.

331
630.

Roxburghiana



Thompson. Lith.

Indigofera paucifolia (Delile)
Indigofera argentea (Roxb.)



Scop. in. Lath.

Indigofera aspalathoides (Vahl)

Lotea

Leguminosae

553
623

Rothburghiana!

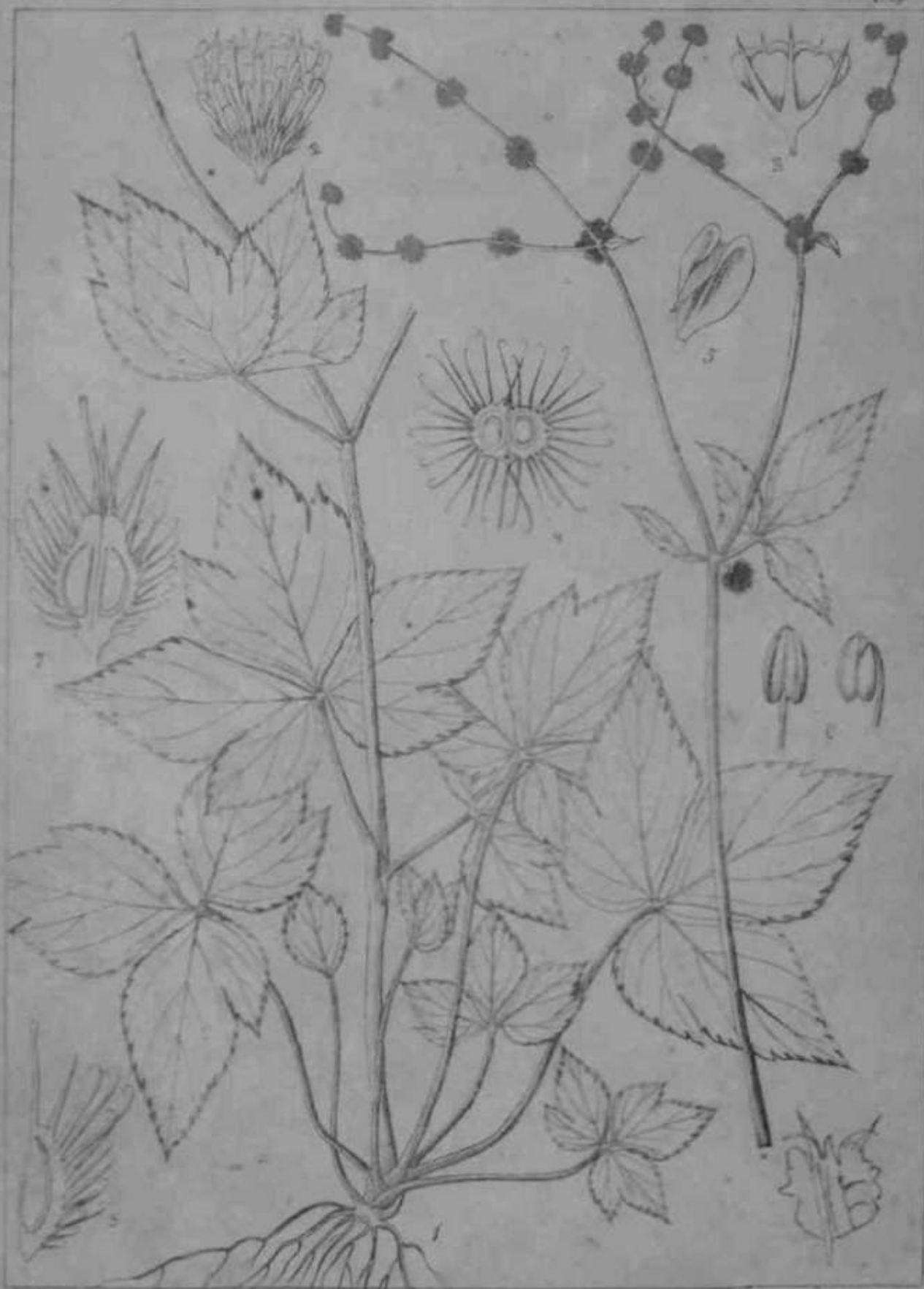


Indigofera uniflora (Ham.)

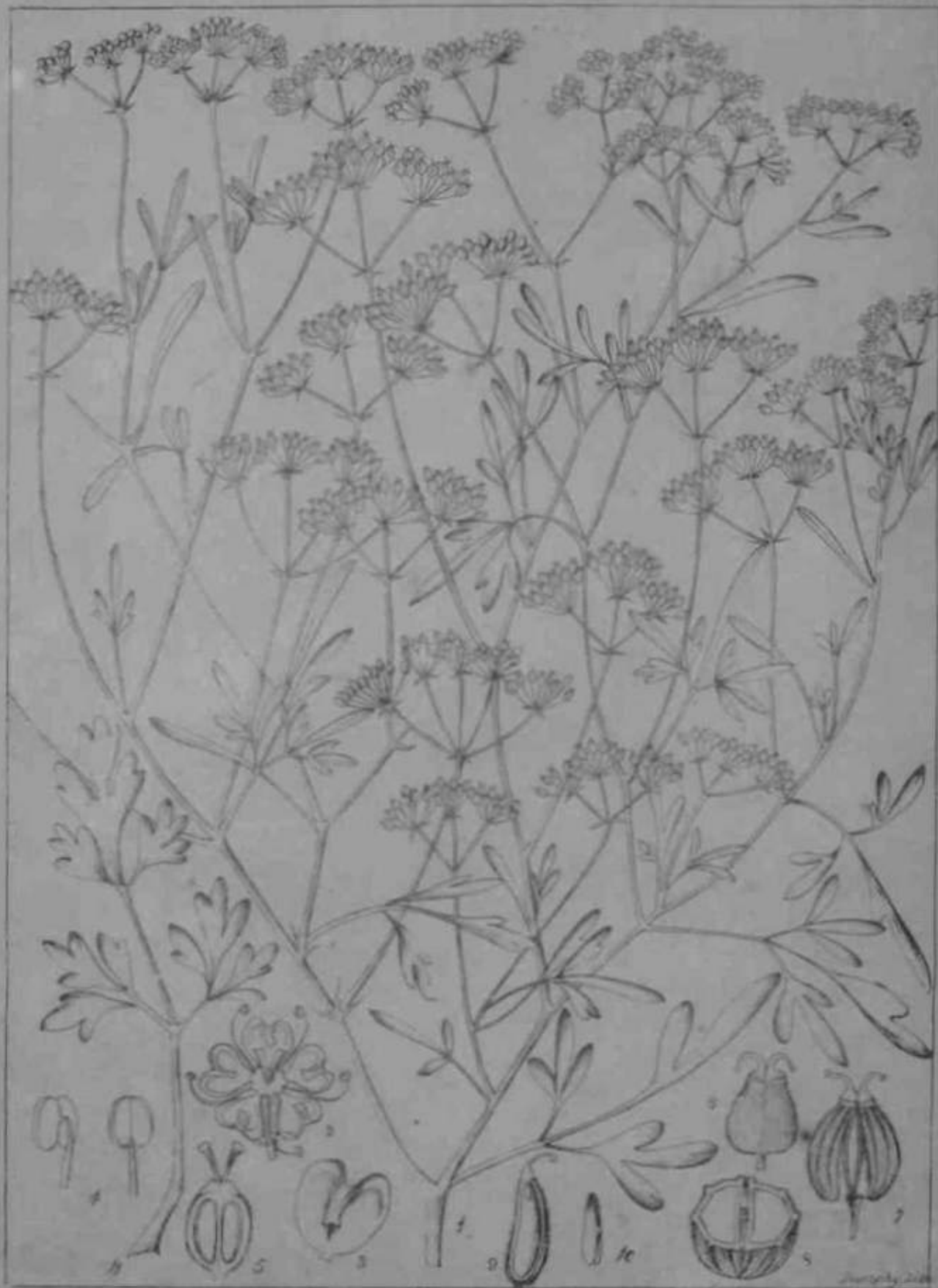
Sanicula

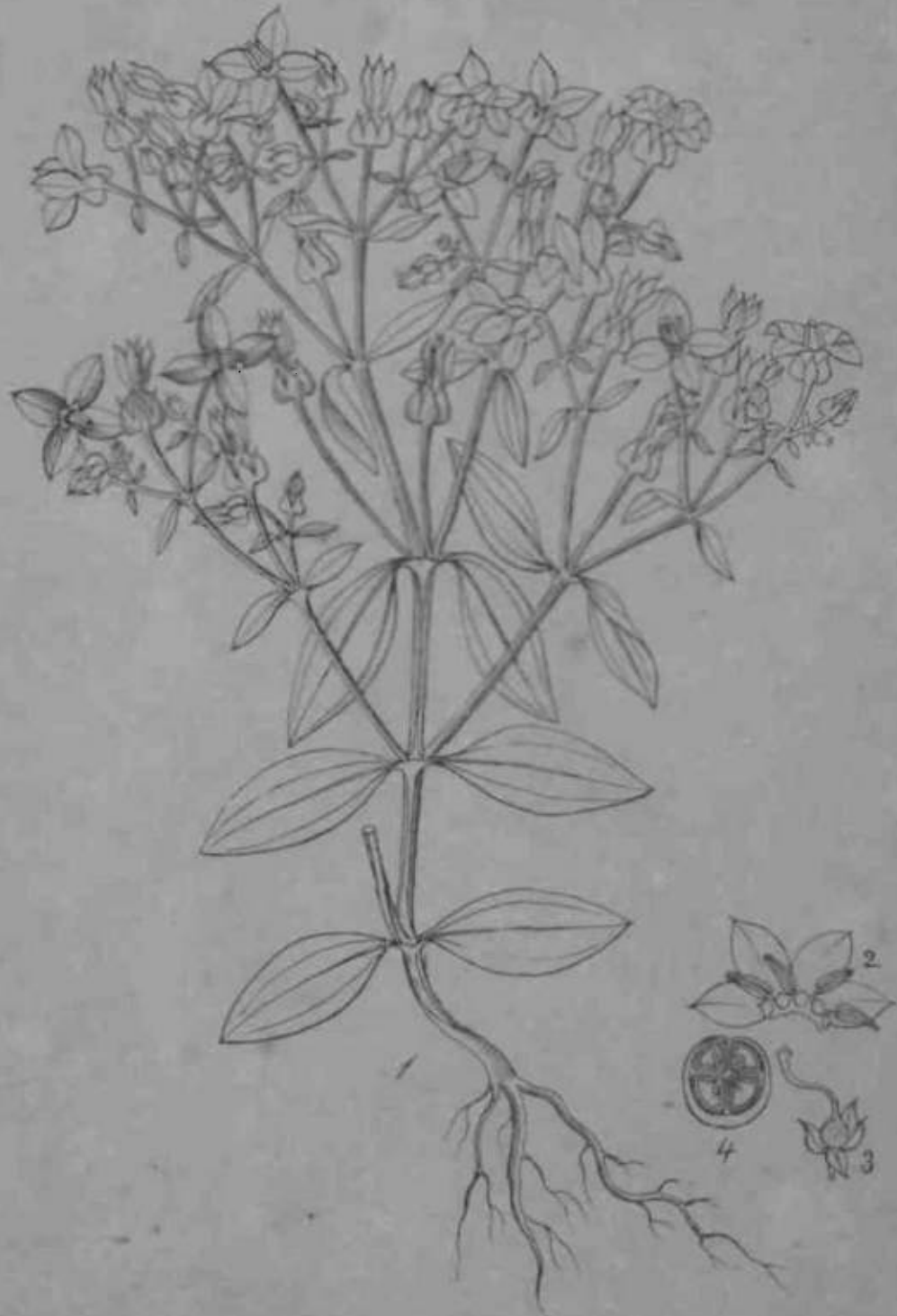
Umbelliferae

334
7136



Sanicula elaeagnifolia (Ham.)





Herpin del.

Barthez sculp.

Exacum pedunculatum



Rungtsh, del.

Dumphy, lith.

Lucas Cephalotes (Spreng)



*Kanpith id**

Luccas vestita (Benth.)



H. D. Alvar del

Thompson Lith.

571. *Quercus agrifolia*
Callerya althamiae Lam.

Zizyphus rugosa (Lam.)

Myrtica

Myrtaceae

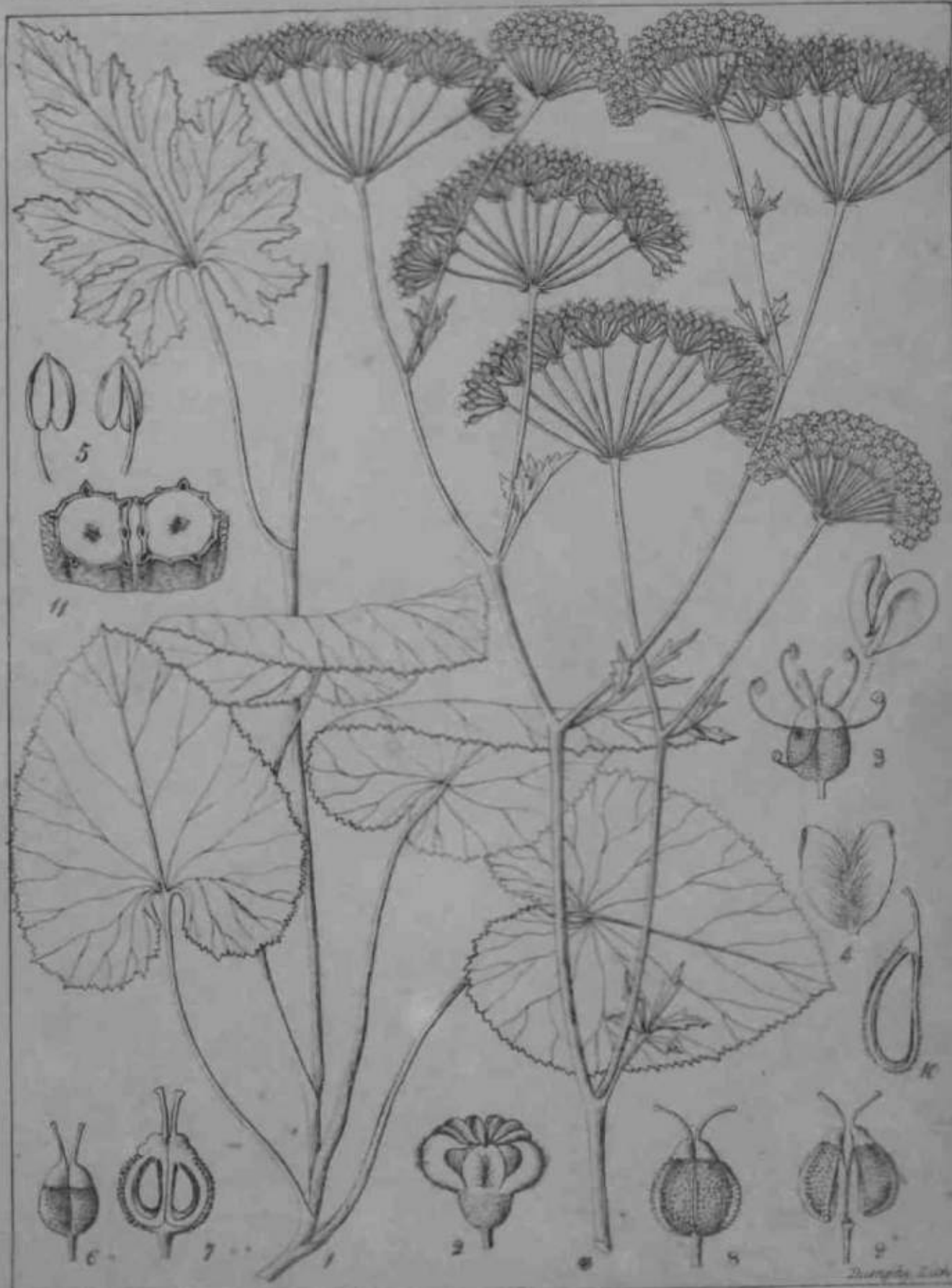
340
1003



Langsdorff

Sonneratia pida (Pinn)

Langsdorff



*Longh. del.
 von Beau
 Kalasrakum!*

Pimpinella condollana, (W. & A.)

Diampis Lich

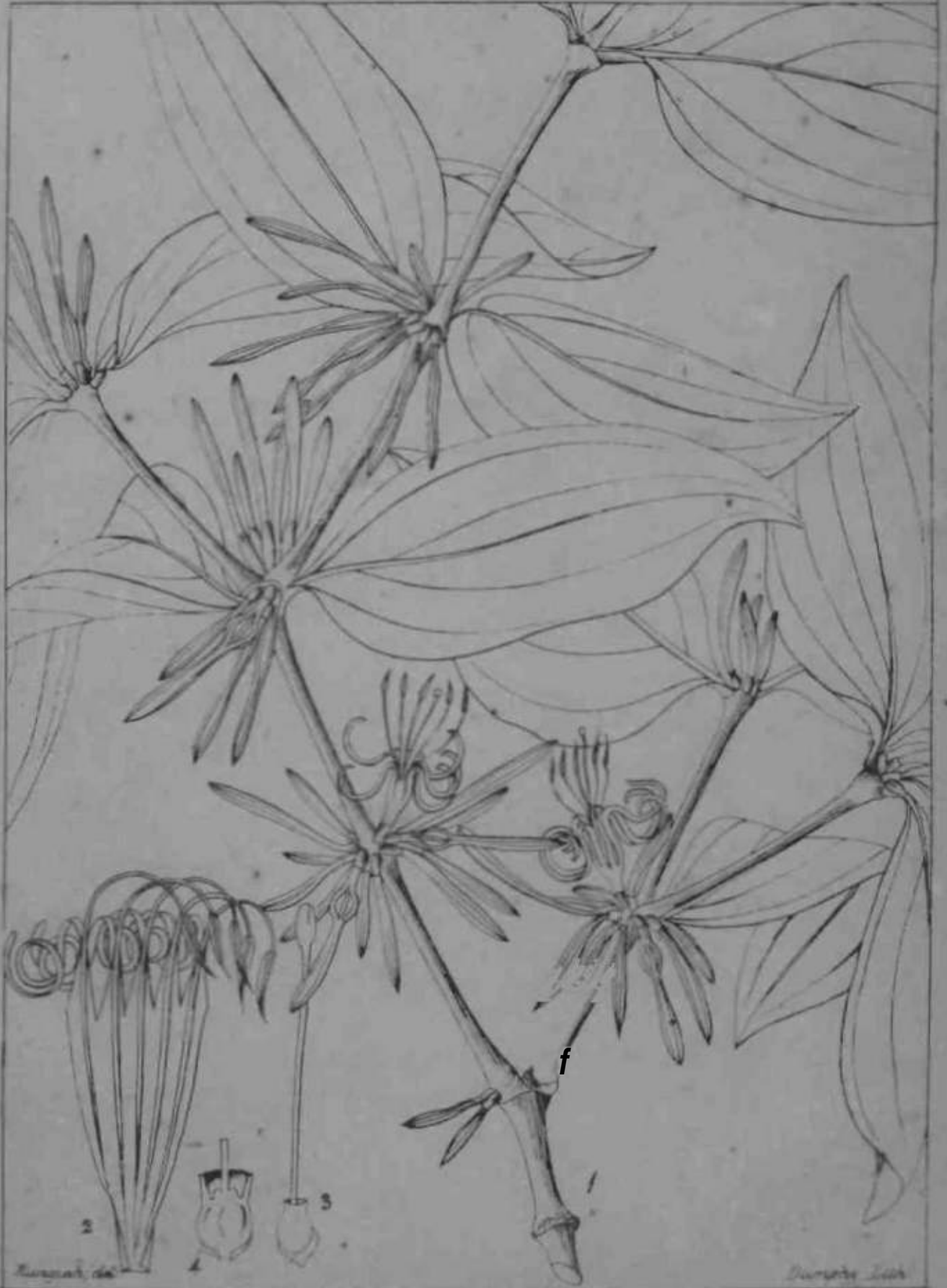


n

Heracleum pedatum (R. H.)

Wiegand del.

Swartz lith.



1858
Marschall's

Loranthus elaeagnifolius (Desf.)

Durand del.



Solanum elaeagnifolium

Solanum elaeagnifolium

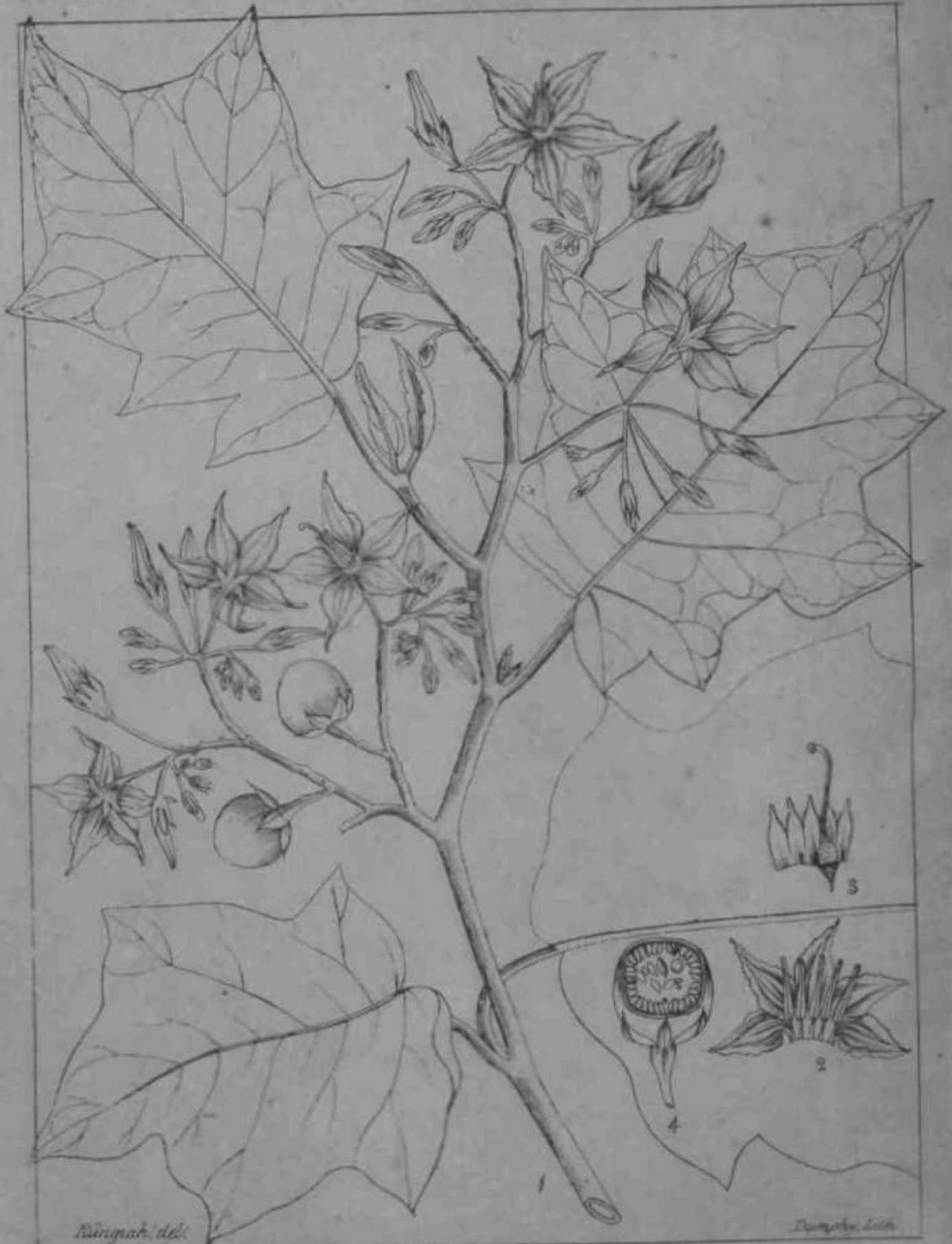
Solanum elaeagnifolium 1/4, frum

Solanum elaeagnifolium

Solanaceae.

Solanaceae.

3AJ



Ringrad, del.

Dumort. Lith.

10200 2. 00001 2. 0000
c. Kalasondacit } Tam

Solanum torvum



Rungtso del.

Dunlop Lith.

Солоньян
Cochocurdum Indicum Lam

Solanum Indicum



H. D. Allen, del.

Ipomoea volubilis (Linn)

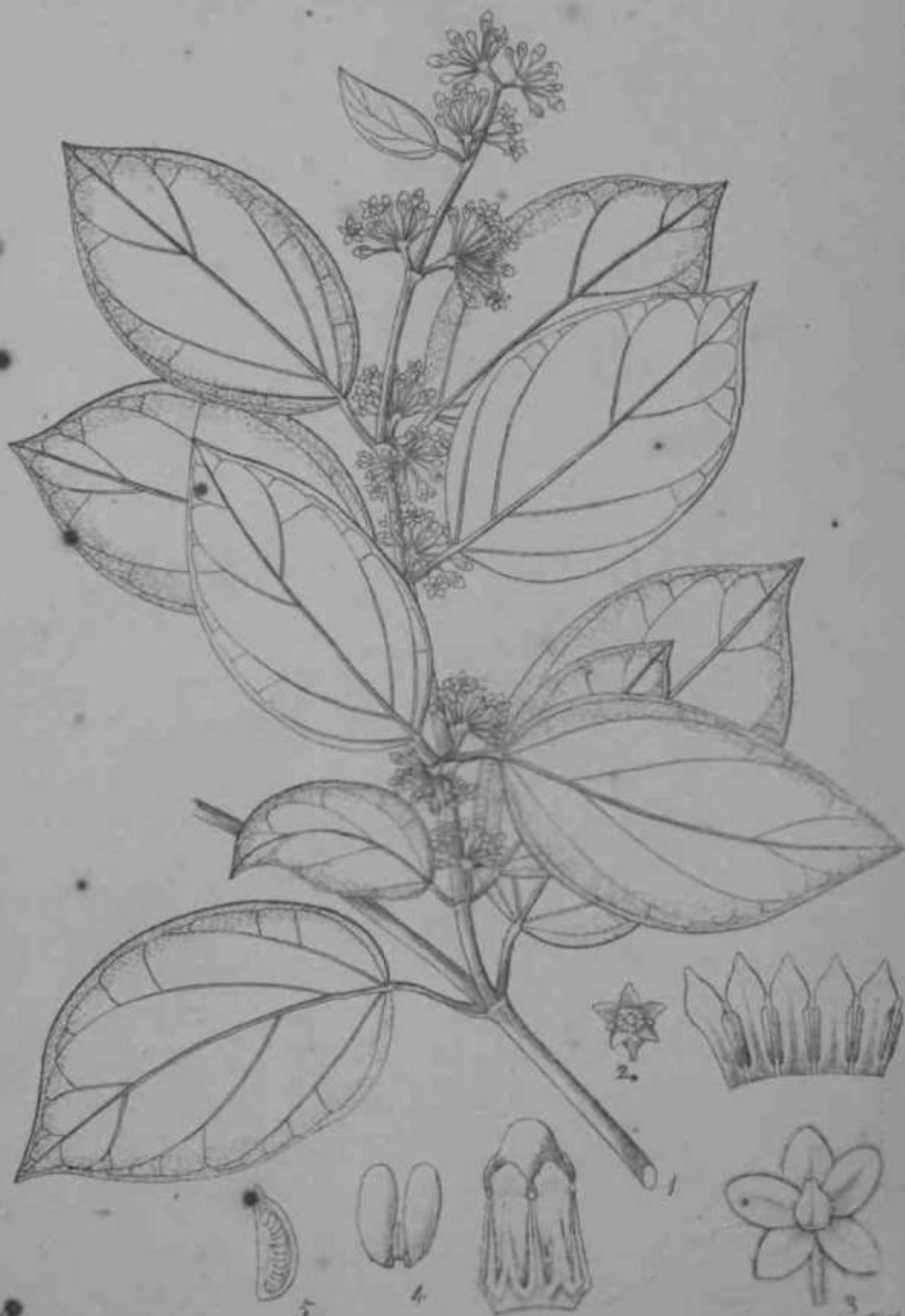


Rungiah, del.

JW- + x. Lich.

£: *Perostemma tanjorensis* } Tam
Perostemma tanjorensis

Perostemma tanjorensis (W. & A.)

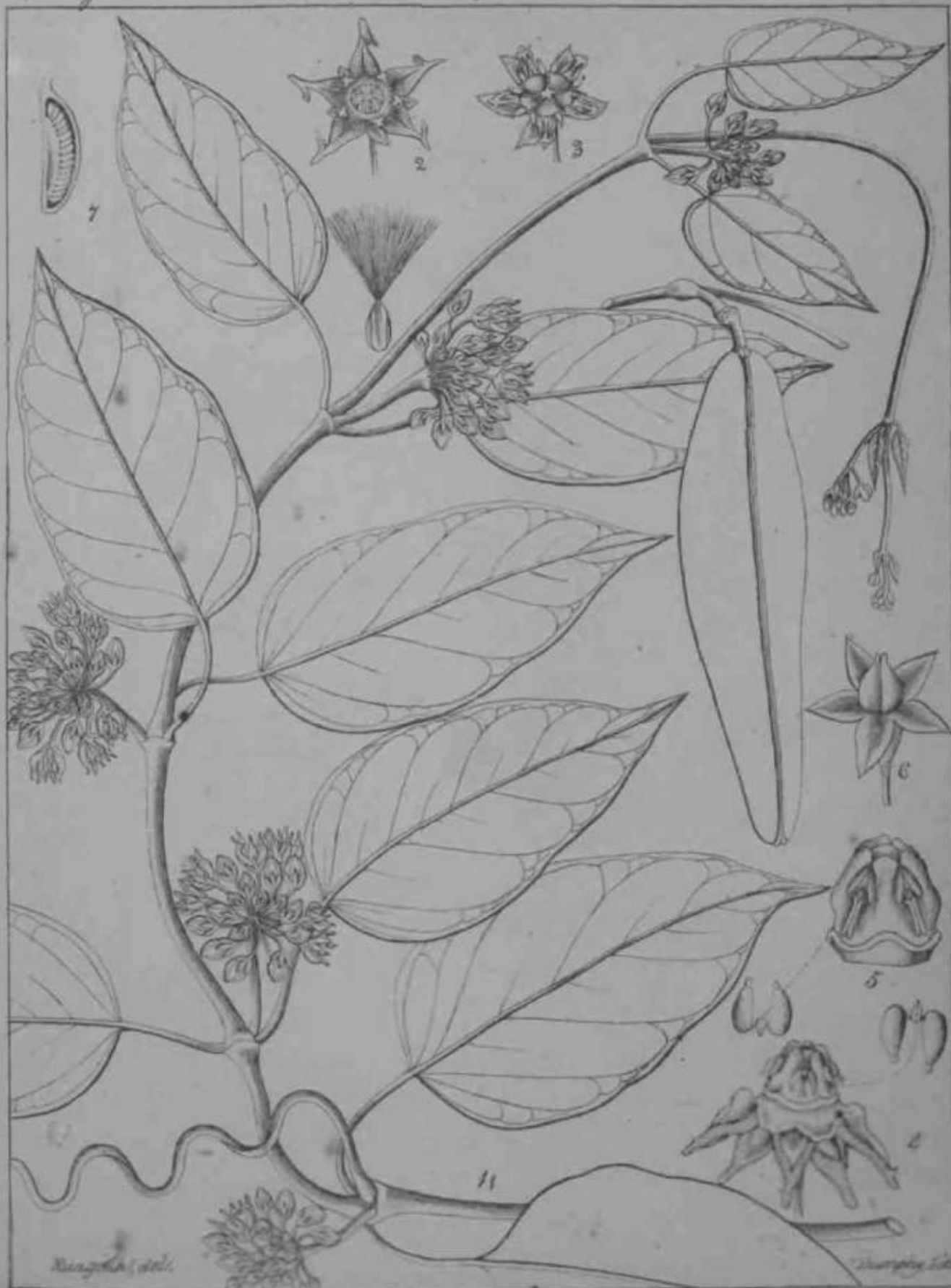


Kungiar, etc.

മുളയ്ക്കിടങ്ങ
Muscocorinya } Jam

Gymnema sylvestre (R. Brown)

Handwritten signature



Leptadonia reticulata (W & A.)
Palau

Leptadonia reticulata (W & A.)



Kunth del.

Dunlop, Lith.

Тылофора плетущая
Tylophora carnea (Wall.)

Tylophora carnea (Wall.)



Kunigak. det.

Diagnos. Lich.

Opellicody } Jam

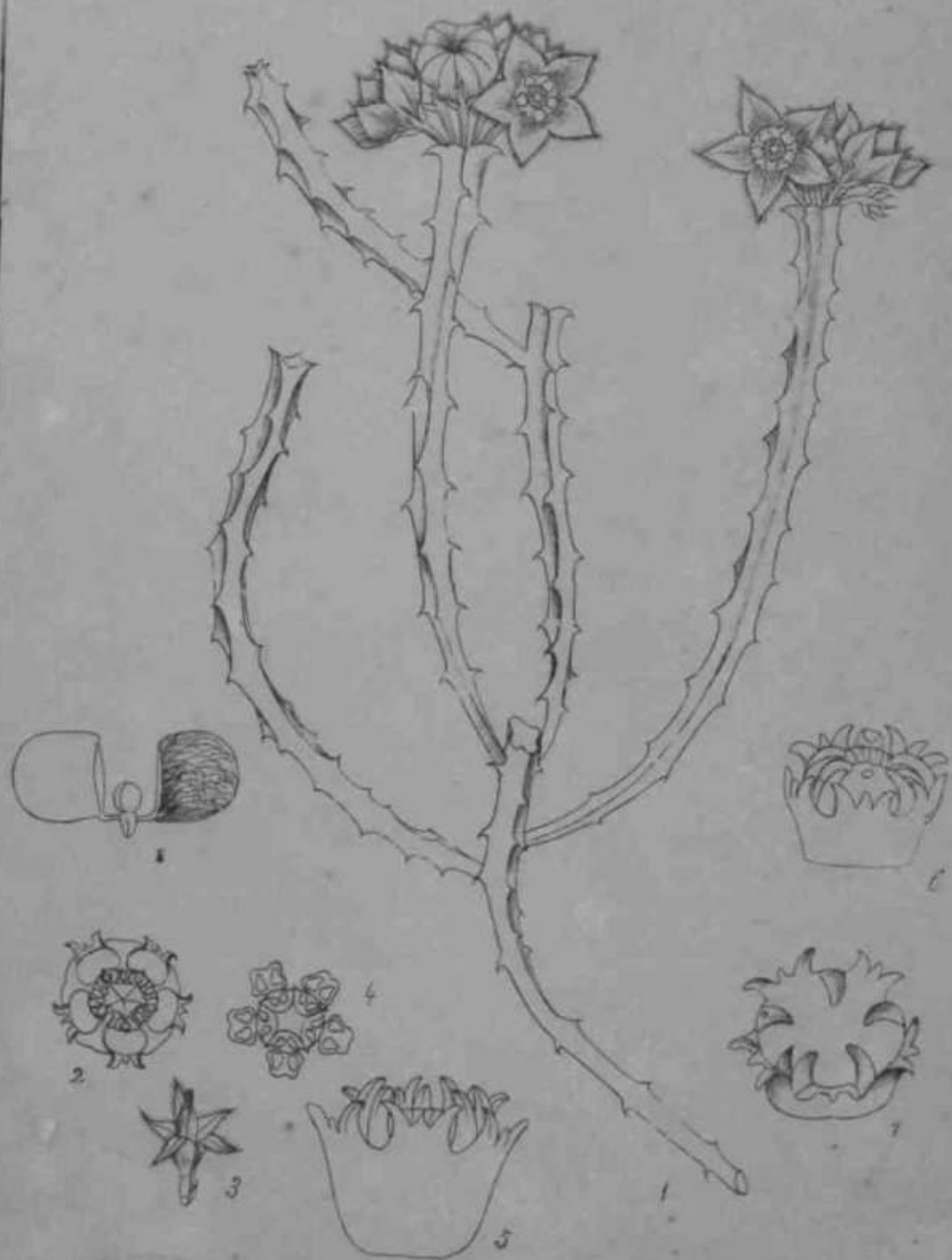
Pentstemon microphylla (W. & A.)



Ceropogia tuberosa (Roxb.)



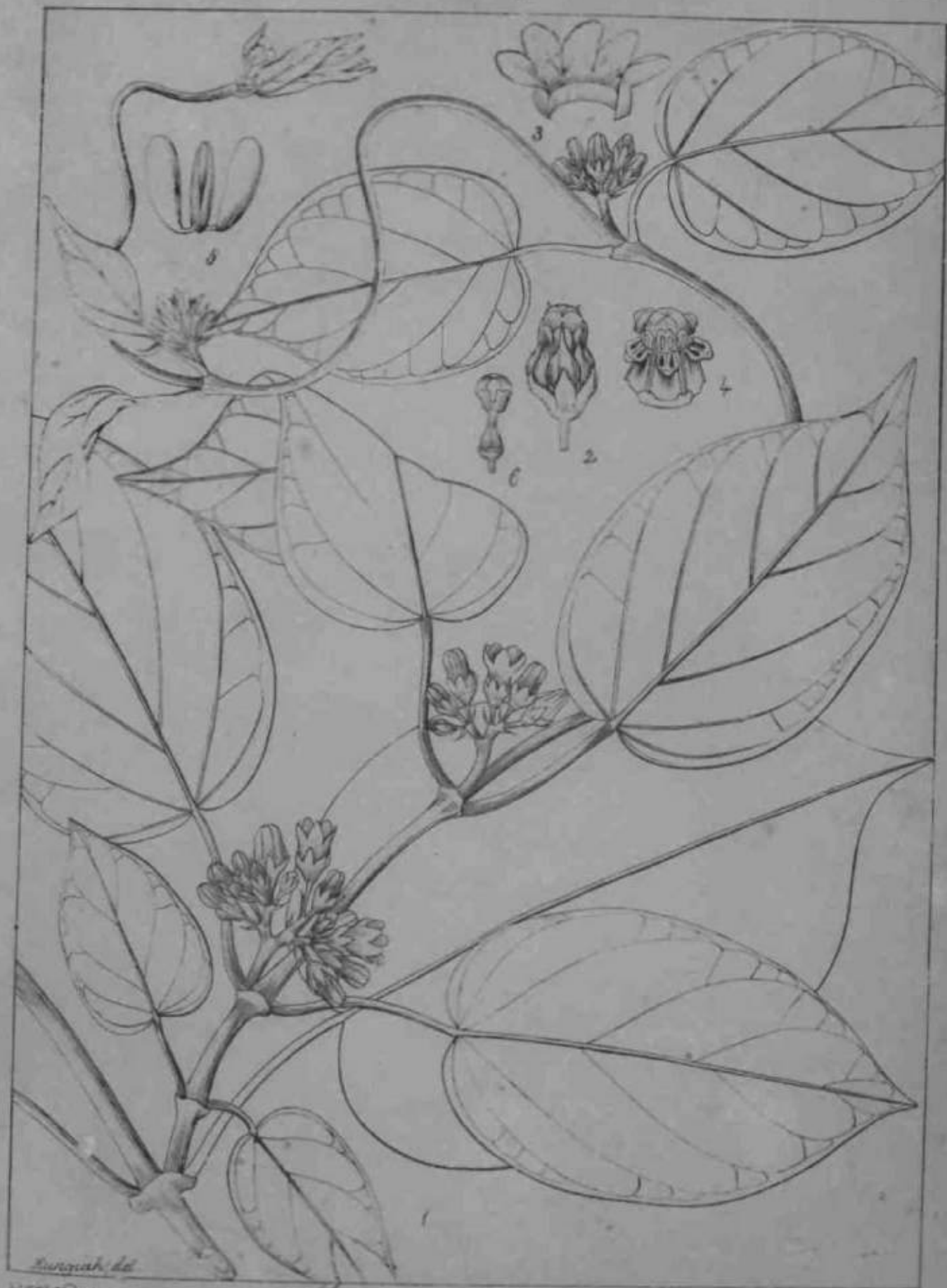
Cynanchum pauciflorum (A. Brown.)



Rurquah, d'Al.

Culleemolayan 3 Tam

Hutchinsonia Indica (W & A)



W. & A.
Palacodey

Marsdenia Brunoniana (W & A)



D. cinerea
 L. d. cinerea
 L. d. cinerea

Dichrostachys cinerea (H. & A.)



Bot. Beechey
 Cambridge Mass
 1837

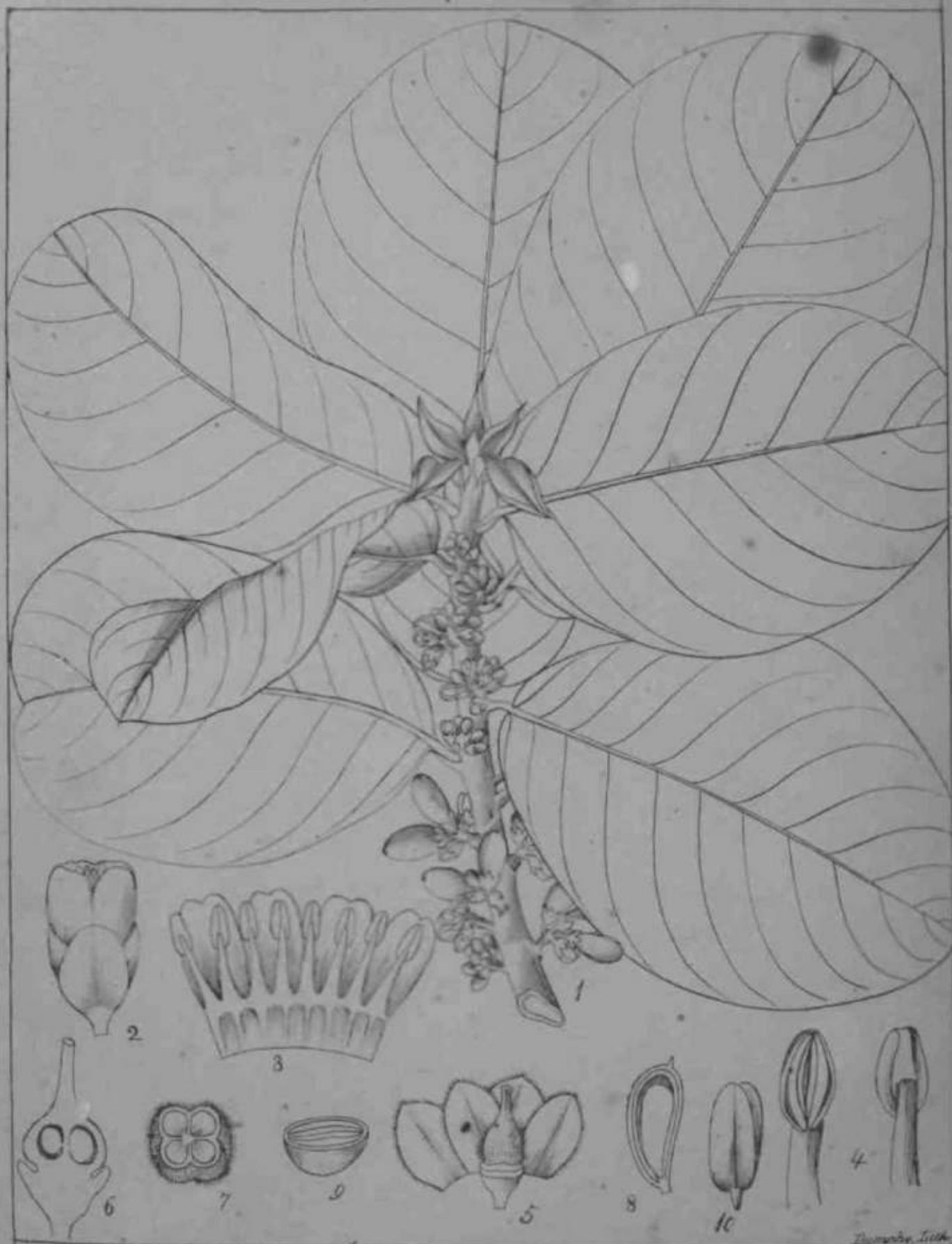
Dillenia bracteata (R. W.)



Kingman, del.

Isonandra lanciolata (R. W.)

Dumortier, Lith.



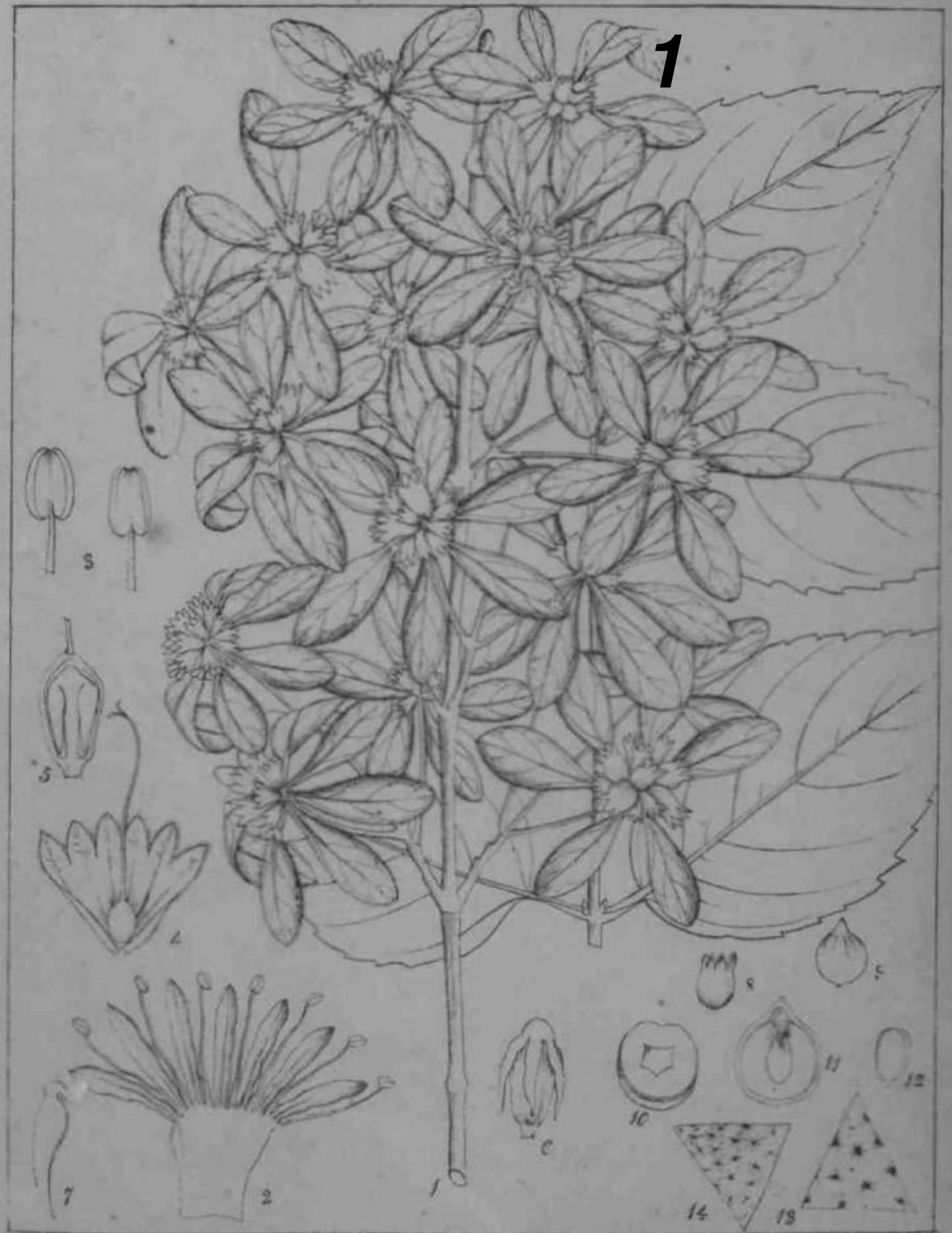
Rungtsh, del.

Isonandra villosa (R.W.)

Thompson, Lith.



Sipho Lindleyana



Engelm. det.

Det. Jmfcj. v. Sisch.

Symphoricarpos involucrata (Roxb.)



Reynolds del.

Symphoricarpos polyandra (R. W.)

Reynolds del.



Ringuelet, del.

Cochlospermum f. Lam.

Sterculia foetida (Linn.)

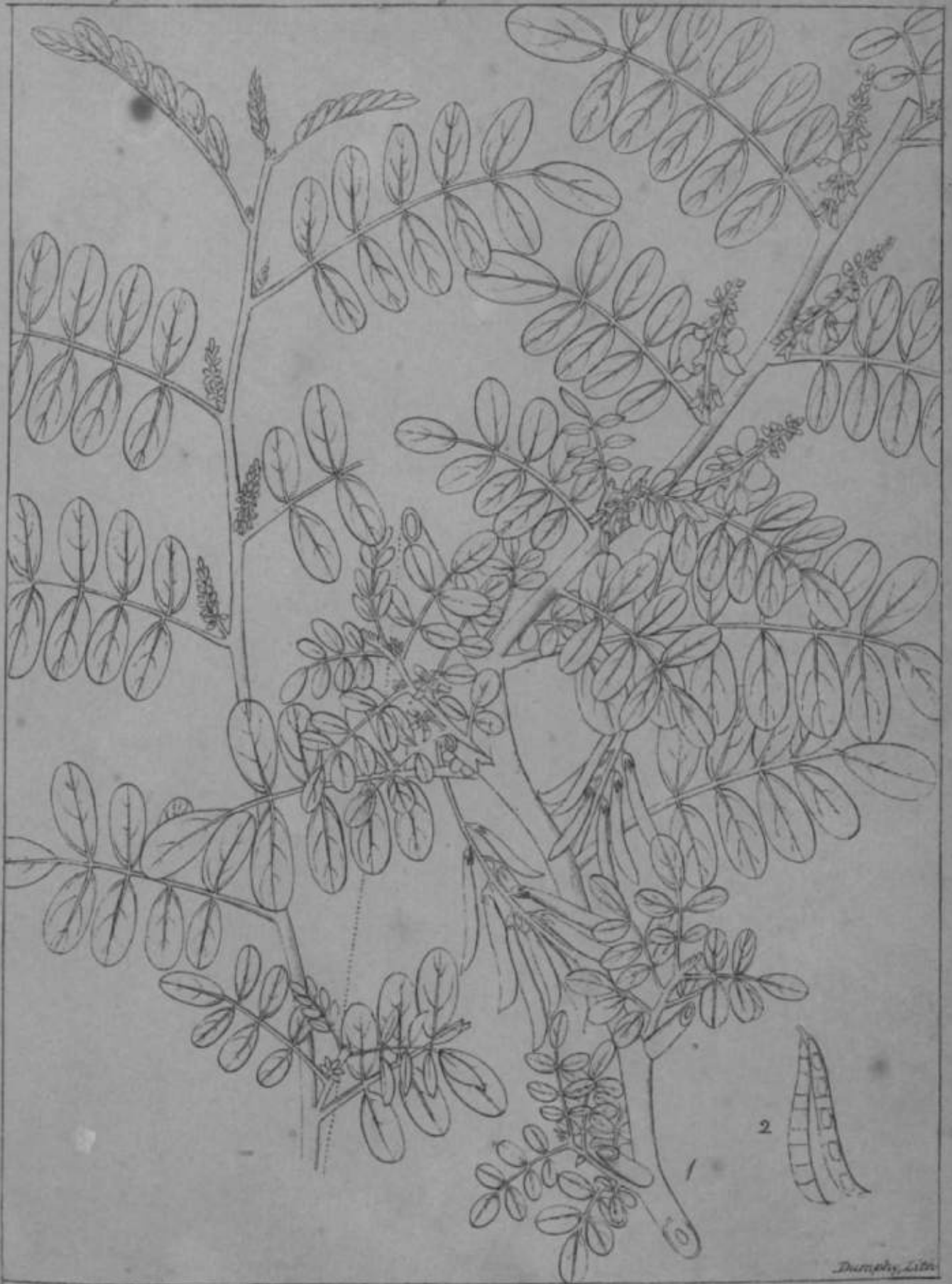
Dumortier, sculp.

Sapilionacea.
Raciburghiana.

Leguminosa.

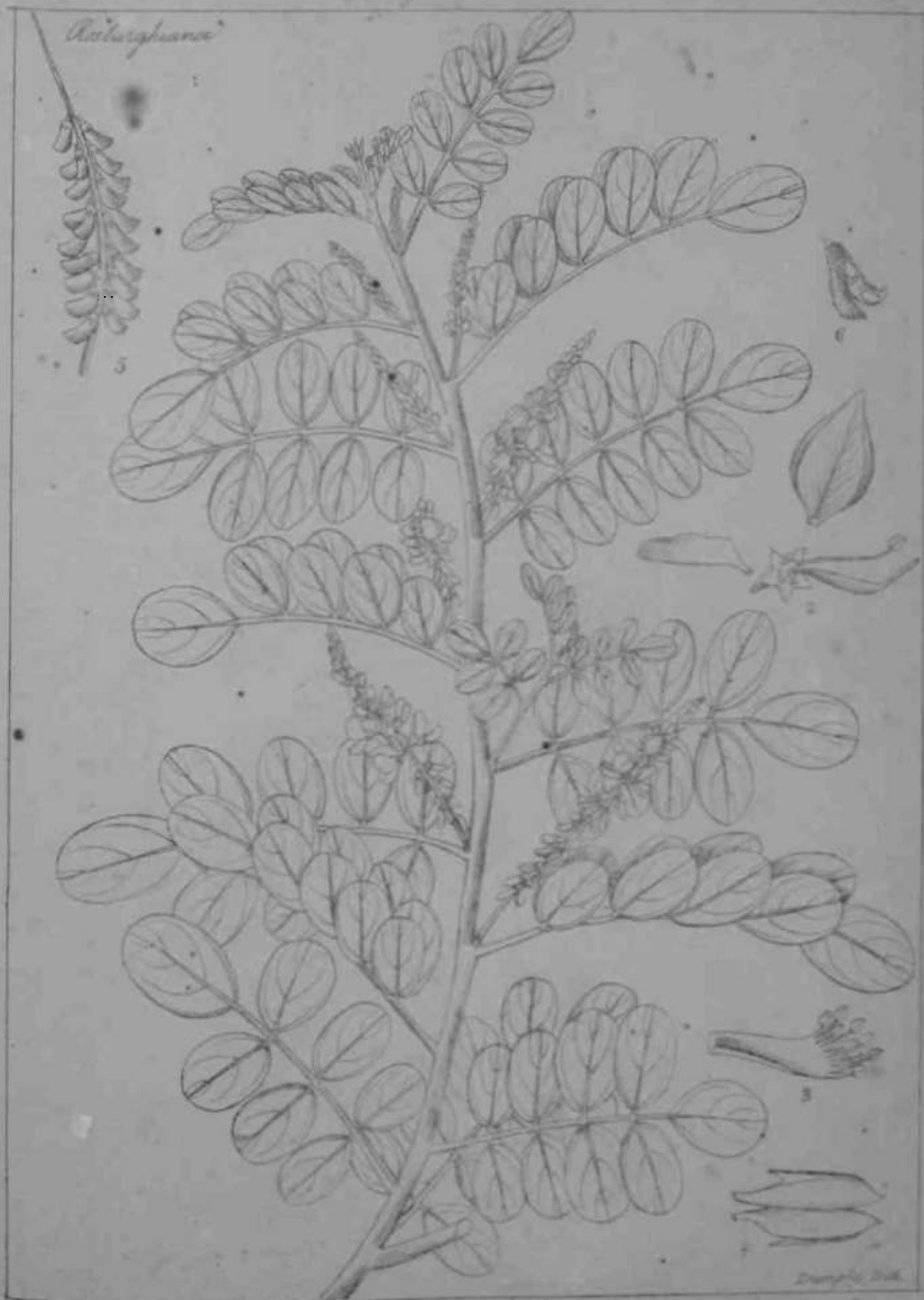
Lotea.

$\frac{365}{633}$



Indigofera tinctoria (Linn.)

Acacia



Indigofera carulea (Roxb.)

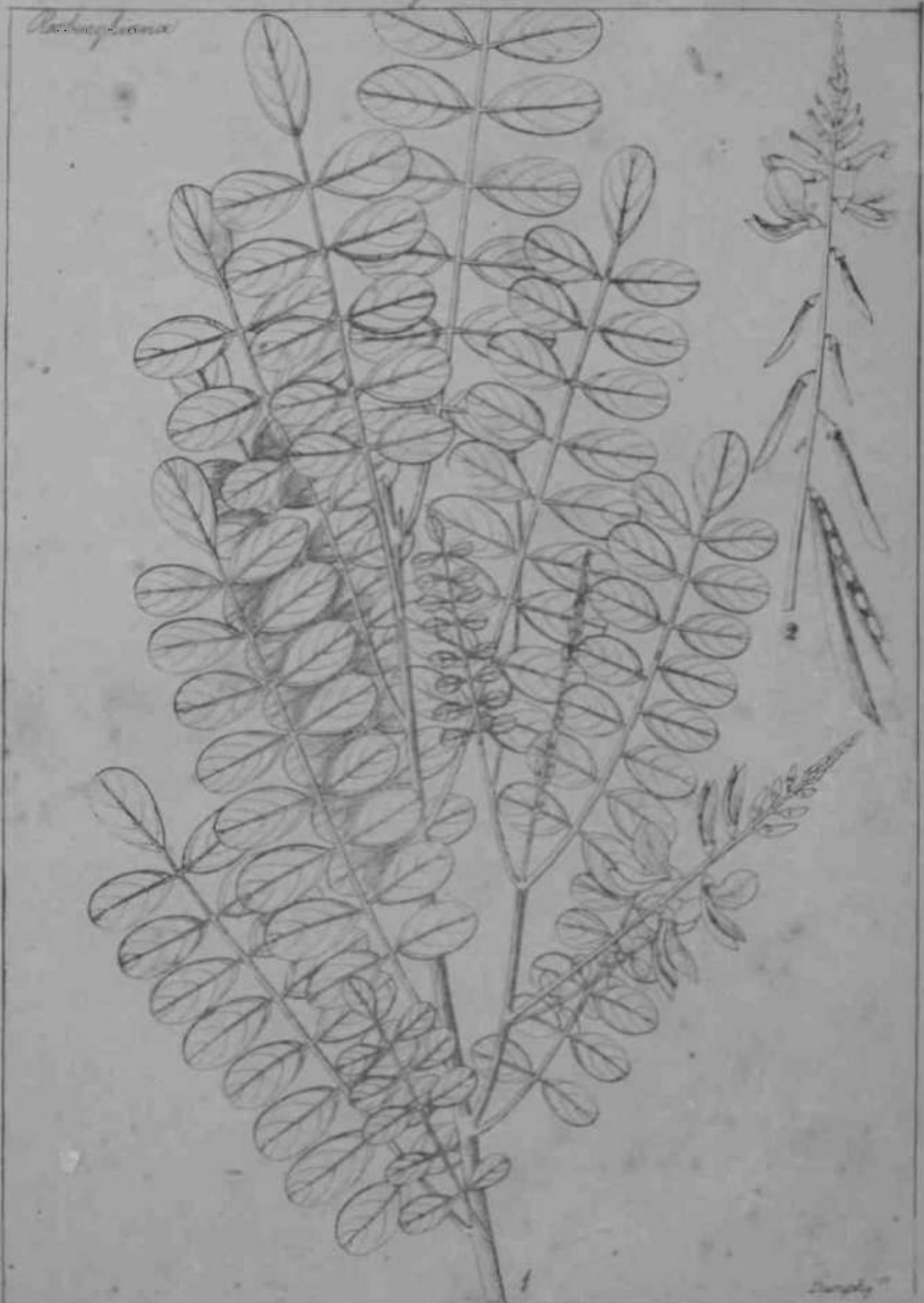
Papilionacea

caeu minosa

Lotea

567
63

Archegonia



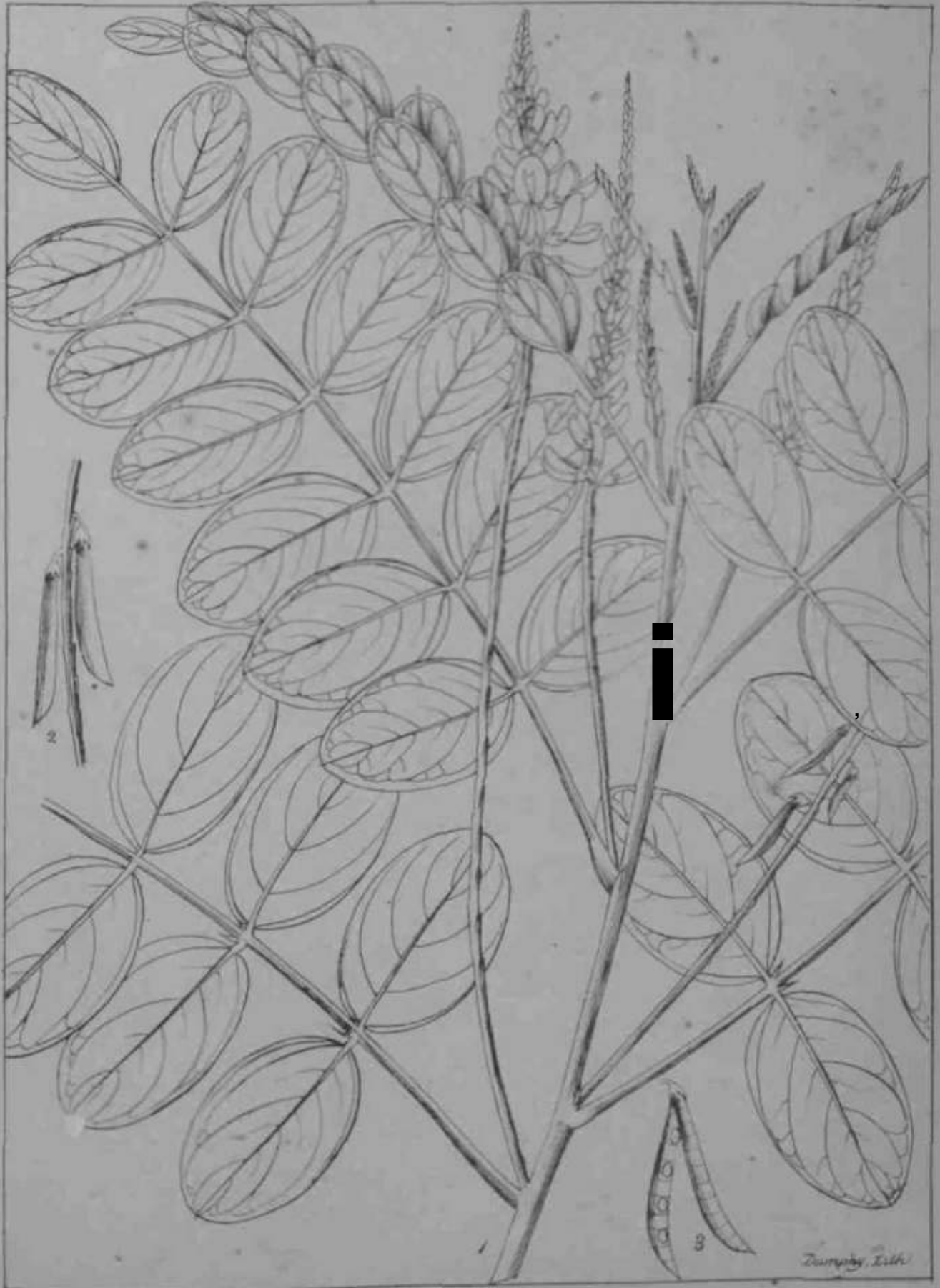
Indigofera pulchella (Roxb.)

Handy



Reichb. in Hort.

Indigofera arborea (Rost.)



Indigofera atropurpurea (Red)

Papilionaceae.

Leguminosae.

Loteae.

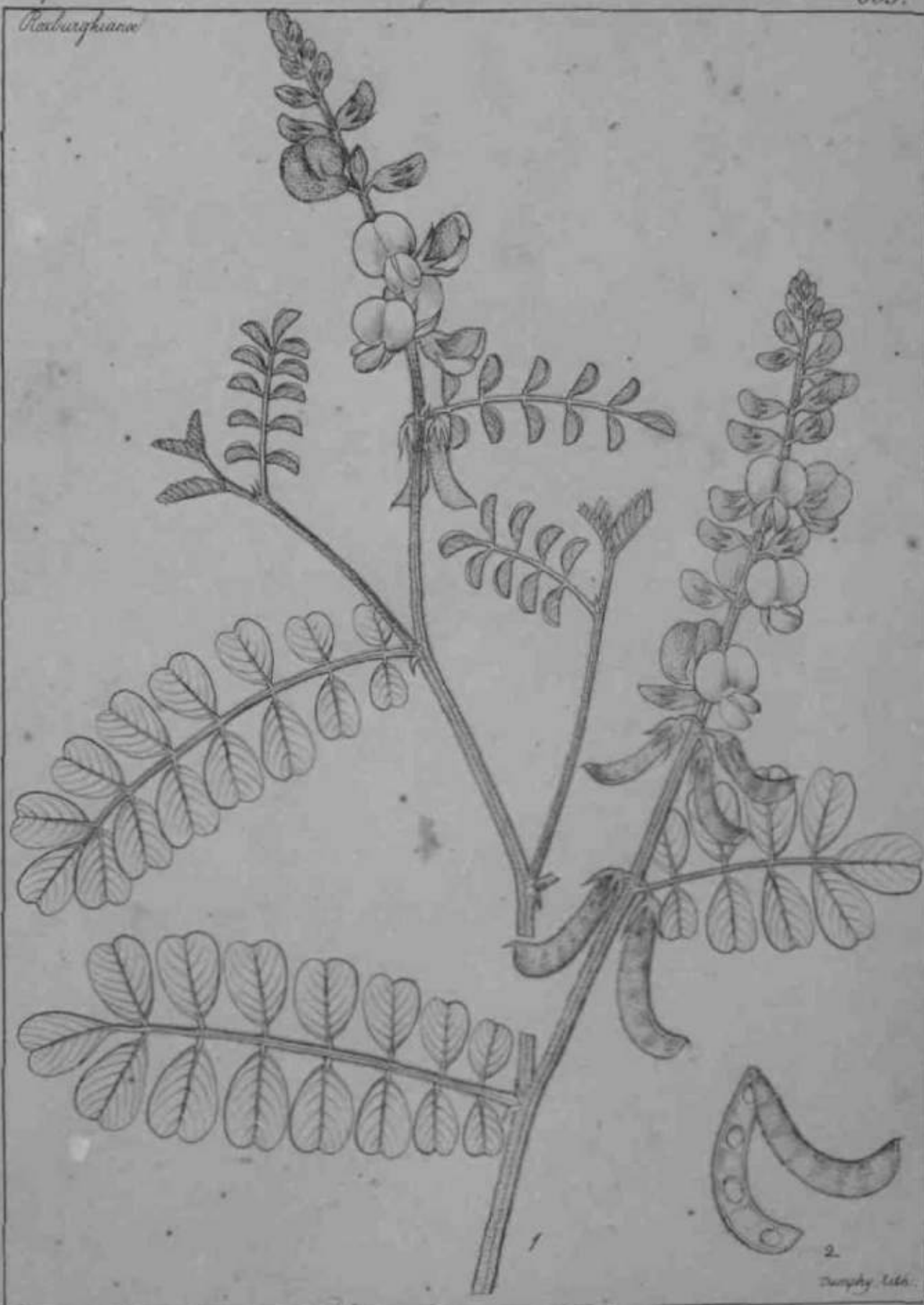
376
657

Rochburghiana



Tephrosia senticosa (Pers.)
Gallega pentaphylla (Rost.)

Rostraghiaceae



Dunphy del.

Siphrosia incana (Graham)
Cytisus incana (Roel.)

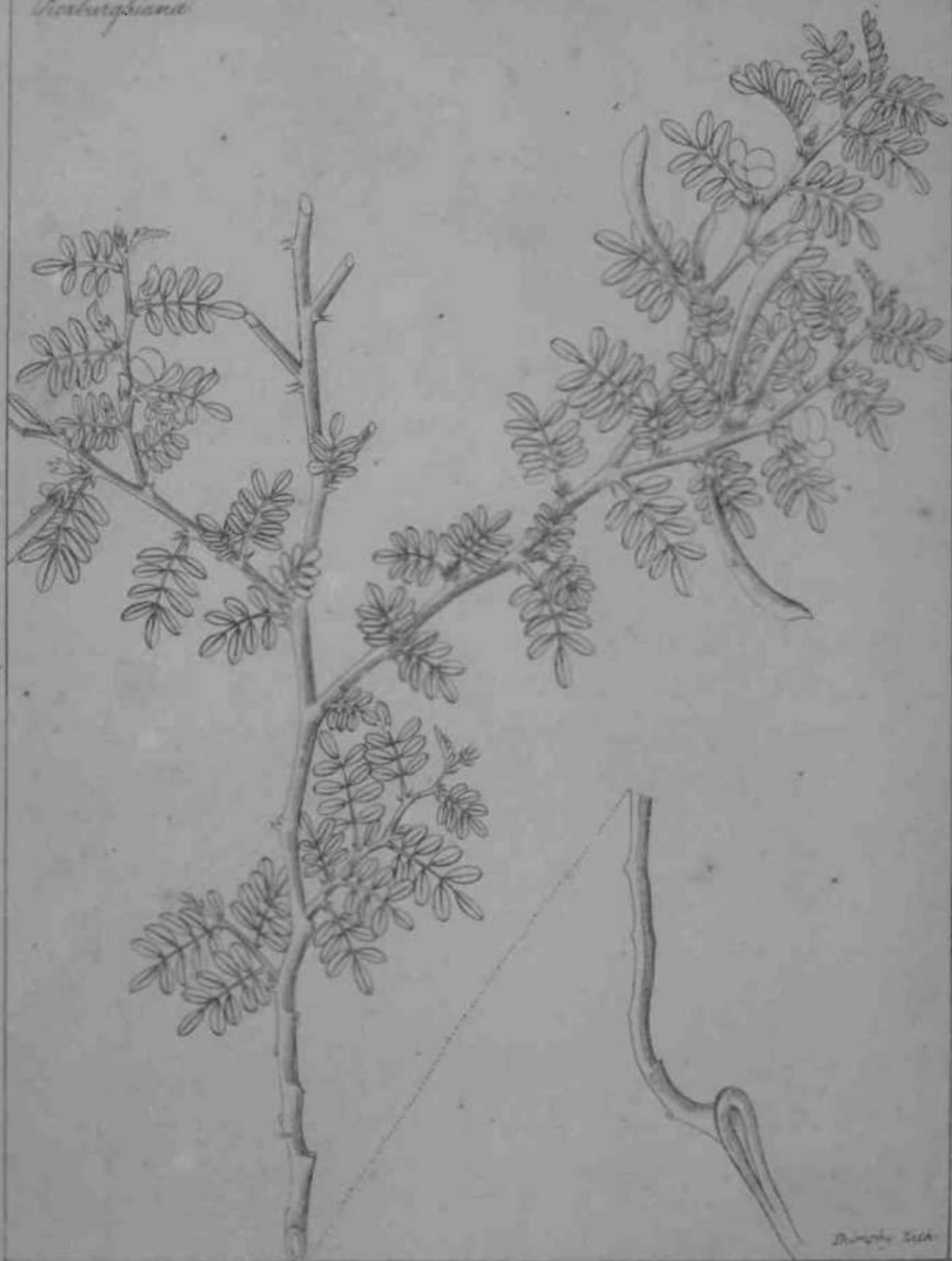
Papilionacea

Leguminosa

Lotia

372
663

Richthiana



Drummond's Lotia

Tephrosia spinosa (Pers.)
Galaga spinosa (Rostk.)

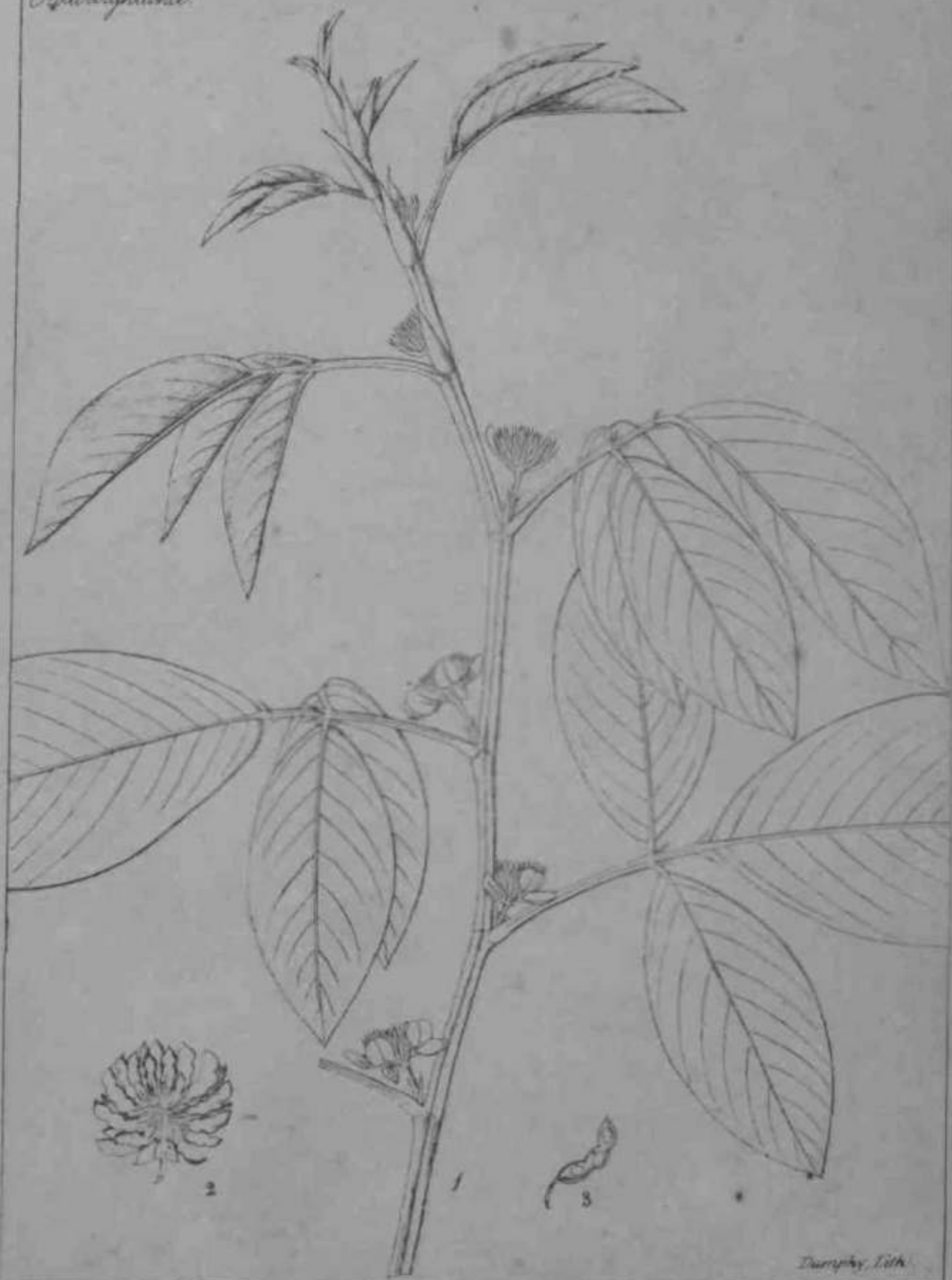
Papilionacea!

Leguminosa.

Hedysarea!

$\frac{373}{694}$

Rostriflora!



Desmodium cephalotes (Wall.)
Hedysarum cephalotes Roxb.

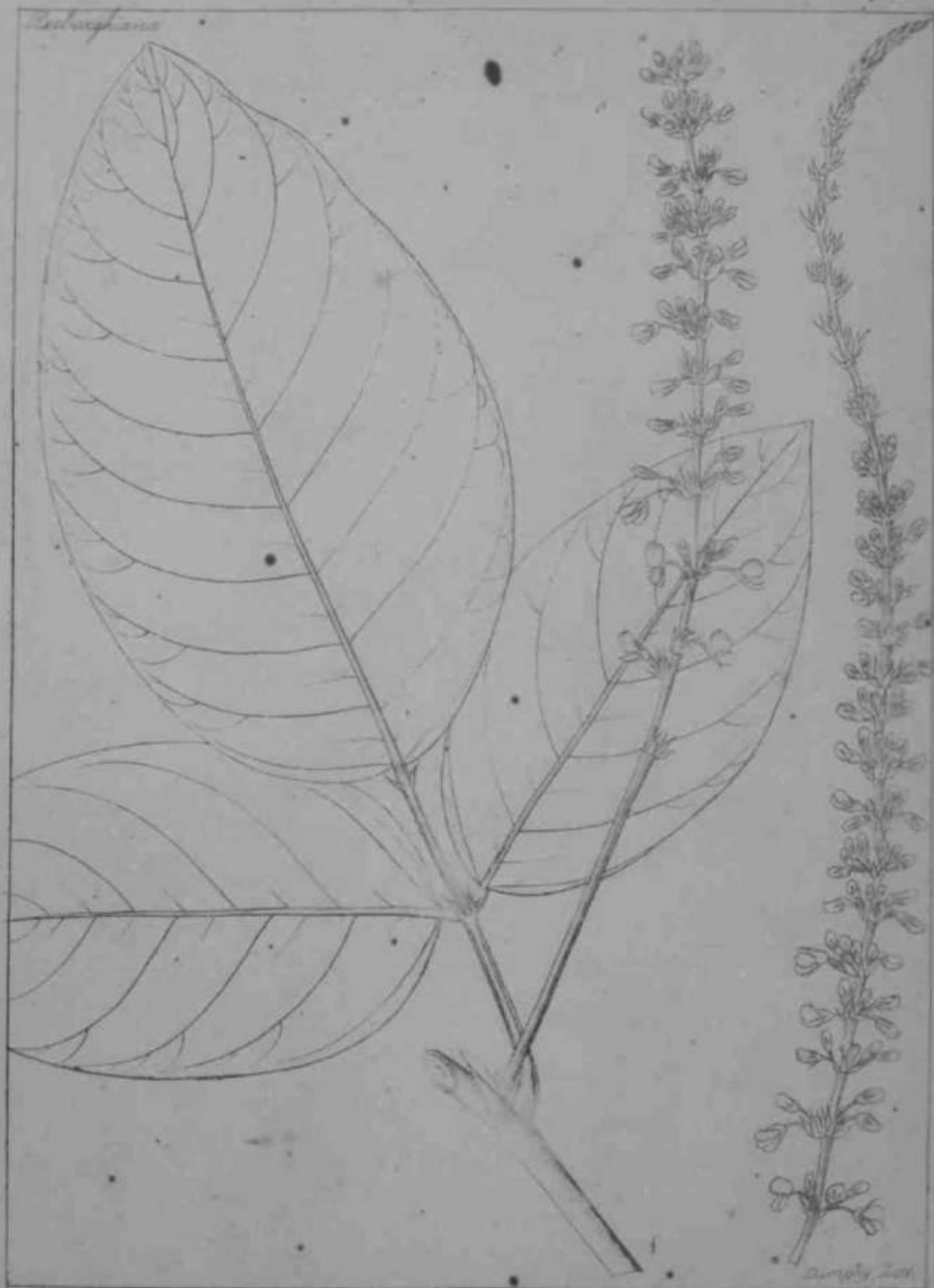
Papilionaceae

Lupinaceae

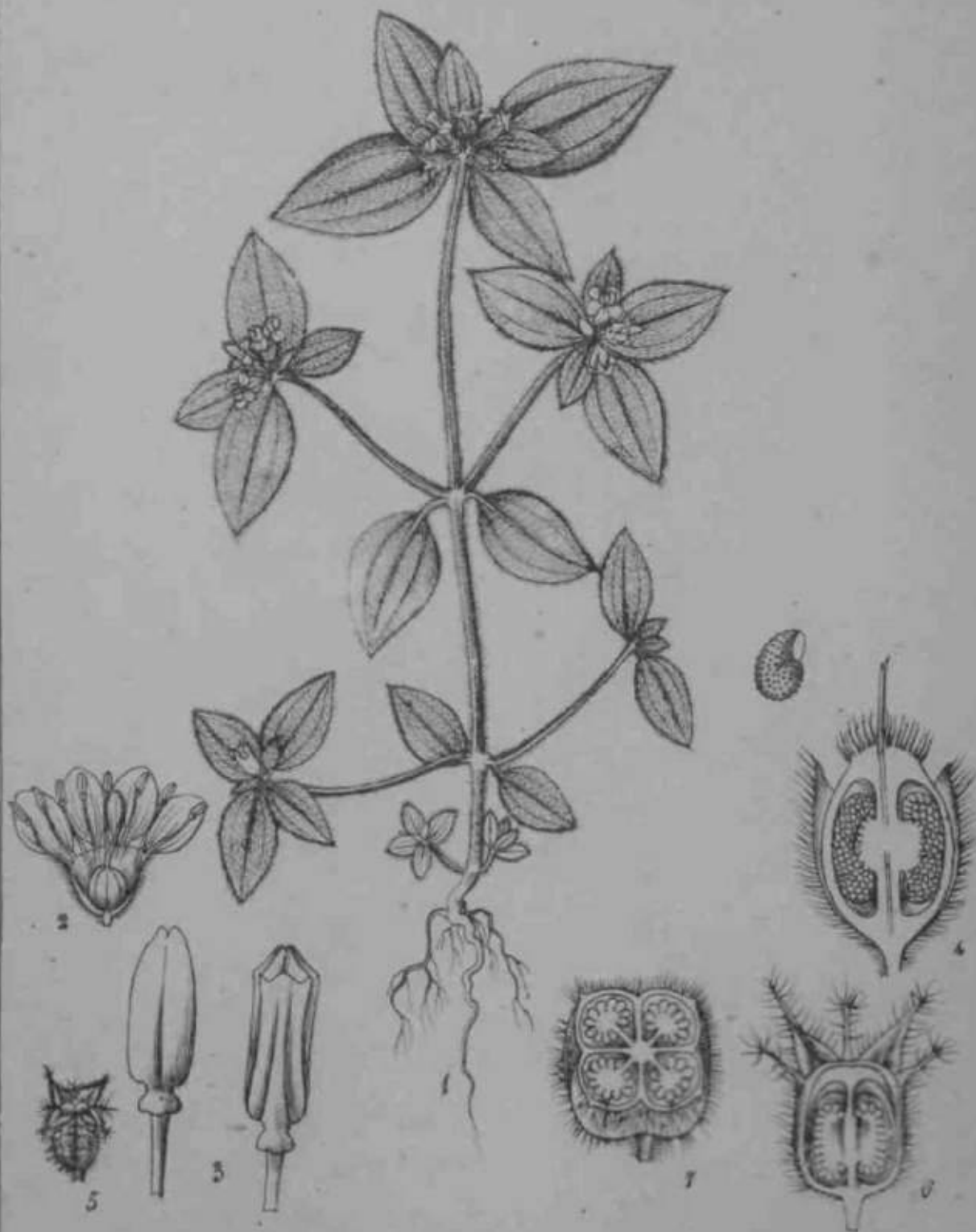
Hedysarum

574
705

Reichb. f.



Desmodium recurvatum (Graham)
Hedysarum recurvatum (Rost)



Koenig, del.

Sepp, lith.

Euclea hirsuta (Bonpl.) Mart.



Engelm. det.

Dumort. det.

Colubia verticillata (Don) Nutt.

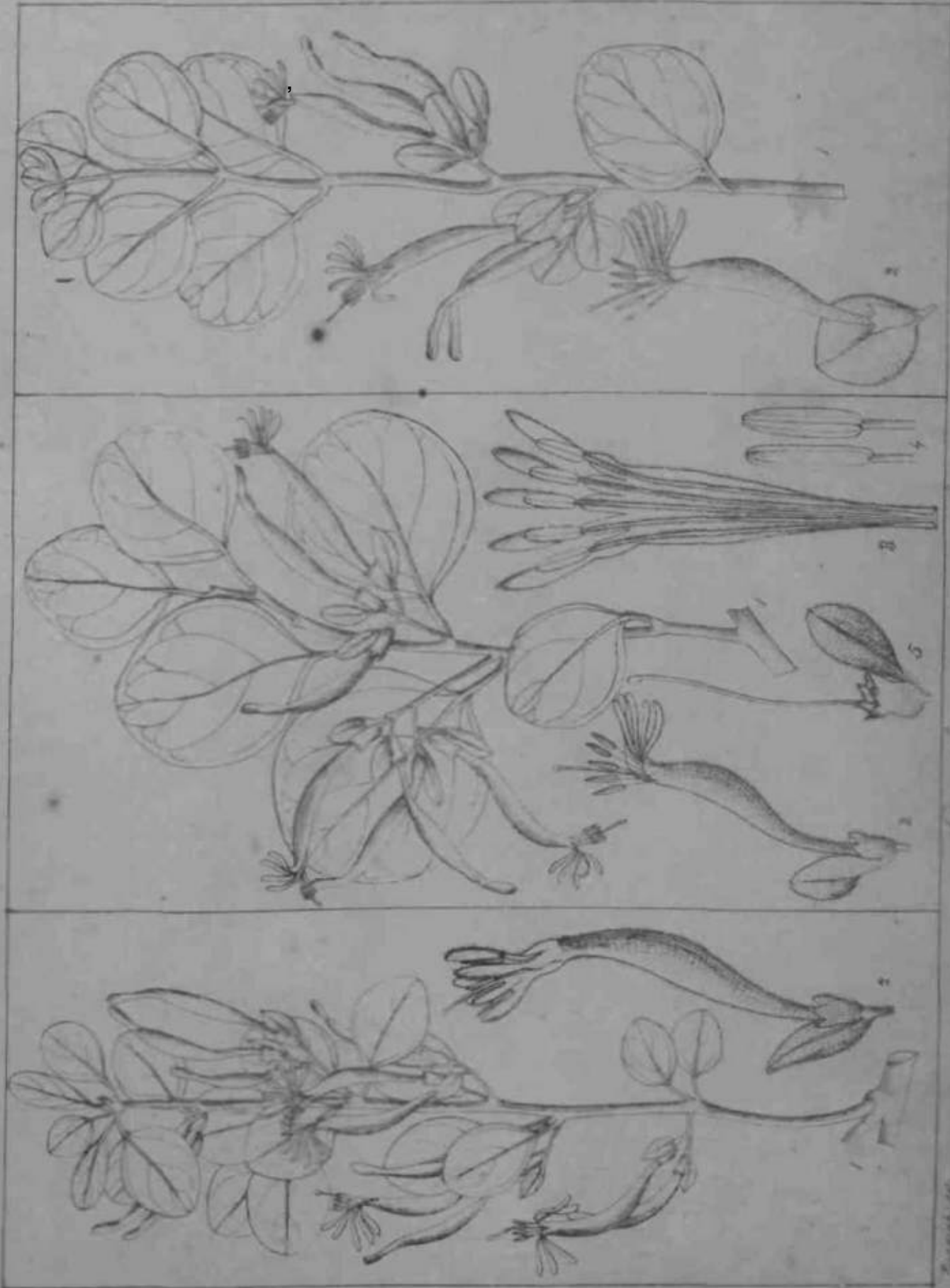


Plumie del.

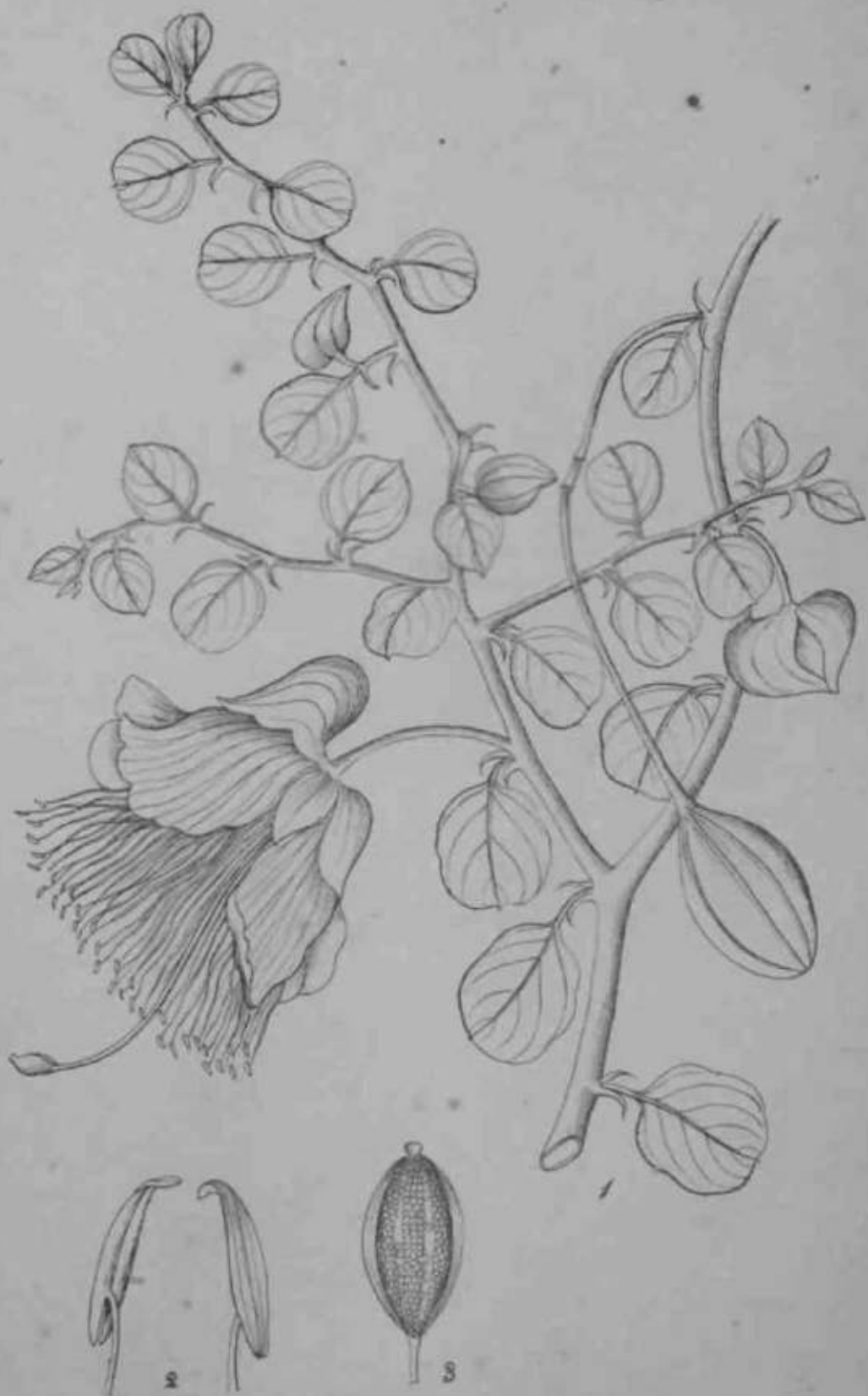
Plumie del.

Cistecchia aspera (Plumie)

Loranthaceae.



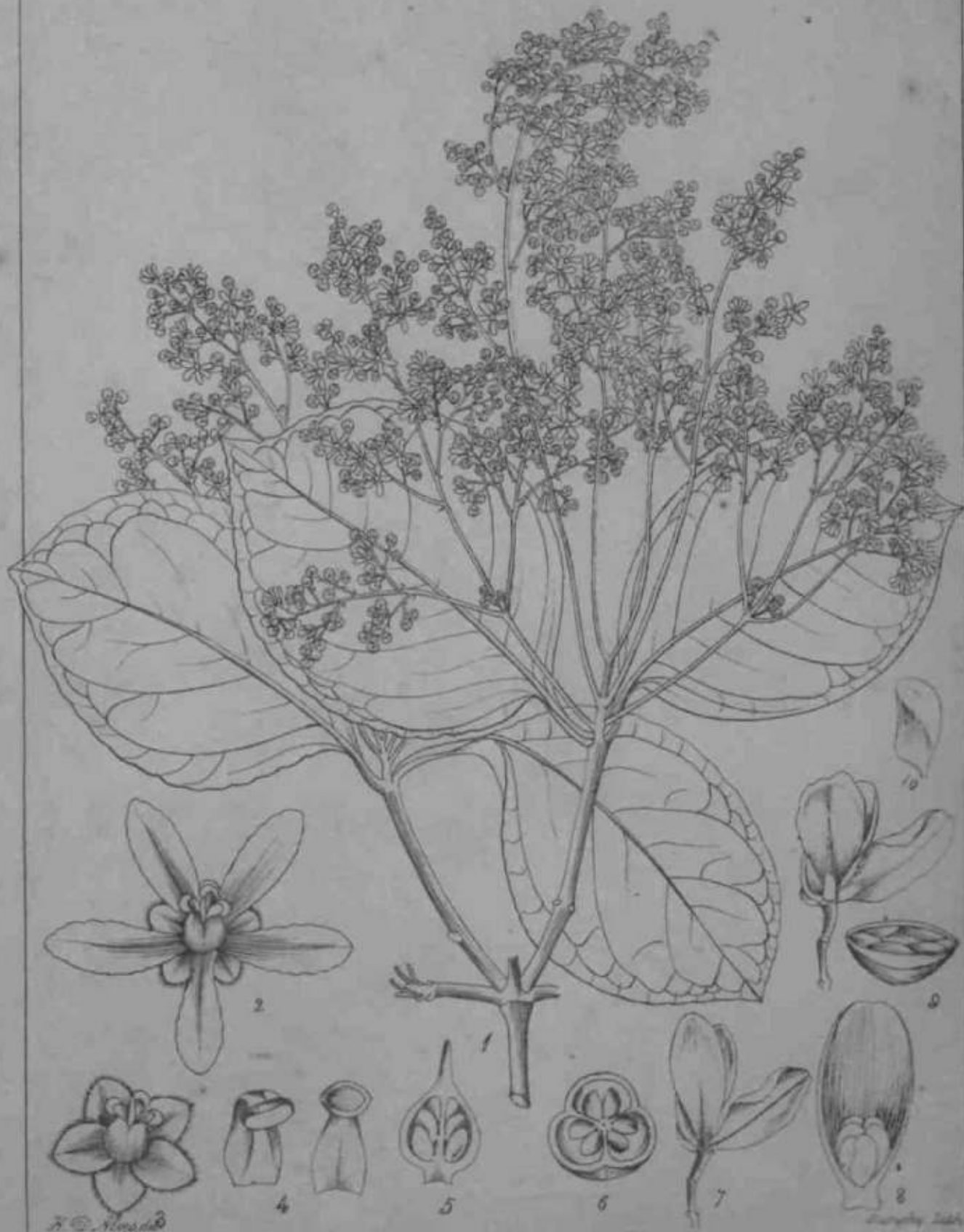
Loranthus tomentosus (Hayne)



Riverbank, det.

Dumphy, det.

Capparis Murrayana (Graham)
Cat-Bombay Plant (P. 9.)



Hippocratea Crakamii (R. W.)

Malpighiaceae.



Remy: pt II A

St. Lucia (Remy)

Remy: L. 18

Euonymus

Celastrina

372
507



Celastrus montana (Roxb.)

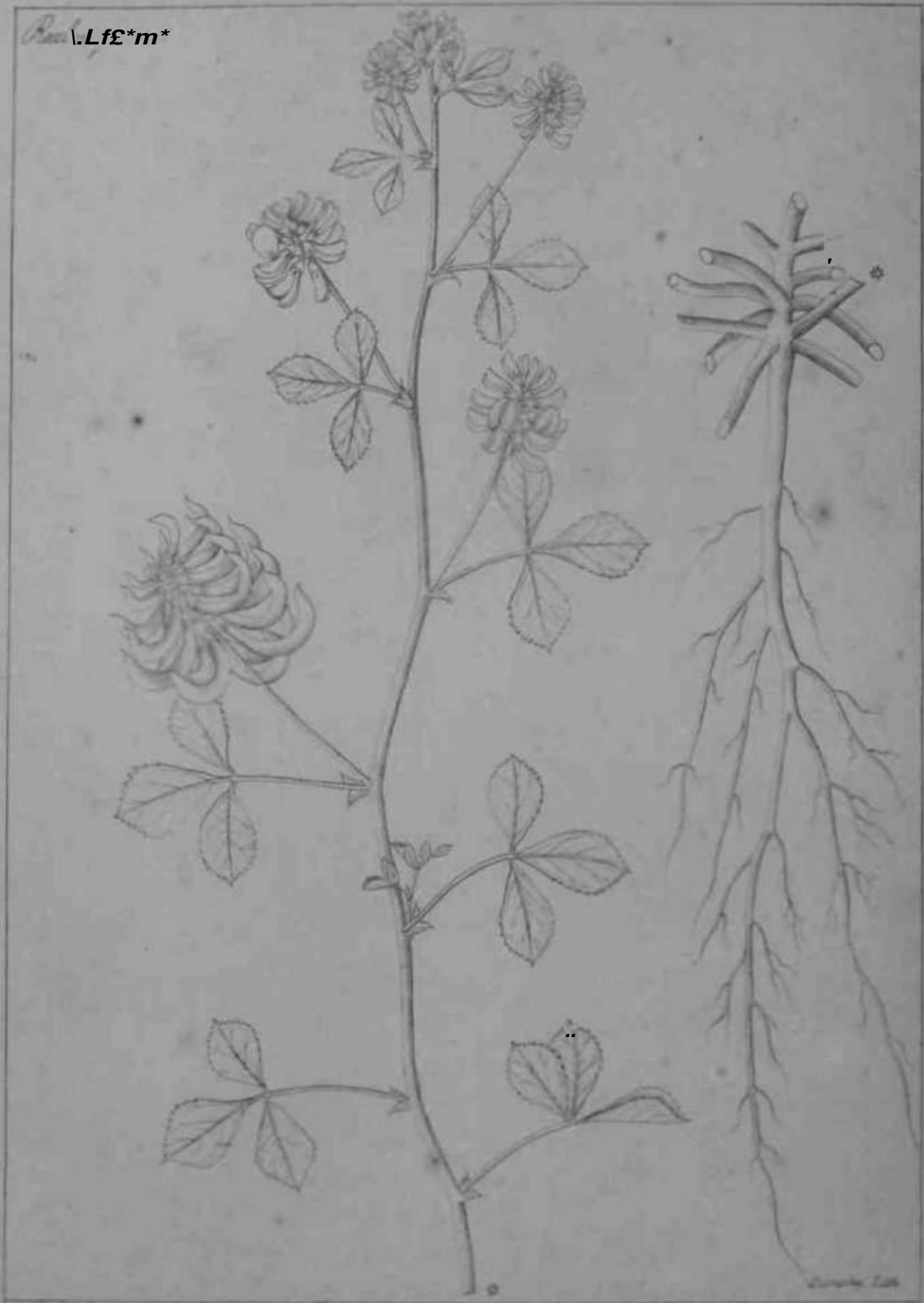


Boissier del.

Crotalaria obtusa (Graham)

Boissier del.

*Rad. Lf. m**



Trigonella corniculata (Linn.)
Medicago corniculata (Rostk. & Schmidt)

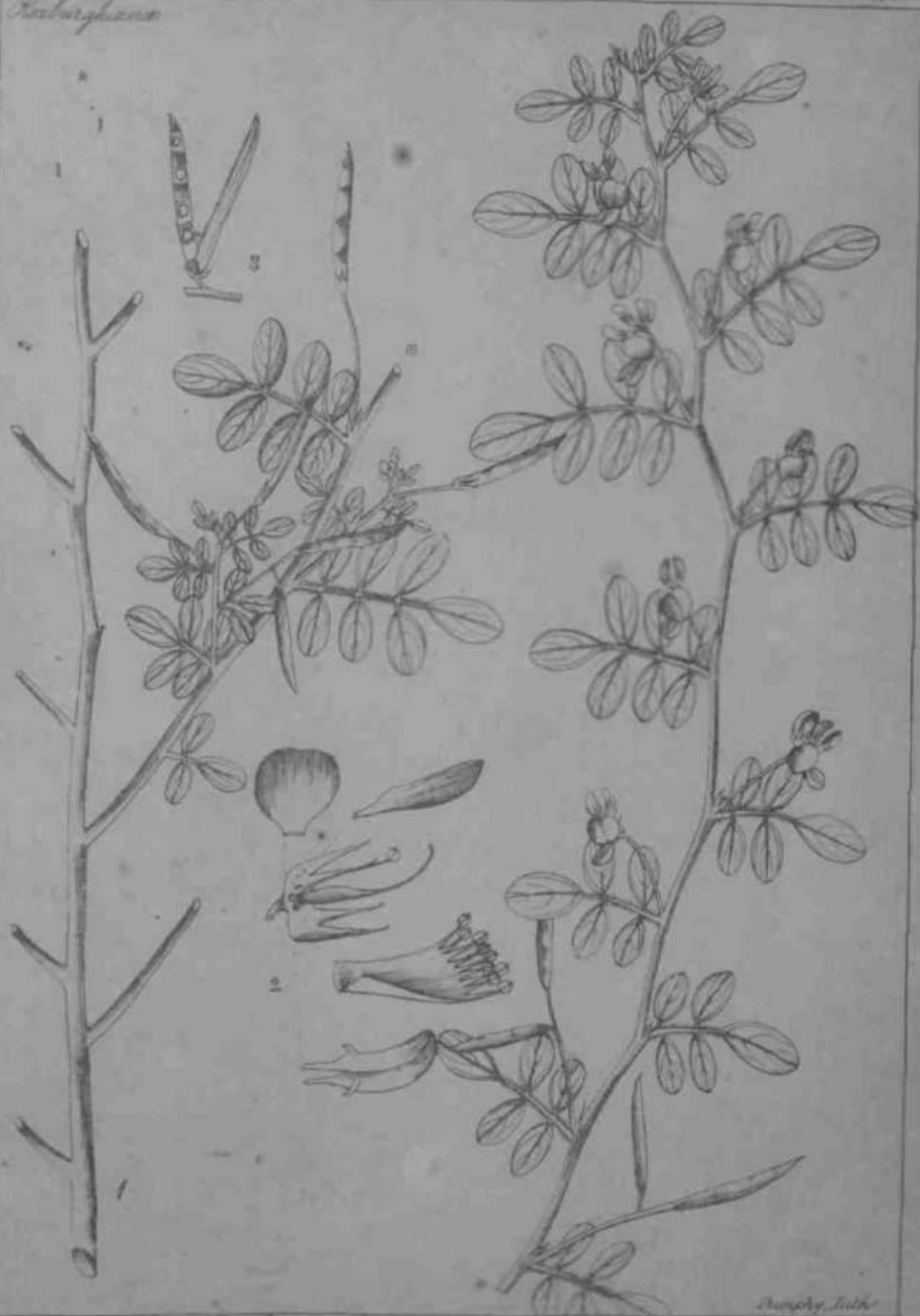
Papilionaceae

Lupaminosae

Lobelia

385
624

Barbary



Indigofera pentaphylla (Linn.)
Indigofera fragrans (Retz.)

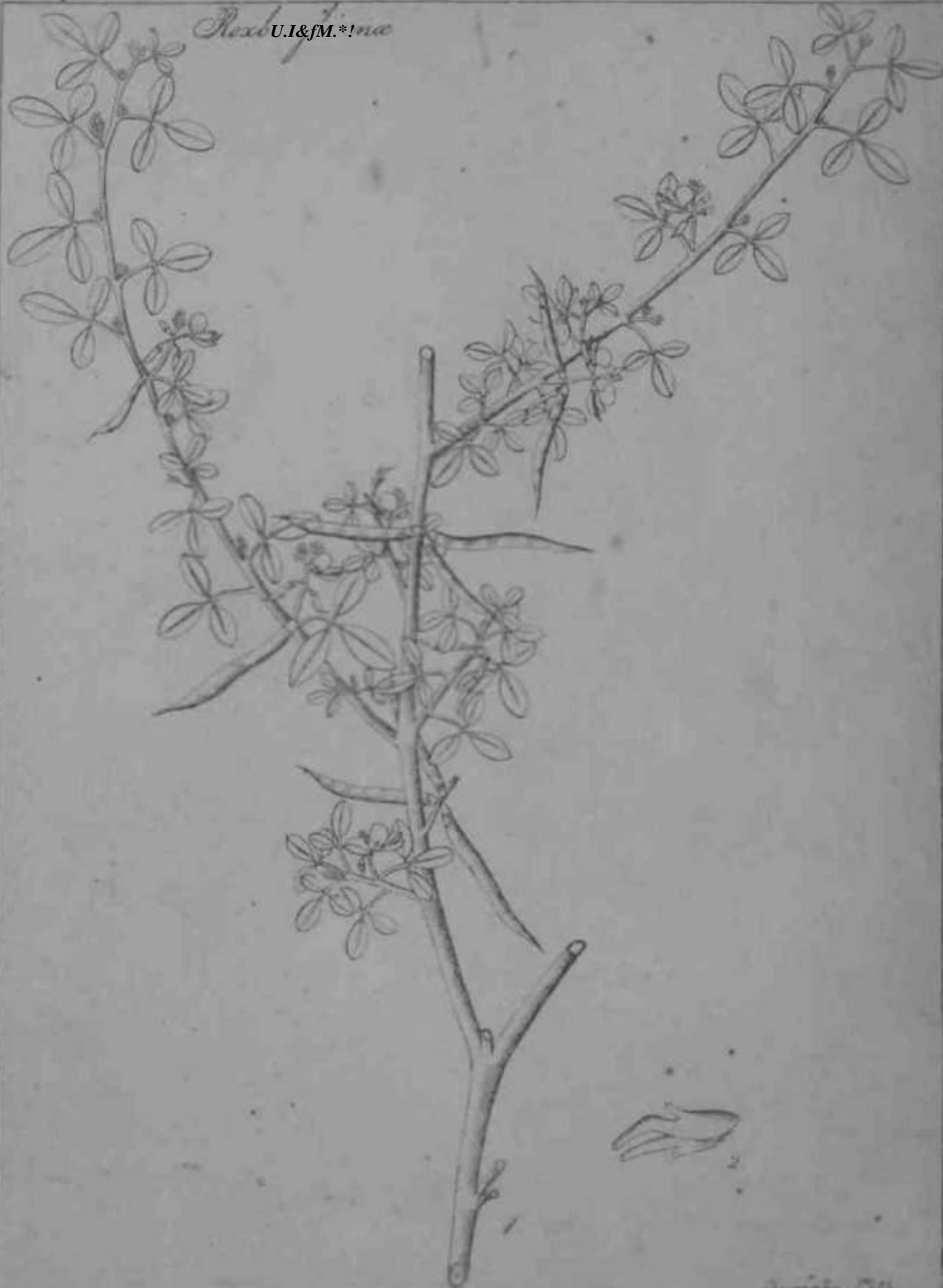
Papilionaceae.

Leguminosae.

Lotea.

256
0.30

Roxb. f. na

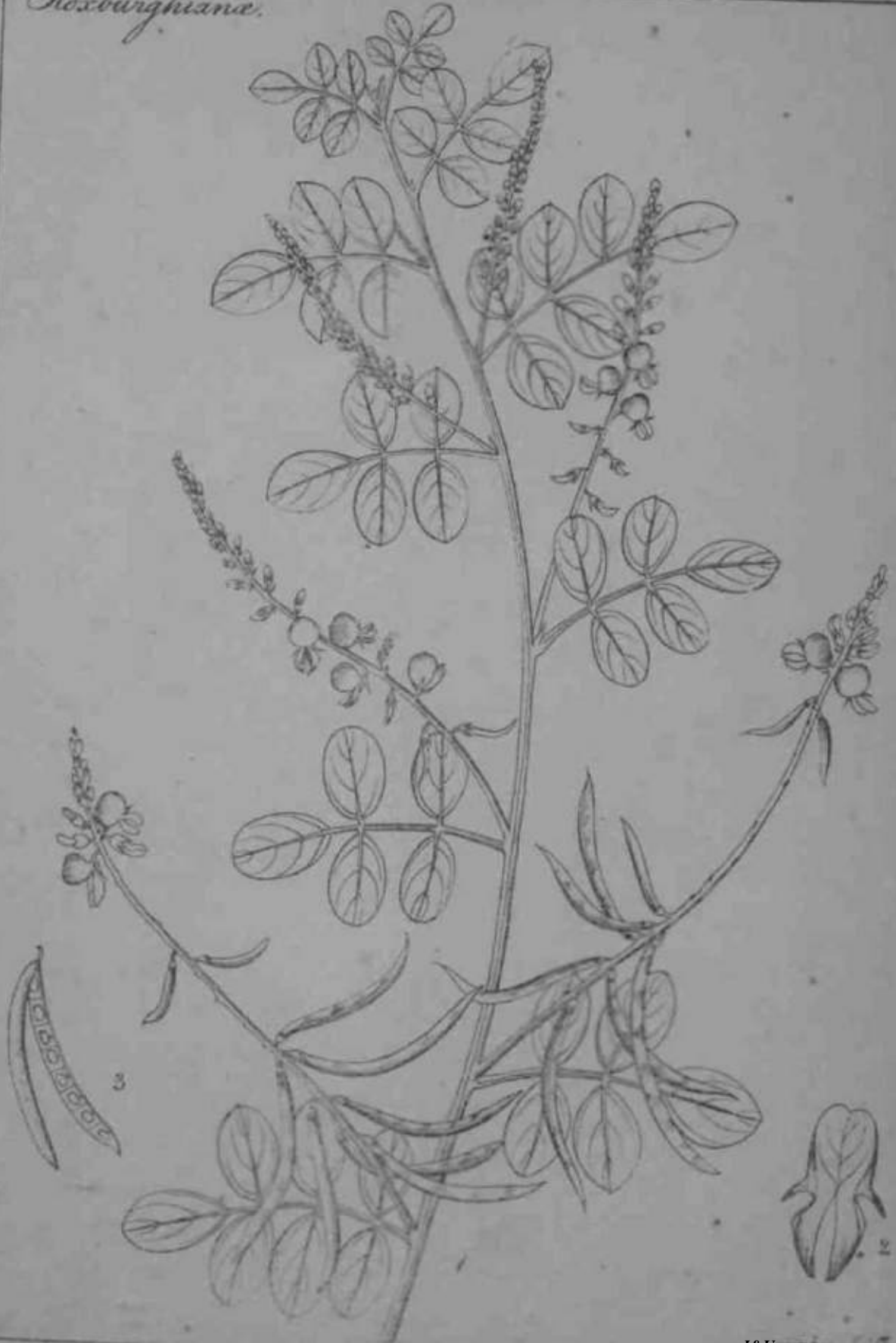


Swartz 1781

Indigofera treta (Linn.)
Indigofera cinerea (Roxb.)

Papilionaceae. Leguminosae. Lotae. 387
638

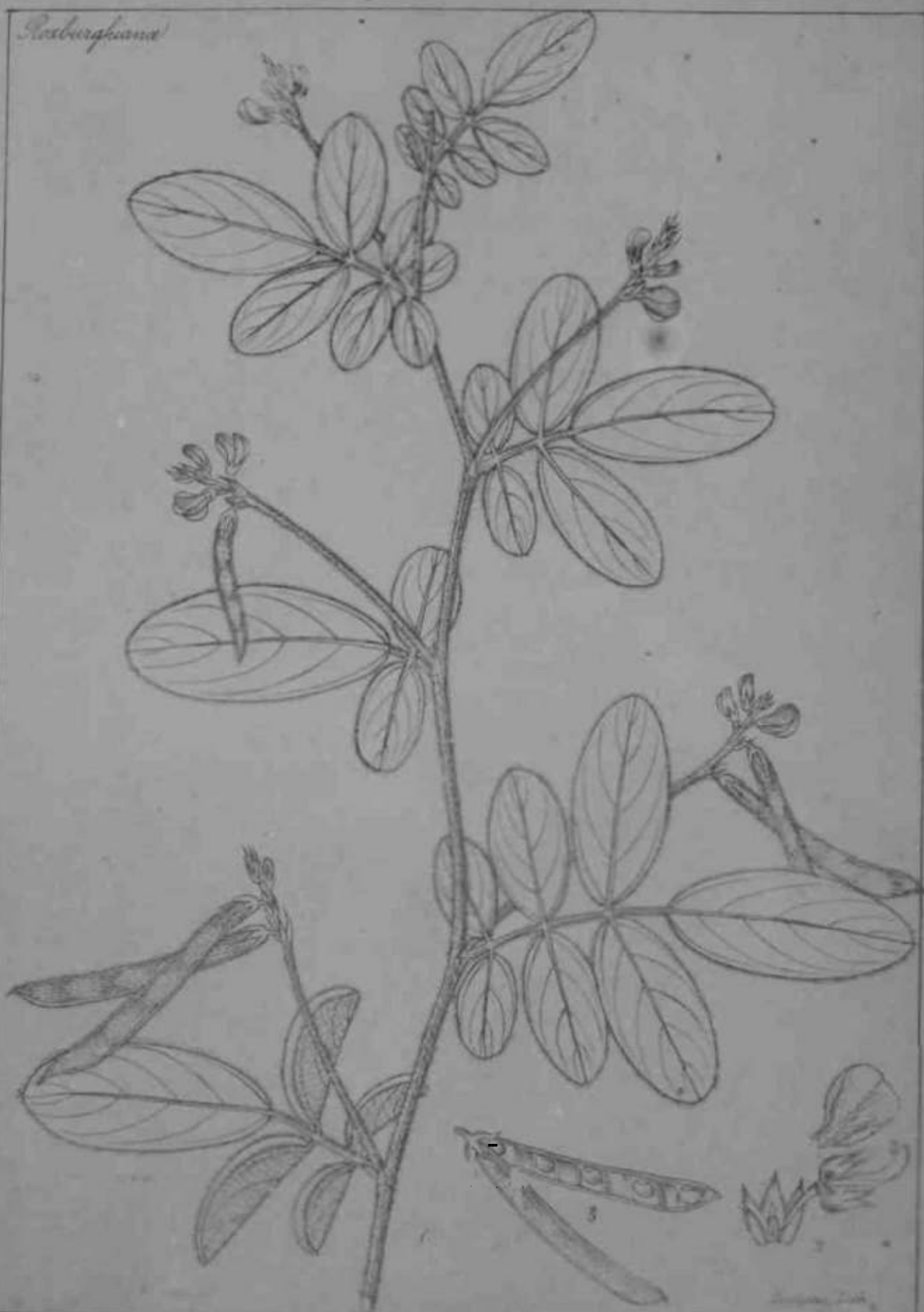
Roxburghiana.



J&U-*apri*. *Lith*

Indigofera staccida. / Koen. /

Roxburghiana



Tephrosia tinctoria (L.)
Galega Horyncana (Roxb.)

Papilionaceae.

Lupinus

Phaedra 319

Lupinus



2

Wormingia nana (Rost)

Lupinus

Papilionacea

Leguminosa

Phaseol

390
750



Flemingia congesta (Rach)

W. & A. G. S. 1840



Dalbergia Oregonensis (Reichb.)



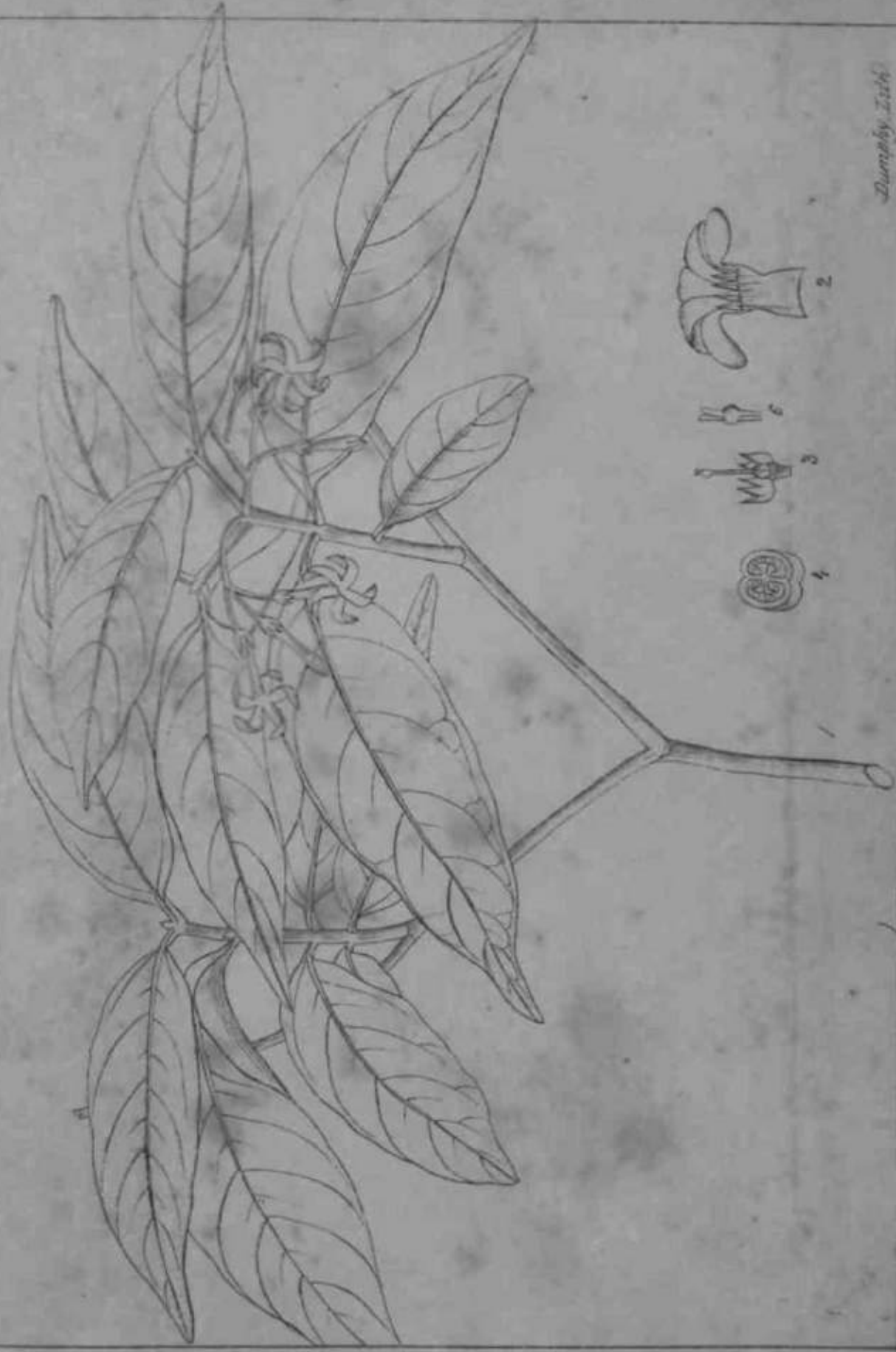
Adiantum nemorosum Linn.
L. *Adiantum nemorosum*

Euphycyned.

Barbingtoniana

Apocynaceae.

393



Dumphy, Zich

Suberimontana parviflora (Rorb)



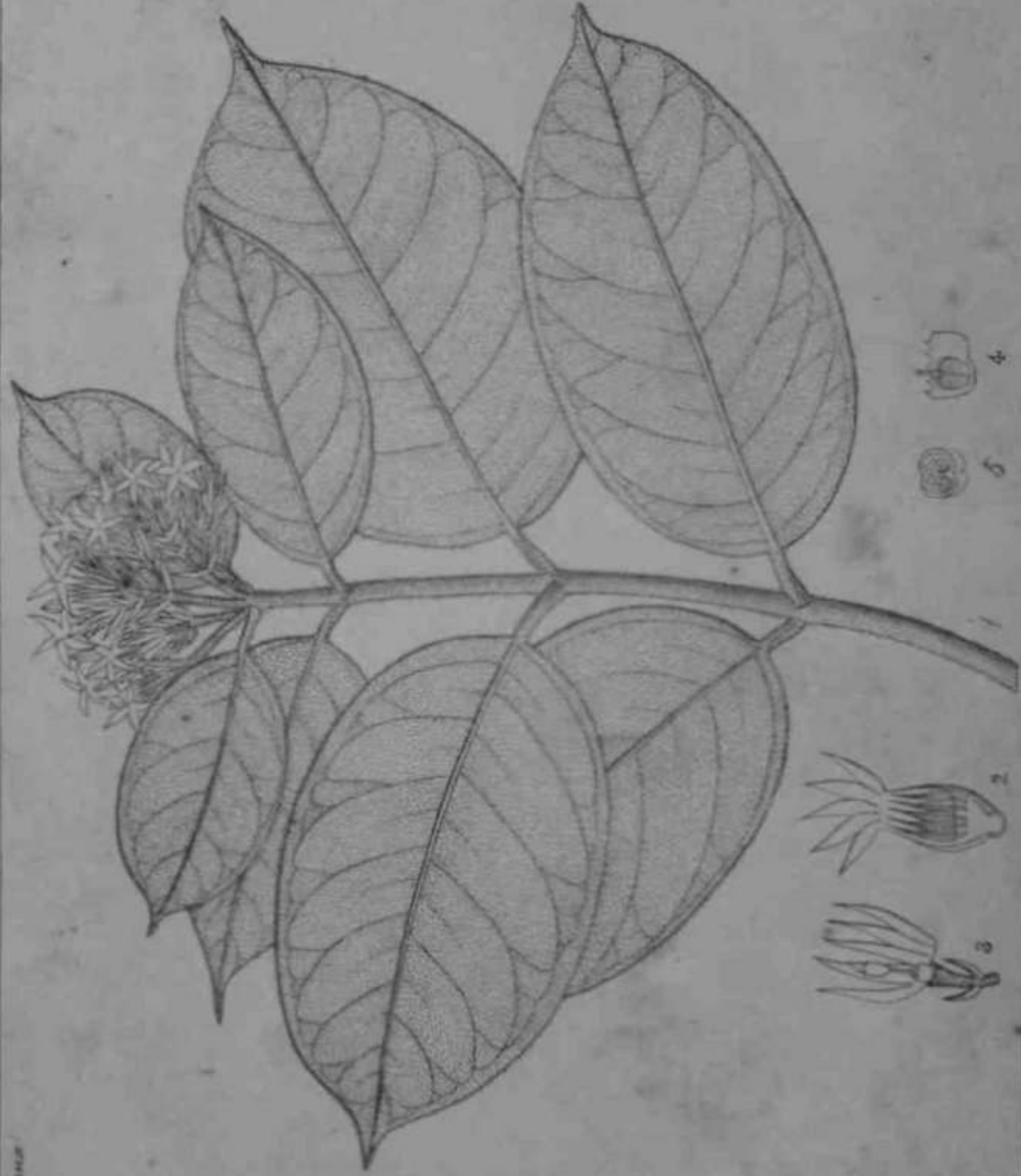
Hedyotis monogynus

Echites

Apocynaceae

395

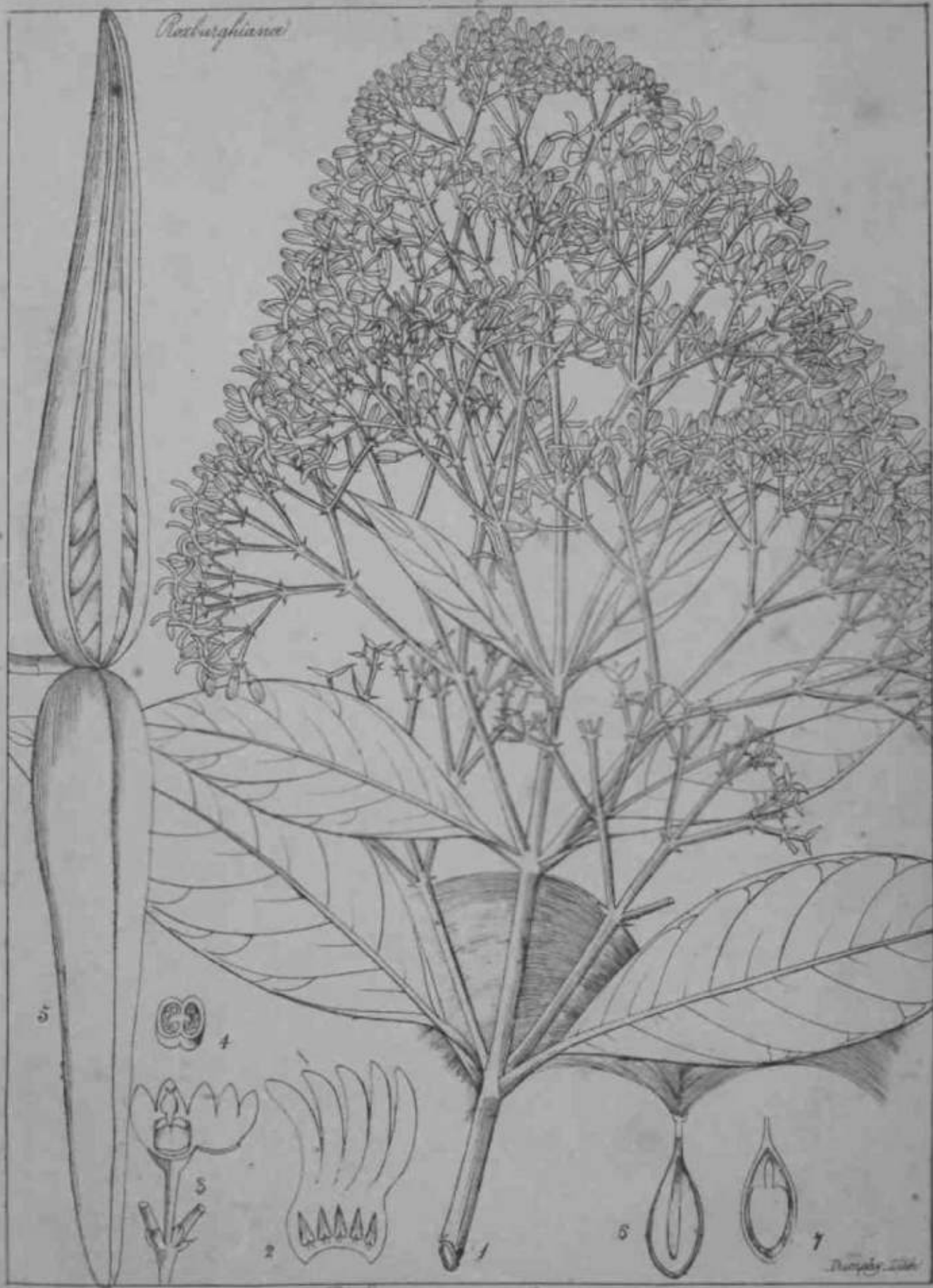
Paraguayana



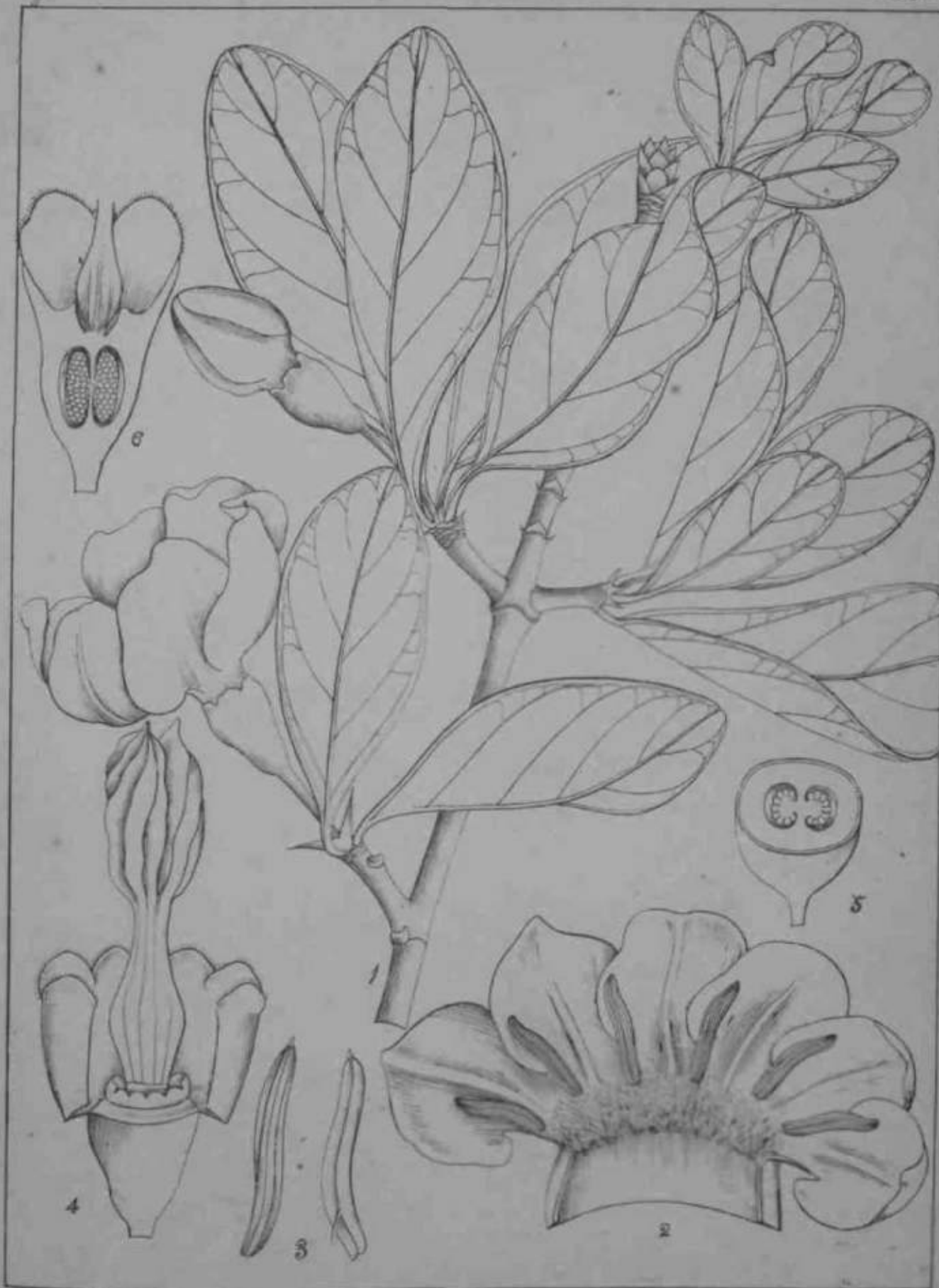
Echites cymosa (Roth)

Dumphy 216

Reichb. f.



Echites paniculata (Roxb.)





H. D. Sivas. del.

Guatteria florindi (Dun.)

Boissier. Lith.



Koenig, del.

Abelmoschus moschatus (Moench)

Dumortier, Lith.



Russek del.

Eriodendron anfractuosum (D.C.)

Dumphy lith.



Schmiebia villosa
Ornithopna villosa (Roel.)



Cupressus peninsularis (S. W.)
Schleichera pentapetala, Roxb.

Papilionaceae.

Leguminosa.

Loea

403
621

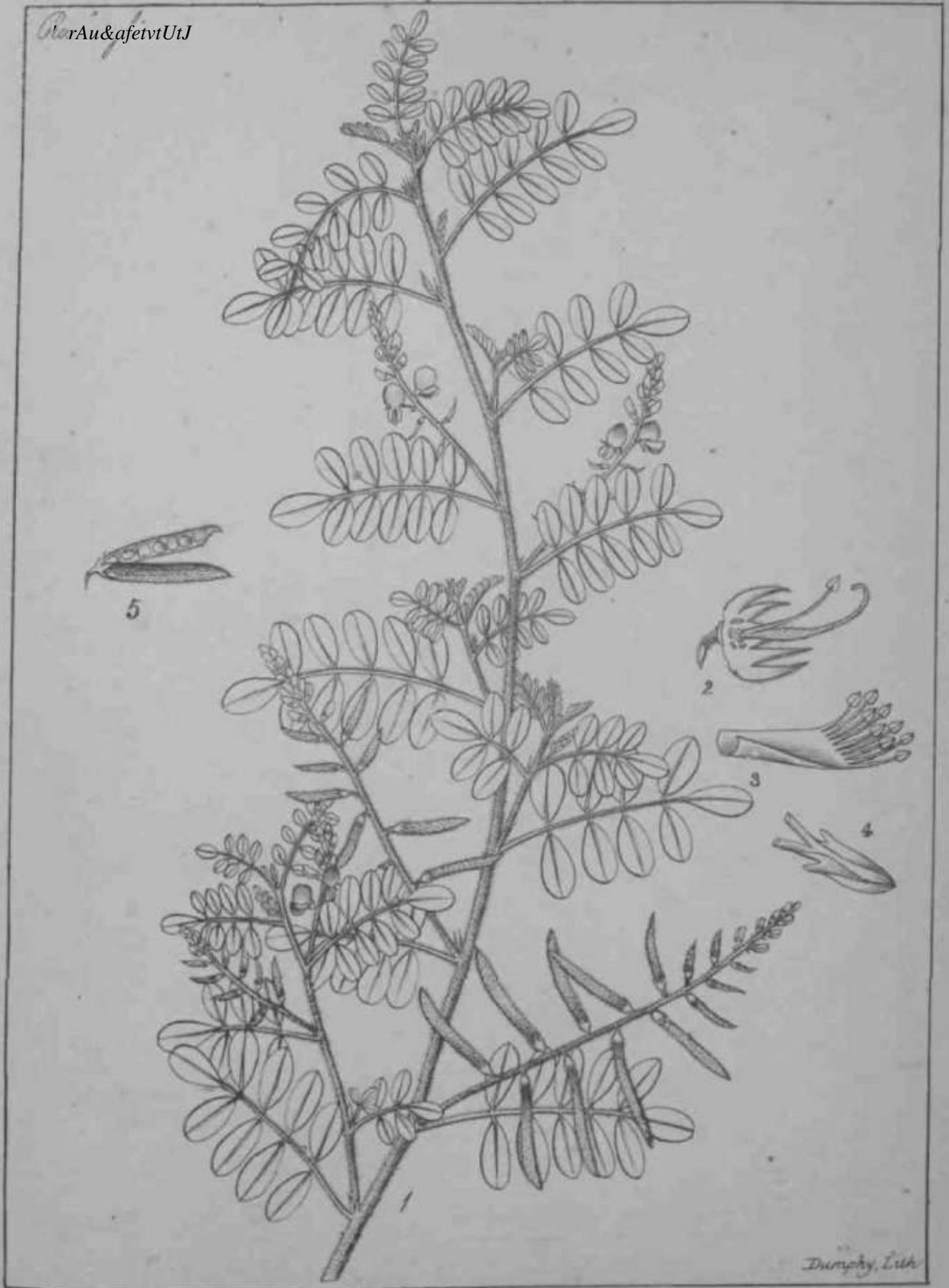
Roanokeana



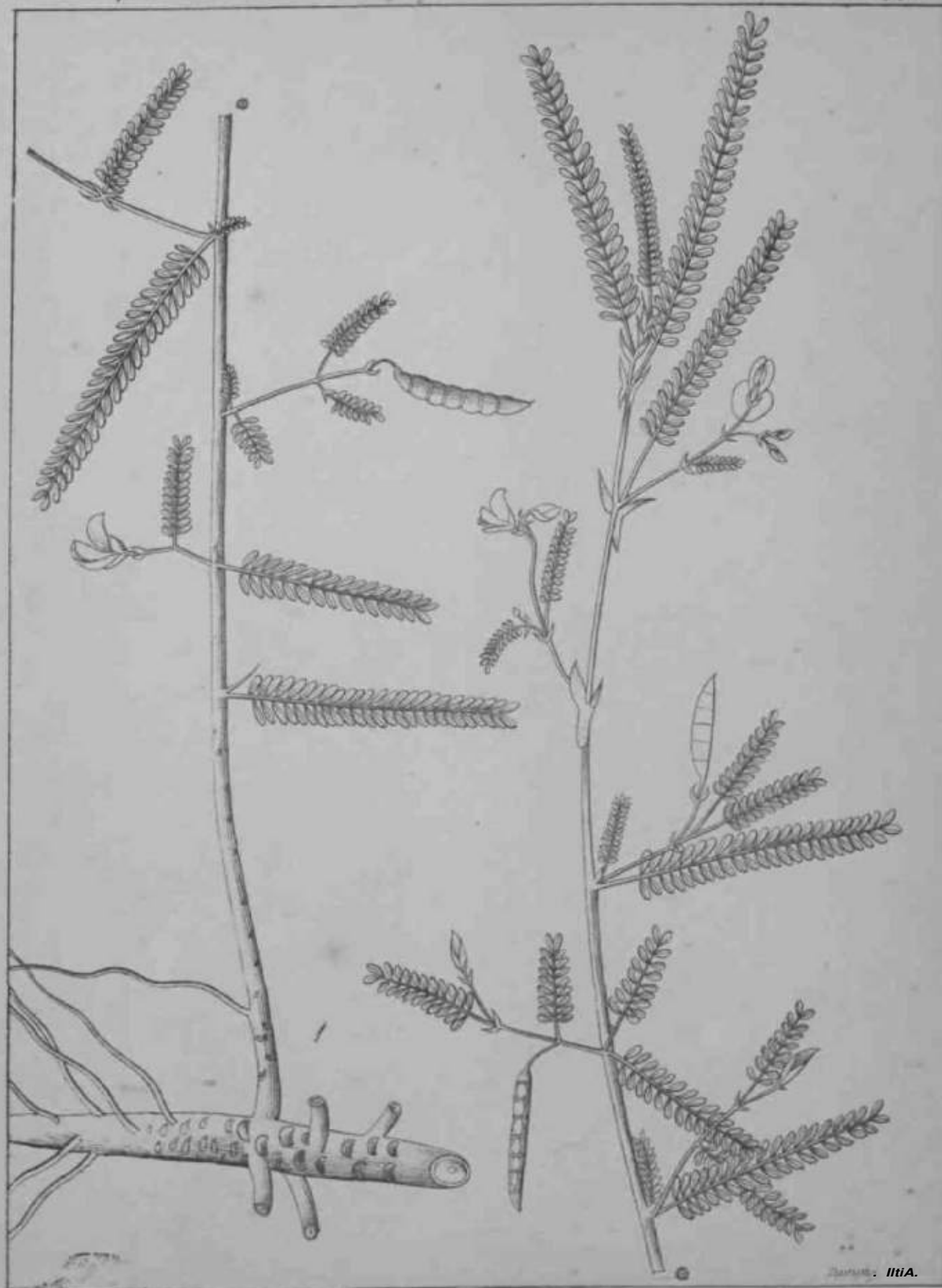
Indigofera tinctoria (Linn.)

Thompson, del.

PerAu&afetvUtJ



Indigofera viscosa (Sam.)



Aschynomene Indica (Linn.)
Hedysarum Nilotali (Roxb.)

Delin. IttA.

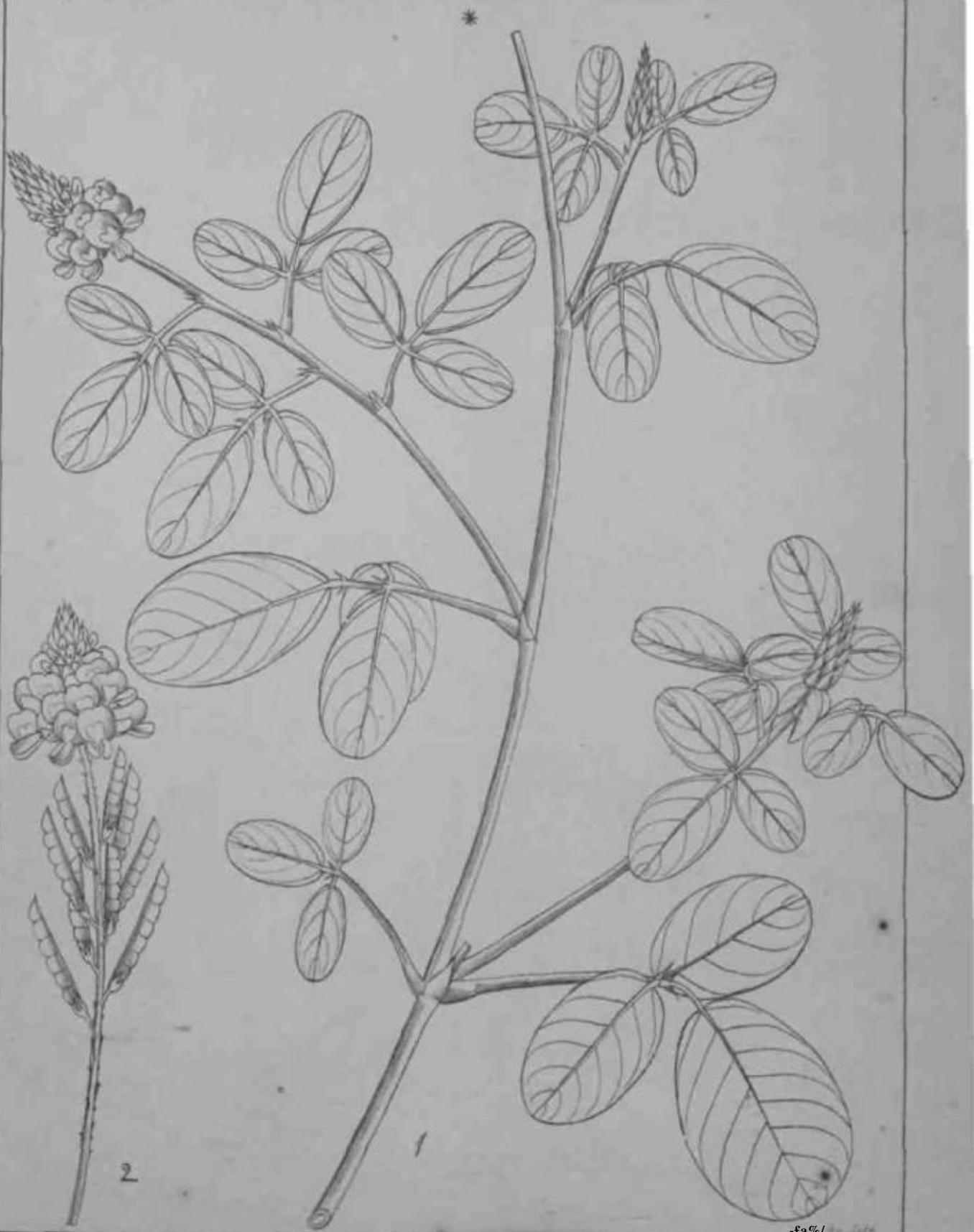
Papilionacea.

Liguminese.

Hedysaræ.

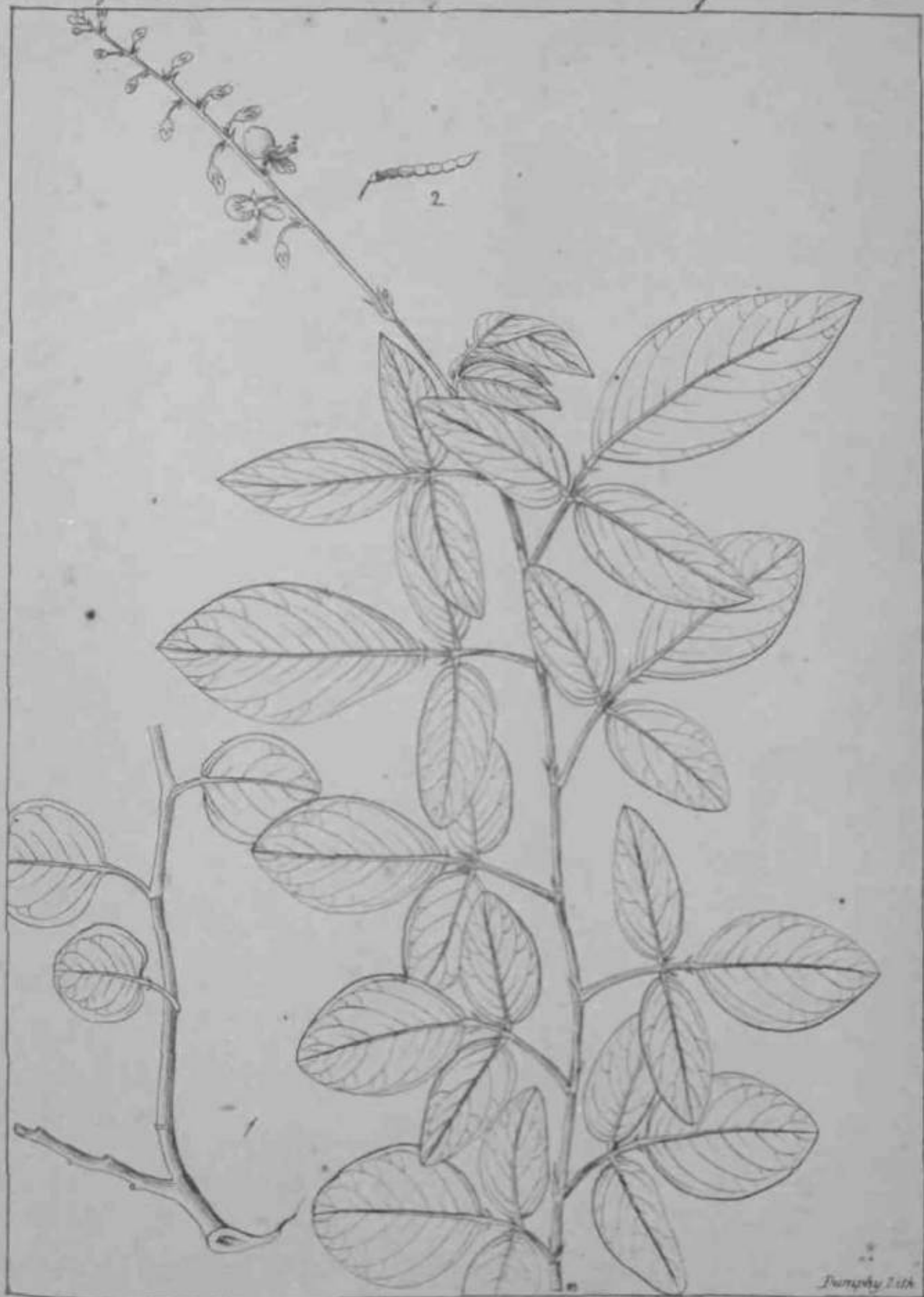
406
703.

Radurghione.



Lamortium polycarpum (D.C.)
Hedysarum polycarpum (Reich.)

-La%/. by Sch.



Lupinus patens
Halysaerea patens (Pursh.)

Barbighiana.



Homenqua procumbens
Hesperis procumbens (L.)

Scop. 1788.

Papilionacea.
Radburghiana

Liguminosa.

Hedysarea

409
699



2

1

Bonghy Lith.

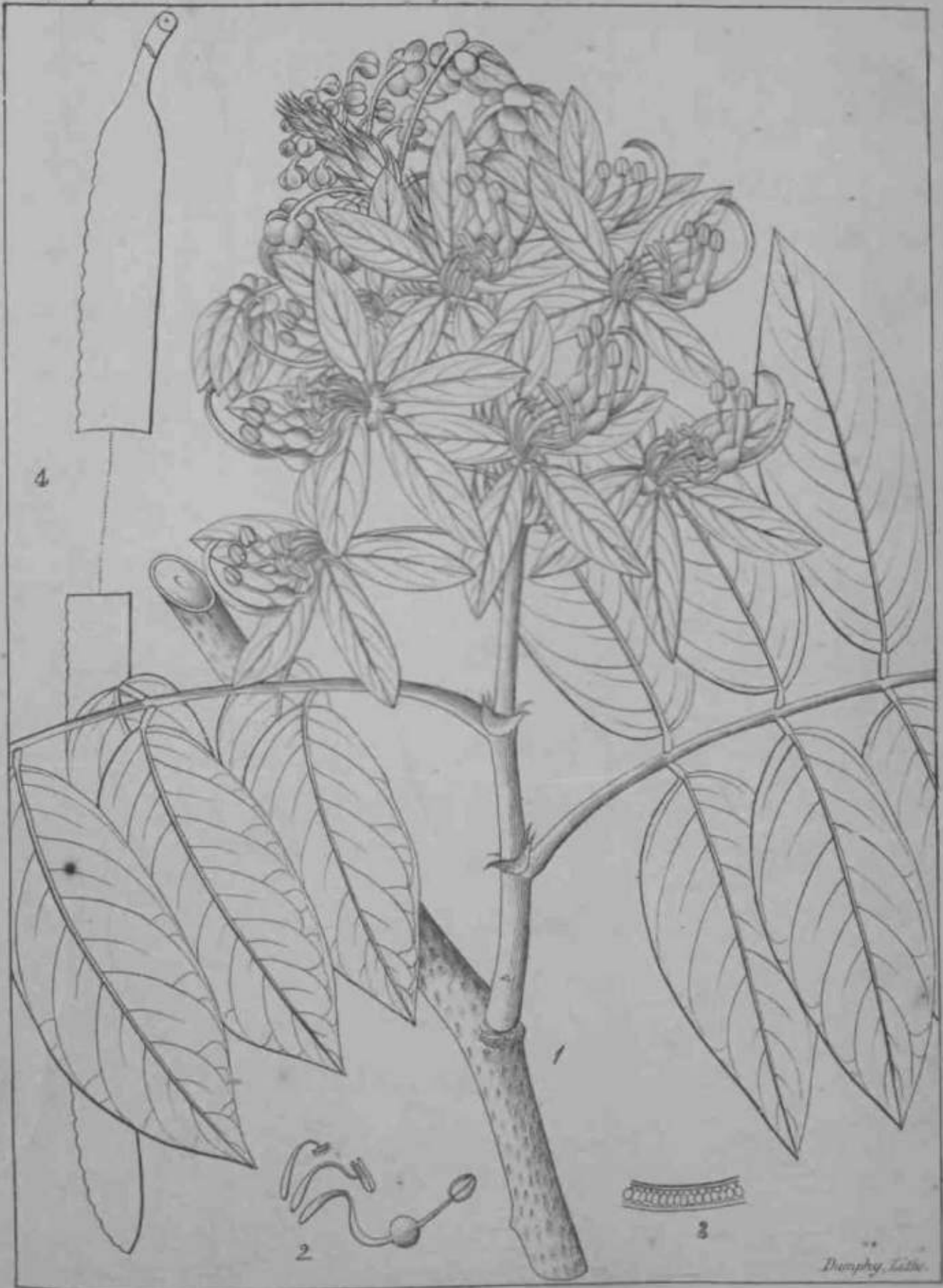
Lemnolium diffusum (DC)

Hedysarum diffusum Rad

Papilionacea.
Roxburghiana.

Leguminosa.

Phaseolea. 410



Dunphy, Lith.

Cassia nodosa (Roxb.)

Papilionacea.

Lepuminoſae.

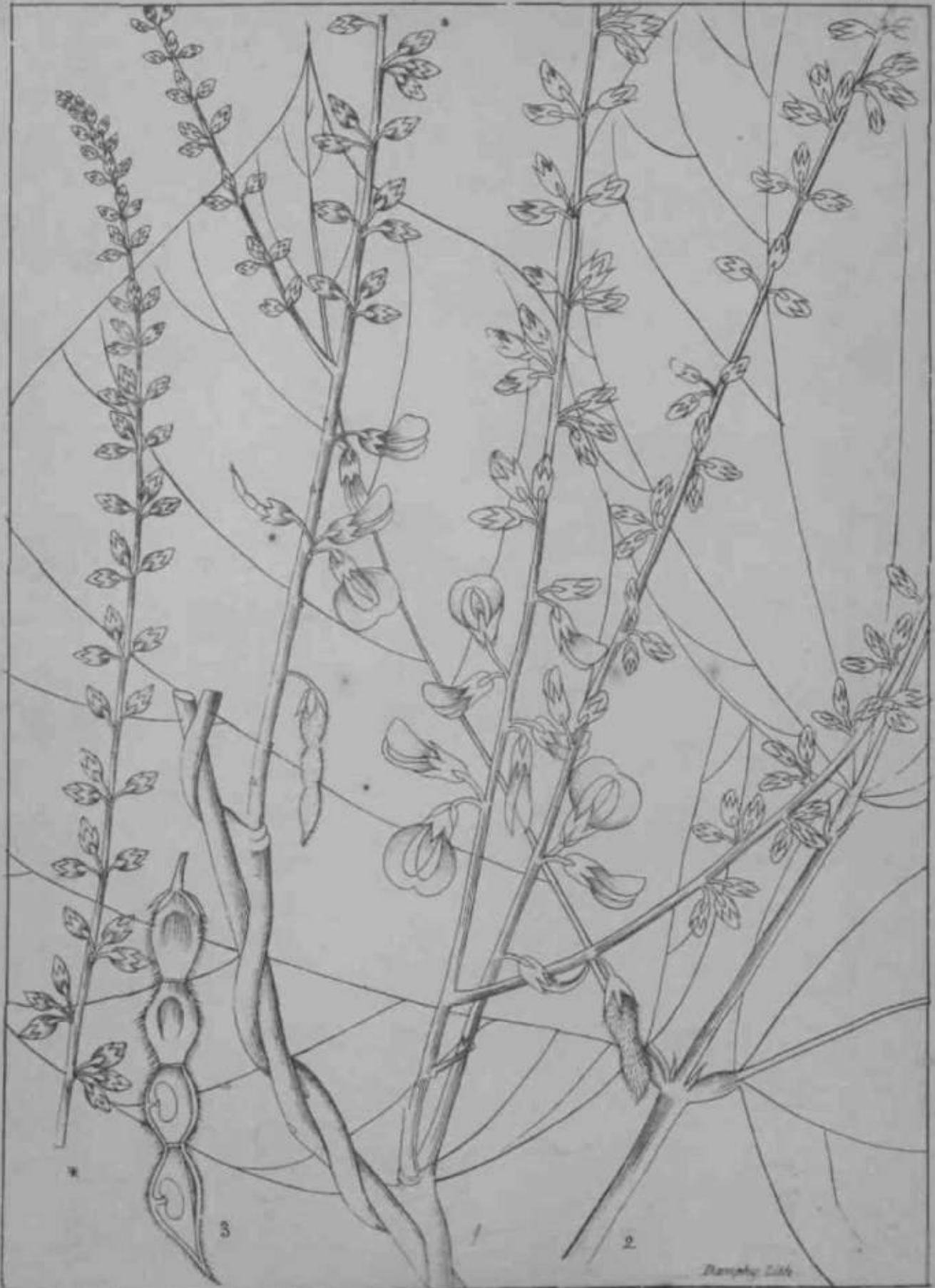
Hedysarrea.

411
-J&

Roburghiana



Uria (Dow)
Hedysarum cicutum (Reak.)



Lucaria tuberosa (L.)

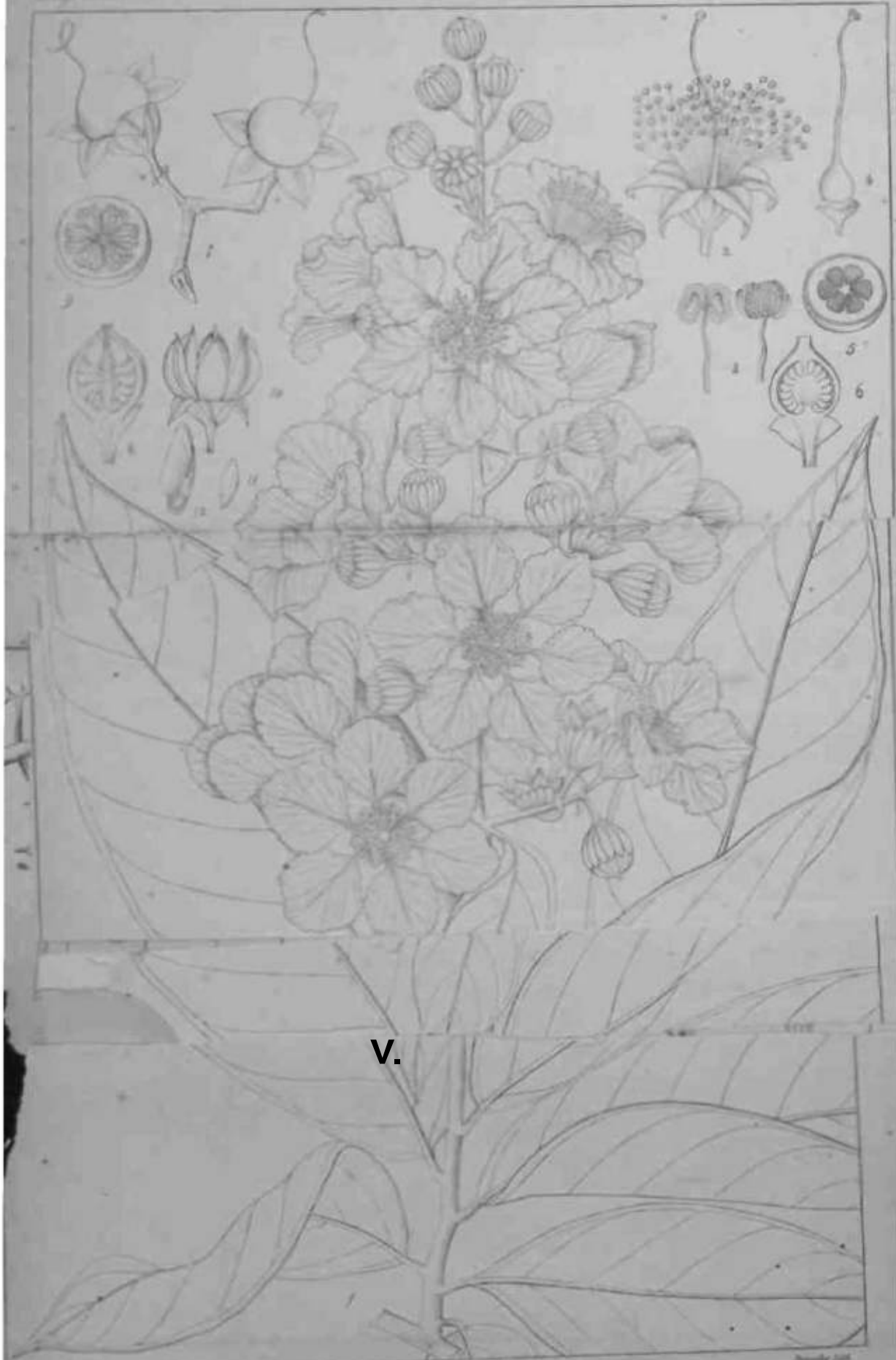
Hedysarium tuberosum (Rost.)

Dunlop. Lith.

Ligustrum

(TIA-17111)

113
913



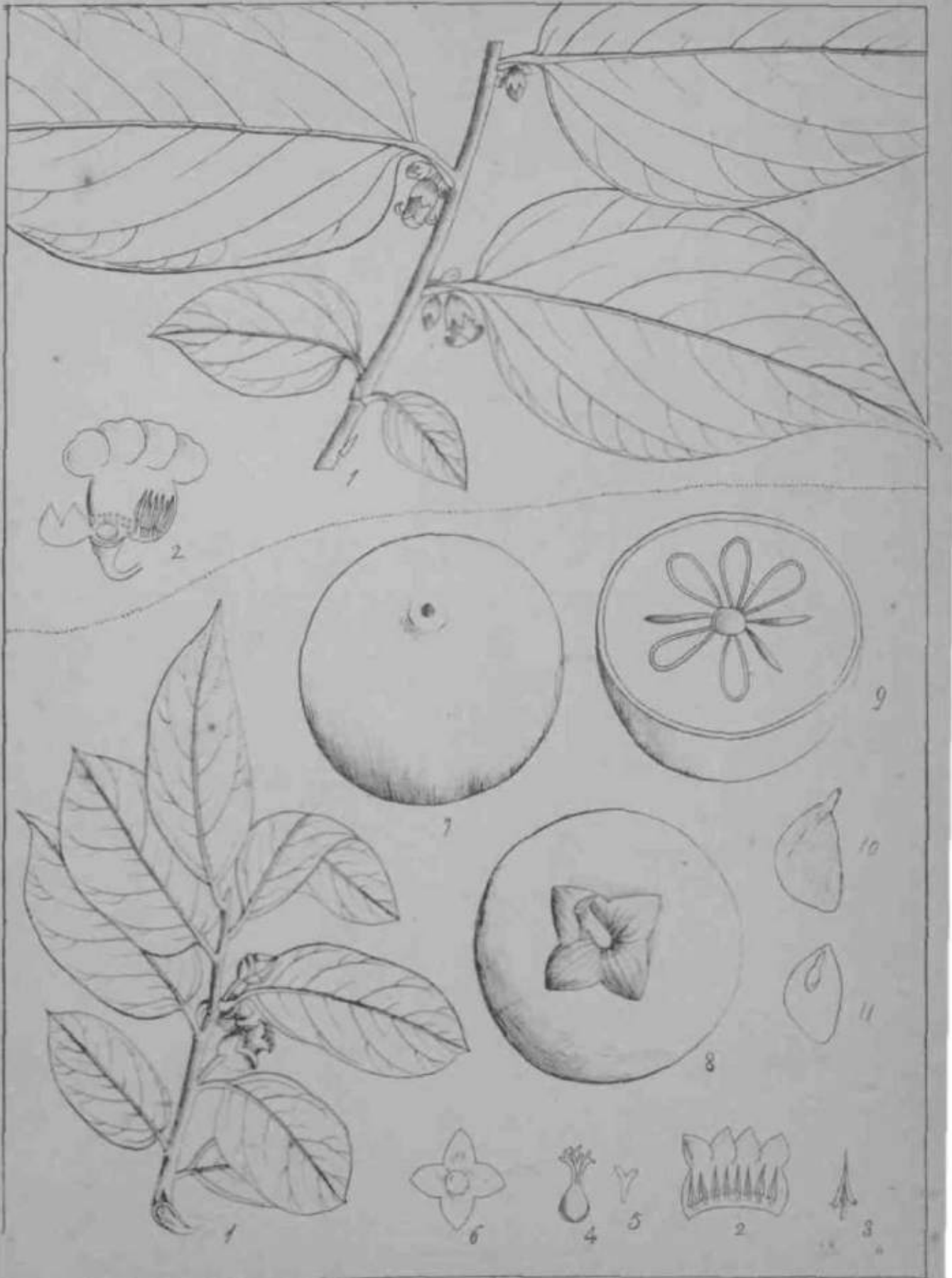
V.

Ligustrum lucidum (Rubi)

Shimper del.

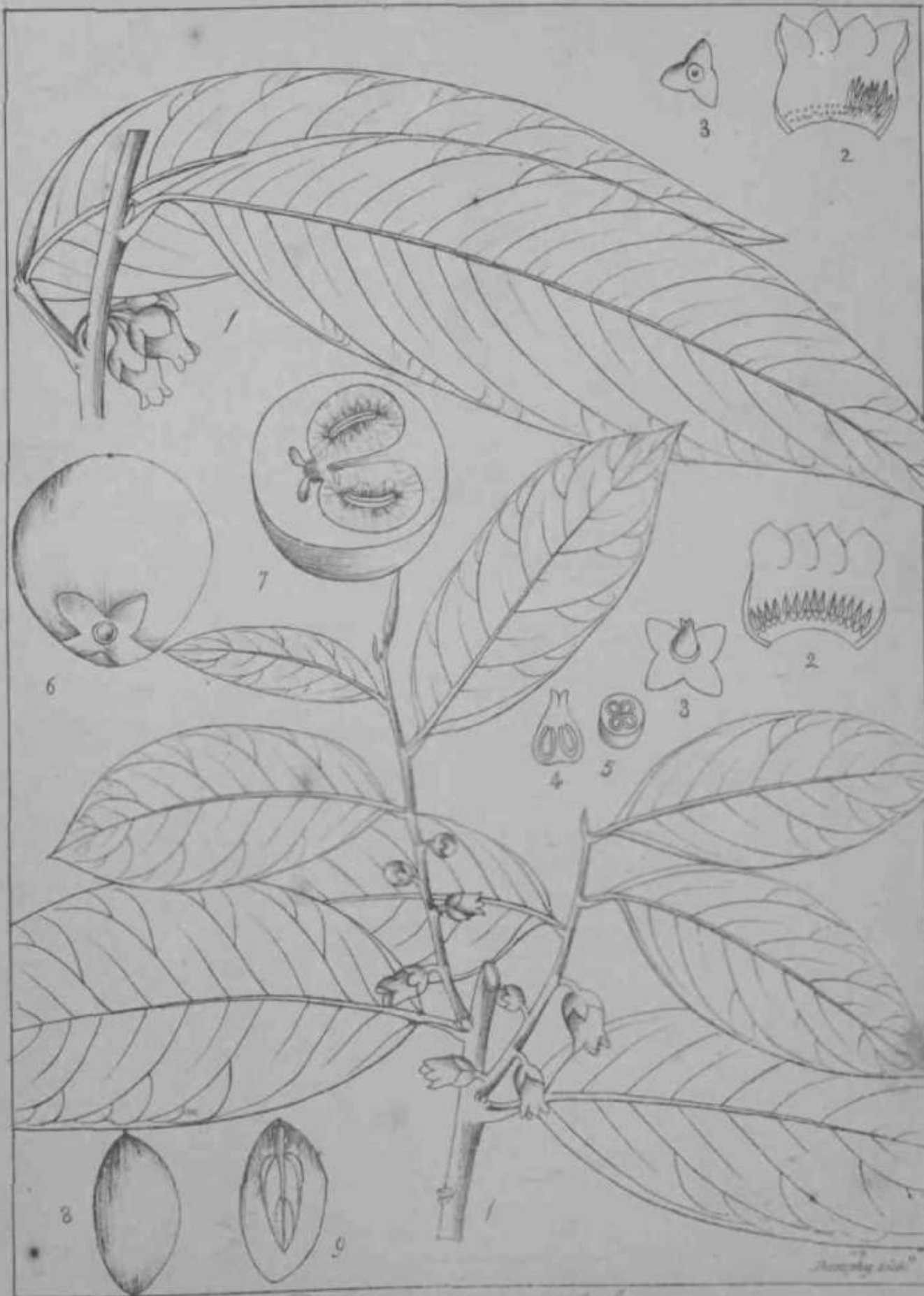


Sargularia odoratissima

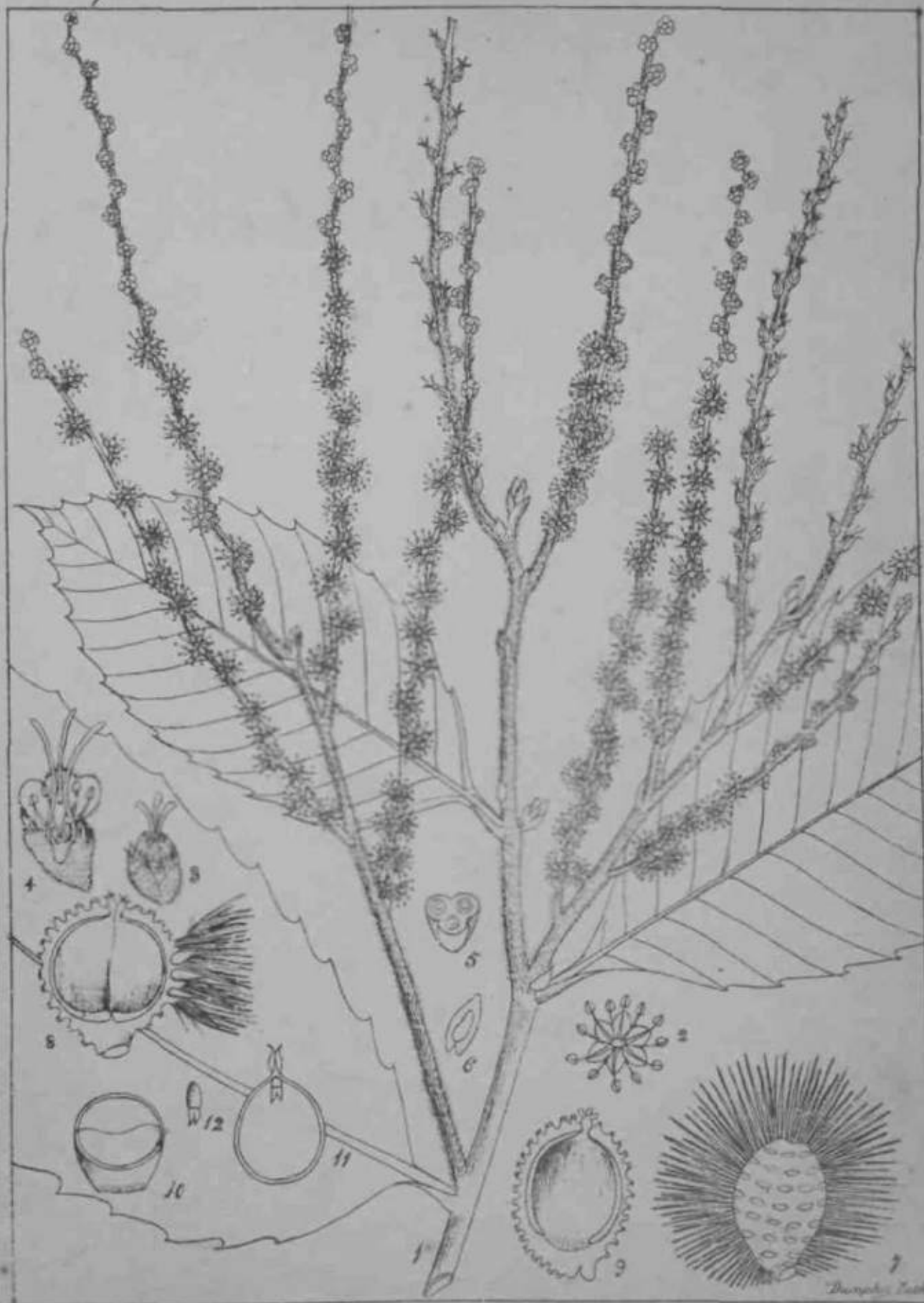


Diospyros kaki (Reichb.)

Drumh. Lith.



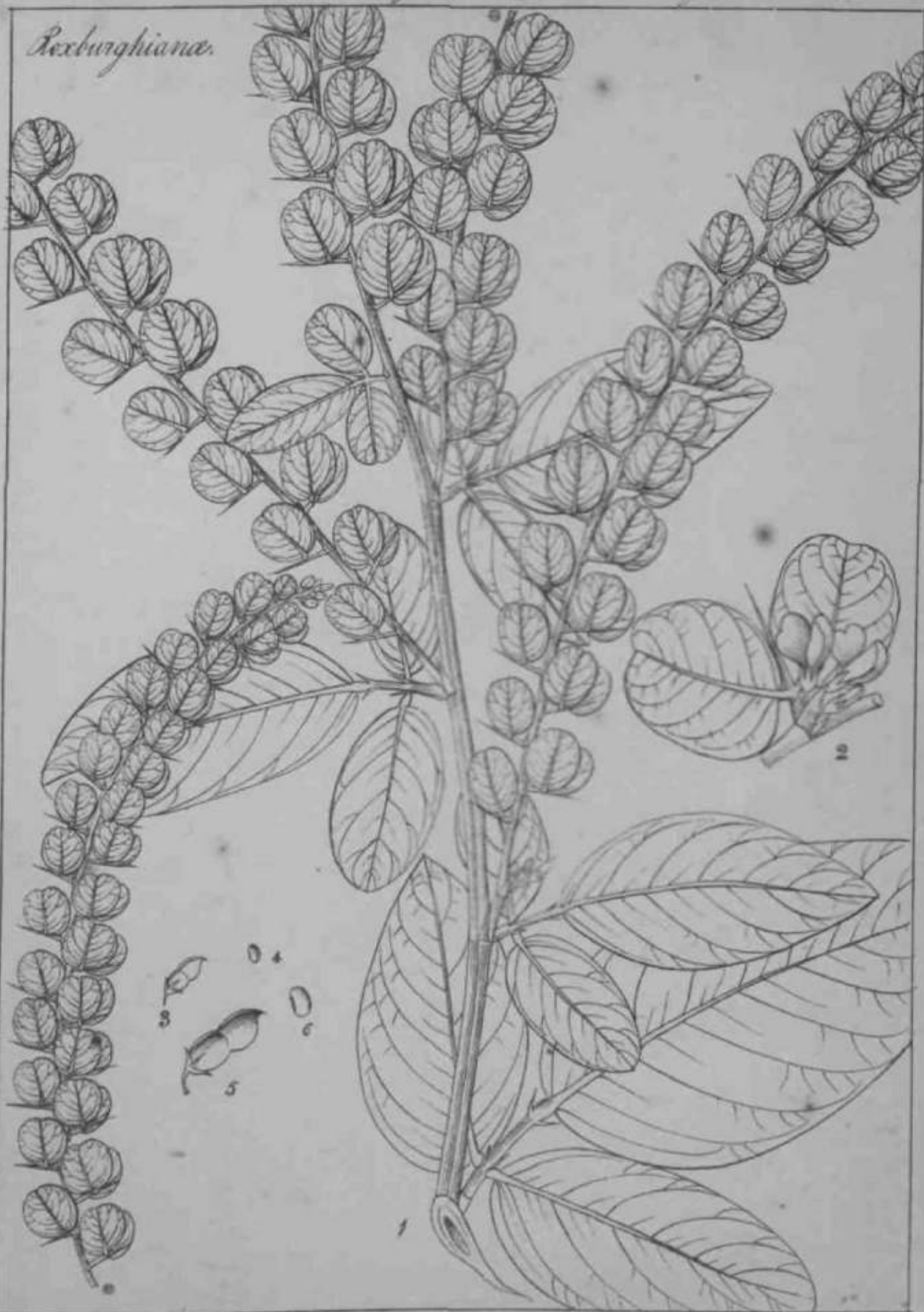
Diospyros racemosa (Racib.)



Custancia indica (Roxb.)

Dumortier del.

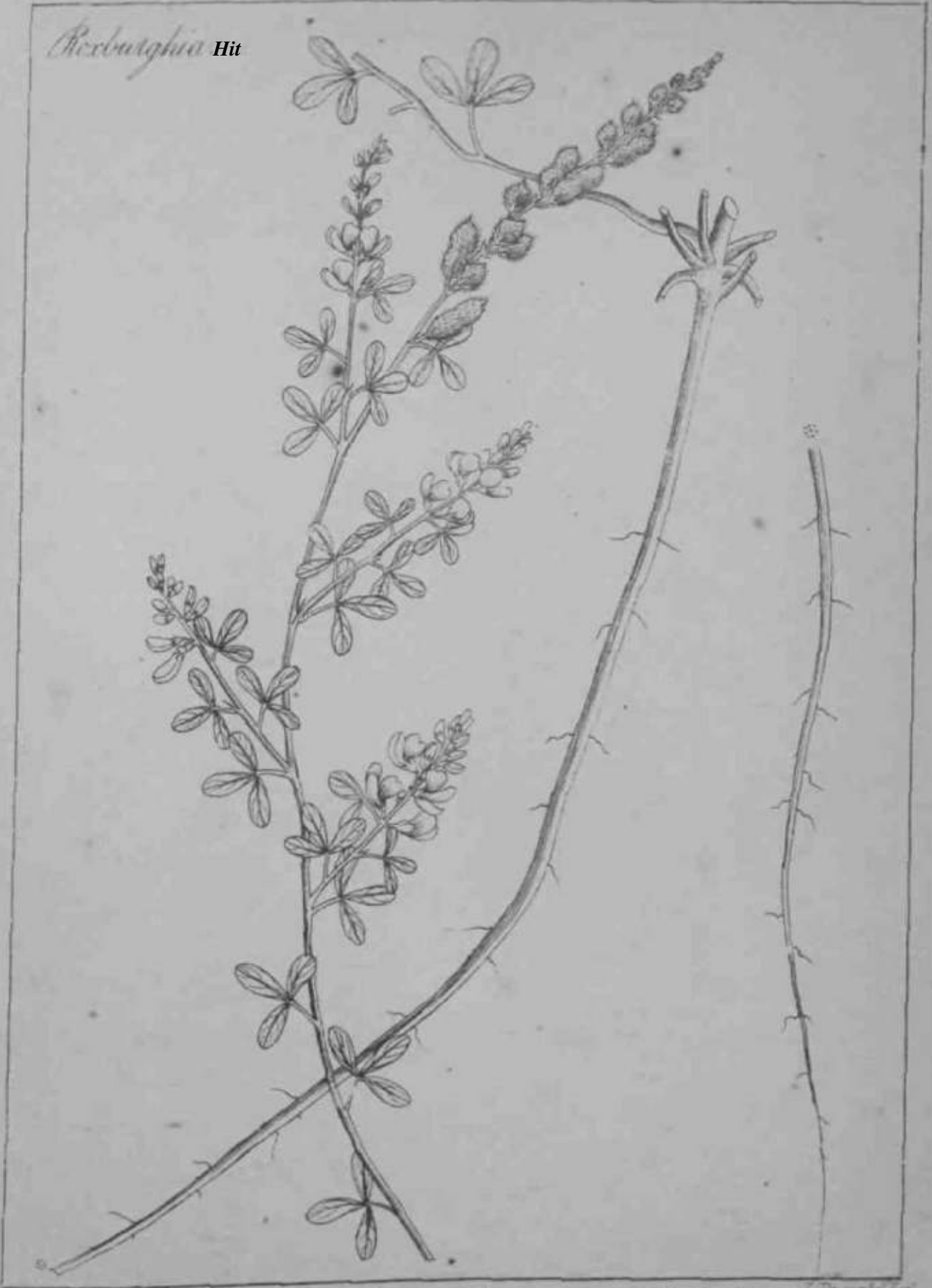
Rexburghiana.



Dicerma (D. C.)
Hedysarum pulchellum.

J. Drummond Lith.

Reichburghia Hit

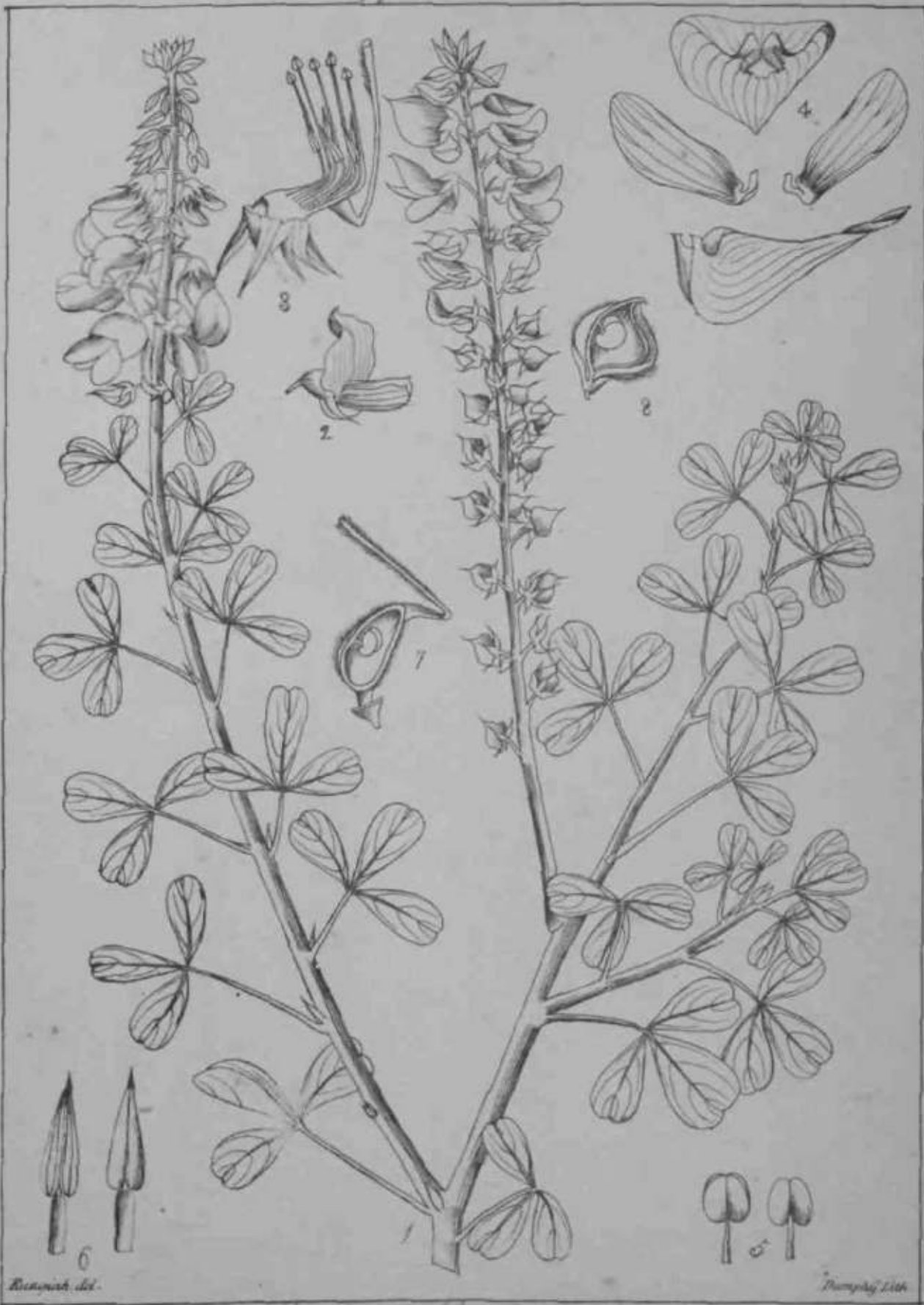


Decurva tkifat dactum, (C.D. G.)
Hedysarum biarticulatum.

J. Dampier



Pongamia elliptica (Walt.)
Cyathodupa elliptica (Host.)



Rosenbach del.

Dumortier lith.

Lotus filiformis Willd.

Radurghiana



Habenaria schelaris (R. B.)
Echinos schelaris (L.)

Eschscholtz

Rasburghiana



Echites parviflora (Roxb.)

Thompson, 1886

Roxburghiana



Apocynum acuminatum (G. Don)
Echites acut. — (Roxb.)

Donohy Lith.

Rochburghiana



Darwin, L.H.

Agaveosma marginata (L. Don)
Echites marginata (Roxb.)

Carissa

Spocynae

Rubiginosa



Castro bush

Andrus (Linn.)

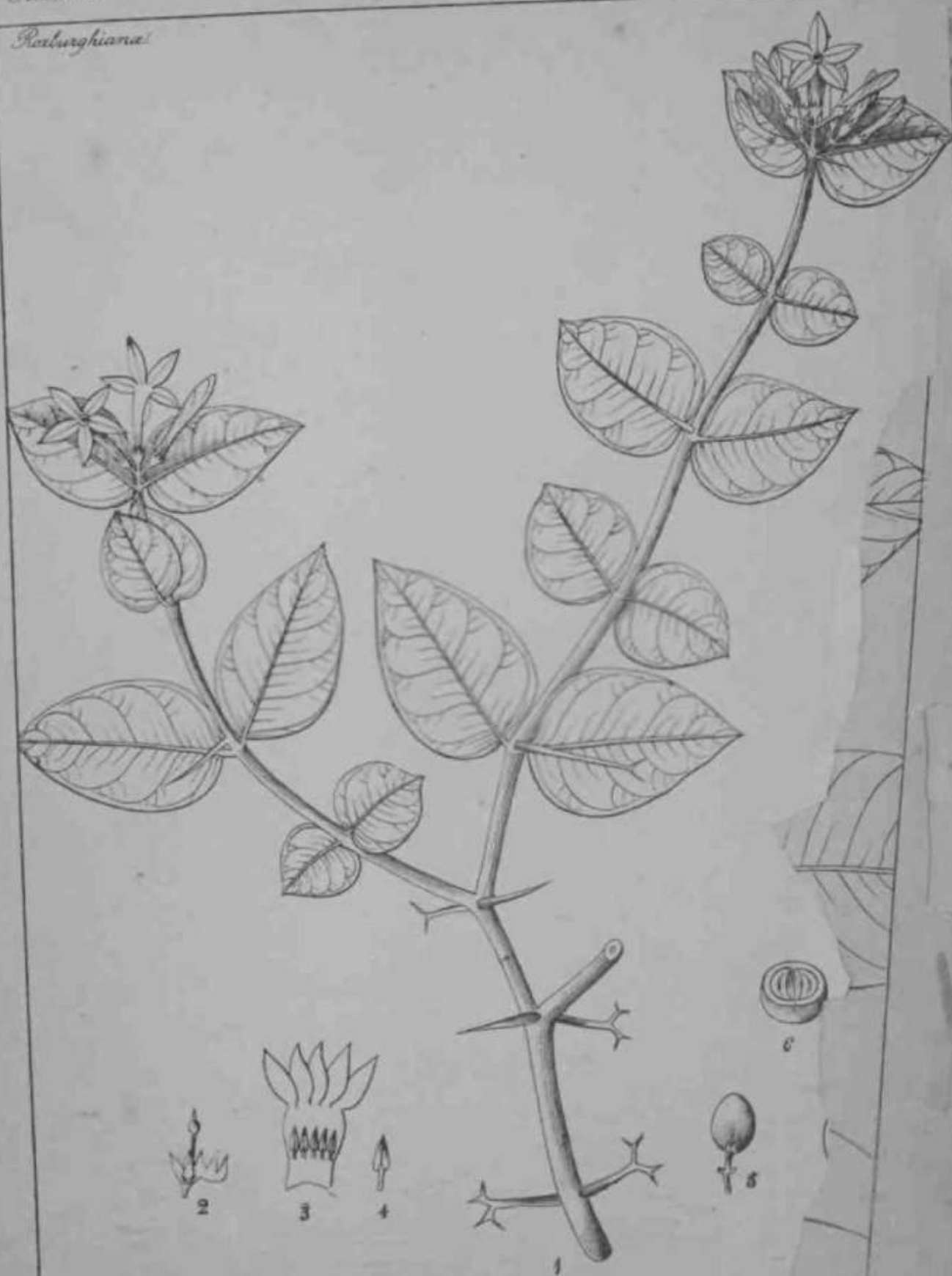
Dunlop

1840

Carissee!

Apocynaceae

Barburghiana!



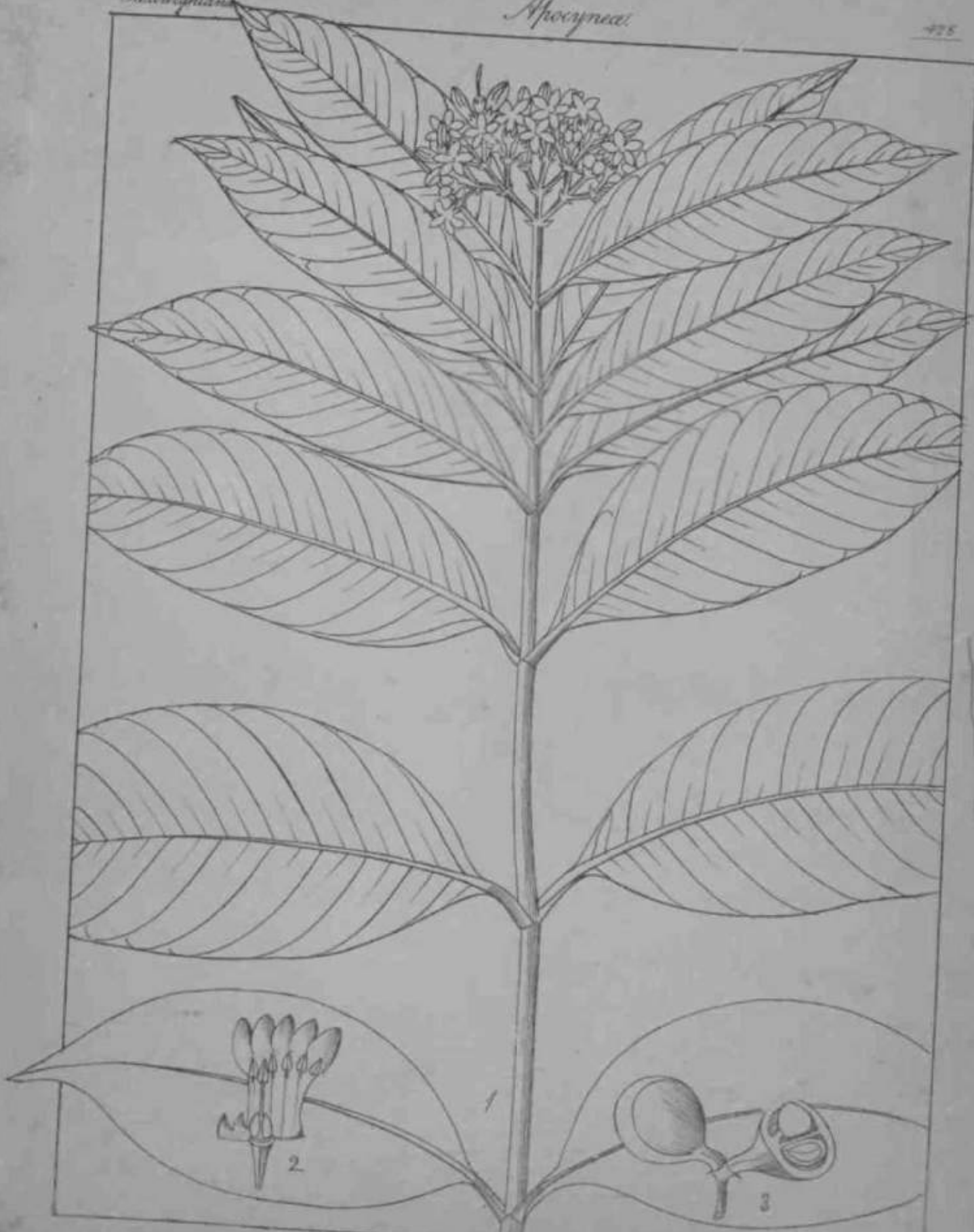
Hunteria acrymbosa (Barb.)

Thompson 2nd ed.

Humera
Richardsonii

Apocynaceae

478



Humera corymbosa (Pursh)

Samuel Lee

•i\$tti&i,y*Aii*ut-



Vallaris Peruviana (Bucam)
Echites hirsuta (Red)

Dimphy 1886

Rach. i za4tari/f



Echinocarpus **L.** *luteus* (R. Br.)
Echites pulchellus (Rach.)

Roxburghiana

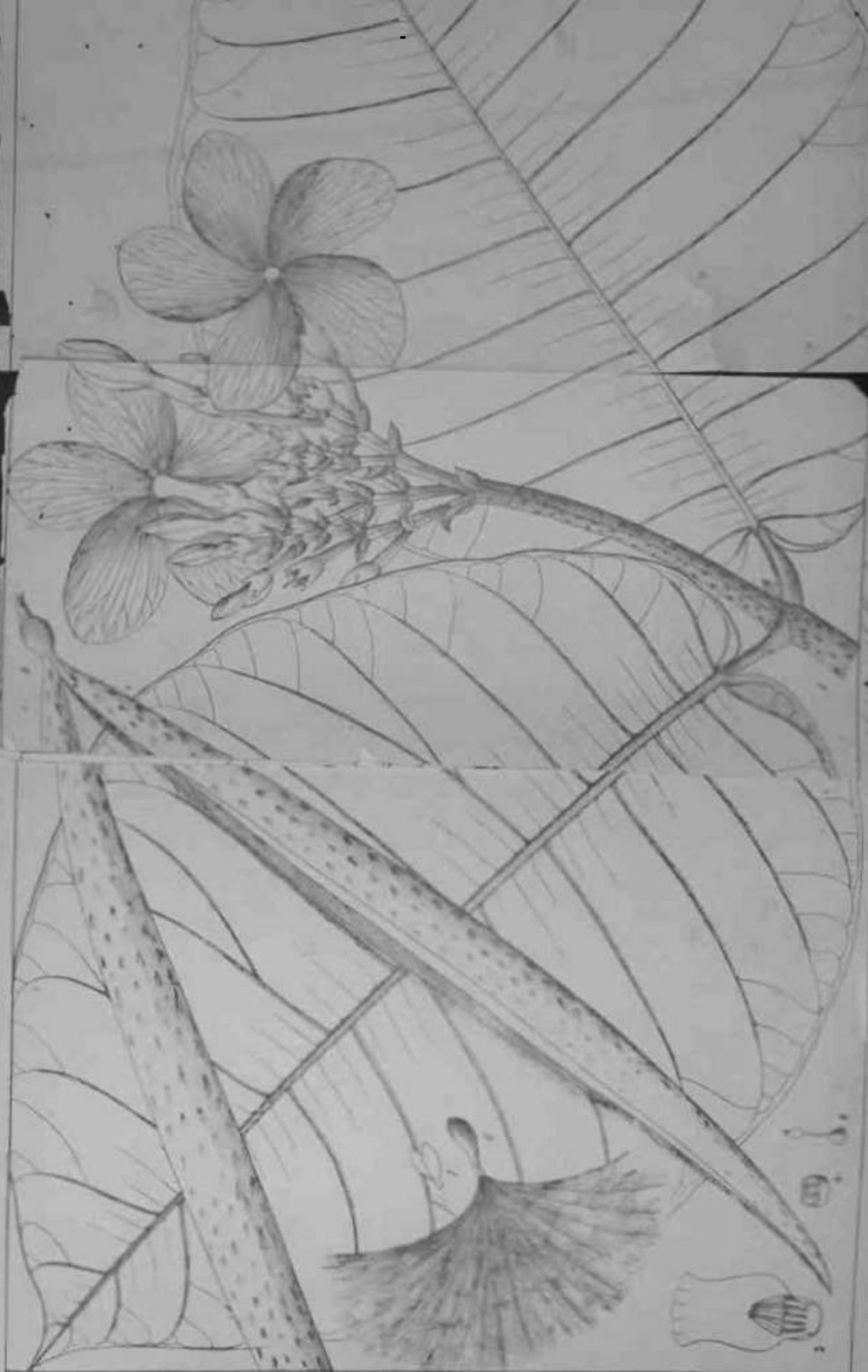


Calpicarpum Roxburghii (L. Don)
Cerbera lutea (Roxb.)

Barthelet Lili

C. arborescens

Castilleja



Castilleja arborescens L. var.
Castilleja arborescens L.

Tabernaemontana



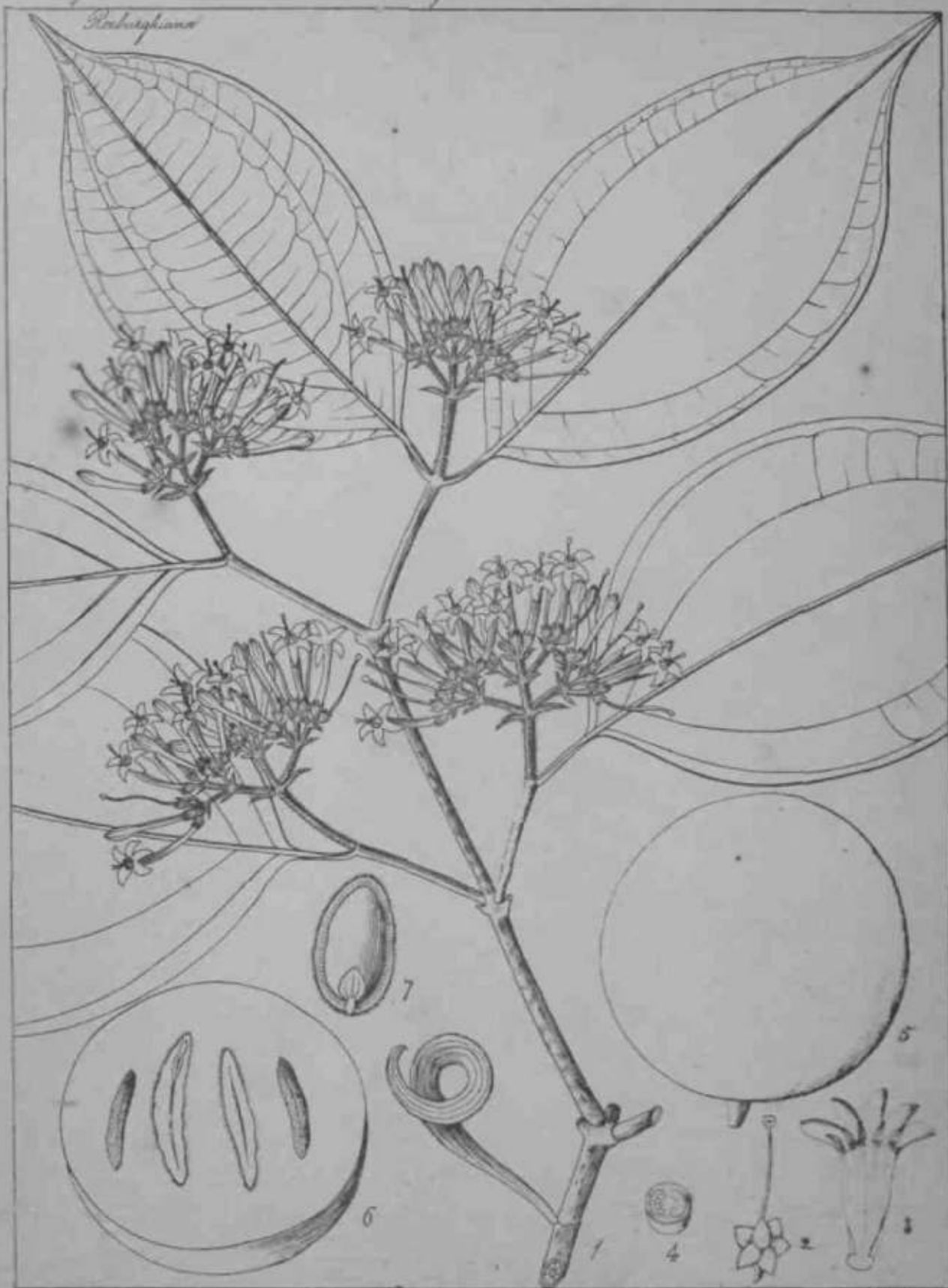
Tabernaemontana dicholoma (Rat.)

Strychnia

Loganiaceae

134

Peruviana



Strychnos adalvina (Lin.)

Dumort. Lin.

Nyctea

Nyctacea

435
7032



Frangula del.

Sambuca vulgaris (L.) C.

Frangula L.



Hytenuca venenata B. & P.
C. chilos venenata Hort.

Roburghiana

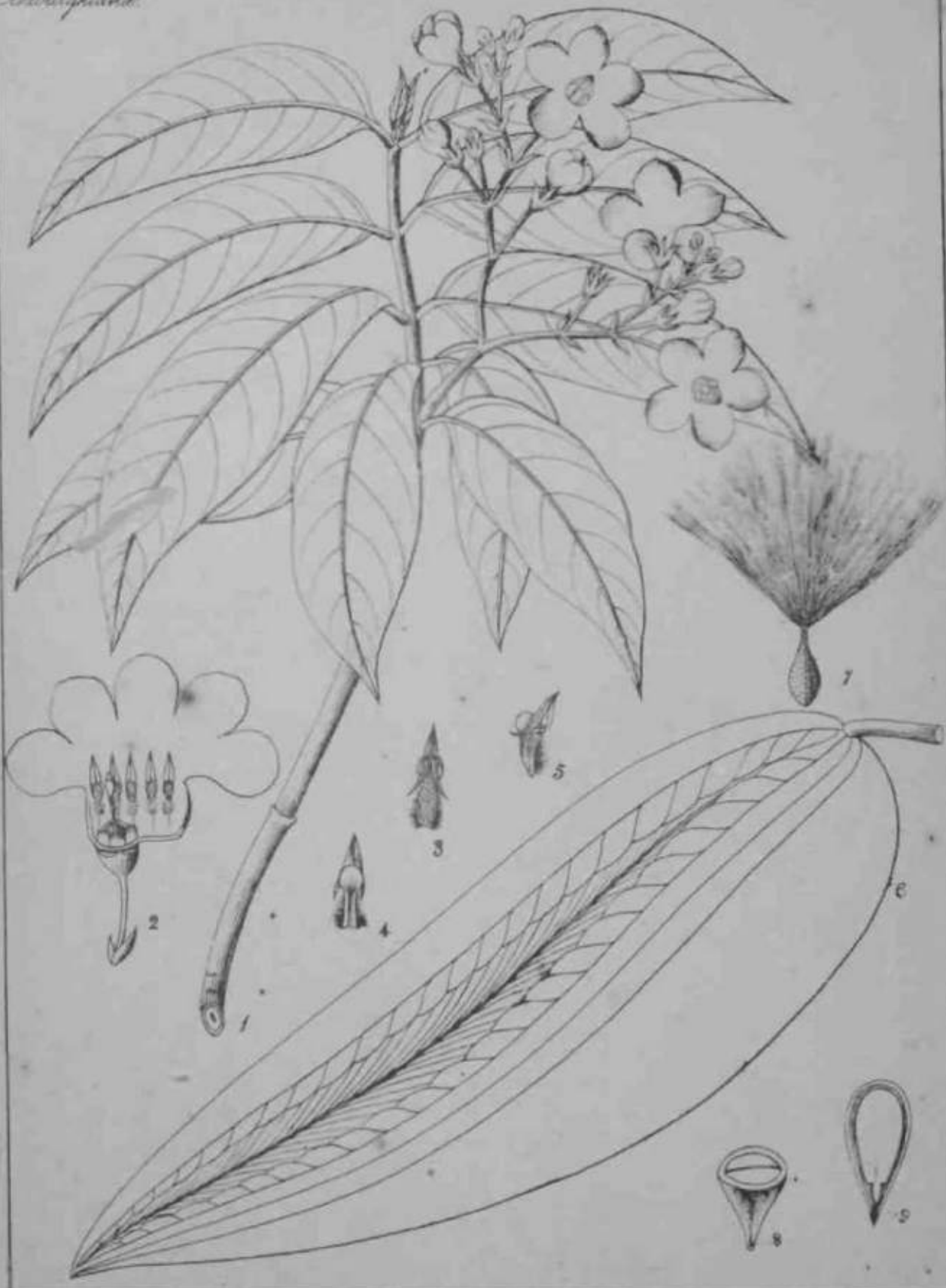


A & @

Carissa villosa (Roxb.)

Thompson 2000

Barbuziana.



•*
Vallaris dichotoma (Wall.)
Echites dichotoma (Roxb.)

Dumphy Lith.

Rexburghiana



Dumphy Lith

Agänosma Rexburghii (G. Don)
Echites caryophyllaria (R.)

4

Ephioxylea

Apocynica

Palmyriana



Solanum Malab.

Cerbera odollum (Gart. Roxb.)
Sanghonia odollum (L. Don.)

Caraburgiana



Wrightia coccinea (Sims)
Wrightia caribaea (R.)

*Wrightia
Washingtoniana*

Apocynaceae.

443



Wright

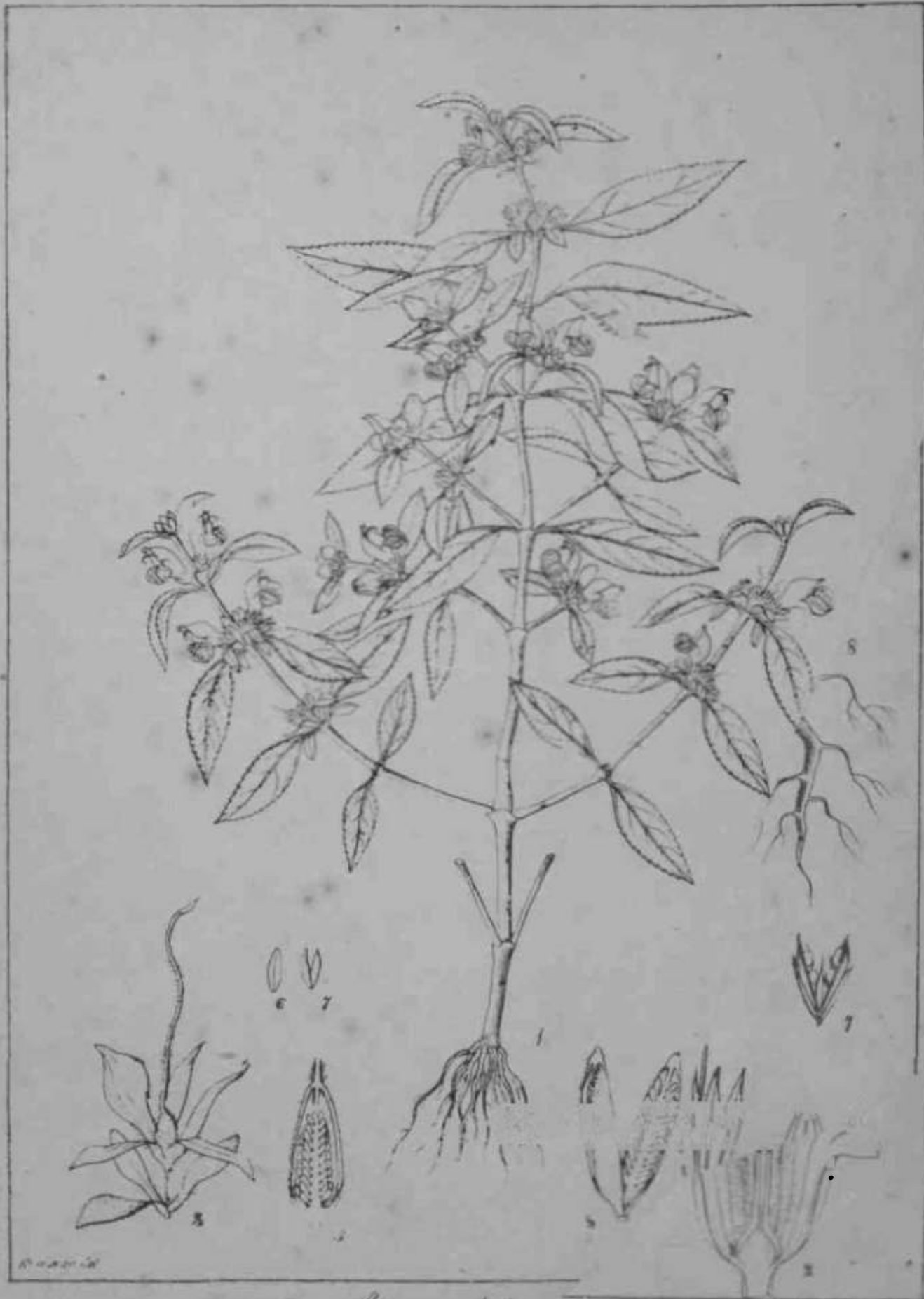
Adruca
Westringiana

Apocynaceae

Hb.
711

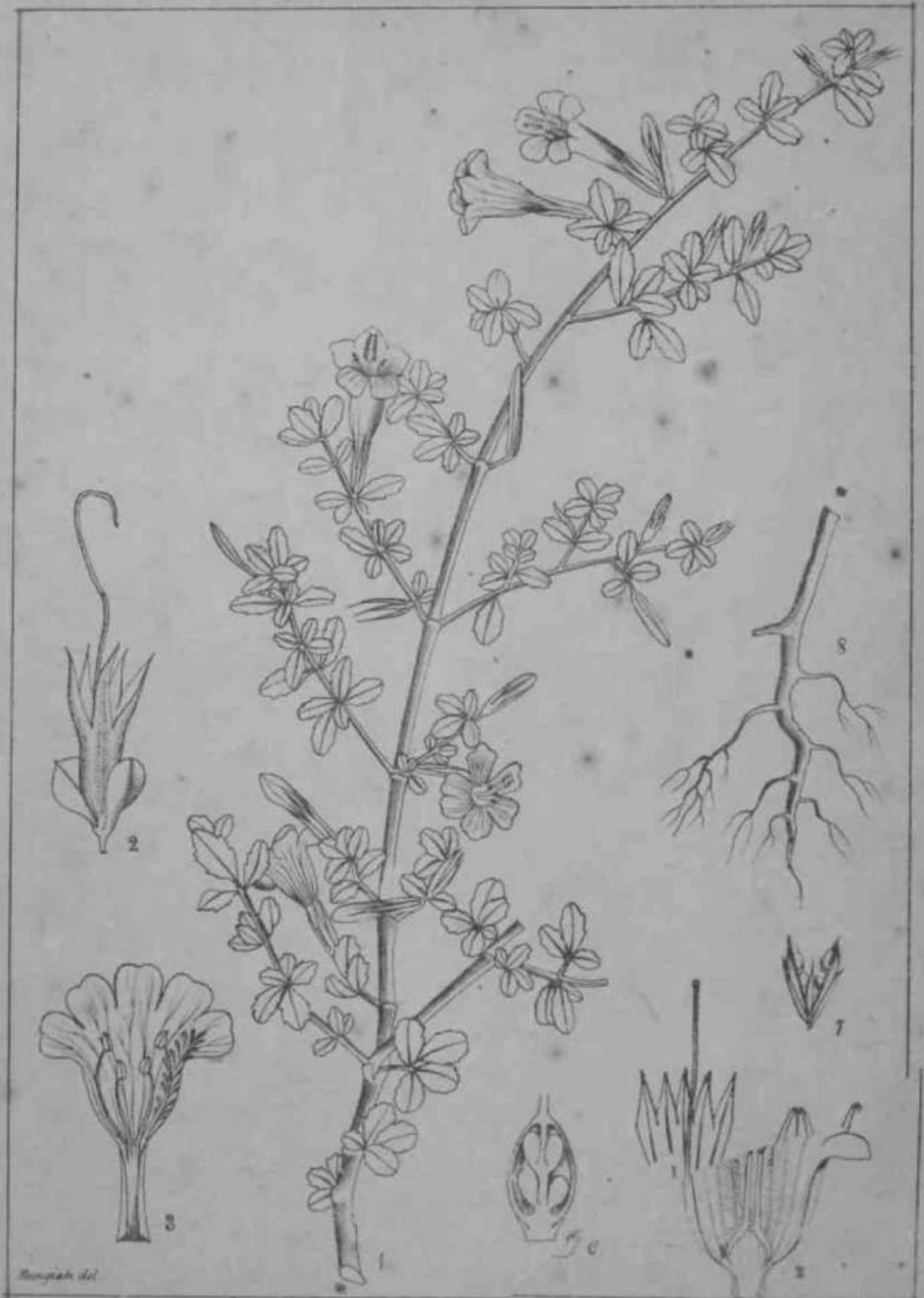


Wrightia tinctoria (R. B.)
Verum tinctorium (R. B.)



Adenocaulon latifolium (Nes) N. S. P.

Hand-drawn illustration



Boissier del.

Boissier del.

Lysichiton littoralis (Sw.)
Ruellia littoralis



Kunth del.

Phlebotyllum kunthianum (Nees)

Dumortier del.



JW del. det.

Dumort. Del.

Astrocyantha longifolia (Nees)
} var. *longifolia* (Nees)
} var. *longifolia* (Nees)

Astrocyantha longifolia (Nees)



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Barleria Acuminata. (Wight)



Barleria cuspidata (Kilim)
Villamorillo Zam.

Barleria cuspidata (Kilim)



Dumortier, 1846

Dumortier, 1846

Marcomell. & Zam.

Barleria acutifolia (Sinn.)



Mezomacul. Spm.

Barleria cristata (Linn.)

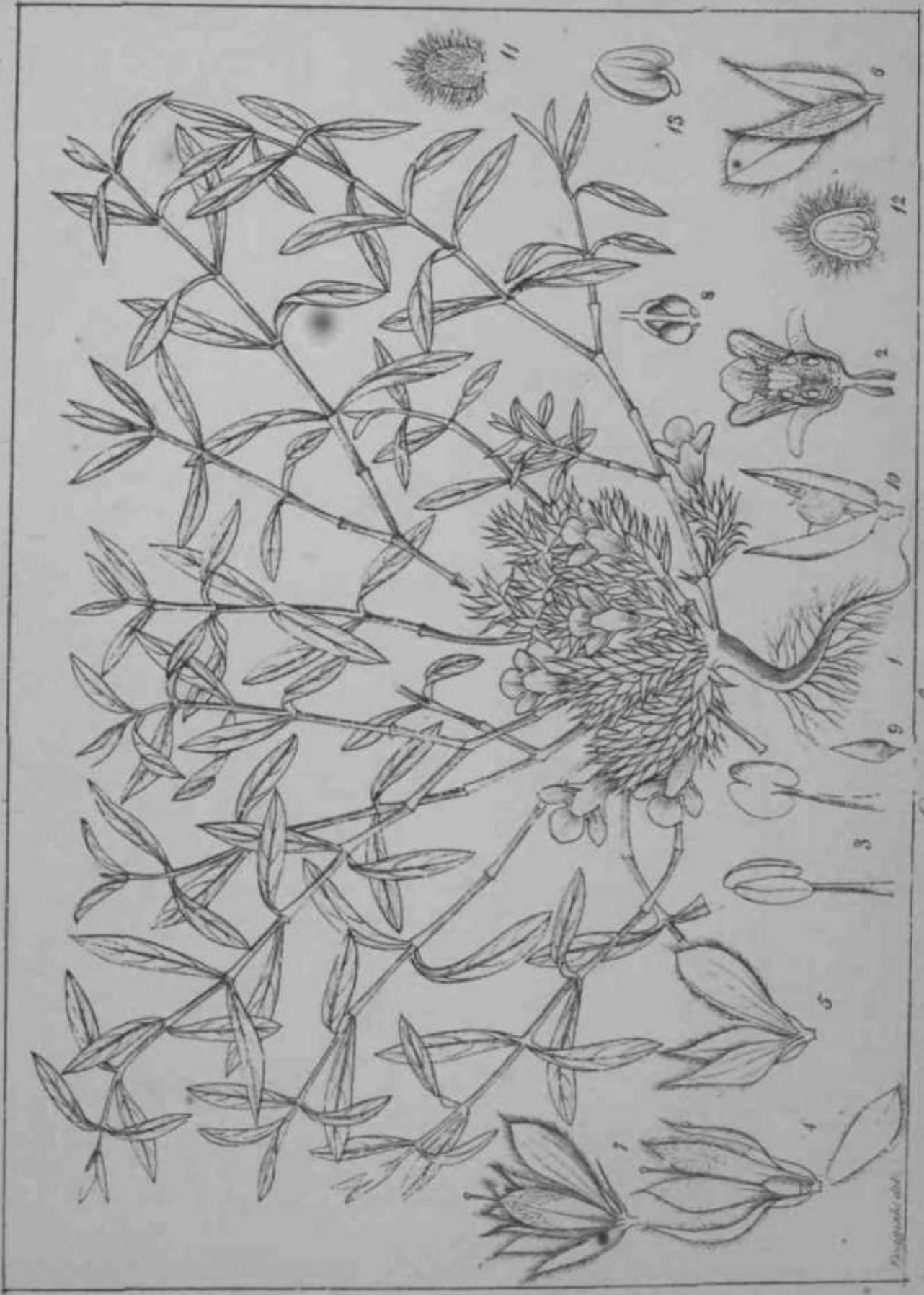


Dingman del.

Barleria nitida (Nees)

Barleria nitida (Nees)

Dunphy Lith.



Lepidagathis prostrata (Willd.)

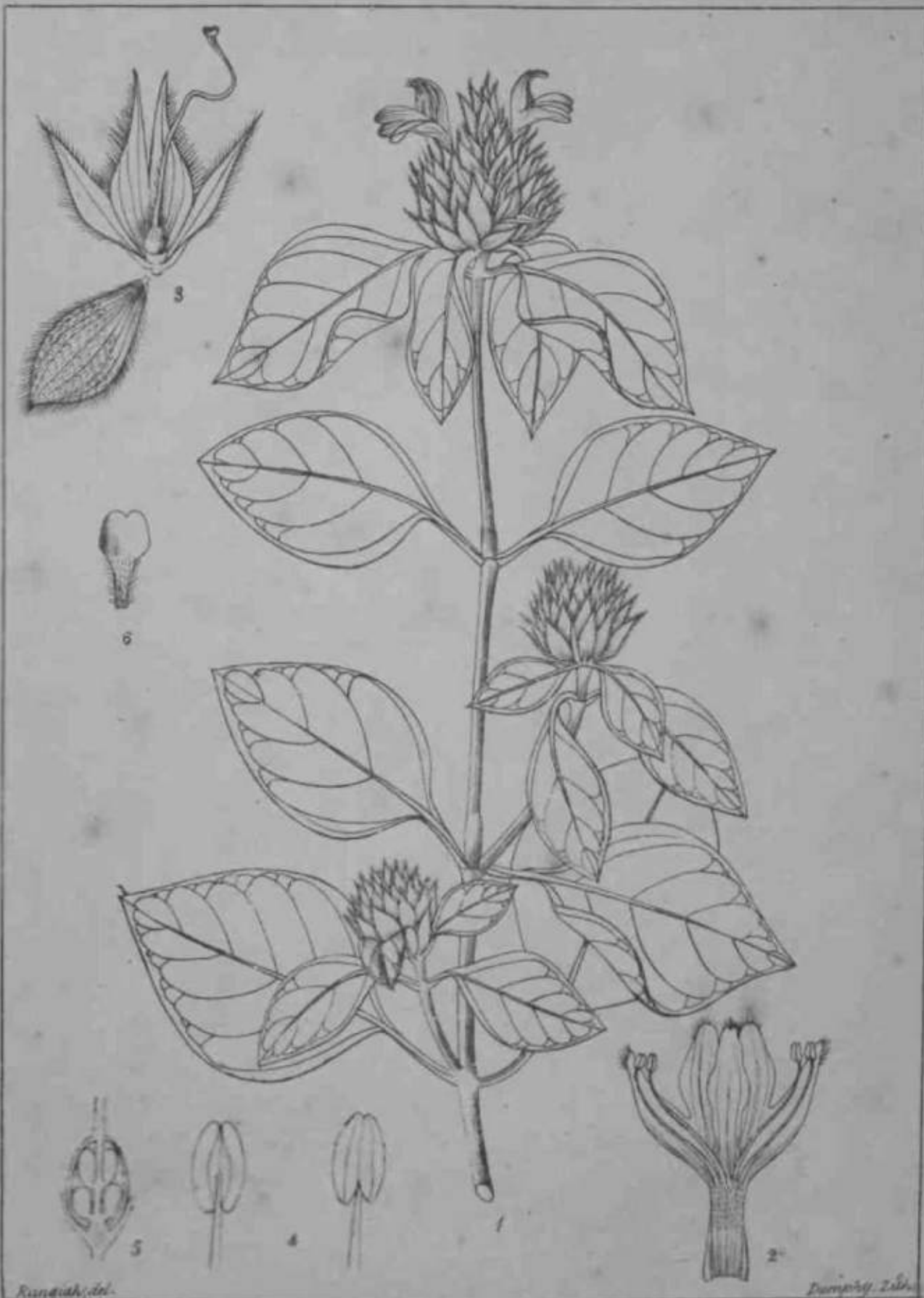
Barleria, var. prostrata
at the University of Toronto } Jaom

Thompson, Zool.



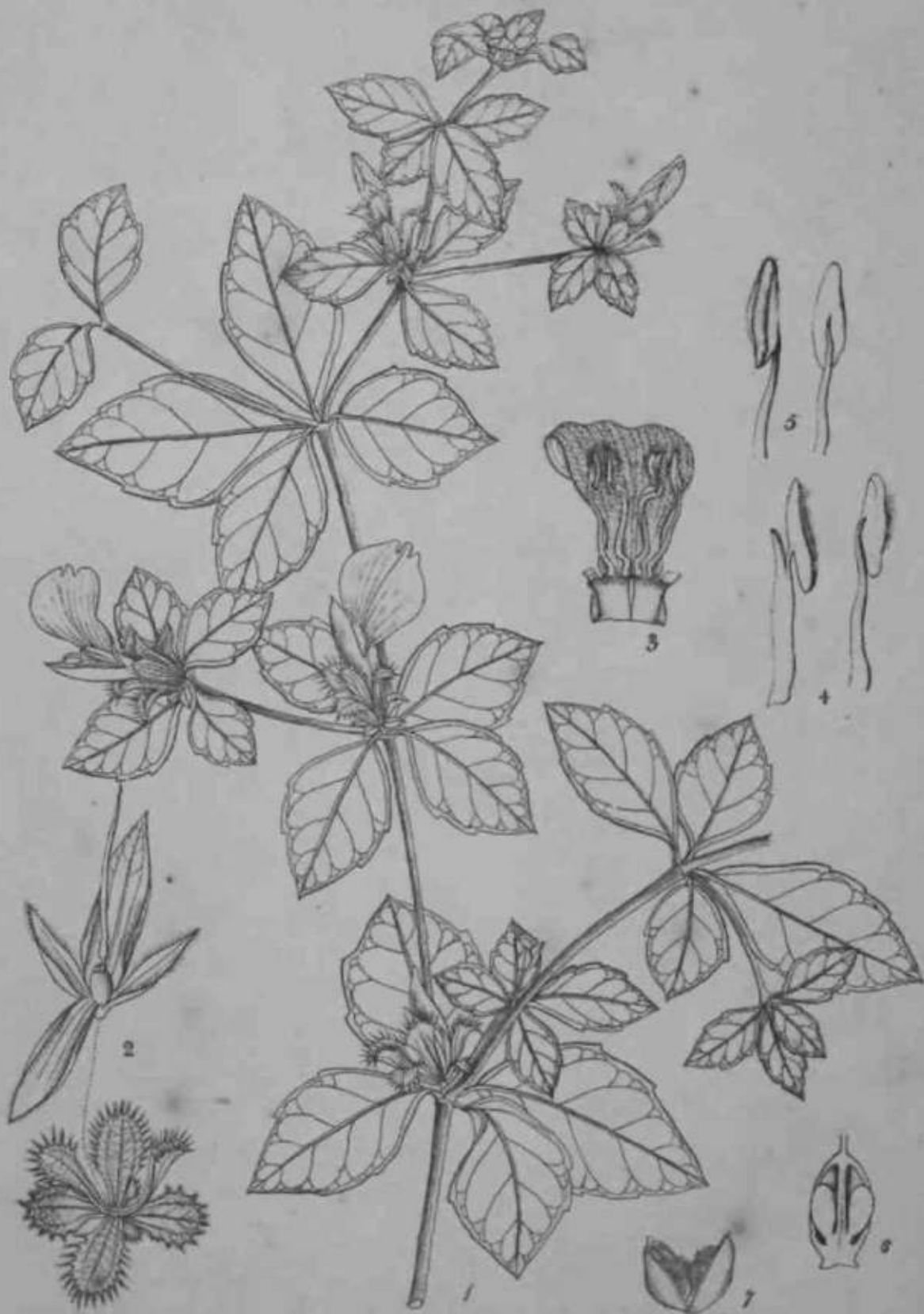
Barbarea (L.) var. *Barbarea* 5

— & *Lepidagathis* / *impetto* • (Nico)



Rundsch. del.
Lepidagathis scariosa Nees

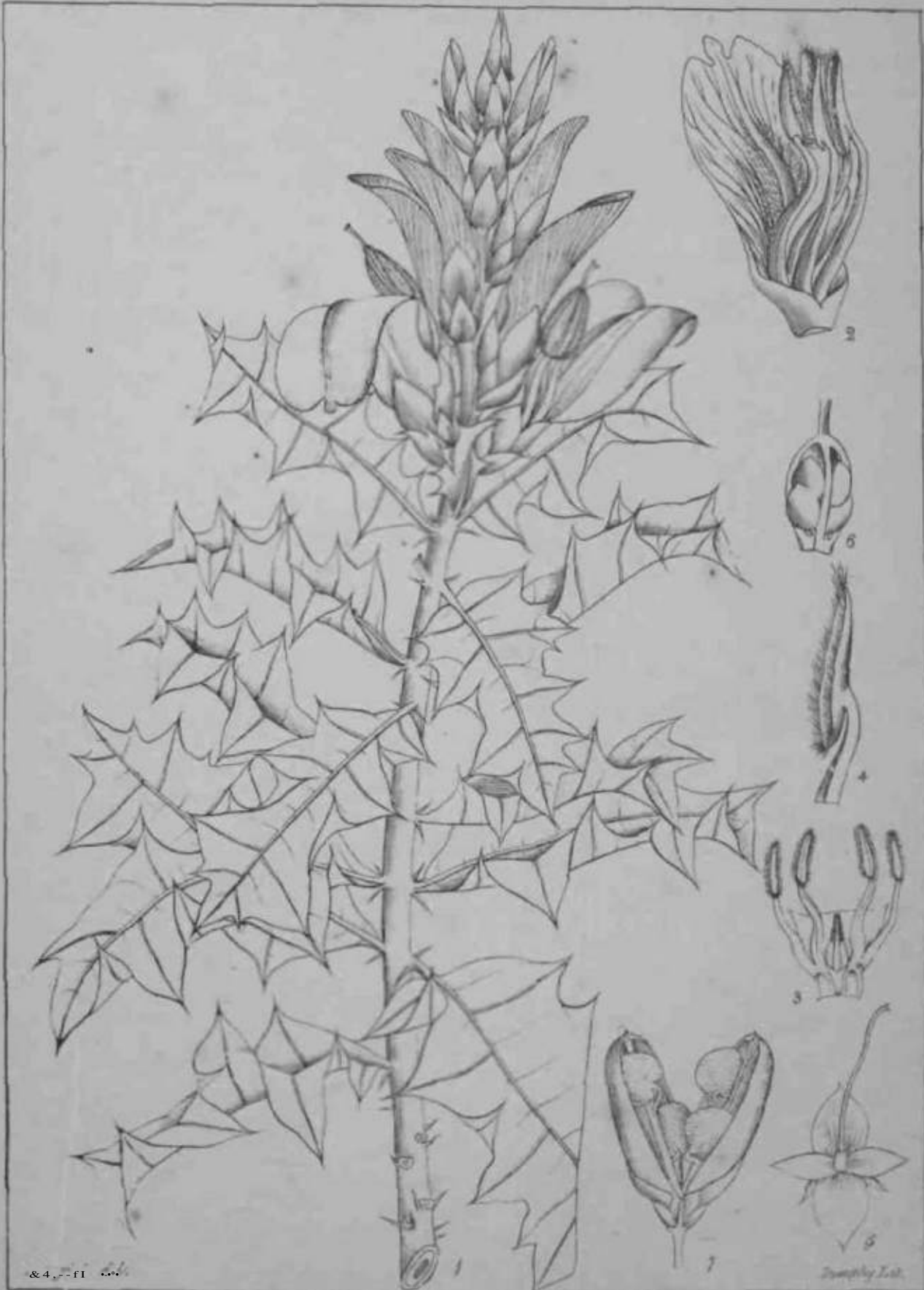
Lepidagathis scariosa (Nees)



Kunze del.

Dumphy Lith.

Blytharis Boerhaaviaefolia (Sw.)



& 4. fl. det.

Dumphy Det.

Dilivacia silicifolia (Suq.)
 Dilivacia silicifolia (Suq.)
 Dilivacia silicifolia (Suq.)

1. *Dilivacia silicifolia* (Suq.)



Српски јазик
Српски јазик

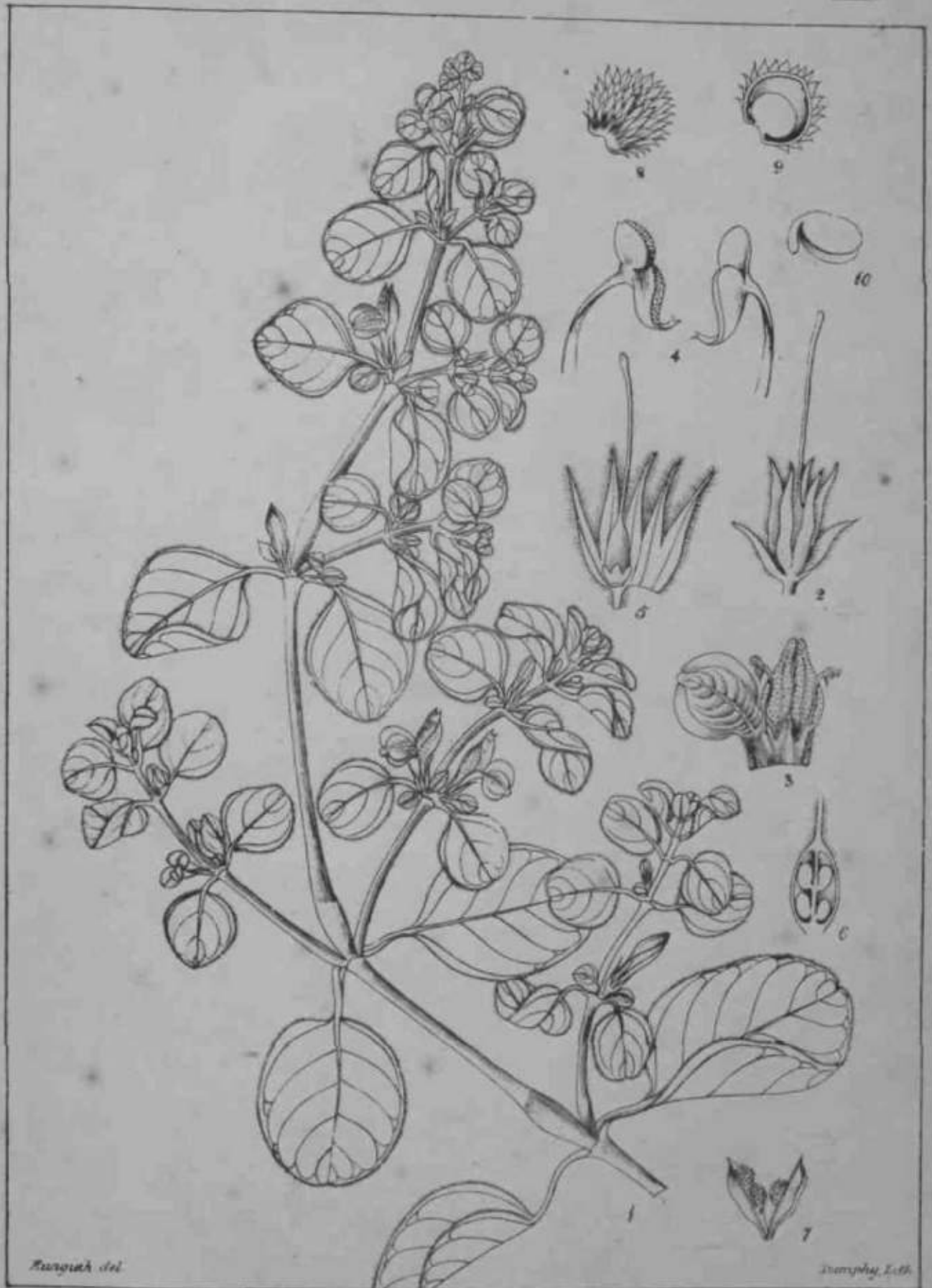
Cressandra aullaris (Nees)

L. Hitchcock

Justicia

Acanthaceae

&?'



Kunze del.

Wimperley, Lith.

Justicia hancquibarensis (Nees)
 Acanthaceae
 Justicia hancquibarensis (Nees)

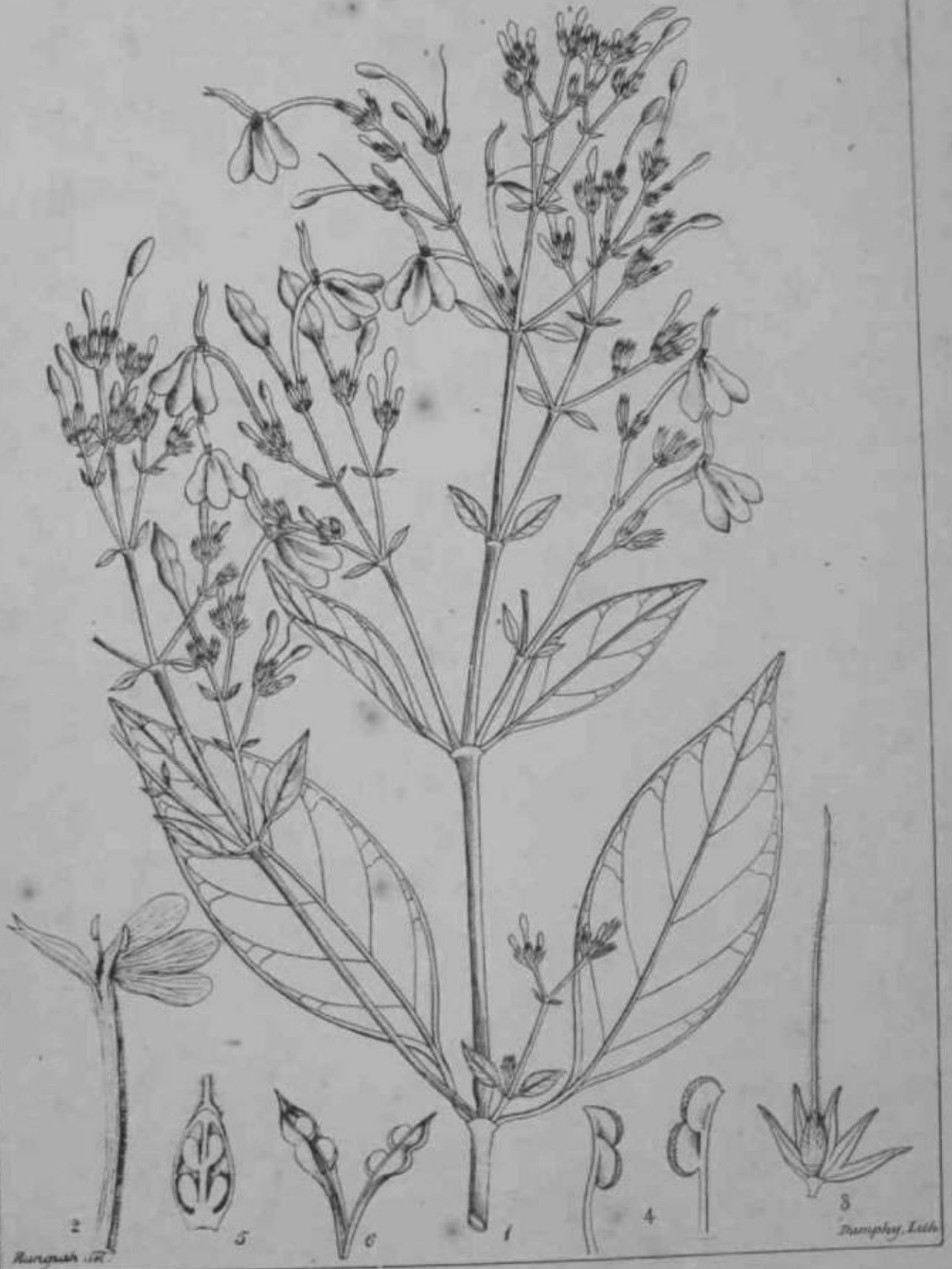
Justicia hancquibarensis (Nees)



Justicia adhaerens
 Justicia adhaerens
 Justicia adhaerens

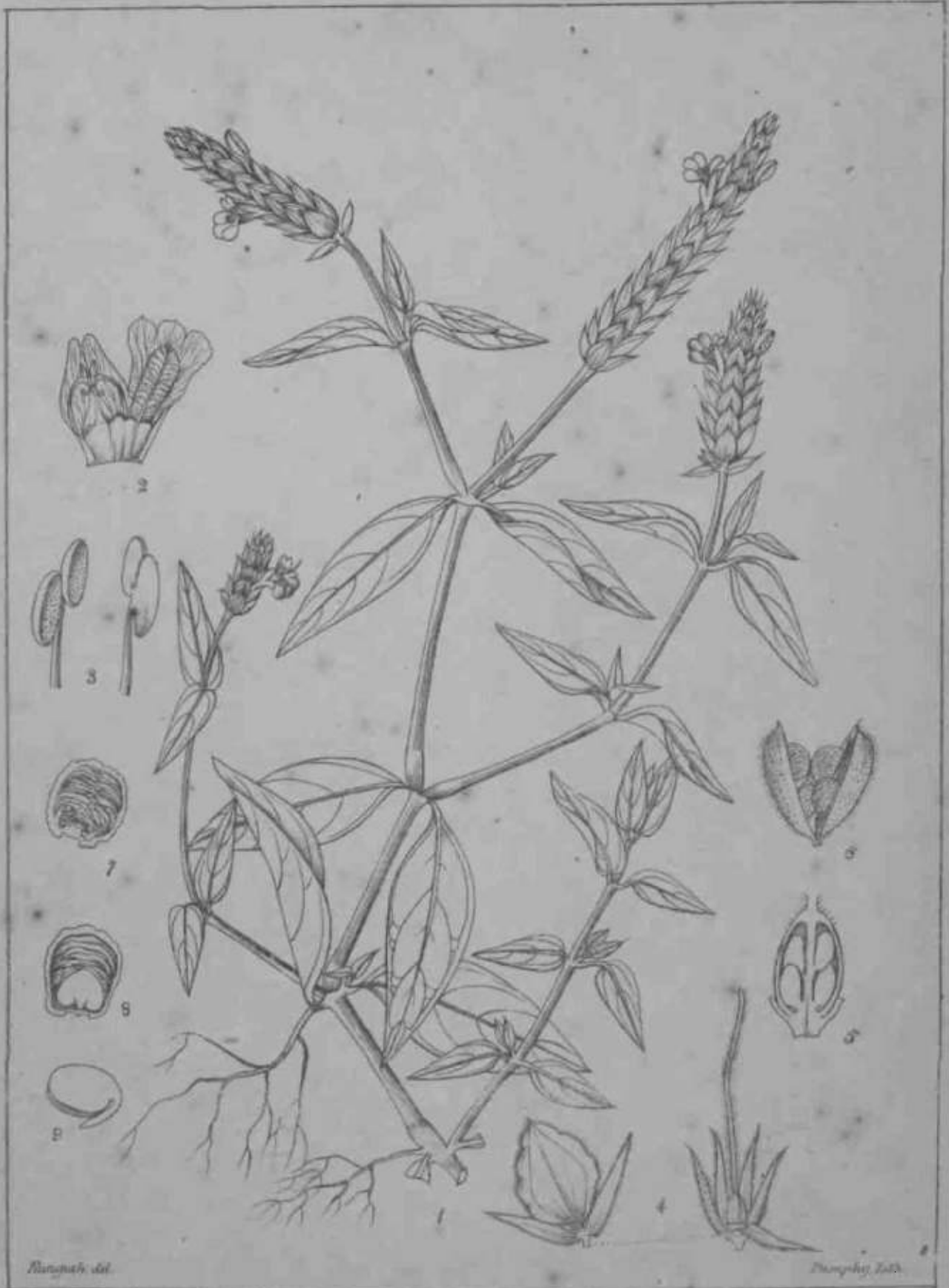
Justicia adhaerens Linn.

Harvey del.



Rhinacanthus communis (Nees)

Handwritten notes in the bottom left corner, including the name 'Rhinacanthus' and other illegible text.



Rumohr del.

Thunberg del.

Handwritten notes in a cursive script, possibly a collector's or describer's notes, located at the bottom left of the page.

Rungia repens (Vass)



Eranthemum
mentanum var. *a.* (Nees)

Eranthemum mentanum var. *a.* (Nees)



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¥&

Conocaulon
Andrographis } Lam.
Andrographis } Lam.

Andrographis echinoides (Nees)

Cyendarussa.

Xanthoxa.

465



Burmah Bot.

Periploca Bot.

Cyendarussa vulgaris (Lam.)

Cordia

Cordiaca.

Asiatica



Cordia asiatica Roxb.

Thunberg del.



Robinsoniana

Tabernaemontana cuneata (Roxb.)

Wright

Fraxinifolia



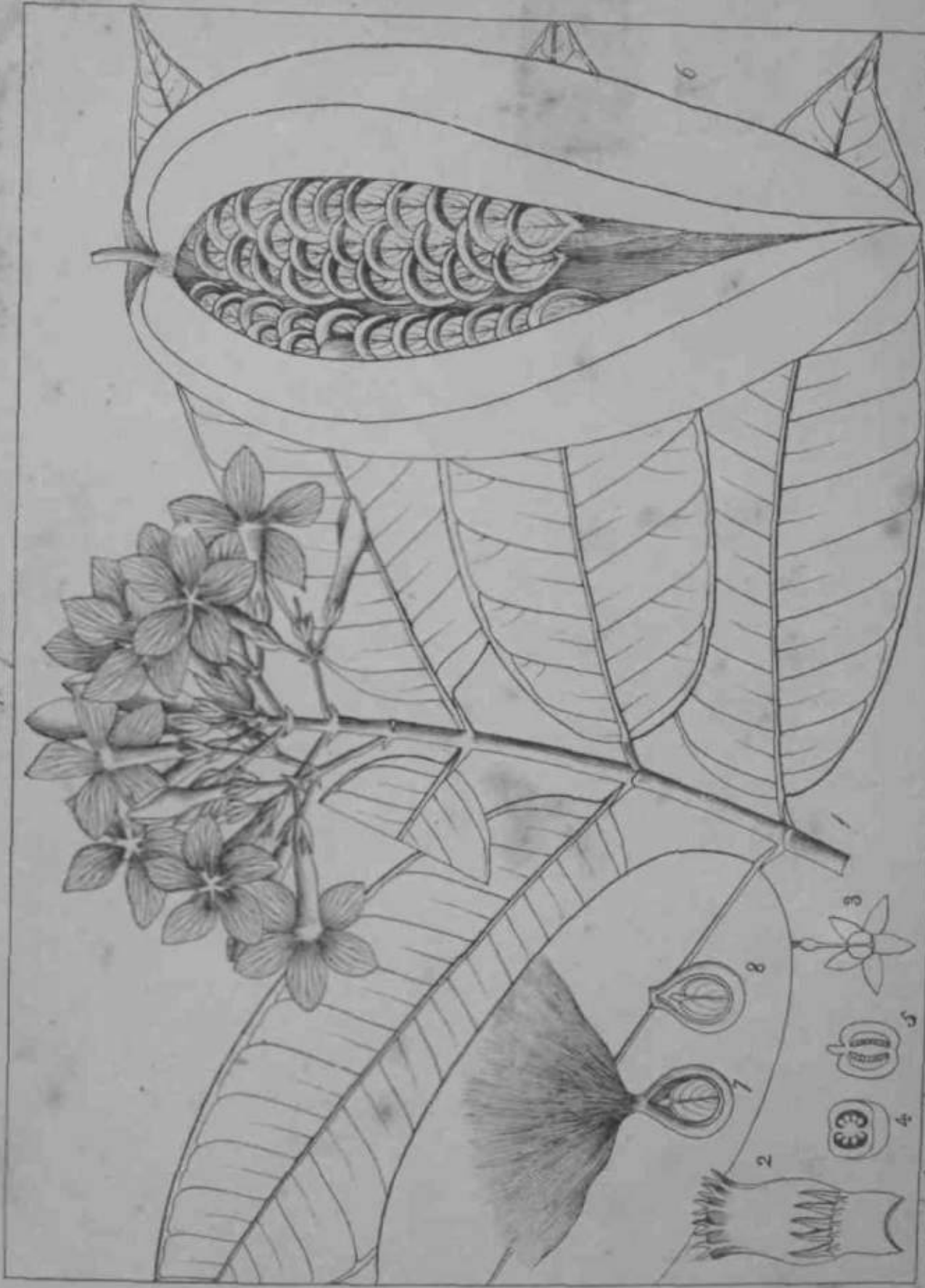
Plumeria racemiflora (Lam.)

Pringle del.

Echites

Spocynna

472



Echites setosus

Echites piscidium (R. W.)
Ancium piscidium (Boob)

Dunphy Lith.

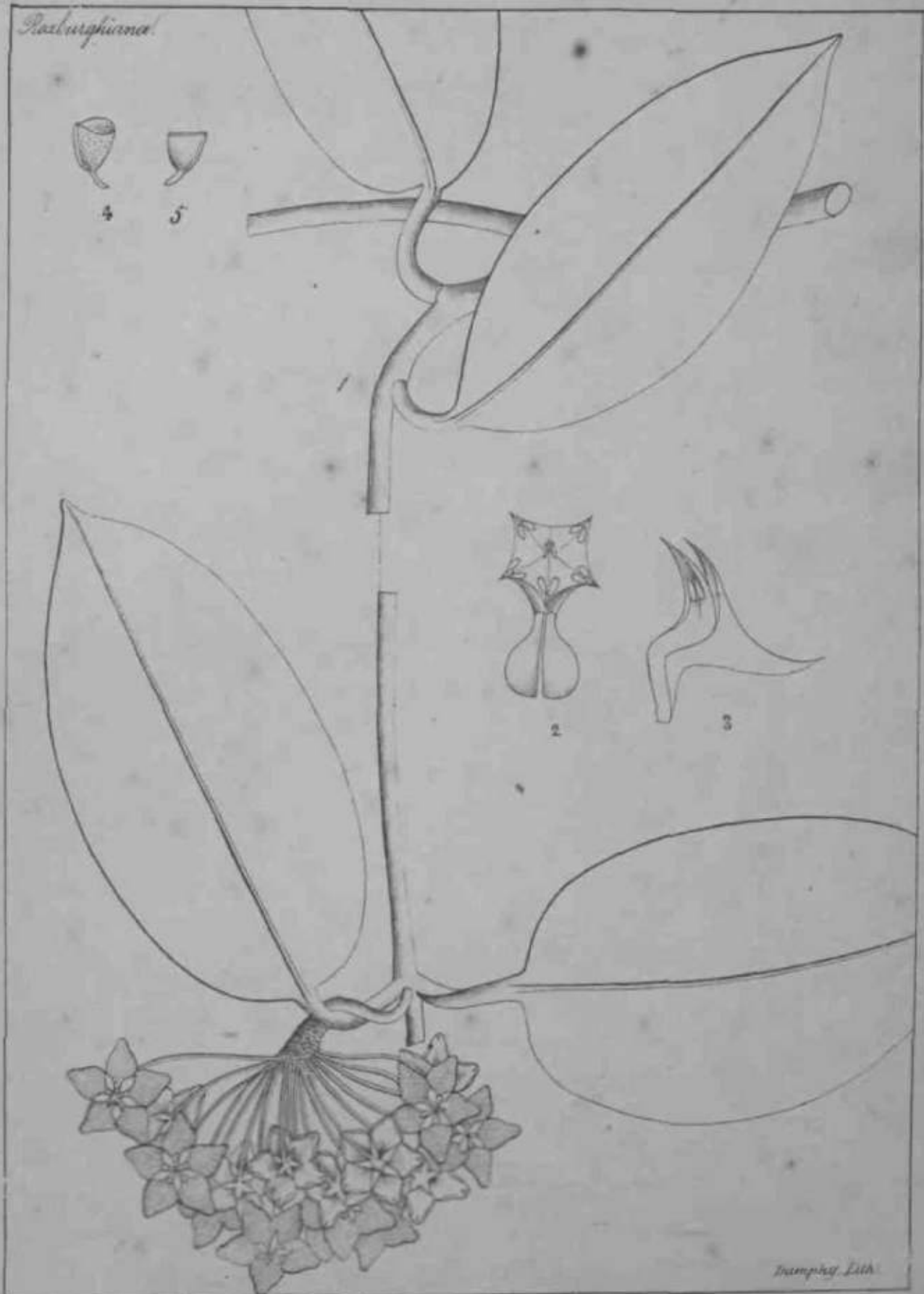
Rodurghiana



Dumphy Lith.

Ureola stansica (Rost.)

Roxburghiana.



Trampky Lith.

Hoya poudula (W & A.)
Asclepias furtiva (L.) Roxb.

Asclepias



Samuelsson

Asclepias tuberosa (Mill.) A. N. S. P.
Asclepias tuberosa (Mill.) A. N. S. P.

Plumeria

Apocynaceae

478

Barbadosiana



N. L. 1878

namensis recurva (Roxb.)

A-13

732. *CROTALARIA ROTUNDA* (W. and A.) *confertiflora*, erect; branches divaricating, shortish, tomentose; stipules narrow-sabulose; leaves slightly approximated, trifoliate, long-petioled; leaflets ovate-obovate, scarcely entire, mucronate, rather longer than the petiole (from a half to an inch long, and one-third of an inch broad); upper side glabrous; under paler, sprinkled with minute adpressed hairs; racemes terminal or leaf-opposed, shortish (2-3 inches long), many-flowered; flowers approximated (pretty large); bracteoles linear. — W. and A. Prod. p. 182.
 Neilgherries near Kotoogherry, August.

1 Flowering branch—2 detached flower—3 dissected flower—4 stamens—5 dissected form of the anthers of the shorter series—6 stamens of the longer series with their round anthers—7 ovary cut lengthwise with 3 scales—8 legume full grown (seeded)—9 seed—10 cut lengthwise showing the cotyledons and radical—11 embryo detached.

733. *CANARIALIS GANJATA* (D. C.) *perennial*, twining, glabrous; leaflets cordate-ovate, rather acute; legumes 8-10 times (or more) longer than broad. — W. and A. Prod. p. 223

A common plant in hills. Its seeds much cultivated for the sixau • tmü ua w d u i, other.

734. *ATYLOHA CAUDATA* (L.) *erect*; branches straight, twigg; young parts villous with silicles hairs; leaflets oval; upper side even, pubescent; under reticulated, shortly tomentose, villous on the nerves and margin; stipules lanceolate, acute, notched, spreading; peduncles 2-flowered, longish; calyx villous; segments lanceolate-acuminate, curved upwards, lowest one about half the length of the keel; spots of the vexillum blackened, slightly yellow; legumes villous. — W. and A. Prod. p. 223

Neilgherries, where it is most abundant. Elevation of about 3500 feet to the top. It is not in flower at all seasons, flowers yellow.

1 Flowering branch—2 dissected flower—3 stamens—4 dissected ovary—5 JIMTH I I—6—7 detached seed showing the cotyledons—8 seed cut transversely—9 embryo detached.

735. *FRANCOA LUNATA* (Linn.) *biennial*, usually twining, glabrous or pubescent; leaflets ovate, acuminate; stipules minute, reflexed, caducous; racemes shorter than the leaves, peduncled, the floriferous part verticillate; pedicels in pairs; bracteoles narrow, small, shorter than the calyx, adpressed, caducous; legumes pendulous, spongy-shaped, long-mucronate, not torulose, glabrous, 2-4 seeded; seeds oblong, compressed. — W. and A. Prod. p. 214.

Much cultivated but seldom if ever found in a truly wild state. A large pedicled variety of this is the well known "Duffur flower" of India, said to have been introduced by Dr. Duffin from the Mauritius, whence the name.

736. *DESMANTHES FRUGIFERA* (Wald.) *herbaceous*, prostrate; stem compressed, triquetrous below; leaves bipinnate; pinnae 3-5 pair; leaflets 10-12 pair; stipules sabulose; peduncles axillary, solitary, naked or with 2 caducous bracteoles about the middle; flowers globose-headed; 5-petaled, demuminate; legumes stalked, linear-oblong, equi-sided, 4-6 seeded. — W. and A. Prod. p. 216.

Found in wet pasture ground; near the coast flowering during the rains. The specimen here figured was gathered at Madras.

1 A small plant natural size—2 a fertile flower dissected flower—4 stamens—5 dissected ovary—6 nearly mature—7 a dissected seed—8 attached—9 a sterile flower—10 a pair of leaflets their form and cells.

737. *CLISSIA (SINUSA) SPURSA* (Roth.) *perennial*, herbaceous, diffuse, procumbent, branches glabrous; leaflets 4-5 pair, ovate, mucronate, unequal at the base, glabrous; petioles and rachis without glands; stipules lanceolate-acuminate, tapering, spreading persistent; racemes axillary, 2-3 flowered, much shorter than the leaves; pedicels without bracteoles, legumes linear, beak thin, 2-banded; siliques protuberant and slightly angled but scarcely crested. — W. and A. Prod. p. 258.

Frequent in pastures and cultivated grounds all over the Southern provinces of India. Is much used by the natives for medicinal purposes. — W. and A. Prod. p. 258.

738. *BUTANIA MYRIGENUS* (KWs I* WS. V) *herbaceous*, glabrous, smooth; stems simple; leaves cordate, repand-toothed, usually 3-angled or lobed; slightly scabrous; male flowers in a simple or procumbent umbel at the apex of a long slender peduncle; female very shortly peduncled, solitary, often in the same axils with the male, rarely several umbellate at the apex of a long peduncle; calyx-tube and ovary narrow-oval; berry longish-oval, glabrous, conspicuously marked before maturity with small scales; seeds smooth, surrounded with a coat, quite flat. — W. and A. Prod. p. 245.

Myson, Neilgherries, &c. climbing among bushes and bushes. Between this and *B. Herbersonia*, extended over careful observation has satisfied me there is no difference, nothing being more common than to find both forms on the same plant or even on the same branch.

1 Flowering branch—2 dissected flower—3 dissected ovary—4 dissected seed showing the cotyledons—5 detached seed showing the cotyledons—6 dissected seed showing the cotyledons—7 umbel of fertile flower—8 DVBIV cut vertically—9 ovary cut transversely—10 * 1 kidney u<i>ly mature cut transversely.

(739) *GARDENIA LAY FOLIA*. (All.) *herbaceous*, unbranched; leaves opposite, in threes, very shortly petioled, oval or obovate, glabrous, with a small hairy gland in the axils of the nerves on the under side; flowers terminal, solitary, very shortly pedicelled (pedicels scarcely a line long); limb of the calyx campanulate, irregularly divided, five-lobed on the inside; corolla hypocrateriform; tube long, divaricate on the outside; limb about 3-fled, the divisions obliquely obovate, about half the length of the tube, divaricate towards the one margin on the outside; style 3-angled, thick and fleshy, bipartite, segments bifid; ovary green, nearly globose, crowned with the whole of the calyx; nut brittle and heavy, with 4 perispermous seeds. — W. and A. Prod. p. 305.

Found in thickets and subalpine jungles in the hills, especially near the coast but not eastward of the hills. I have had an opportunity of examining the fruit of this species, and comparing it with that of *G. elata*, the larger fruit of which is much more like that of *G. elata*. The fruit of *G. elata* is much more like that of *G. elata*, the larger fruit of which is much more like that of *G. elata*.

740. *CHAMAECARIS* *herbaceous*, sections according to its habit, especially near the coast but not eastward of the hills. I have had an opportunity of examining the fruit of this species, and comparing it with that of *G. elata*, the larger fruit of which is much more like that of *G. elata*.

761. *MICROTROPIS GAMBIRPOLIA* (Wall.) Engelm. *gambirfolia* Hook. *Clusia* *clausa* (Wall.) subsericeous leaves lanceolate entire acuminate: peduncles axillary or sessile: corymbs small few-flowered: capsule 2-valved splitting from the base. *Bot. Fl. Ind. 1*, p. 818.

Sylhet, (Buxie Wall.)

Of this genus little seems to be as yet known. Dr. Wallis, with whom it originated, published the name of 2 species in his list of Indian plants, but without either generic or specific characters. Professor Meisner from imperfect specimens of two of them constructed a generic character so nearly correct that I was enabled from it to refer two or three new species, natives of the Nellores, to the genus. Dr. Arnott, (*Annals of Nat. Hist.*, 2 p. 151.) has more perfect specimens of the species here figured, & has up a generic character which, with a few slight modifications, will include all my new species, though differing a little in the capsule. I hope in a subsequent part to be enabled to give a more perfect character taken from the examination of several species.

762. *LINDHULLIA PROSTRATA* (Hook.) leaves or branches creeping: leaves alternate, petioled, lanceolate flowers axillary sessile: capsule globose with one row of seeds in each cell attached immediately to the axis. *Bot. Fl. Ind. 1*, p. 329.

Native of Pegu.

763. *MARA BUCHHOLIA* (Lam.) *Ferrisia* *buchozoides* Hook. leaves obovate glabrous in the adult state: calyx fleshy: corolla 5-lobed: aggregate, laxantherous, filaments all simple. *G. Don. Icones.* 4 p. 43.

A frequent shrub in low jungles very abundant in the Ghats, but also extending to the Southern parts of the Peninsula.

764-5. *MYRICA INTENSIFOLIA* (Hook.) leaves lanceolate entire smooth; scales of the female involucre terete one or two-flowered: drupe oval, subcordate. *Bot. Fl. Ind. 3*, p. 763.

Native of the hills at i Urr & fe

The fruit is picked by the natives and used as a condiment; in its raw state though inviting to the eye is too sour to be relished. Drupes oval the size of a plum, not oblong thick and very hard, a little flattened, the two edges rather extended and somewhat sharp, densely clothed with an immense quantity of fine white hair in penicilliform tufts. The pulp consists of a mass closely impregnated but distinct striate succulent yellowish.

764. A branch of the male plant with a detached flower magnified.

765. Female plant with analysis of the ovary and fruit.

766. *ANTIDIOMA LANCEOLATA* (Wall. & Sledge Hook.) shrubby smooth: leaves lanceolate: stipules quadrifid: spikes terminal filiform: male flowers axillary. *Bot. Fl. Ind. 3*, p. 766.

Native of Chittagong.

767-8. *ANTIDIOMA TORRENTOSA* (Wall. & Sledge Hook.) shrubby tomentose, leaves acuminate: stipules subulate: spikes cylindrical, unbranched, male flowers triandrous. (*Bot. Fl. Ind. 3*, p. 767.)

A Native of the hills; flowers May and June, ripens its fruit in September.

The genus *Sledge* not being considered sufficiently distinct from *Antidroma* has been reduced to the latter as being the older name.

767. Flowering branch of the female plant analysed.

768. MC. plant with detached flowers, seen from above and below.

769. *QUERCUS CAPRINARIA* (Hook.) leaves oblong entire smooth: nuts borne at little hairy, completely hid in the woody cup-like cup which is completely armed with numerous sharp spines. (*Bot. Fl. Ind. 3*, p. 810.)

(Chittagong, a large tree, flowers July and August, and the small acorns ripen during the cool season.)

770. *QUERCUS ARMATA* (Hook.) leaves lanceolate acuminate entire smooth: cup an entire woody cupule armed with many compound thorns, hiding completely the subovate acorn. (*Bot. Fl. Ind. 3*, p. 810.)

Mountainous countries East of Bengal, a large timber tree.

771. *AMPHODONIA ALPHONSA* (Lam.) perennial (living smooth) leaves ovate, rather acuminate: racemes axillary, simple or panicle, decussate. (*Bot. Fl. Ind. 3*, p. 810.)

Eastern part of Bengal, Bengal.—Lower slopes on the eastern face of the Nellores; R. W.—Magnolia Lam. Flowering season on the Nellores June, July and August.

1 Flowering plant—2 dissected flower—3 capsule as seen hanging from the stem—4 capsule cut vertically—5 cut transversely.

AROIDES.

Obs. The natural family *Aroides* has of late years undergone much careful revision, by several most eminent Botanists, in the course of which it has been found necessary to break down the old Linnaean genera and construct numerous new ones. The old genus *Arum*, so copiously illustrated in this Part, affords a striking example of the correctness of this statement. Of 22 species described by Roxburgh, in his *Flora Indica*, under that generic name, not one is left. I have notwithstanding preferred publishing most of his figures under his own name, quoting the new ones by synonymy, not because I disapprove of the innovations, for I have not yet had an opportunity of determining for myself by examination of the plants the necessity that exists for such necessary changes, but because I think it desirable to show the progress he made in classifying this difficult and, at the time he wrote, imperfectly understood family.

When I first published the first part of my systematic description of the order, and now find I have fallen into several errors in writing the synonymy of them. Since then, indeed, while these sheets were passing through the press, I received Kauff's *Essence of Piantaria*, Vol. 3d embracing among others this family, with the aid of which, I have been enabled in the latter part, to correct the errors of the plates.

772. *CALOPHYLLUM HYDROPHILUM* (Lam.) leaves lanceolate entire smooth: calyx 5-lobed: corolla 5-lobed: lobes of the corolla 3-lobed: capsule 3-lobed: seeds 3. (*Bot. Fl. Ind. 3*, p. 812.)

Native of the Nellores; flowers May and June, ripens its fruit in September.

773. *CHAMAENOMORPHUM* (Lam.) according to its name, the name of the corolla. As it now includes the *Chamaenomorpha* of India, has been much mistaken species, if in fact, as few defined, can be found—that is, a *Convolvularia* in two of these essential requisites of—lanceolate ovary, and campanulate corolla.

774. *CRYPTOCORYNE EXHIBITANS* (Aubl.) Boeck. stemless; leaves linear lanceolate; spathe as long as the leaves (erect): capsule one-celled. — *Boeck. Fl. Ind. 3 p. 420.*

A native of Coromandel in marshy places where it is partly immersed in sweet water. This species I am not aware of ever having met with. The one-celled ovary seems to make it a very doubtful member of this genus.

775. *CRYPTOCORYNE CILIATA* (Fischer—Aubl.) Boeck. leaves long petioled lanceolate; spathe shorter than the leaves with a tubular base and expanding ciliate apex: capsule six-celled. — *Boeck. Fl. Ind. 3 p. 424.*

A native of Bengal in marshy grounds on the banks of streams and tanks.

776. *POTIS SCANDENS* (L.f. Boeck.) epiphytic: petioles as broad as the lanceolate leaves; spathe globose: capsule six-celled. — *Boeck. Fl. Ind. 3 p. 420.*

A very common distributed plant, always found climbing on the bark of which it adheres like ivy by its roots entering the crevices of the bark. It defines it "Parasitic" which in the sense of Writton is limited to the term in insect. I have therefore substituted Epiphytic or Parasitic for his word.

777. *LAMA HYPERICIFOLIA* (Koch.) Boeck. stemless; leaves ovate, sessile to petioled; spathe erect spiral many times longer than the short cylindrical ovary: capsule six-celled. — *Boeck. Fl. Ind. 1. 427.*

Native of Bengal. This and *Potis Scandens* R. have been separated from *Potis* as a distinct genus in consequence of their solitary pendulous ovaries. *Potis* having several erect ones.

778. *SCINDAPUS OFFICINALIS* (Schott, Poiteb. Boeck.) perennial epiphytic, stems rooting; leaves oblong cordate entire; flowers terminal; bracts naked. — *Boeck. Fl. Ind. 1 p. 431.*

Native of Bengal. In some parts of the Mysore district it is cultivated for its fruit which, cut in transverse slices and dried, forms an article of the Hindoo materia medica.

779. *SCINDAPUS TOCROVIVUS* (Schott, Poiteb. Boeck.) perennial, rooting on trees, smooth; leaves oblong ovate sessile; bracts ciliate cuspidate; flowers lateral or axillary long peduncled. — *Boeck. Fl. Ind. 1 p. 434.*

Native of Sylhet. A very large powerful species blossoms during the hot season.

780. *SCINDAPUS PEEPUS* (Schott, Poiteb. Boeck.) perennial subperennial rooting on trees; leaves long petioled oblong acuminate; flowers subterminal bracts spatulate entire. — *Boeck. Fl. Ind. 1 p. 433.*

Sylhet, flowers April E3J f' : y.

781. *SCINDAPUS PERTENSIS* (Schott, Poiteb. Boeck.) perennial subperennial rooting on trees; leaves ovate peduncled on one side and petioled on the other; bracts two-lobed. — *Boeck. Fl. Ind. 1 p. 433.*

A native of the mountainous parts of Coromandel. Boeck. I have only so far as I can recollect, met with this species at Coimbatore at the place called "Five Falls."

782. *AREN COMPANULATA* (Boeck. *Asiophila* Desv.) stemless; leaves decomposed flowers sessile with respect to the surface of the ground and appearing when the plant is destitute of leaves; spathe the length of the ovary campanulate, with curled margins; no nectary: club broad ovate lobate: anthers 2-celled. — *Boeck. Fl. Ind. 3 p. 393.*

An extensively distributed plant much cultivated in Coromandel by the natives for the sake of the roots which are used as yams or potatoes. When in flower it exhales a most overpowering and so perfectly resembles that of *C. discolor* as to induce him to cover the club of the spathe with their eggs. From a number of drawings sent me I selected two, the one to show the plant, and the other 782 to show a most gigantic flower, but to which I find no reference in Roxburgh's work.

783. *AREN BULBIFERUM* (Boeck. *Pythousia* Schott. *Asiophila* Boeck.) root tuberous stemless; leaves lanceolate bulb bearing; spathe cylindrical longer than the cylindrical ovary no nectaries. — *Boeck. Fl. Ind. 3.*

A native of Bengal plentiful in woods in the vicinity of Calcutta, blossoms in May.

784. *AREN CUPIDATUM* (Boeck. *Arisema* Martine) stemless; leaves ternate; leaflets equal lanceolate cuspidate; scape as long as the petioles; spathe longer than the subulate pointed ovary: anthers four to five in a petiole circular crown on each filament. — *Boeck. Fl. Ind. 3 p. 396. Are. Roxburghii* Kunth.

Native of Fala-Penang. Roxburgh when he first described this species had only some male flowers.

785. *AREN COMPANULATA* (Boeck. *Asiophila* Desv.) stemless leaves decomposed flowers sessile with respect to the surface of the ground and appearing when the plant is destitute of leaves; spathe the length of the ovary campanulate with curled margins; no nectary: club broad ovate lobate: anthers 2-celled. — *Boeck. Fl. Ind. 3 p. 393.*

An extremely distributed plant much cultivated in Coromandel by the natives for the sake of the roots which are used as yams or potatoes. When in flower it exhales a most overpowering and so perfectly resembles that of *C. discolor* as to induce him to cover the club of the spathe with their eggs. From a number of drawings sent me I selected two, one 785 to show the plant, and the other to show a most gigantic flower but to which I find no reference in Roxburgh's work.

786. *AREN COLOCASIA* (L.f. Boeck. *G. J. M.* *Asiophila* Schott.) 2. *AREN HYPERICIFOLIA* (Boeck. *Colocasia* Ventenat.) Two plants are represented in this plate, and according to some authors they belong to different genera. Roxburgh however doubts whether they are not mere varieties of one species.

1. *COLOCASIA ANTICQUUM* (Schott.) stemless leaves paleate ovate rounded serrated at the base; spathe shorter than the ovary; spathe much longer than the ovary cylindrical erect club subulate: anthers of the antheriferous part of the ovary sessile. — *Boeck. Fl. Ind. 3 p. 434.*

A native of wet marshy grounds: it is very common in the Tanjore district on the banks of the river. The leaves and root of this species are used as food. The fruit is the baccate fruit of the plant and is used as food. The fruit is the baccate fruit of the plant and is used as food.

2. *COLOCASIA* stemless; leaves ovate; spathe much longer than the ovary; spathe much longer than the ovary; spathe much longer than the ovary; spathe much longer than the ovary.

A native of the mountainous parts of Coromandel. Boeck. I have only so far as I can recollect, met with this species at Coimbatore at the place called "Five Falls."

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787. *ARUM CALCARATUM* (Lour. Roeb. - *Calceolium* Lour. *Calceola* Schott.) stemless; leaves sub-peltate exactly cordate acute, with the lobes angulately rounded and convex or concave, from their margins being contracted: scape half the length of the pedicel: spathe cylindrical nearly as long as the pedicel. *Rarb. Fl. Ind. 3 p. 501.*

Native of Bengal—found about Calcutta but rare.

788. *ARUM CURVATUM* (Roeb. - *Arum* Mart.) stemless; leaves peltate, leaflets from 10 to 12 lanceolate, spathe vaulted half the length of the curved spathe: no nectarial filaments: anthers 3-lobed. *Rarb. * 1 / <? . 3 p. it*.*

Native of Nepal blossoms in May.

789. *ARUM FUSCICATUM* (Roeb. *Colocasia* Ray. Schott.) stemless; leaves peltate, narrow cordate with the lobes angle rounded: spathe clavate, upper half of the spathe vaulted equalling the spathe berries with from one to three seeds. *Rarb. Fl. Ind. 3 p. 501.*

Native of Bengal and Chittagong. blossoms in rainy season.

790. *ARUM DIVARICATUM* (Roeb. *Typhonium* Schott.) stemless leaves cordate acuminate spathe subulate spathe with a slender drooping spiral apex nectarial filaments simple and subulate, entire. *Rarb. Fl. Ind. 3 p. 500.*

Native of Malabar—Roebough also received living plants of it from China.

791. *ARUM FLABELLIFORME* (Roeb. *Typhonium* Schott.) stemless; leaves sagittate lobes spreading: spathe and spathe equal whip-shape nectarial scales coloured: anthers two-lobed two-celled. *Rarb. Fl. Ind. 3 p. 502.*

A native of Bengal found in damp places.

792. *ARUM FORSICATUM* (see above No. 785.) stemless; leaves cordate acuminate spathe subulate spathe with a slender drooping spiral apex nectarial filaments simple and subulate, entire. *Rarb. Fl. Ind. 3 p. 500.*

793. *ARUM GRACILE* (Roeb. *Typhonium* Schott.) stemless; leaves cordate acuminate spathe subulate spathe with a slender drooping spiral apex nectarial filaments simple and subulate, entire. *Rarb. Fl. Ind. 3 p. 502.*

794. *ARUM INHUCUM* (Roeb. *Colocasia* Ray Schott.) stemless; leaves cordate base bifid, lobes approximate and rounded: spathe cylindrical equalling the lower part-shaped spathe: club cylindrical longer than the rest of the spathe. *Rarb. Fl. Ind. 3 p. 505.*

A native of various parts of Southern Asia, cultivated in Bengal for its succulent stems and small pendulous tubers of its root, which are eaten by people of all ranks in their country.

795. *ARUM MARI-MITERRUM* (Roeb. *Amorphophallus* Kunth.) herbaceous stemless: leaves trifid with entire narrow lanceolate pinnatifid segments: spathe campanulate equalling the ovate, sessile; nectarial like large pearls. *Rarb. Fl. Ind. 3 p. 512.*

Native of Hindostan, flowers May and June. The globular bodies seen in the spathe are not fruit but abortive or modified pistilla or in Roxburgh's language "Nectarial." The ovaries occupy the lower portion of the spathe the nectarial the upper—the pearls-like bodies the middle. Roxburgh's description of the leaves does not convey to the mind a proper idea of their form. Generally they may be described as bipinnatifid; that is they are first divided into 3 primary lobes each of which is again cut into several narrow lanceolate segments with entire margins. They may then be said to be clearly defined almost in Roxburgh's own words slightly altered in the arrangement thus "leaves trifid, lobes deeply cleft into several narrow lanceolate segments, entire on the margin."

796. *ARUM MONTANUM* (Roeb. *Colocasia* Ray, Schott.) stemless, root a subcylindrical tuber: leaves cordate repand, polished: spathe nearly as long as the ovate subulate spathe: anthers many-celled. *Rarb. Fl. Ind. 3 p. 497.*

A native of the mountainous parts of the Northern Circars where the root is employed to poison tigers!

797. *ARUM ODORATUM* (Roeb. *Colocasia* Ray, Schott.) stemless, leaves cordate, base bifid, lobes rounded: spathe cylindrical equaling the length of the whole spathe: berries one-seeded. *Rarb. Fl. Ind. 3 p. 499.*

Native of Pegue, flowers during the cool season ripening its fruit in March and April. The flowers possess a considerable degree of agreeable fragrance, a very unusual quality in the family.

798. *ARUM VITIFERUM* (Roeb. *Renealmia* Schott.) stemless; leaves peltate cordate acuminate: root flagelliferous and those runners bearing small vitiferous bulbs in clusters. *Rarb. Fl. Ind. 3 p. 496.*

A native of Nepal—Malabar—Coastalium, very abundant at the latter station, under the shade of dense woods. There I find it in perfection during August and September.

799. *CALYPTROGLOBA* (Roeb. *Hemodorum* Kunth.) stemless leaves oblong cordate: spathe circinate, the upper conical portion falling when early in blossom: spathe the upper half clavate and covered with stamens the lower half cylindrical and female. *Rarb. Fl. Ind. 3 p. 514.*

Native of Amboyna.

800. *ARUM SEMILIBERTUM* (Roeb. *Semiothisa* Kunth.) stemless: leaves peltate leaflets about 10: broad heart-shaped entire: flowers sessile appearing when the plant is destitute of foliage spathe clavate twice the length of the long tapering, erect, sessile, spathe nectarial, filaments clavate: anthers 2 lobed, berries one to two seeded. *Rarb. Fl. Ind. 3 p. 507.*

A native of the country around Ceylon, I see it during the dry hot season.

801. *ARUM OBTUSUM* (Roeb. *Arum* Mart.) stemless: leaves three lobed: spathe cylindrical equaling the length of the long tapering, erect, sessile, spathe nectarial, filaments clavate: anthers 2 lobed, berries one to two seeded. *Rarb. Fl. Ind. 3 p. 507.*

A native of the country around Ceylon, I see it during the dry hot season.

802. ARUM SYLVATICUM (Roxb. *Ancryphallus* Kunth) Py 'liuniLtn iirli'hit.) leaves mix: decompo. nil • ell InnnoUtd i Kpti ix stralgh'. muar [lire* time* longer than the short gibbous comp. iraltito ijnthas anthers 2 celled. Roxb. *Fl. Ind. 3* p. 311.

Native of the Great mountains, flowering; tin» fbi vrt HAM)

803. ARUM m'i. *A: 'w (Lin. Roxb. *Typhaceum* Schott.) stemless leaves three lobed: flowers sessile: spathe simple with its apex spiral and resting on the timmrik, nectarial filaments short simple and removed. Aw*. R /i,j/ 3 p. 306.

Native of the Moluccas whence it introduced into the Botanic Garden.

804. CALLA PICTA (Roxb. *Aglawema* Kunth) caulescent leaves shortspined, ovate, oblong entire clouded: flowers solitary solitary peduncled, spathe, gibbous, serrulate, shorter than the obtuse clavate spathe. Roxb. *Fl. Ind. 3* p. 315.

Native of the Island of Sumatra.

805. CALLA AROMATICA (Roxb. *Homon* L.) caulescent leaves subsagittate, cordate, acute; Stitut. 14; Utw« rounded and divaricate: spadix cylindrical. •item, «r»»i ling the spathe, above male, below female with abortive flowers intermixed: anthers many celled. Roxb. *Fl. Ind. 3* p. 312.

A native of Chittagong: when cut it diffuses a pleasant aromatic scent. The natives hold the medical virtues of the root in high estimation.

806. CALLA OBLONGIFOLIA. (Roxb. *clg*: -kr^a Kunth) caulescent: leaves ovate, oblong: spathe boat-shaped, acuminate spadix cylindrical short: than the spathe the lower r)«rt on scattered: spathe above closely covered with 4 celled anthers. Roxb. *Fl. Ind. 1* p. 316.

A native of the Malabar introduced into the Botanic Garden of Calcutta.

807. CALLA B' intrit (ItxnU *Hemalonum* Kunth) leaves cordate, base • LLL, *jiin be contracted, acute, equaling the spadix b of the spadix covered with prominent clavate "irjirtelc intermix' ii, upper t' is covered with i mt V n only, Roxb. *Fl. Ind. 0, j* 313.

808. CALLA VIRGATA (Roxb. *rt>hx:rutii* Ruhtli) 4111-lescent, leaves ovate, slightly serrate. urmiviicii at the base: spathe one-fourth the length of the iir n-late spathe with the female flowers LM bstc, •Flitter* many celled. Roxb. *Fl. Ind. 3* p. 317.

The status of this plant is not mentioned. It is called in Hindoo *Rak Rakho*, High meaning poison. Roxb. says derived his specific name from that word.

809. SMILAX OVALIFOLIA. (Roxb.) stem cylindrical branched: leaves unarmed, oval, opposite from five to seven nerved, petioles tendril bearing umbels compound. Native of the Circars in hedge and forests.

810. DIOSCOREA ALATA. (Linn.) tubers oblong, white, stems annual twining, long winged: leaves opposite, deep vt^lls from five to seven nerved. Roxb. *Fl. Ind. 3* p. 321.

This plant is universally i jstjvatt'dlt. >ia Carnatic in produces i

811. DIOSCOREA DEMONIA. (Roxb. *FL Ind. 3* p. 303) root tuberous, biennial, stems annual, twining, armed, leaves ternate, leaflets obtuse, cuneate, thm Ui ftn nrtwl. &•*. n. !<nd. 3, p. 303.

Native of lkiMr*) «i* i V oluocess. " TV nc is dried-ful, ~T*nniil, « Hl iflir .t lu» tODU lf ded." (Roxb.)

812. DIOSCOREA GLEBOSA (Roxb.) tubers white, stems twining six winged, leaves alternate and opposite, sagittate, ovate: male sp. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 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998, 999, 1000.

This species is much cultivated as affording a • MI talk

813. DIOSCOREA OPPOSITA (Linn. fill fl ind.) herbaceous smooth, leaves opposite from cordate to ovate—lanceolate, acute - tuitb tkfr* to seven nerved, male flowers axilled, Roxb. *Fl. Ind. 3* p. 308.

A -Si*J Of ("wclmandel, IUUL Of flattest occurrence in sub-alpine jungles.

814. DIOSCOREA PENTAPHYLLA. (Linn. Roxb.) tubers oblong, stems herbaceous, twining, prickly: leaves digitate downy: male flowers panicled, female ones < »pi«fl Roxb. *Fl. Ind. 3* p. 308.

A sufficiently common species in jungles on low hills, &c. but never, so far as I have seen, cultivated which is the more remarkable as I have always heard of the Natives dig the tubers, whenever they had an opportunity, to eat them.

815. TOMENTOSA. (Koenig.) herbaceous, tubers irregularly oblong: stems twining downy, slightly ternate, downy, male racemes axillary compound. Roxb. *Fl. Ind. 3* p. 303.

A widely distributed species, extending from the Circars to Cape Comorin and to be found on almost every considerable hill that is covered with natural jungle. Unless my memory deceives me, I have seen specimens in Dr. Royle's collection from even the high latitude of Scharapour and the foot of the Himalayas.

of the time I see of comparative copiousness of the baccate fruit resembling those and their name, and dividing sections according to its of the corolla. As it new though so truly Indian, has an species, if in fact, as how different can be found—that is, a Convolvulacea three essential requisites of—baccate ::>:, ovary, and campanulate corolla.

EXPLANATION OF PLATES.

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310. M J I P M M O i . r e c e j i H A (Sprung—Stittan utappn Lin. Acmitfpha ariiffiti SVillij.) (li'teuUM.- lenvoi prltatr c g d te fltiiI.T ac F'invted : (RBXA.) pinflw of male flwW7)TMNDijvjt brtCt*Miltrnttuves il, cmlnlnr, concnvr, dtfnlatc, f'lii'p, mntIT flit'tjrc<l : it'ivers very itnili; calvi 2 | » r H fclixt<d -ifa'nini. nh<KH 8, filaments Ulltfft Uinu b<< MijrX. Aw*. /% /i,j, / j p, \$yO.

Amboyus and Euum Islands.

Hpil.ur'li's dacripdbn of (tie Jluwdf) (if fiit jilntt i* dritakni by mntliog to Diutn tbn .tamcm and nutljiT*. On this (termini 1 nm unahle u iiltin<i(\ »nmtn..... from Mfjuimiii of apptirciljly thir (mult- pUnt, (iW differing in nonH re*ptct> frw< bn ft^nr, > r i i , j) (b » i in mine ibt calyx M f,hw riot tew pttrtd ". la it «lw tk* UUhr** *t* peltate. d—ytf &*i' l mu> 4 t»»>ai ce »t Knt l—l under his Oeyris peltata.

Bit. » APPA ? FELTAY < (TL W. Oeyris ... Maracaja ? Pet. Thour) Athorion, leaves ptJuta mil coriste entire (Roxb.) male panicles axillary : t actess rnatv So* < : flowers exceedingly minute ; calyx three parted ; stamens three ; anthers peltate four celled ; cells covered with lida, (Roxb.) female, calyx 3 parted ; ovary superior covered with yellow glutinous grains usually (by a ... style short, lateral, springing from ... ovary, ending in one, sometimes two ... late stigmas ; ovule attached to the base of the ovary opposite the insertion of the style, axce. size of a pea, debussing vert integu i> n> thr— — mniui wv)w^Aj| tinning U>> l i h ; the middle " »* not Ana tUck. thick, kui lid roogh on lh< otttldt' ; twi .rrtj It am iff* «i(rrwM' l<trf it • quantity d' uft .btiili palp; tk< loner <n* Mn « late and very thin : »> o ufaUpacU jnwrr*, Mi laced in a copious albumen ; only JiJox fcfamUM cunlitr J u*frrj pluma l mtoul* : ladtcb r [i i i M M • t l b w i T O p « r 4 < towards the apex of the seed.

Cir nn t l i ^ , Malabar and Eastern, slopes of Neilgherries.

Tic l « : M M * * B * r t w ! • taken partly from my own dissections, but principally from Roxburgh's description ami:, .. a in * • t < - to showing that the Nappa of A. dc Timlm inii UH Oeyris of Roxburgh are generically congen even though in this species the stamens are usually only 3 and the ovaries solitary, and further it seems ... me that they must all be referred to Du Bois' I li . i , n 5 m Malbaras between which and M ... the pla M » • l T » 4 « r w n i i . i i n i — M M i . . n » . is fotm the connecting link ; with however the weighty objections that in it the ovule • M wot < K « M l ta be pendulous from the apex * t l * mil sal it * calyx to be 4 parted while in this the < w U w i U i i f and the other 3 cleft. But ... to be explained, I think it pe ... all the known species of both genera will show that they can be reconciled an i til brought UCIWT on* sc ... denomination, the plants themselves being very like. Should this not prove the case then, as surmised by Roxb. in a MS. note on : l w drawing, thii must i-unntituae the rypo of a new genus and with the oth<t i"« firm (be type of a small suborder.

118. SPINACIA TETRA ai>itK rm.it; tcavc-i vn, lowly lol «d: (lowcn Jii«piil. «H*ile: th» male mir< (•tntmtw, itio TCIUBIC ciljt 3 pjirtal Rub. rt h-i. 3^ 771.

i'ib. mil-li cultinttdtn ft i-gal. I.lwvf quntod (Jw S. tetra Va of Stem am! Voq. Tana-n with doubt, tlw ehancter oftiv latter nni a. ree-IOL: wtlI *iili Hoxbur^U'i fi^nnri inn! L)«4,ri(-t;ori, Steu ll f Ninniiiliitiitr tlutun.) U oqtuQj in dattbt but he seems filler nut ID be nrart of ilit ricii^nce (if lttfxburgh's F"-" TmiiB, nr S' re c, din^ nntqn ote it, p r l . : rjiic Will" lich" catalogue, as if the one might be safely and satisfactorily distinguished from the other: Should this be his opinion, he could not have fallen into a greater error; the catalogue is a temporary one, and of no authority. The numerous species described, distributed among the distinguished and reliable, rendered available to the advancement of Science, pending their more careful determination by numerous eminent Botanists who undertook to add tin *«hnC out the most important specimens of the numerous species described, as well as figured in his most extensive and unique collection of drawings: to the general accuracy of which representations this work bears most ample testimony. U ikt> pwt< of raadvni kn plants, f w OHM n*rt>l to ill •to ud it in l'w twada of byi ft* b* ik*ff"Wt at ew SOMH*. Jwvty overwhelmed with synonyms, by the addition of the numerous undescribed ones of that kind, was an error scarcely excusable. The exclusion of Roxburgh's Flora from the tiM fd •uilionijci qaotH in tkaf «4rtwM> iartit* h) nwfUnermi mod and his plants for the most part elaborately identified.

319. Antnnt mtu (Spring. Stilago itanias Uo Roxb.) terate entire, lanceolate obk r w pailthed : ipikM uilttt •oil terminal ; male flowers irwf irmu *itti «k ahwtht <*lumn En lf> eatn. Jtate.

Nepal, Amboyas, is a tree of quick growth and particularly beautiful when loaded With til numerous bunches of ripe, shining, of the nd milt, which are subsacid and palatable. — B. time I see of comparison, superiority of superiority of re-

«20. ANTIDISENA PANDELLATA. (Roxb) the baccate fruit caaadnl: l n f i f * w « i i 04 — l M I f H CHINI n the three es quizes of «-baccate fruit, albumen. ovary, and campanulate corolla.

A 809

830. GYMNEMA ELHGANS. (W. & A. Contributions) twining, branches slender glabrous, the older ones warty : leaved cordate—ovate or oval, acuminate, undulated on the margin; umbels short peduncled, peduncles and pedicels afterwards elongating : flowers small, (white) throat of the corolla naked, tube furnished within with hairy lines: stigma obtuse longer than the stamens : follicles often, by abortion, solitary, acuminate : seed margined. *Wight's Contributions, pfl. 46.*

The exact station whence the specimens figured were obtained is unknown to me the drawing having been made when I was in England which will in part account for the absence of fruit. The follicles are slender, about 3 inches long and only three or four lines in thickness.

831. CRYPTOLEPIS GRWDIFLORA. (R. W.) leaves from oval to obovate spatulate : cymes axillary diffuse, longer than the leaves : corolla funnel-shaped, throat furnished with 5 inflexed capitate processes : anthers acuminate ; 5 hypogynous emarginate scales alternate with the stamens; follicles divaricated.

Balahaut mountain near Naggary. A fine species abundantly distinct from *C. Buchananni*.

While examining the specimen figured I found some grains of pollen producing their tubes, these I have endeavoured to represent. The large tube on the right hand side is one of them more highly magnified to show little opaque bodies passing along.

832. CRYPTOSTEQIA GRANDIFLORA. (R. Br. *Nerium grandiflorum*. Roxb.)

This is a large twining shrub now common in the hedge rows about Madras and not unfrequently met with as an ornamental shrub in gardens. It abounds with milky juice from which, when exposed for a short time to the sun, a quantity of pure caoutchouc separates : flowers redish white especially towards the bottom of the tube.

833. ANFSEIA CALYSINA. (Choisy. *Convolvulus caltuginus*. Roxb.) stem pilose twining : leaves oblong cordate¹ acuminate very acute, glabrous, petiolate : peduncles hardly the length of the petioles 1-3 flowered : sepals with villous edges, exterior ones sagittately cordate : corolla tubular. *G. Don. gard. diet. 4, pg. 295.*

Roxburgh assigns the interior parts of India as the station of this species. The specimen here figured is of peninsular origin the exact station I do not at present recollect but think Negapatam.

834. BATATAS PENTAPHYLLA. (Ch. *Convolvulus pentaphyllus* Lin. *C. hirsutus* Roxb.) hairy : leaves quinate ; leaflets petiolate, elliptic lanceolate or oblong, entire, acuminate: peduncles longer than the leaves, loose, dichotomous : corolla white or cream coloured. *Don. gard. diet. 4 >pg 261.*

Roxburgh assigns the same station as above " interior parts of Hindostan" for this species I have found it repeatedly near the Coast. The specimen here figured grew at Wegapatam on the sea coast.

835. HEWITTIA BICOLOR. (W. & A. *Shuleria* Choisy, not of W. & A. Prod. *Convolvulus bicolor*, Roxb.)

This, the only species of the genus is common enough near the Coast. It is distinguished generally by its one celled 4 seeded capsules and the flattened ovate spreading lobes of the stigma. Roxburgh however says, " capsules hairy/rmr celled; seeds black, one in each cell" which I think must be a mistake on his part. My draughtsman has clearly represented the capsule¹ 1 celled and four seeded which corresponds with Choisy's character.

836. IPOMCII PESTIGRIDIS. (Lin) leaves palmate 5 rarely 7 lobed, lobes ovate entire, clothed wK? silky hairs : peduncles many flowered equal in length to the leaves : flowers aggregate; bracteas six or eight surrounding the head of flowers and longer than it. *Don. gard. diet. 4, pg. 280.*

A most common plant in sandy soils extending all over India.

837. IPOMCEA PILOSA. (Choisy.) hairy : leaves broadly cordate entire or slightly 3 lobed, clothed with white wool beneath : peduncles exceeding the petioles, cymosely many flowered ; sepals linear hairy. *Don. gard. diet. 1, c.*

A subalpine plant found twining over bushes in jungles near the bottom of hills. The leaves are white and powdery beneath, the flowers a beautiful rose pink color and the whole plant covered with long soft hairs.

838. IPOMCEA & PIARIA. (Konig. lioxb) stem alternately glabrous and villous from loose hairs : leaves cordate, oblong : peduncles many flowered : sepals oblong ovate acute or obtuse : corolla showy tubularly funnel shaped. *Don. gard. diet. 4, pg. 273.*

Very common twining in hedges, a showy plant deserving of a place in the flower garden. The peduncles enlarge toward the apex and sometimes become so succulent as to resemble fruit.

839. ARGYREIA CYMO¹ (Choisy. *Bivea* R. W. *Let'somia cymosa* Roxb.) clothed with pruinose down : leaves roundish cordate or reniform-cordate¹ obtuse, terminated by a short mucro, glabrous on both sides, or clothed with pruinose down : peduncles equal or occasionally exceeding the leaves; leafy at top and cymosely many flowered ; bracteas ovate roundish, obtuse, plieately recurved : outer sepals like the bracteas, inner ones ovate.linear: corolla showy. *Don. gard. diet. 4, pg. 257.*

A plant of not uncommon occurrence twining among hedges, which during the flowering season it greatly enlivens with its numerous large pale pink flowers.

When naming this plate I had not specimens at hand to dissect, the ovary and therefore adopted, *CIC¹SV¹S* name in opposition to the evidence furnished by the drawing * which shows a 4 celled ovary, not a 2 celled one, which constitutes the essential character of the genus. I have since ascertained that the draftsman is right and that it is in fact a species of *Rivea*, the character of which is to have a 4 celled ovary with a single cell in each cell. With this character taken from structure M. Choisy, has, in the case of *Argyreia*, unhappily, combined one derived from the form of the corolla of easier observation, and on which he seems generally to have relied, though unfortunately of no value and such as a very slight degree of reflection must have satisfied him ought not to be associated with those derived from the structure of the ovary, until confirmed by most careful examination ; there being no necessary connection between the shape of the corolla and number of cells of the ovary. As this matter now stands it seems not improbable that *Lo-ureiro's* old genus will be swept away to give place to one of yesterday, merely through an error of the more recent expositor. For myself I have not yet met with a single instance of a convolvulaceous plant with baccate fruit and a 2 celled ovary; and now, I trust not unreasonably, feel sceptical of the existence of such a union, though at the same time I see no reason why it should not exist: but lining of comparatively rare occurrence I would urge the propriety of reverting to Roxburgh's idea of making the baccate fruit the essential character of the genus reuniting *Rivea* and *Argyreia*, of course adopting the older name, and dividing the genus into sections and subsections according to its 2 or 4 celled ovary and form of the corolla. As it now stands the genus *Argyreia*, though so truly Indian, has scarcely a true Indian species, if, in fact, as now defined, one genuine species can be found—that is, a *Convolvulacea* the three essential requisites of—baccate fruit, 2 celled ovary, and campanulate corolla.

840. TIXACUM WIGHTIANUM. (Arnolt) stems very numerous and with the branches broadly winged: leaves oblong lanceolate acuminate subsessile: corymbs leafy: corolla five cleft, 1 acinios oval acute or acuminate. ^{fruits} • ^{feroMS} jfedicels recurved: capsule globosely ellipsoidal. *Arnott annals Nat. Hist.* 3, p. 89.

This seems to be a rare plant I have not myself met with it the accompanying drawing having been prepared during my absence from India.

841. SOLANUM (NYCTERIUM) WIGHTII (Nees) herbaceous, armed with aciculate prickles, and clothed with fascicled hairs: leaves cordate, ovate or elliptic, ^{repando-siuuate} : fruitiferous peduncles elongated ^{reflexvd} : the three inferior anthers larger: fruit covered by the persistent calyx. *Nees in Act. Acad. Cats. Nat. Cur. Vol.* 18.

A rare plant found sparingly on the Neilgherries near Coonoor in jungle, the specimen figured was not however, from that station.

842. WAHLENBERGIA PEROTIFOLIA. (W. & A. DC. *Dentilla* Willd. *Iloxb.*) stem erect, flexuose, pilose, angled ramous: leaves alternate, sessile, lanceolate, acuminate attenuated at the base, glabrous; the margin somewhat undulately-crisp, denticulate: peduncles terminal pubescent naked: tube of the calyx hairy; with shorter, linear acuminate, glabrous lobes: capsule globose. *DC. Prod.* 7, p. 434.

Found not uncommon in cultivated sandy soils near the Coast. Leaves finely ciliate, capsule 3 celled.

843) EMBRYOPTERIS GLUTENIFERA.— Male and female 844 j (Roxl). *Diospt/ras glufinosa* Konig. in Roxb.) leaves linear lanceolate glabrous male peduncles from three to four flowered with about 20 filaments and forty anthers: fertile flowers solitary, with from one to four sterile stamens styles four. *Roxb. FL Ind.* 2, p. 533.

The specimens here figured were found in Malabar. They seem to correspond nearly with Roxburgh's description that I can scarcely doubt their being the same species, though they vary in some points. Judging from one or two I have seen cultivated at Madras it seems a middle sized tree.

845. CEROPEGIA BULBO3A. (Roxb. W. & A.-Contributions) twining, glabrous, rather fleshy: root tuberous: leaves from suborbicular to lanceolate acuminate: peduncles many flowered, shorter than the leaved: calycine segments much shorter than the ventricose base of the corolla: tube of the corolla subclavate, segiksnsts of the limb enlarging upwards, much shorter than the tube, ciliated: middle lobes of the leaflets of the corona subulate incurved at top, lateral ones minute, acuminate lying on the primary ones. ^{W. § > A. contributions} p. 32.

The specimen figured was grown in my garden from a root found in sandy soil on the sea coast near Point Calimere, I am uncertain whether I have since met with the plant.

846. CEROPH. GIA MYSORF.NSIS. (II. W.) snffrutecose, glabrous, twining; leaves broad cordate ovate, acuminate: peduncles about the length of the petiols, four to eight flowered: lacynice of the calyx acute, much shorter than the greatly dilated base of the corolla: tube of the corolla short, suddenly expanding into a large 5 cleft limb, segments short, broad ovate, adhering at the point, glabrous on the margins: lobes of the corona all ligulate, the lateral ones about equaling the primary: follicles long slender irregularly curved.

Mysore twining in hedges December 1834.

I have not since met with this beautiful, copbusly flowering, plant. Flowers pale straw-coloured. It is most nearly allied to *Celegatis* but is readily distinguished at first sight by the uniform colour of its flowers, their being quite glabrous, but more and satisfactorily by the divisions of the staminal crown which are all equal in place of the lateral ones only about half the length of the primary.

847. HOYA I/ALIFOLIA/ £W. & A.) climbing, rooting along the stems, glabrous: leaves fleshy^{val} acuminate at both ends: pedifncles shorter than the leaves many flowered: corolla puberulous within, segments ovate acute, leaflets of the stamina! crown oval, obtuse, interior angle short: stigmat-inuticxmsk *JViqbfs contributions*, p. 37.

A handsome species but apparently of rare occurrence as I have not met with it for several years, the specimen figured was found in Mrlabai.

848. TYLOPHOBA FACCUlATA-(Ham^{W.} & A. Contributions) erect, or slightly twining, glabrous: leaves approximated ovate somewhat fleshy, slightly decurrent towards the ends of the branches: peduncles erect flexuose, bearing at the flexures two or three flowered facicles: lenflets of the staminal crown oblong ovate, bluntish: pollen masses transverse: stigma apiculate. *Wights contributions*, I. c.

Copper mountains Bellary frequent, twining on grass also on low gra&y hills at Courtallum twining among long g.-ass. S, When it meets with support it twines to a small extent. In the analysis the peculiarities of this species are not so well shown as I could have wished.

849. OPHIOXYLON SERPENTINUM. (Linn.)t

This is a plant of frequent occurrence in moist woods and being one of great beauty is also much cultivated as an ornamental shrub. The leaves are generally whorled, from three to five round the joints, lanceolate acute or acuminate, waved on the margin, glabrous; cymes axillary on long peduncles usually erect: pedicels and calyxes bright shining red which, contrasting with the pure white flowers, give the cymes a showy appearance especially when combined with its clusters of black berries.

850. ANISEIA UNIFLORA. (Choisy.) stems glabrous or pilose at the apex, prostrate: leaves oblong on very short petiols, mucronate at the apex, glabrous: peduncles equal in length to the petiols 1 flowered outer sepals joined obliquely at the base. *Don. gard. diet.* 4, p. 295.

A rare plant in Coromandel. I have only once met with it near Negapatam, where this drawing was made. As I found it growing on the edge of a "vik in" moist sandy soil it may perhaps be more frequent in the more humid climate of Malabar where Itheede also found it.

851. ARGYREIA SPECIOSA (Sweet Choisy. *Ricea*, II. W.) tmentnse: leaves large coruV.e, acute, glabrou?, above or rarely villous, thickly nerved beneath and clothed with silky silvery cpwn: peduncles about equal in length to the petiols, at first umbellately capitate the divisions afterwards elongating, forming lax cymes: bractees acute unequal: sepals ovate very blunt. *Don.gard. diet.* 4, p. 154.

A most powerful twiner and splendid plant. The juice like that of most of the genus is milky and viscid, the flowers pink or rose colored within, but appear nearly white exteriorly, owing to the thick coat of white hair with which the tube is covered. Except in the campanulate corotya this is a *Rive a* having the 4 celled ovary of that genus.

852. DATURA ALBA. (Nees.—*D. mctel* Koxb/)'h^{es} ovate, acuminate, iepandy toothed, unequal at the f>se, and are, as well as the stem, smoothish: stamens enclosed: fruit prickly. *Don. gard. diet.* 4, p. 474.

A very common plant, possessing, in every part, intensely narcotic properties which has led to its being beneficially employed in mtdirine for the relief of various nervous disorders and, ninong evil disposed persons, lbr other most mischievous purposes.

853. PiiYALn SOMNIFERA. (Link. Nees.) shrubby: leaves entire: flowers crowded, nearly sess'le, subverticellate. *Don. gard. diet.* 4, ;. 44.

This is a common plant but, so far as I am aware, a useless one to man.

85⁸. SOLANUM TRILOBATUM. (Linn.) frutescent, scandent, prickly; prickles hooked: leaves panduriformly 3 lobed, or 3 lobed obtuse, glabrous and are, as well as the petioles and peduncles, prickly: racemes subumbellate terminal and lateral: corollas deeply 5-lobed. *Don. gard. diet.* *, p. 437.

A common plant found creeping on the ground or climbing among hedges and bushes. The color of the flower varies from white to purplish the berries red.

855. STIUGA EUPHRASIOIDES. (Benth. *Bucfyricea evphrasioides* Valil. I. ten'h.) nearly glabrous, rough, leaves linear oblong: calyx oblong, marked with about 15 striae tube of the corolla pubescent. *Benth. Scroph. Intl. p.* 41.

This plant is common in wet pasture land. Since the publication of his synopsis of Indian Scrophulariaceae Mr. Benthham has revised his previous labours in this family and has separated the Indian species of *Buchnera*, from the Cape ones, under the generic name of *Striya*, mainly on account of the very different form of the corolla—being straight salver-shaped in *Buchnera* and abruptly bent in *Striya*—This therefore being a true *Striga* I have adopted the name and quote that on the plate as a synonym, without, however, approving of the principle, and still less the practice of constructing genera based on such slender points of difference. So far as I can judge from a perusal of the generic character, I should suppose that a subgenus would have amply sufficed, thereby avoiding the injury to the science arising from breaking down good natural genera and unnecessarily adding to the already too long list of synonyms under which Botany groans.

856. SUTERA OLANDULOSA. (Roxb. Benth.) diffuse, clothed with glandular hairs, viscid, segments of the pinnatifid leaves cut; the upper ones, with the racemes of flowers, alternate: sepals obtuse.—*Bentham's Synopsis*, p. 42.

This drawing was not made under my direction and the analysis is less perfect than I could have wished. The plants forming this genus are low diffuse herbs with opposite pinnatifid leaves, pedicelled axillary, solitary, or occasionally, racemose flowers.

857. BONNAYA HISSOPIODES. (Benth.) stem elongated lax: leaves oblong lanceolate, remote: pedicels axillary elongated, corolla three or four times longer than the calyx. *Benth. Synop. p.* 34.

This is a common plant on the banks of paddy fields and in wet pasture every where during the rainy season.

858. BONNAYA MINIMA? (G. Don. *Gratiola minima* Roth.) stem filiform erect simple: leaves oblong, sessile, remote, serrulated and are, as well as the calycine segments, ciliated on the margin: capsule oblong, rather longer than the pedicels. *Don. gard. diet.* 4, p. 538.

This very minute species is found in paddy fields, but to the best of my recollection is of rare occurrence. The flowers are pale yellow. I am uncertain whether this is Roth's plant, but I think it corresponds well with the character and, like it, only attains the height of about 3 inches.

859. DOPATRIUM FOREMOTIDES. (Benth. *Gratiola lobe-lioides* Roxb.) stem elongated, sparingly branched: leaves of the stem minute, obtuse: capsules globose: corolla nearly five times the length of the calyx. *Benth. Sipwp. p.* 31.

Frequent in rice fields growing in water, flowers usually pale blue, longish pedicelled: racemes on the ends of the branches. The draftsman from not understanding it, has not clearly shown the structure of the capsule which is four-valved. This however is unquestionably Mr. Benthham's plant.

Figure 4 is a detached anther considerably magnified.

860. LIMNOPHILA POLTSTACHYA. (Benth.) leaves emersed ternately whorled, 3-nerved: racemes branched, slender many flowered: flowers small sessile. *Benth. Synop. Scrophulariaceae Indic. p.* 17.

Not unfrequent in rice fields and other flooded grounds in the Tanjore district and in most parts of Coromandel. Flowers small white.

861. LIMNOPHILA RACEMOSA (Benth.). *Gyrilla aquatica* Roxb.) leaves emersed opposite or subverticelled, three-nerved, entire, or the lower ones divided: racemes dense many flowered: flowers pedicelled and like the membranaceous calyx smooth. *Benth. Synop. Scroph. Ind. p.* 28.

A native of flooded ground such as rice fields the flowers are purplish, possessing considerable fragrance.

862. TORENIA ASIATICA. (Linn.) leaves ovate or ovate lanceolate: peduncles axillary fascicled: calyx oblong, contractile at the base, about half the length of the corolla. *Benth. Synop. Scroph. 2nd. p.* 38.

An alpine or subalpine plant very widely diffused in alpine regions. The specimen selected by the draftsman for the illustration of this species is not so favourable a one as might have been. The plant itself has little beauty, except when forming a compact tuft with a number of open blossoms when they become one strikingly so, owing to the deep rich purple of its flowers.

863. VANBELIA CRUSTACEA. (Benth. *Gratiola lucida*, Roxb.) diffuse, glabrous: leaves ovate: peduncles axillary or subracemose two or three times longer than the calyx: calyx before expansion 5-toothed, afterwards 5-parted, exceeding the ovate capsules. *Benth. Synop. Scroph. Ind. p.* 35.

A very widely distributed plant and well represented in this figure.

864. ANISOMELE MALABARICA. (Brown. Benth.) tomentously villous: leaves oblong lanceolate narrowing at the base: verticillasters many flowered, dense, or length elongating into large cymes; floral leaves, bracts, and subulate teeth of the calyx very soft. *Benth. Lab. p.* 70.

Frequent in many parts of the Carnatic, but has an extensive range, being also found in Burmah, the Mauritius, Penang, Java, China, &c.

865. ANISOMESLES OVATA. (R. Brown.—Benth.) hairy or subglabrous: leaves ovate or roundish, acuminate, rounded, or truncate subcordate, at the base; verticillasters dense, many flowered, teeth of the calyx lanceolate, acute. *Benth. I. c. p.* 702.

A common plant not very ornamental and with as wide a geographical range as the preceding.

866. LEUCAS BIFLORA. (Brown. Benth.) herbaceous diffuse: leaves ovate, coarsely dentate, pubescent on both sides: verticillasters two flowered: bracts unequal: calyx tubular, mouth equal, teeth subulate. *Benth. I. c. p.* 619.

A low growing plant, common in arid jungles, very polymorphous in its general appearance. The form here represented is not the most common, but being suitable for the size of the plates was taken. I have seen plants three or four feet long, usually lying on the ground, but sometimes climbing to that height among bushes.

867. LEONOTIS NEPETIOIDES. (R. Brown.—Benth.) herbaceous: leaves ovate crenate: all the teeth of the calyx spinous, the upper one larger ovate: corolla (red) about twice the length of the calyx. *Benth. I. c. p.* 618.

This very conspicuous plant, with its large redish orange coloured flowers, is usually found growing among rubbish and in neglected places, towering at all seasons. It is widely distributed over the world, being found in the tropical parts of Asia, Africa, America, and New Holland.

868. *OCIMUM Btiiiuaau. tar. TITMIFMIVM (Bonlh.)*
 Jwtt-icdli*, ewcl nr »Bl. niliuj; • 1ts*ci priLnlml, ovuj* or
 •-ifiWwrtim« th* biir, lubdrultlc, *AIHClU* nwAiul«
 elliate: racemes simple: calyx: lobes 5: lobes 5: lobes 5: lobes 5:
 fruit: rami oiw* r«nr»d, niwpwitilj iriUwJ, g»Mwa»
 nbnir t>- U. d. nanc ««*(• imm 1, »VU»
 •Aon Mnm, M««««• »ot evmtttt * iW ta* rf i»»
 th* IUMl tmti *raM *r«dB. tW 1 ^ «««• Wtt-
 " «> pawW. a««««« t ln w t i r f M A W H * * *
 1 «> W 1 U t t i rrei. «Uhr,v». pfuOa Uht

86P, *Plinffl* UTiron**. (Rash.) aromatic: leaves
 round Mrdkkt e«liir. MROMII : MTVWA* «iI«T MM I»T-
 monal: throat

A i-nuiutin itn-nii, fiarendf » dirtt nttov M U V) drope
 about lb« rite ofa I*1) trctt vnaicfM 4 cdM.

870. *BARKLIA RUFICORNIS (Linn. Nees.)* shrubby: hairs
 spreading: bracteoles axillary paired, spinous, opposite,
 divariced, alternately one flowered and one leafed.
 •Erfib: leaves el-
 liptic, acute at the base, spinously mucronate;
 the calyx shorter than the sepals, the inferior one obtuse,
 emarginate. Nees in Wall. pl. Anat. var. 2, p. 54.

A low growing thorny shrub, frequent in poor lands and
 about road sides. The flowers open in the course of the
 night outj «t*««lj dn^ Ufm
 ! nr lr«k wUl* to rtm ax* m.

871. *HEXUNOMOI xTHBUU. (ft. ITI) «r» ellip-
 tic oblong, acute. Inliuir, er««i*i, tincr nerrnt, i*

Mysore.—I am indebted for the drawing and specimens
 of this plant to the kindness of Mr. Siotd* nf • P
 •fthi who found it in Mysore. The only specimen I have seen
 is ii itcsr NueziIT in Mv»o«. It is the only specimen I have seen
 by Mr. Drahtman. The limb of the corolla is bright yellow
 the tube purplish. The bearded anthers and tubular
 stigma seem to indicate that it might form the type of a
 new, or at all events a sub-genus, but not having fruit I
 prefer leaving it here.

P. S.—Since the above i t»r» ma ftwt
 does not differ from those of *Hexastrota* I, therefore,
 think it advisable to view the hairy anthers rather as a
 sectional than generic character.

872. *THUNDERGIA GRANDIFLORA (Ro. Nees.)* scand-
 ent: leaves cordate, angled, acuminate, hijviJ : limb of
 the calyx truncated, entire. Nees in Wall. pl. At. var. 3
 7 7.

This plant I have never met with wild. Tlit *jwcimen
 here represented was obtained from the M)t*re liftli-
 cultural Society's Garden at Bangalore. It is in r.«kU-
 Wely training handsome plant, well fitted lot irlnjur*.

873. *SYNDOSMORPHUM ROSELIANUM (Nees.)* leaves
 ovate, dentate, glabrous beneath: bracts rhomboid obtuse,
 cordate, equalling the calyx. Nees in Wall. pl. Anat.
 var. 2, p. 54.

The specimen here differs a good deal in ap-
 pearance from the one so named by Nees in my
 herbarium, especially in the shorter spikes and greater
 abundance of flowers, but still: i>-i-ie liiii • only differ-
 ent state of the (MM pUtii, tli«9 »r« rtM UM WK I'-
 calyx, namely the Pulney mountains.
 seen with on the Nel

874. *BORRH*
 fonn pmtliai: fJALTCm*. (IUth.J ««>o marked wn
 VM4iui HWT*! 1» 1* of (he His. ents and anthe 1»«
 etxfomeath; tUL, til*lop- of the long styles and stigmas
 MWIII ihn I
 A ntT«»

Th« j«Mt i w > I U W M S U * « IB. W.) Brbarwiii; oiy-
 *wb i«t« «rt\ fl„m] ipdnni 4J haved; lrw» «
 Th— / —\ itmi rfy k«rrh f i#b ralj x, after-
 to the wcfimw | fcjy, W mi« ipaAmWr : filaporia

overlooked white lar. ^U>^4 Jloweri Klull, lube pur-
 culur.

This is shown which he named *R. palmirale*
 ^ hf M4 *W^ | ^ _ .

there are certa MirtimnitMrrt.AHt. . W A A.)
 I have ventur SCHIZOMA minute, cactus, 3-5-lobed; ovatum
 larger flowers, its 5-lobed. W. & A. Prod. p. 71.
 : Neighbouries frequent. A moderate tree

875. *Borghuly and August, matis*—its fruit during
 leaves succulent. This, which 1* Iir MJ1 ? ? ? ? ?
 of the cones long per, think to have 'H:11 united to *Erucellans*
 interruptedly such it assuredly does not differ in any essen-
 the intermediate branch—2 flowers—3 petals back and front
 round the apical branch—5 anthers—5 calyx and ovary—7 stigma
 transversely—9 cut vertically—10 a fruit
 appearance is—11 cut vertically showing several supra-
 a seed—12 flower bud and involucral—14
 under surfaces of a leaf all insignificant.

litnr part of it's VERA GYCHTIDIS. A ion > W. & A.I
 fiJj|rd !; (t ««, MitartO. MEOi: »»•• *ppwft*, (VtJ>

876. *ARECA*
 the oblong of plate near the base, acute, monochamous,
 woolly tomes and serratures briefly: pedicels axillary or
 all the length of the leaves, very slender;
 the ends of the areolae, with a very short conical nearly
 Scot. Veg. 1. anterior lobe of the petals elongated,
 An exceed towards the base: stigmas united; capsule
 nearly all wo- brown, tapering at both ends, with about 2
 little known, a the middle and a constriction between
 never to have A. Prod. p. 139.

I flowering flowering in July. This I found in great
 or Waller in moist jungles, during the pre-
 South West monsoon, and at the same time
 showing the following:
 ed—7 mature round a mind

ARECA KARNAL (W. & A.) W. & A.:
 reading diffuse branches: leaves opposite,
 fan-shaped, serratures briefly: pedicels axillary or

877. *ARECA I nbtum U» toMMtttt a*d «c«t»*,
 •rale flo«t- on each side near the petiole; upper side
 involucre veins and near the margin; under glaucous:
 long petiole ovary or in pairs filiform, longer than the ovu-
 2, p. 880, side horter than the lanceolate ones, in fruit re-
 Frequent al sepals linear, equal
 gardens and, concave, larger than the posterior lobe of
 The curious, much smaller than the elongated above 1* .tite-
 un-ates each- wet one with slender spur, t«rf^ mice the
 frmi all the flower: capsule narrow-oblong, tapering at

1 flowerful w seeded. W. & A. Prod. p. 140.
 trtdl- alut !
 flower—I (

ARECA KARNAL (W. & A.) W. & A.:
 carpels ovate, branched, diffuse, slender, densely puber-
 versely. Petioles triangular at the apex, denudate; leaves
 ovate elliptic-oblong to rounded, mucronate,
 beneath and glaucous beneath: racemes lateral:

878. *ARECA*
 deeply cog- like, about twice the length of the calyx. W.
 2-lobed; tra- p. 181.
 male spike, diffuse growing plant is of frequent occurrence
 licta. The specimen from which this figure
 may perhaps be gathered on the Neighbouries.

1 flowering plant w...
 —2 flower:—3 calyx, its
 calyx lobes removed to show

KYDIA. Roxburgh.

Roxburgh in establishing this genus assigned two species to it, K. calycina and K. frutescens but with characters so loosely constructed that, but for his figures, there would have been some difficulty in distinguishing them. Having got specimens of these different forms it became necessary to determine their species. This I found more difficult than I at first supposed. I only possessed the plant in flower, and I was obliged to have recourse to the fruit to determine their species. This I found more difficult than I at first supposed. I only possessed the plant in flower, and I was obliged to have recourse to the fruit to determine their species.

This led me to examine the only flower left on the fertile branch which proved its identity with Roxburgh's K. calycina. The circuit of the ovary is very different from that of the other species. The ovary is very different from that of the other species. The ovary is very different from that of the other species.

The preceding observations will explain the cause of Roxburgh's error having seen the ripe seed vessel of K. frutescens though the structure and contents of the germen promise the same parts as that of the other species.

In the valleys of the Circar mountains Roxburgh has discovered a new species of this genus. It is very different from that of the other species. It is very different from that of the other species.

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AAVIA PROCUMBENS. (Roxb.) root branches procumbent, smooth: leaves alternate, ovate, serrated, pubescent, covered with a silver coloured powder, terminal in long peduncled heads.

C. KYDIA. showing the short peduncles, always in flower projecting beyond the leaves. It is a troublesome weed, always in flower projecting beyond the leaves. It is a troublesome weed, always in flower projecting beyond the leaves.

881. KYDIA. of the seed, though strictly correct, as seen in the drawing, does not convey a correct idea of the seed, though strictly correct, as seen in the drawing, does not convey a correct idea of the seed.

Aon, *; twufju, pV. bat it it ot, u think this (Jte- otii; M i n af eec... uo<W>iihW usU urn:her

882. MICA. involucre 5-veined: stig. NALVIA STELIATA. (R. W.) decumbent: flowers in racemes, corolla ovate, obtuse, microcarpa: racemes branched: flowers verticillate, subsessile, in the cool season: ovary elongated, clavate, furrowed, greenish, 5-veined: style elongated, slender, 5-veined, DC. from which the style is elongated, slender, 5-veined, DC. from which the style is elongated, slender, 5-veined.

883. IMPATIENS JAVANICA. (Juss.) stem erect, and like branches diffuse: leaves alternate, ovate, serrated, pubescent, covered with a silver coloured powder, terminal in long peduncled heads.

884. IMPATIENS TIBETICA. (Linn.) stem erect, and like branches diffuse: leaves alternate, ovate, serrated, pubescent, covered with a silver coloured powder, terminal in long peduncled heads.

885. IMPATIENS JAVANICA. (Juss.) stem erect, and like branches diffuse: leaves alternate, ovate, serrated, pubescent, covered with a silver coloured powder, terminal in long peduncled heads.

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886. *TROXALIPUS KLEINIT.* (W. & A.) stems glabrous ramuli pubescent: leaves elliptic, abruptly acuminate: corymbs sessile, branches divaricate longer than the leaves: flowers pedicelled; segments of the corolla ligulate glabrous, throat pilose; leaflets of the staminal crown ovate bidentate-truncate, the apex furnished with an interior exerted flat lacinia subtridentate at the point; stigma rostrate, slightly bifid at the apex, a little longer than the tube of the corolla: follicles arcuately reflexed.

Wight contributions, p. 10.

Twining in hedges near the sea coast in Tanjore about Negapatam.

1 flowering branch—2 detached flower—3 corolla—4 calyx removed and limb of the corolla drawn back to show the crown more highly magnified—5 pollen masses—6 follicles.

I am indebted to Dr. Greville of Edinburgh for Nos. 4 & 5 of these analyses.

887. *IPOMOEA RUGOSA.* (Choisy.) stems creeping: leaves cordately reniform, glabrous, obtuse, mucronulate: peduncles usually shorter than the leaves: sepals ovate, outer ones shortest and rugosely plicate. *Don. diet. 4, p. 266.*

Frequent in moist soil as about the banks of water-courses and under the bunds of tanks, flowers usually pink sometimes pure white.

In this plate the figure No. 4 represents the calyx with its two rugous sepals, the best distinguishing mark of the species.

888. *RIVEA POMACEA.* (R. W. *Argyria pomacea* Choisy.) leaves clothed with cineritious velvet down on both sides but especially beneath: peduncles exceeding ripe petioles, somewhat cymose, many flowered: bractes linear lanceolate adpressed to the flowers, sepals ovate lanceolate obtuse, rather villous. *Don. L. c.*

This is a strong growing species frequent about Coimbatore twining over hedges and bushes. Juice milky, flowers pink, berries yellow when ripe, pulpy. The analysis of this kind two subsequent species Nos. 890 & 91 clearly show that in all of them the ovary is 4 celled and fruit baccate and to that extent all are clearly referable to Choisy's genus *Jivea* to which, I have referred them. I have however found this character so universal in the genus that I am becoming more and more fearful, if rigidly adhered to, that the other name will be blotted out of Botanical nomenclature and would therefore suggest that the generic character be so extended as to include all those species having baccate fruit whatever the form of the corolla or number of cells of the ovary. As that I have yet seen are further distinguished from *Ipomoea* by their woody subarborescent habit abounding in milky juice.

889. *CAPPARIS RIVARICATA.* (Lamark. W. & A.) glabrous: stipules thorny sharp, curved: leaves very shortly petioled, exactly linear-lanceolate, mucronate, coriaceous: flowers axillary, solitary, short pedicelled: petals linear spatulate, ciliate, acuminate. *W. fr. A. Prod. p. 27.*

Very common about Coimbatore, usually appearing as a small very ramous shrub, exactly agreeing with the first part of the above character, and in that form never in flower; hence neither Lamark nor ourselves had seen flowery. More rarely it attains the size of a small tree, with a round dense top, the ends of the branchlets drooping. In this state only I have seen it in flower and this figure gives a good representation of a branch taken from a tree rather larger than is usually met with. The natives seem to associate some sacred ideas with this tree, as I have frequently seen swamy idols under its shade.

890. *RIVEA CUNEATA.* (P. W. *Argyria Ker*, Choisy. &c.) smoothish: leaves obovate cuneate, emarginate, glabrous above, but beset with short crowded hairs beneath, hardly petiolate: peduncles shorter than the leaves 3-6 flowered: bractes linear very acute: sepals, ovate obtuse, equal, villous. *Don L. c.*

This species is very abundant in Mysore and is also generally met with in alpine districts, but rarely below 2500 feet of elevation. It is a beautiful shrub when in full flower, rarely twining but does sometimes. The fruit after maturely becomes dry and capsular forming as it were the transition from the succulent fruit of *Argyria* to the capsule of *Ipomoea*.

801. *RIVEA HIRSUTA.* (R. W. *Argyria hirsuta*. W. & A. *Madras Journal.*) hairy all over; leaves cordate at the base, harshly tomentose beneath: flowers cymose; peduncles usually longer than the leaves: flowers large tubular, stamens included: fruit ovate pyramidal pointed deep orange coloured when ripe. Neilgherries flowering the greater part of the year.

It seems, to me, doubtful whether this and several other reputed species, found on these hills, may not require, on more careful examination, to be united into one.

892. *HELIOTROPIMUM ZEYLASICUM.* (Lam.) stem shrubby branched, clothed with stiff bristly hairs: leaves linear lanceolate pilose on both sides: racemes axillary, numerous towards the ends of the branches, much longer than the leaves, forked; flowers sessile: corolla tubular 4-lobed, throat 5-lobed; segments of the limb spreading acuminate: anthers sessile, included, connective produced beyond the cells, 3 toothed at the apex. *

Frequent in cultivated land about Coimbatore but generally a rare plant in India, Burman's figure (Fl. Indica) taken from a dried specimen, is most characteristic of the plant in that state but gives an imperfect idea of the growing cue.

893. *SOLANUM GIGANTEUM.* (Jaq.) stem shrubby: prickles tomentose at the base: leaves elliptic lanceolate acute, unarmed, entire, glabrous above, clothed with hoary tomentum beneath: racemes dichotomous cymose lateral, many flowered, clothed with white tomentum. *Pon. diet. 4, p. 430.*

A subalpine shrub: the specimen* here figured grew on the Neilgherries at an elevation of 6000 feet.

The flowers which are small, pale purple, nearly hid in the woolly calyx, are at first drooping afterwards erect, and the clusters of fruit always erect. This plant has the property of expanding the flowers of each corymb in such slow succession, that ripe berries and unopened flower buds are common in the same cluster.

894. *BUDLEA DISCOLOR.* (Roth.) arboreous: branches almost terete, compressed at the nodes, tomentose: leaves lanceolate, acuminate, serrated, glabrous above, pale beneath, or clothed with white tomentum: spikes interrupted slender, simple panicled: bractes linear-lanceolate: flowers nearly sessile subglomerate: capsular reflexed. *DoH. gard. diet. 4, p. 600.*

A subalpine plant common on the slopes of the Neilgherries scarcely attaining to an elevation of 6000 feet, though most abundant, a little lower. No. 11 of the analysis represents a stem highly magnified but conveys very imperfect idea of its beauty when seen under a good magnifier.

893. *EGISEVIA* itrmc.i.?lloxb.) s'npe nearly simple, elongated, -jaltefJ, "lie flowered : licub of I lie eorolia short!?! Scilifi.

Jungles near Paulghadt, mmmif; decaying vegetation very •bnodat: tioueciis; in J mm iitrinfuly.

On comparing my figure with thane of Klieede and Boibnrgh I cannot Imp lhtnkingthat, fu quoting itlicedi-'a figure at a ijrncayia tor hit, Roxburgh lias fnflen into trnr and thiat ltheedVa plant is identical nihi iniie but different from Roxburgh'?! I must however leave them ai find them ftr the present.

696. IUSKIH. »mi. (Linn.) stain twining perennial: leaves nvate undulated : tsjiikus peduneled simple, itprtvG.

J rim is a COTIIIH"" plant ocenmog In erery part of I lie country: the Miceulent hares, are dressed nud c>: like Ipinago. Tlie most curious part of the structure of this plant is the teed the embryo of which is rallied up like the main spring of u watch.

837. KDPHIBBIA. ANTIQUORUH. (Linn.) stem* jointed erect ramaus, ;i-4 or more angled angles furnished with numerous protuberances (fnrwl eyes or buds) each armed with twit short spreading Bijiuhiry spinet: joint* ktraighl's peduncle* jnliinry or in paira, usually 3 tlovercd, a little above the nllcs of the eipulea,

CanmOO all over India j a Very pilyinerrjiidit)* plant. No cfiiraeter can be derived from the number of angles that being tnott variabte. It in however quite distinct from the following mid easily dUtingabhed by the straight not twisted stems and the peduncles being few, one or two, fioiu each protuberance or bud ; while in the •l'ier they are uumeroua.

898. EL'PHIBBIA Tonjxrs. (Rottler,) stems erect, ratncitis, joiiteJ) joints ^pirnly twisted, angular; af!(les furni-ihed with armed protuberances ; flowers nuraeroui Cueicled on the angle* : peduncles 3 flowered-

I susycut when this funilj shnllhve been more closely studied the best epecie a^ well «a sectional characters will Il' derived Horn the parts enluned within the cup of ihe iuvoluL-ntm, the npperidnges of (he flowers, iliatia, Viewing endi stamen uud ovary as a dirtiooi flower!" Thcee jartB, ia shovrn in thlis and the precedtu platr, nre sufficiently ditlinei in form to encourage further iuicati-gntioo in that diiection.

B9". KCEMPFFKU QAIAvai. (Linn.) leaves round ovate cordate: B pikes central, upper se^nienuof the inutr bonier of the perinmti, corolla, yval enuiriugiufce.

This I have only seen wild on thie Malabai eoffst, the figure was taken fion a, plant I found in Truvancore near Trevitiiruui-

900. REMU«»^I* vjvifRnA. (Shott.) in No. 793, I gave from Roxburgh a figure of the impuous form (ate iLram trivipanmt) «f this speci^rt. I here give the mneh rarer one, in which it presents the nurinul liirtn of llie genus.

The drawing wai pn ivire.l from »pecin>eni gsithtred at (* nri-illura along wiith the other, thia being tsecediugly rare, fbiilt! the other was most abuudant.

901. MICROS-ITHB VBRJICOLOR. (Lind.) etem leafy : ieflves cordate or ovate ohlung, abruptly petioleil, nodulated platted ; Up transverse, dentated on tj'ie margin, cucullate, •lig'uly overlapping at the baee : colnt&n bieoraale at thw npet sppali: und petals Bt'cUini. Lind. genera fl't^ speiit&, r- n.

irit dtmijhira ? Kidiard Ann. dm ecianeea v, 15.

Frequent OJ the NoQgharriea and other elevated atation in grassy posini

The upctiuuei li-re tijinred wsa gathered on the Pulney uiouuUi£j) bu; i₆ qiut« identic*) YI sti thieSeils'ieriy r^{13flit}

902. JICBORITLs Tlutemi. (Lind.) stein leftCy : le>ve« oLlong lnnceoJ«t< plait«d : liatmucMed dentate, largely uvi i dipping at the base. Lind. gen. cni/ tpeiet, />» 21. "

Pulii'y ••L:llar iius .Inifiiij'liLirflu: ^ - * IlgUit 1^36-

This apēcica him long rmted tm Hhecae'i, fimu*^{aljd} Dr. Ltndiey io hU ruuent work " G«ncn wta Specie* <K Orchideoat phnts" remarks "I uu not think into »je •oj' material in this tonntry iaflcieut for dotermimng exactly wb*! ISLC Malaxis Itheedit t>f Swarla ir. or ratlior the liasiiala Poulou Merman of ilia HortL:* Md»b*ricui upou which that specie is fouodsd." Uodar thecimffc-iliti thiit this ii actually Hhoede's pltin I publish this figure though lean perfect in ii« tietuils than I cool i wish partly oifing to my indfttWeut »cqiwt«t«» with the tribe when it WBS *xeuted, a ml partly from ihe Arlistn v">ut ut'rdic «t that time iti representing Onhiiles

903. LEPAIKS oLIVAcLA. (Undley.) leaves biitie or Solitary, run ml isli corJ.ite or oblpng, na nminated, illicate, ehorter *han the erect in my flowered raceme : scape te-rale at the hise : lipobovitte relust- with a inucro, bitnbrri-ulaie at I lie but: stp.ils obtuse, lateral ones reating ou the lip. Lind. I. c. p, ?G.

Pulnej mountains, on TOky cliffti covbiwl widi hei luge. I have aame douhU ns to this being Ltodlrtj'l phTit from wliki it ijirt-is in Buine partkul*-. There arc three in plane of one or two IMTM ami the lip is cinnrpjintf retuie in pUte of raacroDJte, basidet which there may ue ether distinciion nut MM'.

901. ' Lip.vms *TRorIT«FUREA, (Lind.) leaves tivg or three, rguulish, icumimted, petioiJlod, plaited, obliquel enculut« at thie barte. abojt as blip as the erflft.few flowered raceme ; Inbolluru ouiuuig, obtuse, recurved, erentilatej Uterd acjials oblong lanceolate oblique i petal* long fili-Cbnn. ZiW. 1. p, p_m 58.

l'ulncy moantaim mnnng rocty cliffti sparingly covered wifii pasture—also from Ceylon.

Flowers pnrple, large iu proportion to the size of the l C

905. LiPABt^ "ffALSSKKB (Grth*m Hot. Maj.) leav«« two or tbwe, roundisli ovate, nodte, petioled, ptwata, "b- lii;tie Bt the base, cneaUie, shorter than the l rett, iii:»ij flowered, raceme : jWuncies angled ; ll, roittdtah, reBflx-e,l, cfeimnted : sepals spreading oblong, ntargina retolnte, the gerceo and fliform petal* eqa«t

Graham But, Mag. .Tfu. 3770.

I am uncertain whence I obtained the ipecimeO here figured but believe it was nt ('isurtluku in 1885- H« much larger llian the on« figured by Vt. Gtaham, but is I tkiuk uuqieatioiiah the s:ime P Uit

906. LtPiMi* IOSDIPE.. (Liud.) p»eudobu, b» long, terete, tw» leaved: leares einiform Wceolate: riceme Mraiclit tunny fW red ; scape anciipitous: lip ovate acute, v-ithonttiibri:" »s, length of ihe column: wpatoww-petal* line ir. Lind. I c p. 30-

Coyn*llum flowering ia July aid August. I bfW ip«Hm«Di from Cwlen. Sly ipecirwu. « v J •Walkr than Dr. frallich't N«paul oue figure—ia the Plant. As. Kurcores.

907. HE qbluse, »Jtn"i=at angted : leafM i~<. »... ofate pJiMte, acuit. ; ipikea the length «< T^{llr} nciiduluuii; fajBctea luetubratiateous_Vnuca»eAJ*PJ Sl2, iatertnob^i:i>ll, erect, btsnuediatj <y cordate. Lind. I. c. />. W.

(^ourulluni-1 have also ftequeuily met willfp.,)^, we]](stattotus flsy in Ceyloa. imm pur-

908. DKNDROBIUM FIERARDI. (Roxb.) stems pendulous glabrous : leaves ovate-lanceolate acute : flowers in pairs, forming a spurious raceme : sepals acuminate membranaceous : petals larger than the upper sepal, acuminate : lip dilated cuculate somewhat truncated ciliated. *Lind. I c p. ?y.*

Pendulous from trees. The ignorance of the Transferrer of the habit of this plant, had made him turn it upside down.

909. DENDROBIUM HEYNEANUM. (Lindley) stem erect, flexuose, clavate, clothed with the lax sheaths of the leaves : leaves linear lanceolate, acute : racemes axillary, spreading, many flowered : bracteas, minute ovate : sepals and petals ovate lanceolate about equal : lip three lobed, united with the base of the column; a longitudinal callosity on the disk ; lateral lobes acute, the middle one roundish, fleshy inciso crenate. *Lind. I. c. p. 90.*

Epiphytical on branches of trees in Mauiba[^]. " The spreading many flowered peduncled racemes, combined with the figure of the lip are alone sufficient to distinguish this species." *Lind.*

910. DKNDROBIUM BARBATULUM. (Lindley) stems terete aphyllous : racemes lateral and terminal, many flowered : sepals ovate acuminate ; petals obovate acute larger than the upper sepal: lip flat, obovate-obtuse, apiculate, entire, bearded at the base. *Lind. I c.p. 84.*

This seems to be a very handsome species, growing on trees, but of which little is yet known, the specimens from which it was taken up having been poor ones. The one figured here was found in Malabar. The flowers are pale straw coloured.

911. CYMBIDIUM TRISTE. (Willd.) leaves terete: umbels subsessile : sepals and petals connivent, fleshy, oblong, cymbiform: lip oblong, about twice as broad as the sepals. *Lind. Z, c.p. 167.*

This is a difficult plant to dry hence Dr. Lindley seems imperfectly acquainted with it, having only had a bad worm eaten specimen to examine. I cannot understand, however, on what principle the racemes of this and one or two other allied species are called umbels, they are short but distinctly racemose. Another peculiarity of some species of the section of the genus to which this belongs is the form of the lip, a hollow inflated sack.

912. GIODORUM DILATATUM. (R. Brown) scape shorter than the leaves, spike pendulous : flowers congested, lip subcalarate, dilated at the apex, crenulate. (*Brown Hort. Kew. Lind. L c. p. 175.*)

This is a widely distributed plant. Rheede found it in Malabar, Roxburgh in the Circars, Blume in Java. Colonel Walker in Ceylon, and the plant here figured I found within a few miles of Coimbatore.

Kanathkoovoodoo, August 1843, in clefts of rock under the shade of bushes.

The figures of the elaborated analysis seem all so plain as scarcely to require explanation with the exception of No. 13, which is a transverse section of a nearly full grown fruit.

913. EULOPHIA VIRENS. (R. Brown) leaves grass-like, linear-lanceolate, shorter than the branched scape : sepals and petals oblong obtuse narrower at the base, tessellated : lip three lobed bearded, lateral lobes shorter middle one, ovate obtuse with an erectish callous spur, *Lind. I.e. p. 183.*

This specimen was found with the preceding in clefts of rock filled with vegetable earth in great abundance some of the specimens upwards of 3 feet high.

914. ANIA LATIFOUA. (Lindley) leaves oblong plicate shorter than the scape : lip unguiculate three lobed, cohering with the elongated base of the column ; lateral lobes obtuse, shorter than the roundish ovate acute middle one ; the claws furnished with three truncated lamellae terminating below the sinus of the lobes, that of the middle one 5 toothed, the lateral ones shorter. *Lind. I. c.p. 130.*

Not having the original drawing by me I am at present "unable to give the station of this plant, but believe Pulney mountains. I suspect it is not the species described by Dr. Lindley, differing as it does so materially in the character of the lip and its lamellae, neither do I feel quite certain that the structure of the anther case is the same as in his, but as I have not the specimens at hand to ascertain that point by examination. I am for the present compelled to leave the matter in a state of uncertainty.

915. VANDA SPATHULATA. (Sprengel) leaves ovate oblong obtuse, oblique, emarginate : racemes erect many flowered, much longer than the stem and leaf : sepals and petals oblong flat: two callosities in front of the base of the lip, linear rhomboid, incurved at the apex, crestate : ovary six winged! *Lind. L c. p. 216.*

A beautiful species growing on trees " the leaves and racemes often marked with blood coloured spots, flowers yellow spotted, base of the lip white within."*

*The specimen figured was gathered in Malabar.

916. VANDA KOXBURGHII. (R. Brown) leaves obliquely tridentate at the apex : racemes erect, longer than the leaves: sepals and petals oblong obtuse undulated obtuse, middle lobe of the lip emarginate. *Lind. I. c. p. 215.*

A splendid species, remarkable for its finely lessellated petals ; is found epiphytical on trees, especially the mango. The specimen figured was found in Malabar. This is the *Vybidium tesselloides* of Roxb. Fl. Ind.

917. SACCOLABIUM WIGBETIANUM. (Lindley, (*Eridei radicosum?* Rich.) leaves channeled, narrow, obtuse, sessile, subequal at the apex : racemes erect Vanmoussong or than the leaves : sepals and petals ovate obtuse: lip with a cylindrical obtuse bent spur ; limb furnished at the base with a two lobed fleshy callosity, lateral lobes rounded: capsules three winged and three furrowed. *Lind. I. c.p. 22.*

Epiphytical on branches of trees, this specimen grew in from the Pulney's, flowers rose colored.

The specimens from which the species was originally taken up, were far from good and the character is unavoidably imperfect, but sufficiently so to leave little room to doubt that this is the plant, I have quoted Richard (An. des Sciences. Vol. 15) with a doubt though I believe unnecessarily his description and figure, agreeing so well with my plant. The great not recumbent column and entire not 3 lobed lip of his plant show that it is not referable to (*Erides* at least as defined by Lindley.

326.)

is and was

918. CALANTHES EMARGINATA. (Lindley) leaves lanceolate: spike erect lightly pubescent : lip with spur, callosities, limb 3 lobed, middle one emarginate, velvety late, the lateral ones minute : spur linear. -> mellow in pressed equaling the ovary. *Lind. I. c. 240/ror^Q^ume. Amblyglottis emarginata* Blume.

This plant does not, seem hitherto to have been found in India, the above character, which applies well* having been taken from a Java specimen. Flowers purplish blue or violet.

918. Pr.ifAKtntintA LUTRA. (R. W.) stem erect, lower 3mf ulutliril witli hlirmhinL' *calc«, uhi.ur U-af : lenv't i-vhr IJIC-olate sente : bracteis foliaceos, ovate, cucul- lated, equaling the flowers. sepals 5, linear, 2 lateral ones ascending : petals JU «nm!f, litcar l'ercv* later; lip 3 lobes by length of the sepal, lobes, obtuse, entire, lateral ones smaller; spur pendulous clavate somewhat shorter than the ovary.

Pulney mountains i ts pwtnt^ -wiangtofn p m t w m yellow. 'IL»»» mn met wHk fbk *f»« in any UK* cuakM. li w mi a f*aaW Plat* • these though > my i fnw tU «u I Thnatbt at Cr>t it mi«ki be a U atS kDf iw iad*s» te«t»

920. PLANTANUS SCRAEBERII (Lindley) stem leafy about three flowered; leaves ovate 1/2 long acute, upper ones cu tq tlw 4<n> SB* rtmwbdd i fMsk Rnmrantri tip ittn* fJTi.J, Uten! lofcr* ttiUKHled tnju.i clrft, lit* J- 93.

Pulney mountains 11th 11K other. This magnificent species seems very widely distributed Amboyna, Cochin China, New Holland, and India all claim it. I have never met. vifa tteserpt Mtt, bat T tsw • »f«ii^A. i from iU-iti n.ii r of H-inba; lor wiieh 1 M l'Mnwa 1« the k ttiirwt* uf Mt-La*, of ihr RMab*^ CH) SatrfaL n> »rli at (M away M W I MfUy murwuifr wMhtw to my herbarium, nr all < I H H 1 b*B t4 ICTulc an a r a v thanks.

921. PERISTYCHUS PLANTAGINIFOLIA (Lindley) leaves (3) erect oblong lanceolate acute, almost as long as the spike; sepals ovate; petals roundish obtuse; li roundish obtuse-ly to JtnUhtfpwr spheroid. Lindley. i. «. 300.

In nwbl Httwv t* thr t**«» <f Putittum aWtian in May «. Janr. t^fniniH. wt, te. Dr. Lindley des- cri on specimens.

922. HABENARIA LINDLEYANA. leaves few distant, roundish ovate many flowered; bracteis Uianom o^u^i^ ttx sU posterior sepal truncated at the apex, the lateral ones ovate acute; petals two parted, segments linear subulate, equal; lip 3 parted, middle segment the longest.

I'miry OtBUuUio* w p WiIH In tt« character of ih« flower t!,i. uicuu «U*«l tttZL JMaanmav UIURM-. but x >t it impvMjble iv detvaua*v f''''' *»*» a ehanctur «< b« eitefl, (bate lliuu|ht it mtor t* oaMida- ita duiaact species.

923. HABENARIA HEYNEANA. (Lind.) leaves narrow oval acute; raceme secund few flowered; bracteis foliaceos cuculatae, somewhat ventricose, acuminate, longer than the flowers; lip 3 parted segments about equal, the length of the sepals, middle one MFTW* e i (*-t Jc about the same) e*gtb consistent, spur pendulous bifid tknterfiaui the ovary. Lind. l. t pp. *20.

This is frequent on pasture ground on the Nilgiris but is far from being a conspicuous plant, its pale yellowish green flowers resembling the herbage among which it grows. The fleshy processes in frontier the column are particularly large and conspicuous ill this species.

924. TTjiiii:xm.i TIAITTIOHA. f(A.nieInrd)rivciob- lmg Unrcolnir nUc plicata, etc i[ij;g the low 11 rait of the -ttiii: slfmiicnae* f*2 flow duncled bracteis : bractvtvr ovate oval acute, usually shorter — the peduncle : petals 5, linear, 2 lateral with a longer, linear appendage : lip 3 parted, longest, linear subulate somewhat 1 f'DiU ft«r«M«. if ib? tit|Int, long obtuse. A. Richard Anat. des. Sciences 15, p. 70.

This species I have only once met with on the Nilgiris, whence Richard received his specimen, on cliffs at Kaitty Waterfall. My figure is from a specimen found on the Pulney mountains where it abounds. This is the only described Indian species, referable to Lindley's "Erodiate" division, having the anterior sepal larger, and the anterior segment of the lip longer than the posterior.

925. HABENARIA LINDLEYANA. leaves numerous, upper leafless part of the raceme the smoothest; bracteis ovate, flowers 2 parted, middle segment long, on better acquaintance, broad truncate crenate; throat this name will be retained the length of the ovary's MS. n. slightly abridged. Flora awl awn a*prria% the same time wjyloni haa ben Urjrtj *nJ tاتم «* plant very abundant, ttmr mi

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927. HABENARIA MONTANA. leaves few distant, roundish ovate many flowered; bracteis Uianom o^u^i^ ttx sU posterior sepal truncated at the apex, the lateral ones ovate acute; petals two parted, segments linear subulate, equal; lip 3 parted, middle segment the longest.

928. ATE VIRENS. (L.) leaves narrow oval acute; raceme secund few flowered; bracteis foliaceos cuculatae, somewhat ventricose, acuminate, longer than the flowers; lip 3 parted segments about equal, the length of the sepals, middle one MFTW* e i (*-t Jc about the same) e*gtb consistent, spur pendulous bifid tknterfiaui the ovary. Lind. l. t pp. *20.

929. SATYRIUM NEPALIENSE. (Don.) radical leaves oblong lanceolate acute, sheaths inflated, acuminate, distant : spike long many flowered bractes ovate acuminate reflexed, length five times the flowers /lateral sepals oblong, middle one and the petals linear glabrous ; lip helmet form, crested above, spur filiform longer than the ovaries. *Lindley, I. c. page 340.*

A widely distributed plant extending from Nepal to Ceylon, very abundant on the Neilgherries and Pulney mountains in pastures.

930. DISPERSIS TRIPETALIOIDEA. (Lindley) stem erect, three or four flowered : leaves cordate oblong acute : sepals glabrous lateral ones pendulous, sessile, united at the base, foveate above the base ; lip filiform pubescent, roundish dilated at the apex, with a minute concave appendix at the base. *Lindley, I. c. p. 371.*

I am indebted to Mrs. Colonel Walker for this most correct representation of this very curious plant specimens of which were found near Rambodde. The flowers are pink with a yellow lip.

1 flowering plant—2 detached flower the upper hood-like portion consisting of the posterior sepal and lateral petals the two lower ones the lateral sepals with the pit at the base—3 lip incumbent on the column—4 the same with the pollen partially drawn from its sheath or anther case—5 pollinia quite detached—6 column and anther showing its long spirally convolute caudicle—8 lip detached, back and front views—10 ovary seen from behind, sepals removed.

VANILLA APHYLLA? (Blume, Lind.) leaflets, peduncles 3 (or many) flowered : limb of the lip undulated obtuse bearded in the middle : anthers two lobed fruit cylindrical (insipid?) *Lind. I. c. pt 43B.*

Travancore near Trevandrum, climbing among bushes. Dr. Lindley refers to this plant in his remarks under *V. aphylla* but seems doubtful of their being identical & point which my imperfect specimen did not enable him to clear up. At first he seemed to have considered it distinct as he has marked a specimen in my Herbarium *V. Wightii*, but on re-consideration changed his mind and published the species under the name here adopted. The numerous flowers and acute not obtuse limb of the lip seem to indicate that his first opinion was correct, but that point I leave for himself to decide.

VANILLA WALKERIANA ("R. JV) leafless peduncles many flowered : " Lip and petals much waved delicately transparent" and like the sepals marked with a deep green costa ; lip slightly bearded ; anthers 2 lobed fruit cylindrical

Ceylon.—For this very characteristic drawing I am indebted to Mrs. Colonel Walker. It is accompanied by the following note written on the margin. The leafless Vanilla alluded to by Colonel Walker, (see a letter to me). The original drawing was sent three years ago (1834 ?) to Dr. Graham, by whom it was sent to Dr. Lindley who pronounced it a new species of Vanilla. I am anxious to get the flower again to make a better drawing, as I think I have improved a little since this was drawn, and also understand the structure of Orchideae better than I then did.

" flower inside pure white : Labellum and petals much waved and delicately transparent, sepals striated, outside ringed with fawn colour, - streak of deep green in the centre, which the petals also have, though neither so broad nor so strongly coloured."

This species seems very nearly allied to the preceding but differs in the petals being much more waved ; the lip being less distinctly three lobed and sparingly bearded toward the base. Should they, on better acquaintance, prove the same species I think this name will be retained in preference to Dr. Lindley's MS. name, the compliment being so highly merited by that most accomplished lady, by whose admirable pencil the Flora and more especially the Orchideae of Ceylon has been largely and most exquisitely illustrated.

Judging merely from the brief character given, I can scarcely hesitate in considering both distinct from Blume's plant. Fearing however that Botanists, more intimately acquainted with the order, might consider these two identical, this plate is given extra to the regular number. The figure is copied from a tracing not from the finished drawing.

1 flower seen from below—2 lip side view—3 front view—4 column—5 anther case—6 anther case with its contained pollinia—7 front view, view of the column with the anther case raised to show the pollen—8 side view of the same—9 seed vessel.

EXPLANATION OF PLATES.

VOL. III.—PART III.

931. VANILIA APIHYLLA ? (Blume, Lind.) leafless, peduncles 3 (or many) flowered : limb of the lip undulated obtuse bearded in the middle : anthers 2-lobed, fruit cylindrical (insipid ?) *Lind. I. c. p. 436.*

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1 flower seen from below—2 lip side view—3 front view,—4 column—5 anther case—6 anther case with its contained pollenia—7 front view of the column with the anther case raised to show the pollen—8 side view of the same—9 seed vessel.

933. 34. CLEMATIS GOURIANA (Roxb.) climbing : leaves pinnate or bipinnate ; leaflets ovate-lanceolate, acuminate, cordate at the base, 3- or obscurely 5-nerved, entire or with a few coarse serratures : young branches angled, and peduncles, and oblong achenia pubescent : sepals vevovac. W. 8) A. Prod. p. 2,

This beautiful species* flowers during the cool season. At this time, January, it is in full bloom in the jungles below Coonoor, where it may be seen climbing to the tops of the highest trees completely covering them with such a profusion of white flowers as almost to conceal the tree that supports them. In Mysore it is of frequent occurrence in the dense thickets surrounding most of the hamlets of that province.

935. CLEMATIS WIGHTIANA * (Wall) climbing : leaves pinnate ; leaflets not wrinkled, very villous and soft on both sides, coarsely serrated, cordate at the base, palmately 3-lobed, the middle lobe the longest or divided again in 3 ovate-lanceolate segments : young branches, peduncles, and flat, achenia, pubescent, sepals ovate, outside very pubescent inside glabrous : filaments hairy.—*W. and A. Prod. p. 2.*

This species is less frequent than the preceding, but is abundant among the brushwood of clumps of jungla about Ootacamund ; also on the road side above Kaity and on that leading from Southdown round the foot of Elk hill. In the latter Station I met with it in the greatest perfection. It is readily distinguished by its soft almost woolly pale green leaves.

936. ANEMONE WIGHTIANA (Wall) clothed with silky hairs : leaves on very long petioles, tripartite ; divisions very deeply 3-cleft ; segments cuneate deeply 3-lobed ; lobes cuneate, irregularly incise-serrated involucre leaves subsessile, deeply 3-cleft : divisions <3 cleft ; segments linear-oblong, cut and serrated : sepals 6-8, elliptic-oblong : achenia glabrous : style hooked, persistent.—*W. & A. Prod. p. 8!*

Frequent in pastures about Ootacamund, but also generally distributed over the hills. Flowering in May and June. Flowers white within purple exteriorly. During these months it is certainly one of the greatest ornaments of the hills. I have not heard of its being applied to any useful purpose, though it may not be destitute of useful qualities as some of them are known to possess these.

937. RANUNCULUS WALLTCHIANUS (W. and A.) perennial : stem glabrous, diffuse, prostrate, with a tendency to root at the joints, and bearing there several leaves : leaves and petioles hairy ; radical leaves trifoliate, leaflets petioled, 3-cleft, segments somewhat ovate lobed and incise-serrated : peduncles hairy, scarcely longer than the petioles : petals (yellow) about as long as the calyx : heads of (fruit) globose ; achenia roundish, compressed-lenticular, minutely dotted : tuberculated : style broad, hooked at the apex.—*W. & A. Prod. p. 4.*

This species is generally met with in moist woods, of a procumbent habit, with small flowers, flowering in May and June after the rains of the South-west monsoon have commenced. It is however found at other seasons, especially during rainy weather. Another species is found at the same season and so much resembling this one, that, to the unpractised eye, it is not distinguishable, but is at once known by the seed, which, in this, is furnished with numerous little tubercles, in that, is quite smooth and without asperities of any kind.

938. M. NILAGIRCA. (Zenker) Leaves elongated tapering to a point at both ends, glabrous; stipules and spathes silky: petals about 9, in three rows: stamens numerous shorter than the column of fructification: varies numerous, about 4 ovules in each: cells warty, one or two seeded.

A large tree found frequently in the clumps of Jungle, about Ootacamund. There are several very fine ones in the thicket immediately adjoining the Church, the branches of one or two of them overhanging the road.

939. CLYPEA HERNANDIPOLTA. (W. & A.)—Leaves ovate, rounded or scarcely truncate at the base, uncinulate; upper side glabrous, under slightly hairy: panicles about equal to the petioles, umbelliform: rays umbelliferous; pedicels very short: polleniferous ring 6 celled.—*Fl. fr. A. Prod. p. 14.*

Present twigs in the clump of Ootacamund, particularly in low moist situations—It is equally frequent in similar situations on the Pulney mountains, but also occurs on the plains in moist shady jungles.

940. BERBERIS (MAHONIA) LESCHENATJLTH (Wall) —Leaves pinnate; leaflets about six pair, ovate, nearly equal in size, slightly cordate at the base, expand with 6-8 thorny teeth at each side, about 5 nerved at the base; lower pair of leaflets close to the stem: racemes elongated, slender; bracteoles at the base of the pedicel oblong, obtuse: petals with two distinct glands: filaments without teeth: berry globose, crowned with the evident style and stigma.—*W. & A. Prod. p. 16.*

As this is a true congener of Nuttall's genus *Mahonia* I preserve that as a subgeneric or sectional name. The plant is found in Almost every clump of Jungle about Ootacamund, flowering during the southwest monsoon, but may generally be met with in few at other seasons, though more rarely, the fruit ripens during the dry season and when fully ripe acquires a bluish purple colour.

941. CARDAMENE BORBONICA (Persoon) -Leaves trifoliate; leaflets hairy on both sides, particularly on the nerves beneath, petioled, ovate acuminate, unequal at the base, irregularly and sharply toothed; terminal one sometimes 3 lobed or divided into 3 leaflets similar to the others: siliqua erect.—*W. & A. Pr. Sd. p. 20.*

942. HYDNOCAIPIUS ALPINUS (R. W.)—Sepals all equal reflexed: petals ovate lanceolate glabrous: scales lanceolate, as long as the petals, ciliated towards the apex: male, stamens 5, filaments much shorter than the petals, glabrous; anthers obtuse; pistil none: female, calyx, corolla, and stamens, as in the male, but the anthers without pollen: style none, stigma peltate 5 parted; the divisions orbicordate spreading, crowning the ovary.

A large ramous tree, 70 to 100 feet high, not unfrequent in deep moist vallies of the Neilgherry hills, about Coonoor and Kotergherry, usually growing on the banks of streams. Flowering in July and August. Leaves alternate, ovate acuminate, entire, glabrous from four to six inches long and from 1 to 2 inches broad, at first red, afterwards deep green: fruit globose, about the size of an apple, clothed with short brown tomentum: seeds enclosed in a white, fleshy pulp: testa dark coloured hard: embryo enclosed in albumen: cotyledons, foliaceous cordiform; radicle elongate pointing to the hilum.

H. INEBRIANS (Val!) Sepals unequal, the three inner ones longer: petals broad ovate, fringed with soft white hairs: scaled broad ovate, about half the length of the petals, densely hairy: stamens as long as the petals, filaments subulate; anthers broad reniform: pistil none: female in the male, anthers without pollen.—*PP. and A. Prod. p. 99. Q-Wight M. Illus. I tab. 16.*

A tree of moderate size frequent near the coast in Malabar and Ceylon, flowering at all seasons. Leaves alternate, ovate, acuminate, glabrous, crenulately serrated about 5 or 6 inches long, and 1 to 2 inches broad: racemes axillary, short, few flowered: fruit globose, many seeded.

943. VIOLA WIGHTIANA. (Wall.) stoloniferous, slightly hairy: leaves cordate-ovate, crested: sepals lanceolate: somewhat acute; spur short, very blunt: torus flattish: style attenuated downwards, stigma not tripartite, convex but not hooked, neither margined nor papillose: fruit globose.—*MT. fr. A. Prod. p. 32.*

A humble plant common on the Neilgherries, flowering at all seasons. In general appearance as well as in Botanical characters very nearly allied to *V. odorata* but at once, in the growing plant, distinguished by its being destitute of its sweet scent.

941. DROSERABURMAN. Vahl: stemless: leaves all radical, obovate, sessile, veins reticulated; scape erect, and the calyx glabrous: seed-coat not striiform.—*W. & A. Prod. p. 34.*

A low growing stemless plant, inhabiting swampy ground. On the hills it is usually to be met with in flower at all seasons, but in greatest perfection during the summer months. The clump of plants represented were selected to show the manner of its growth, but unfortunately were unavoidably not taken at the best seasons and do not therefore show into the best advantage, though it conveys a good idea of its habit as seen growing.

945. PARNASSIA WIGHTIANA (Wall.) leaves broadly cordate ovate or slightly reniform; sinus slightly rounded: bractea like the leaves, embracing the scape; petals obovate oblong, their lower half having the margin cut into numerous slender linear simple or forked segments resembling a fringe; unguis very short, broad and cuneate: sterile stamens about as long as the fertile, cleft upwards into 3-5 stout hornlike segments that are glandular at the point.—*W. & A. Prod. p. 30.*

A low growing herbaceous plant abounding in almost every swamp, which, during the rainy season, they ornament with their numerous rather showy flowers, in general appearance somewhat resembling Buttercups, but differing in having the flowers pure, white in place of yellow, the prevailing colour of *Rauunculus*. In *Parnassia palustris* there are four stigmas and 4 lines of seed within the ovary, in this there are only three, this, independent of other marks, affords a certain and easily observed distinction between these otherwise very nearly allied species.

946. POLYGALA ARILLATA (Ham.) shrubby, branches pubescent: leaves oblong, acuminate, on longish petioles, puberulous beneath: racemes terminal, many-flowered, terminal or opposite to the leaves find about as long, drooping: bractea caducous: alveolate, obovate, obtuse, tapering downwards, glabrous: carina cristate: capsule reniform, retuse, coriaceous: seeds globose, smaller than the large casuuculus.—*IT. & A. Prod. p. 9.*

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Tbtm l^B tttj cowtnnn |iUn(atinul vil' . nnd roro-felds but I suspect has been introduced by European seed along with the ... jlonjy mitt win. Spargula ar-weed in Ootacamund as in %uropean caru fields.

018. C**4*THI H VULGATUM (Linn) M'tins, irif<j< ••< calyx, covered with a rou (hish viscid pubescence : •itrn* faecLi, «t| rj ; lciFM <ntt(e wf orititf. lanceolate, with » thm •ucrointV.ini UltfiUtion! tluwn much shorter than the pedice|, tn H tn*]l eoopMI somewhat dichotomous par U : p*»li uinmefj luog- : l.t.ut tba (*IMI(. [*r(i>l- : c*p«)li ovoid, germi M tie axlrx; i^rtli 10, lolled lmtk-wards, their margins fl. —IF, * J. /-ml. p. 4X

Like the preceding •• fjiiuimm a «<J in tbr gar* dens of Ootacamund kl iu lbuioof EBf<i|f.

•it. Alum, Ni,iOT,»iiH*t» (W. jfc A)

•n •limait hue tf tuir» . . . s: learfp ditlAOtt ^>JA>^ nwr^tu ULljru S*, mm tuinmie •• e, ellatni io«nli : rtiuja: ftawen tlllwy, v i« brB>loL MI —dichotomous pan |r, IKPII'li pubescent all i M I oogbk, tAetim i lepili b>Wong, acute, with i d mJ bajiy rrrva ; tnnrgii! liemOritr- the e>fj * . * iyt! usually paules orate, jicdflv the A. Prod. p. 43.

020. MALVA NEILGHERRENSE (R. W.)annuñi hsiy all over; branches diffuse somewhat an- ilwr ; lesvm long petioled suborbicular • of(lj(r. i JuhR'ji Jultt* ovate obtuse doubly serrated : flowin utirDlf. us, dorsal aggregated <u |jie mil* iif lb« lmve* : invo-lucl of three narros . li(i^j(UIUtBoUU noillF bvifleU. shorter ilian tl;r ckljrx ; «*lyx ioiurnhal loftilrd 3 ciff.lab> ot>t« acot* 3 UFjr«*d: curnllii foil! coloumr l, trlj twice * lengths of, hr e«]l. jtUla imjfl tmaTBI about iO, cvtiU^tt* i Q> the angles, pubescent.

Katoorberry, in cornfields and about villages, in ilr fish MI «tTOUUiil<_lw UtUf very luxuriant : flowering during the rainy season. The larger leaves are from four to six inches across, pubescent above, hairy beneath, supported on a hairy petiole from four (tittl inches long. Flowers »» it7 (numerous, small in l- "l portion to the size of r tUf;«<l, forming dense tl.i. • ft. oJ« acute, calyx considerably inflated. »M i rtUlRj. citA iMt* •ml, •seed by transmitted light, flouy reticul- between; after drying trans- •Mi I.JIU: -i:r: *"-)f IBB) "I shown in the drawing, the taken from too young specimens. lf«*ta lmwg cwcai

f hii fp»e>», coinu nearest (a M. trrtittl-ila & as fan he_p m<dt uni from •illicit characters, seeme asppj ii>iini;].

ANGULOSA i Wall:) iieiiit barbaeck^an, not pricklji leaves ou long pttuiiw, tOrt«t«, A liityy, tueijuntly limlhed ; UL»» otitt (toumitiu-il j apparild (>uLr.nt«(with short u*ftUb liiin, under tli^lidy (oiur.jfiote. |pedi-cels r| and haccantalla about as long as the p-nqkti: iorotuct] 3-S lmve'il, le>tti coherin j t(>lit|in^ ipuh-like : cuhl nmcll tlluKer, •nd o(ra- ceated w< bin i bti invnlucrl, mBtntwsnaiH>): cup^uls Crfld, iculc, *try liwplit—IF. ^-/I. Prid.f. SS.

'liiii*» a cnn#(i^r>ljtr, HWll «rowing. ihuU, fr*- t|lrfit j| mull, lall in clillhjn of JIISgfil tin iJC N^il* gaur) <-i: inlkvoambli ritaitipm, BJ an tne lutikt ul viemun, kHafedng ; h* Wiftaitff from 10 lo 15 1<v, It is to be met mtb in fan* ti nil icMun^but per- lm|li tn i^rcilril perfikUud iMirllj; lle Bifiift limntlll '•: [i^, year, contr niyioOlc |UUU ehuatllt fif the yeuui :jftU-n>*r> ire arhiidOr vtry jlnlo jellownil.

character which refer* l* [Jir involoMI uml c^l) t which, as given iu Ilir Pro<lrVIHJ>, it incorrect.

022. MONOSRA H«moit (R. W. Ill. Ind. Bot.) glabrous, leaves ovate lanceolate, acuminate d serrulate vu ilit lJlnt;in, wiiliout ghudi ou tfw uuder surface : i: comes a; ui (TK lrn^lli of tin* jv<vpj many flowered. Btfmn dnopitLBI ««|i^i Urm^olate acute; point* Min uiriilrn on the TUPir^int: Hllbftll gktrtnjn, «ljox, ar length r^li-xnt; otarf tltnttd nn (hj^ i«fn» Tcy litrv; Crml jbum (lit) * i » ol'an oliye. -K. vr.

(in idf ilufioi of tbr Vrjc rmint b li v Coe next flowering in No <uihir mi, l Dttrel>*r, cvWcd »i'h fruit in February, spp.jfrntly ieorlj jull ptwti A large and handsome tree, wtjtjt I iliuulJ cKKimilp At hut t«H ilNa (roTt UO lu tM fed in b#f|tt, wild • G16 i^Ulll<4ll^JU<l In^Mii, •tnrji tnncti uf »lil:1), whil) I gathered the spem mien here ft[>*Hc(i(n1, irai L(iv<Tfli, 'llk* ll, *ill> Witt wt)it« (ii*(.ihj fur(iiap{ a tich ma- itH> to ihe IUR^T^Hii^oluife. C'pAin Moan Rnl found it in Oorg ud (Hlu JJC lne •ptcimi-m fmfll which (hcsUofc di^ini-ier «»> titkrn. It ii trruinlj verj rlrtrly -llil^l to il/. fUmJmftfn, but differs in itdiniml ctuuAdtn, *ad »» I ti?i i never see u lift Lre in tucti a iint<- »» umlwiit ufil<-w ncrunr num* 1-arinni, 1 hiii dill tJb-erlain wiiclltr ur uvt Lt#r oug ft en JC unitt-4-

023-24. GOMPHANDRA l'lii.TMii: in. (R. W) dic- dicus glabrous, leaves petioled, membranaceous, glau- beneath, from oblong to obovate lanceolate ac- most axillary, solitary, or in pairs, about the length of the petiole; male, many flowered, fl. : calyx entire, minutely 4 or 5-tooth- ed: p-t>J» 4 • 3 united below, glabrous: projecting: fruit oblong, crowned with the persistent styles.

This large shrub is found in the dense clumps of jungle about Coowar, the Avonche and where, flowering in March and April and, usually, the female at the same time has LII|IIM H*dI *6«MB>fllUi il is in or most part of it The petio- does not seem d character to cal. I cannot I seems rather to be an as a species. It seems rather to be an IT arm between that vari-IT and of coria- one, differing from the latter in being pentandrous, not tetrandrous, but in other respects, agreeing upon the whole, betti i «uu awfaiila tafo potfmerjm.

955. *STEMONURUJ E/TIDUS* (R. W.) leaves elliptical acute or acuminate, venous, pubescent beneath. Flowers terminal, small, cymose-panicled, every where clothed with short hairs: stamens glabrous: style about the length of the ovary: drupe succulent olive-shaped, purple when ripe, nut thin.

Neilgherries in woods, and thickets: flowering during the rainy season, but may generally be met with in both flower and fruit.

This, when growing in favourable situations, becomes a large umbrageous tree; the leaves are of a deep green colour, and when young marked with prominent veins to an extent far beyond what the draftsman has here represented. From what cause, I am unable to state, the flowers are often all males, for a longtime I had specimens of this tree in my herbarium before I got them in sufficient perfection to enable me to make out its genus. The leaves vary greatly in size, I have seen them upwards of seven inches long and three broad, but the usual size is from 4 to 6 by about 2 broad. The flowers are very numerous small, yellow, clothed with short hairs both outside and in, and during the heat of the day exhaling the most abominable smell of carrion. The fruit is about the size and shape of an olive, pulpy when ripe, and the stone so thin and soft that it can be easily cut with a knife.

BURSINOPEAHJM (R. W.)

Flowers bisexual superior. Calyx 4-toothed. Petals five, furnished at the apex with an inflexed bifid process, striated. Stamens 5, anthers 2 celled introrse. Ovary adherent, one-celled, with a single ovule pendulous from near the apex. Drupe ovoid umbilicate, one-celled, one-seeded, endocarp deeply inflexed so as nearly to divide the cell into two compartments. Embryo small, ectantric, immersed in the apex of the fleshy albumen; radical very long superior.

A large umbrageous tree with very dark green, most purplish foliage: leaves alternate, long petioled, oblong elliptical, acuminate at both ends, from two to three inches long by about one and a half broad, glabrous coriaceous. Flowers, terminal cymosely panicled, small in proportion to the tree, calyx conical, adhering to the ovary, limb short, cup-shaped 5-toothed: petals five, ovate pointed, very coriaceous (whence the name, leathery petals) each furnished within at the point with a little bifid hook. Stamens five alternate with the petals, filaments short compressed, anthers large, cordate ovate, obtuse two-celled introrse attached near the base. Ovary enclosed within the tube of the calyx and adherent, covered by a thick fleshy disk: style short: stigma obtuse. Fruit drupaceous, about the size of a small plum, ovoid, the apex marked by a broad scar where the flower had separated. Putamen hard, deeply inflexed on one side. Embryo small, eccentric, immersed near the apex of a copious fleshy albumen, the radicle very long in proportion to the cotyledons, pointing towards the hilum or apex of the seed.

This genus differs from all the rest of the order in its peculiar seed, and from each by many characters. It will form with Alph. De Candolle's genus *Ilypocarpus*, a new section of the order distinguished by their inferior ovary.

956. BURSINOPELALUM ARBOREUM (R. W.)

On the slopes of the hills at Sispara in dense forests flowering in April and May, at the same time bearing ripe fruit in February, when coming into leaf and several weeks before the expansion of the flowers, the foliage is of a lively green colour, afterwards it deepens so much as almost to acquire a purplish tint.

957. *CITRUS VULGARIS* (Risso.) Leaves elliptical acute or acuminate, slightly toothed: petiole more or less winged, flowers large white: fruit orange coloured, roundish or slightly flattened. Undated or depressed: rind with concave vesicles of oil, pulp acid or bitter.

Neilgherries, on the slopes below Kottergherry and Coonoor; in the opinion of the Collector quite wild but possibly raised from seed accidentally dropped by travellers.

I am doubtful whether this is the true *C. vulgaris*, some points of the character are at variance with the figure, but none of much importance and without better specimens, for comparison, of the true *C. vulgaris* than I possess, I could not venture to found a distinct species on these differences.

*958. *CITRUS LIMETTA* (Risso.) leaves oval or oblong often toothed: petiole more or less winged or margined: flowers white, fruit pale yellow-ovoid or roundish, terminated by a knob: rind with concave vesicles of oil: pulp watery acid or sweetish occasionally slightly bitter.

Orange valley, near Kottergherry, flowering August and September certainly &ld. A low, very ramous erect, thorny, bush covered during the flowering season with a profusion of beautiful fragrant white flowers; a very ornamental shrub, well deserving a place in the shrubbery, where, judging from what I saw at Kottergherry, it grows freely.

959. *HTPERICUM HOOKERIANUM* (W. & A.) glabrous shrubby, diffuse: stem terete: young branches compressed: leaves opposite, somewhat distant, oblong, obtuse with a mucro, contracted at the base with a kind of very short petiole; lateral nerves arching, and anastomosing; pellucid dots round and oblong, black dots none: flowers (large) clustered at the ends of the branches: sepals roundish obovate, entire, without black dots: petals not dotted: stamens very numerous: styles 5, distinct, overtopping the stamens, shorter than the ovary: stigma obtuse: capsule 5-celled.—W. *Sf A. Prod.* JK 99.

Neilgherries in swampy ground, flowering in Feb. and March, a shrub with long slender branches, distichous ovate obtuse leaves, perforated with numerous pellucid points, the branches terminated by clusters of large yellow flowers, which, when they first open are nearly saucer-shaped from the overlapping of the edges of the petals. It is at once distinguished from *H. Mysorensis* by the form and direction of the leaves which are distichous in this, and decussate, or crosswise and spread in four directions, in that.

960. *GARCINIA PAPILLA* (R. W.) leaves short petioled, obovate, obtuse: flower sessile, aggregated in the stamiferous, solitary or three together in the fructiferous plant; stamens numerous filaments united, forming a thick short andro-pore without a sterile style: anthers 2 celled dehiscing longitudinally: ovary globose 8 celled: style a thick short fleshy body, crowned with 8 spreading star-like persistent stigmas, enlarging with the fruit: fruit ovate, oblong, furrowed, 8 or, by abortion 4 or 6 celled crown with the greatly enlarged style: seed somewhat triangular, covered with a thin coloured membranous testa.

A stiff tree, growing on banks of streams near Coonoor also in similar situations at Sisparah. Flowering during the rainy month*. This species, in general appearance, is allied to both *V. Roxburghii* and *G. Cambodia* (the *G. Kydia* W. and A. Prod. not iloxb.) but differs from both in the style, the form, and the peculiar nipple-like prolongation of the fruit, whence the name. This last structure seems confined to this plant and to Roxburgh's *G. Kydiana* a very distinct species*, where it exists in a less degree.

951. *MISMA SPICIFERA* (C. DC.) DC. Leaves lanceolate subacute: flowers shortly produced; panicle exserted; calyx 5-lobed, regular, imbricate fruit, 2-seeded. *Uhrisy*, in *B. C. Prod.*

This very handsome tree I found on the Eastern slopes of the Neilgherries, 3 miles below Coonoor, probably at an elevation of about 5,000 feet above the sea.

It is not easy to distinguish the species* of this genus. I formerly published a figure of the Ceylon plant under the name of *M. ferrea* and up to the present time thought this distinct. A closer examination however leads me to doubt whether the continental one is different from the insular tree, the more so as the original *M. ferrea* is an Eastern tree, while the *M. speciosa* is from Western India. The distinctions between the two as given by Oboisy are that in *M. ferrea*, the petals have a claw of 'unguis' which is wanting in this, and that the fruit in that is one-seeded, while in this four is the usual number.

962. *SAJACIAMACROSPEEMA* (R. W.) a diffuse, rambling shrub; leaves oblong, elliptic, acuminate, coriaceous, glabrous: flowers numerous, fasciculate, hortnedicelled: calyx 5-lobed fringed with rusty coloured hairs: petals ovate, obtuse, broad at the base: ovary (3-celled with 2 superposed ovules in each cell, fruit irregularly ovate, few-seeded: seed ovoid covered with a conspicuous radicle.

Jungles about Siaparah flowering, and at the same time bearing full grown fruit in April.

This species seems nearly allied to my *S. verrucosa* but wants the warty stems, and has a ciliated, in place of glabrous, calyx. The plants, besides, when compared, seem quite distinct, though the differences are not easily stated in words. The structure of the anthers and ovary simply distinguish it from *S. multitorci* in this the anthers open longitudinally, in that transversely: here the ovules are two superposed in each cell, there they are numerous, forming two rows.

963. *HIPPOCRATBA OBTUSIFOLIA* (Roxb.) glabrous leaves elliptical, obtuse or acute at the base, obtuse or shortly and obtusely acuminate at the apex slightly serrated or almost quite entire, very coriaceous: panicles axillary and terminal, the former longer than the leaves, terminal ones sometimes much elongated and compound from the abortion of the upper leaves: flowers pretty large: petals lanceolate, much longer than the calyx: ovules 6 in each cell: carpels obovate, 2-angled, striated.—*F. and A. Prod.* p. 10k

The specimens from which the accompanying figure was taken were gathered on the eastern slopes of the Neilgherries by the road side from Koteigherry to Matyolphum in the beginning of March, but no fruit.

964. *SCHMIDELFA RHEEDKI* (R. W. S. Cobbe partly W. & A.) a diffuse shrub, all the young parts densely villous or tomentose: leaves elliptic, oblong, acute or acuminate, serrated, pubescent above; at first short-

ly tomentose, afterwards villous beneath: raceme axillary, solitary or so ifethnwk naked, often longer than the leaves, branched: achenes hairy: calyx glabrous 4-sepaled. sepals unequal, lateral pair orbicular petals 4 spatulate hairy with fleshy glands at the base: ovary hairy, minute, style compressed ending in two spreading stigmas, berry two, 2-f, by abortion, one lobed; lobes obovate obtuse, glabrous: Cotyledons fleshy, foliaceous, folded.

Growing in thickets in Malabar and eastern slopes, the Neilgherries, also on the hills near Coimbatore. The fruit is not yet found, but presume that it is like the rest, a red succulent berry. This is distinguished from all other species I have seen by the ramuli and under surface of the leaves being tomentose and by the many branched racemes.

964-2. *SCHMIDELIA COBBE* (D. C.) leaves trifoliate, leaflets stalked, ovate or oblong, acute, serrated; younger ones more or less pubescent above, villous beneath; older ones more glabrous, but always more or less pubescent: raceme axillary, solitary simple, or sometimes bifid; rachis pubescent: petals cuneate, emarginate, with a scale bearing a tuft of hairs above the slightly hairy claw, limb glabrous: stamens glabrous: (vary hairy, 2-lobed: style as long as the ovary) glabrous: fruit baccate.—*W. and A. Prod.* p. 109.

This figure of what I esteem the true *S. cobbe* is introduced to show by comparison how perfectly distinct this species is from the preceding with which it has long been confounded. The specimens from which this is taken, were gathered in Malabar and similar ones in Courtallum.

964-3. *MILUNOTOMA PUNGENS* (Wall.) leaves simple, coriaceous, lanceolate, acute at the base, quite entire, glabrous on both sides, nerves beneath with a rusty pubescence: panicle rigid, densely covered with a rusty pubescence; rachis terete; flowers on the ultimate branchlets of the panicle aggregated: calyx with 3 branchlets; sepals unequal, glandularly ciliated: outer petals roundish, concave; inner ones cleft beyond the middle, equal to the filaments.—*F. and A. Prod.* p. 110.

A large tree very abundant in the woods about Ootacamund—flowering during the warm season—Leaves thick and leathery; panicles large, terminal, flowers white, the branches of the panicle and the calyx clothed with short, matted rusty coloured hair. Fruit about the size of a pea, dark brown, nearly black, when ripe.

965. *VITIS (AMPELOFISIS) NEILGHERRENSIS* (R. W.) leaves coriaceous, palmately trifoliate, slightly mucronately dentate, middle one, broadly oval acuminate, lateral ones unequal sided, like the centre one ending in a slender straight acumen: cymes terminal peduncles, longer than the leaves: flowers pentandrous, petals distinct.

This species I found at Koteigherry and Nedavuttum, but at neither place have been so fortunate as to find it in fruit. The under surface of the leaves are sometimes coloured of a deep crimson: those from which the drawing was made were pale whitish beneath,

Dr. Royle has described a nearly allied species from the Himalayas, but which differs in the form of the leaflets, as well as their being deeply serrated, and in having small, short peduncled, cymes. The venation of the leaves also differs considerably and allows at once they are distinct species. These distinctions are drawn from comparison of specimens.

966. IMPATIENSFRUTICOSA (D.C.) erect, branched: stems glabrous, glaucous: leaves alternate, opposite, upper side hairy, particularly on the veins; under tomentose: petioles villous, glanduliferous: peduncles glabrous, shorter than the leaves, dividing into several 1-flowered pedicels flowers shorter than the spur: lateral sepals large, concave, roundish-ovate, acuminate: filaments united at the apex: stigmas combined: capsule glabrous, tapering at both ends.— *W. and A. Prod. p. 137.*

This noble species I have only found about Kottaherry and Coonor, it seems to be in flower the greater part of the year. The specimen gathered in August, and I afterwards found it in full flower in March. It is usually met with on the banks of streams, in clumps of jungle and in such situations I have seen it upwards of 8 feet high, nearly every branch as richly covered with flowers as the figure. This species is well adapted for showing the coropound nature of the lateral petals.

967. IMPATIENS SCAPIFLORA (Heyne) glabrous root tuberous: leaves radical, orbicular, deeply sinuate-cordate, the lobes overlapping, coriaceous; under side pale, marked with numerous coloured nerves: scape bearing a many-flowered raceme, bracteaed: pedicels alternate, solitary from each bractea, slender, in fruit becoming deflexed: lateral sepals ovate, small: spur sometimes tumid and inflated, sometimes much elongated: petals 2-lobed; posterior lobe small: anterior elongated, projecting forward. *W. and A. Prod. p. 137.*

This very beautiful but unusual form of Balsam occurs in great profusion in dry pastures all over the upper range of Hills, but is most plentiful about Dodabet, flowering from July till October or November, but is in greatest perfection in September when it is most conspicuous? In this the lower half of the compound petals is lobed, affording a useful, specific character.

968. IMPATIENS MODESTA (R. W.) leaves few, radical, broadly cordate-ovate, or sub-orbicular, hairy, above; glabrous and pale shining glaucous beneath: scape erect racemose many flowered; flowers small, rather long pedicelled, from the axil of a small subulate bractea: upper sepal broad obovate sub-orbicular, the lateral ones narrow lanceolate or subulate incumbent; on the upper; lower shorter than the petals with a short obtuse spur: petals declining, 3 lobed (lower petal two cleft upper entire) hairy near the attachment: capsule glabrous ovate. (*R. W. Madras Journal.*)

Damp woods about Pycarah, flowering July and August. Plant from 8 to 12 inches high, leaves from 1/2 to 2 inches broad, flowers from 30 to 20. Petals approximated and, until closely examined, the whole flower has much the appearance of an Orchidaceous plant. This description is taken from plants growing in shady woods on the top of the Hills at Shevagherry near Courtallum, but quite corresponds with the Neilgherry plant.

969. IMPATIENS RUFESCENS (Benth.) stems erect, branched, jointed, glabrous: leaves shortly-petioled, from elliptic and slightly cordate to obovate, sharply serrated; upper side hispid with short callous hairs; under glabrous and whitish, except the nerves which are hairy: pedicels solitary or in pairs, about the length of the leaves, villous: posterior sepals much smaller than the petals; anterior saccate, without a spur: anterior lobes of the petals oblong, protruded, much larger than the short roundish posterior one: capsule oval, glabrous.— *Jr. and A. Prod. p. 138.*

Frequent in swampy grounds and on the marshy sides of small streams, flowering during the rainy season, but may be met with in flower the greater part of the year near Priyanga, where the ground is always wet. This species affords an example of the equality in the size of the two halves of the compound petals and of a not spurred sepal

970. IMPATIENS INCONSPICUA (Benth.) branched, diffuse, glabrous: leaves opposite, early sessile, from oval to linear lanceolate, slightly cordate at the base, remotely and slightly bristle-serrated; under side pale, glaucous: pedicels solitary or several together, shorter than the leaf, pubescent: lateral sepals nearly equal to the flowers, linear; lower obovate without a spur: capsule oval, glabrous, few-seeded.— *W. and A. Prod. p. 139.*

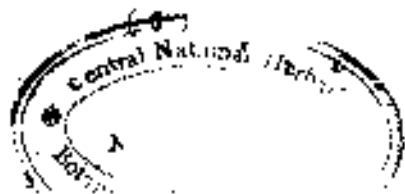
This minute and little known species I have only found at Dodabet and on the top of the hill immediately beyond and to the South of Elk Hill: in the latter station among craggy exposed rocks? It flowers in November, and, but for its abundance where it does grow, would indeed be truly inconspicuous. This, like the preceding, is distinguished by its unequal petals and saecate not spurred sepals?

970. IMPATIENS SLECHKNAULTII (Wall.) suffruticose erect, branched; branches ascending, almost glabrous: leaves alternate, short petioled, ovate lanceolate, acuminate, acute at the base, glabrous, with bristly incurved serratures: petioles without glands: pedicels solitary, shorter than the leaves: lateral sepals minute, caducous: spur slender, tapering, rather longer than the flowers, curved upwards: capsules small, drooping, glabrous, ovate, pointed, few-seeded.— *W. and A. Prod. p. 136.*

This is one of the most common species on the Hills, being found in every thicket and in flower at all seasons. It is quite a shrub in its habit and often attains a considerable size. In shady woods and in moist soil I have seen it fully 8 feet high. It is so nearly allied to *I. latifolia* as to be scarcely distinguishable by technical characters, but when seen growing side by side, they are readily recognized. The flowers of this are pale rose colour or nearly white; those of *I. latifolia* pink and considerably larger.

971. PITTOSPORUM TETRASTICHUM (W. & A.?) leaves elliptic-oblong, acute, coriaceous, glabrous, margins slightly wavy and recurved: flowers in a terminal sessile umbel; peduncles aggregated, usually 1-, rarely 2-flowered, pubescent: sepals pubescent, lanceolate, acuminate, minute, many times shorter than the corolla: petals linear: ovary hairy: style glabrous stigmas 2-lobed: ovules 2 in each cell: capsule nearly globose, scarcely compressed. Many-seeded; valves thick-coriaceous.— *IF. and A. Prod. p. 154.*

Ootacamund in clumps of jungle: a large shrub flowering in February and March. The figure differs in two points from the character which was taken from dry specimens. The stigma is 4, not 2-lobed, and the capsules are somewhat compressed. The lobes of the stigma are at best so minute that a mistake might easily have happened, and the capsules are at first perfectly globose but become flattened when quite mature. The dark streak on the longitudinal section of the seed does not represent the embryo: the draftsman has failed to detect, being very minute and situated at the base of the seed. *P. Nelgherryense* is also found in the jungles about Ootacamund and Pycarah; a third undescribed species is found at Sisparah, all of which we in flower at the afternoon



972. TURPINIA NEPALENSIS (Wall.) leaflets 3-5, oblong lanceolate, acuminate, coriaceous: branches of the panicle opposite: styles almost quite distinct: ovules 3, or occasionally 2, in each cell: berry (immature) scarcely fleshy, marked on the outside above the middle with a small distant point (the remains of the styles), about 3-seeded: seeds pendulous radicle superior.— *W. ntid. ProL. p. 156.*

A very common tree on the Hills, and to be found more or less perfectly in flower at all seasons, but in greatest perfection in May and June. It seldom attains a considerable height; but its branches when it has room to spread, extend on all sides forming a fine head.

973. EUONYMUS CRENULATUS (Wall.) leaflets elliptical, obtuse, short petioled, crenulate-serrated towards the apex, coriaceous, convex and bullate above: peduncles solitary, shorter than the leaves, once or twice dichotomous, few flowered: petals 5 (or occasionally 6) orbicular: stamens very shortly anthers opening transversely: margin of the tofus fr<>e: style very short: stigma blunt, somewhat umbilicated: capsules turbinate, 5-celled, lobed at the apex: seed solitary in each cell; hilum truncate, without an arillus.— *W. and A. Prod. p. 161.*

This plant often attains the size of a considerable tree; but more commonly it occurs as a large and often very handsome shrub, on account of its numerous ascending branches covered with abundance of bright shining foliage. The flowers, as seen on the growing plant, are but little conspicuous being small and hid by the profusion of leaves. They are of a dull purple colour, and not generally so numerous as on the specimen selected for representation. In the above character of the species, the seed are said to be without an arillus. This is not quite correct. The arillus is present but much smaller than usual in the genus. One of the orules only in each cell usually, matures, the remains of the other is shown in figures 8 and 9, sometimes, however, they both ripen.

The plant represented No. 214, under this name, I now find, if not actually, a distinct species, is at least a variety, departing in appearance, so widely from the true plant, that it becomes necessary to devote a plate to the illustration of the more usual and regular form. The above gives a very good idea of the plant, but differs from the character in having entire not crenulate leaves. This is a frequent variation occurring even in different leaves of the same specimen. My first thought on comparing the two drawings was to consider them distinct species and give the older figure a new name. On minutely comparing, however a number of specimens, I do not find the actual differences so great of the drawings as would lead one to suppose, depending as they do, mainly, on the inflorescence; in the one the cymes are contracted, few flowered, in the other lax and many flowered.

Had I the fruit of 214 I might be able to determine, beyond all doubt, whether I ought to consider the two species or varieties, but not without; I therefore in the meantime feel that I must consider the plants represented in these two drawings as extreme forms of the same species. The leaves of 214, and being serrated, while those of 973 are quite entire: the former usual form is between the two. The greater size of the leaves of 214 is partly the fault of the artist. The great difference in the inflorescence is not however so easily accounted for, but still it is only, so far as yet known, a solitary character, for I do not know the tree, except from specimens. In my present state of ignorance therefore I call 973. *E. crenulatus*, and 214 *E. crenulatus* var *lanceolata*.

c 974, see below, 978 bis,

975. MICROTROPIS MICROCARYA (R. W.) an erect shrub: leaves opposite, ovate, mucronate, entire, glabrous, shining above, glaucous beneath: petals obovate cuneate broad at the apex, cymes axillary; dichotomous shorter than the leaves, capsule subcylindrical, slightly attenuated at the base, pointed: testa of the seed of a rusty brown colour.

Kottergherry, in dry jungles, flowering July and August, at the same time bearing clusters of ripe seed. The shrubs from which the specimens were taken were 8 or 10 feet high, branches, ascending, leaves ovate from 12 to 15 lines long, 4 to 6 broad. The flowers had not quite opened at that time and the open flower, figure 2 was opened artificially. No. 1 shows the unopened corolla after the removal of the calyx. *

976. MICROTROPIS OVALIPOLIA (R. W.) a large somewhat diffusely ramous shrub: leaves ovate, rounded at both ends: cymes axillary, trichotomous shorter than the leaves: petals orbicular, fruit oblong oval, obtuse: testa of the seed crimson.

Ootacamund, frequent in moist woods, flowering in February and March, but may generally be found in flower at other seasons. *

In their outline the leaves are very constant, but are often much larger than those represented, being sometimes nearly 1 1/2 inches long by 1/2 broad. These two are very nearly allied species but, I think, quite distinct.

977. MICROTROPIS BAMIFLORA (R. W.) a moderate sized tree: leaves sessile, slightly cordate at the base obovate obtuse or slightly emarginate, reflexed, very coriaceous: flower sessile, aggregated in dense clusters along the naked branches: petals somewhat obovate: fruit oblong obtuse: testa of a reddish orange colour.

Ootacamund in thick jungles. This is the largest species I have yet met with, being quite arborescent. The leaves are from two to three inches long by 1 1/2 broad, exceedingly hard and coriaceous. When in full flower, all the younger branches are as densely covered with flowers as in the specimen figured.

There are three or four other species found on the hills, two referable to the ramiflorous division, and another, or perhaps, two, to the cymose.

978. RHAMNUS HIRSUTA (W. & A.) young branches pubescent, spinescent; older ones glabrous with a white cuticle: leaves opposite or alternate, ovate, or oblong lanceolate, with a short sudden acumination, serrated, membranaceous, nearly glabrous above beneath hairy, particularly on the nerves and veins; pedicels from the base of the young shoots, 3-6 together, pubescent, as long as the petiole: calyx 4-cleft: petals obovate, obtuse, entire, flat: ovary 2-3 celled: styles 2-3, connected to the middle, then diverging, the upper part jointed with the deciduous from the persistent lower half: fruit 2-celled: seeds plano-convex, with a deep furrow at the base on the outer convex side.— *W. and A. Prod. p. 165.*

A considerable shrub rather extensively distributed on the Hills, but not so common on the higher ranges as lower down. The specimen delineated supplies a somewhat flattering likeness as it usually presents a rather scraggy appearance. It is to be met with in flower at almost all seasons, but is not so free as the other in bearing fruit.

983. (bis) *Gou\NrA LEPTOSTACHYA* (D.C.): branches glabrous: leaves ovate acuminate, slightly cordate at the base, coarsely serrated, glabrous; racemes interrupted, axillary or in terminal panicles elongated, when young, pubescent, afterwards glabrous: flowers on very short pedicels, polygamous, disk glabrous, stellate; accessory angle partly adnate to the calycine lobes, free and acuminate towards the two-horned apex: fruit glabrous—shortly winged.—*W. and A. Prod. p. 16f.*

An extensively straggling climbing shrub, found in great abundance along the road between Burliar and Coonor, flowering towards the end of the year and maturing its fruit during the hot season. We formerly supposed this species confined to the Northern parts of the Peninsula, a point on which, it now appears we were mistaken.

979. *SOPHORA GLAUCA* (Lesch.) shrubby: leaflets 19-23, elliptical, mucronate, upper side glaucous and velvety, under vilvius; racemes terminal, crowded.—*IV. and A. Prod. p. 179.*

Very abundant on the Neilgherries, in flower at all seasons. A handsome flowering shrub from 6 to 12 feet high, all the green parts except the upper surface of the leaves clothed with soft pubescence, flowers pale purple: seed oval, polished very hard.

980. *CROTALARU BABBATA* (Graham:) herbaceous, erect, densely clothed with dark brown hairs: stipules minute, inconspicuous: leaves oblong-lanceolate, bluntish; racemes terminal, elongated; flowers few, distant: calyx a little shorter than the corolla, deeply 5-cleft, very hairy; segments slightly falcate: legume glabrous, stalked, 2-3 times the length of the calyx, obovate apex of the style and stigma woolly.—*y. and A. Prod. p. 1K.*

Not unfrequent in woods about Oofaeamund, moist soil on the banks of streams. A large species conspicuous on account of the large size and bright yellow colour of its flowers. It is very readily distinguished by the universal hairiness of all the young parts. Among bushes where it obtains support, it often attains the height of 10 or 12 feet. The whole plant turns black in drying.

981. *CROTALARU FORMOSA* (Graham:) erect, branched, all over villous except the upper side of the leaves: stems terete: stipules minute, setaceous, reflexed: leaves cuneate, obovate, obtuse, glabrous on the upper side, villous beneath: bracteas lanceolate, acuminate, lower ones without flowers: flowers in a dense raceme at the extremities of the bracted elongated branches: bracteoles setaceous, on the middle of the pedicels: calyx villous; legume oblong, broader upwards, glabrous, about 4 times the length of the calyx, many-seeded.—*W. and A. Prod. p. 18b.*

Frequent in pasture grounds on the hill sides flowering in greatest perfection during the months of February and March. It is an erect shrubby species, rising in favourable situations to the height of between 4 and 5 feet, but is generally met with lower. The leaves are a fine pea green colour above, clothed with white adpressed hairs beneath, flowers pale yellow streaked with brown.

982. *CROTALARIA WALLICHIANA* (W. & A.): herbaceous, erect, much branched, young branches irregularly and rather bluntly angled, with the racemes under side of the leaves densely pubescent: stipules lunate, transverse, recurved: leaves oval, glabrous above, marbled beneath rather prominent nerves: racemes terminal and leaf-opposed, many-flowered: bracteas subulate, reflexed, small: pedicels elongated, longer than the calyx: bracteoles very minute, setaceous, about the middle of the pedicel: calyx smaller than the corolla deeply

trilobed; legume clavate-oblong, stalked, softly pubescent; Descart, many-seeded.—*W. and A. Prod. p. 187.*

Abundant in woods and thickets about Ootacamundi, preferring a ricum moist soil, and in such situations sometimes, with the support of bushes, rising to the height of 9 or 10 feet. It is in flower at all seasons and is most conspicuous from the size and brilliancy of its flowers. As a species it is perhaps too nearly allied to *C. semperflorens*.

983. *INDIGOFERA PEDICELLATA* (W. & A.): suffruticose, procumbent; branches filiform, sprinkled with short adpressed brownish hairs; older parts terete; young parts compressed, thickly covered with brown glands: leaves petiolate, palmately trifoliolate; leaflets ciliculate-oblong; both sides with short whitish hairs mixed on the under side with glands: racemes almost sessile, somewhat corymbiform, about the length of the leaves: pedicels slender, drooping, 2-3, longer than the calyx: calyx 7-cleft (segments linear and acute), and with the vexillum and keel hirsute and glanduliferous.—*W. and A. Prod. p. 200.*

A low growing procumbent plant, frequent in dry pastures, where it is rendered conspicuous by its bright crimson flowers, which rise above the herbage among which it grows and which conceals the rest of the plant.

934. *DESMODIUM DEFESCEPS* (D.C.): shrubby: branches, racemes, bracteas, pedicels, stipules, petioles, and nerves of the leaves beneath, densely clothed with yellowish-brown tomentum: leaves trifoliolate; leaflets oval, obtuse with a long bristly; upper side glabrous; under densely clothed except the nerves with adpressed silky white hairs, especially when young: stipules caducous: racemes axillary and terminal, many-flowered: bracteas ovate, tapering to a long subulate point, before expansion densely imbricated, soon caducous: vexillum orbiculate: alae as long as the broad keel: legume pubescent, about 7-jointed, straight on the one suture notched into the middle on the other.—*W. and A. Prod. p. 228.*

A low growing shrub, not unfrequent in moist ground among brushwood. On the roadside below Coonor on the Neilgherries, it occurs in considerable abundance, and from that station the specimen from which the drawing was taken was obtained. It is in greatest perfection during the rainy season, but may generally be met with in flower in the neighbourhood of springs.

985. *DESMODIUM STRANOUATUM* (W. & A.) herbaceous, erect: branches hairy, somewhat 3-angled, angles obtuse: leaves 3-foliolate, long petioled: leaflets pubescent on both sides, lateral ones obliquely ovate, terminal one rhomboid: stipules scarious, oblong-lanceolate, concave, glabrous: raceme hairy, axillary and terminal, panicle, at first oblong and imbricated with large oblong concave hairy bracteas, afterwards becoming very long and few-flowered: flowers 2-3 together, on long filiform pedicels: calyx campanulate, bilabiate; upper lip emarginate, under deeply cleft: vexillum obovate ala shorter than the keel: stamens monadelphous from the base to the middle, diadelphous towards the apex: ovary stipitate, about 4-angled: legume 3-jointed (occasionally from abortion 1 jointed), much contracted one suture between the joints, even on the other, hispidly pubescent; joints semi-oblong, nearly equal at both ends.—*W. and A. Prod. p. 22*.*

A slender erect growing herbaceous plant, frequent in dark shady woods. It is at once distinguished from all the other peninsular species of the genus, by its deep orange coloured flowers, and the deep divisions of the legume between the seed.

A-18

986. SMYTHIA BLANDA (Wall.) suffruticose, diffuse every where except the upper surface of the leaves and corolla hairy: leaves abruptly pinnate 3 paired; leaflets linear, elliptic, mucronate; glabrous above, hairy beneath: racemes, axillary and terminal: flowers congested towards the apex: calyx 2-lipped, upper lip bifid, under 3^d cleft; without pellucid glands or dots. R. W. MSS.

Pycarah in wet swampy ground rare. In the accompanying figures, No. 3 showing a magnified view of the bracts, calyx and stamens, is from a flower picked from the specimen represented. No. 6 showing the calyx and pod belongs to another species, and is introduced partly to show the form of the ped of the genus, partly to indicate a specific distinction, the one being perforated with transparent glands which are wanting in the other. The glandular one is probably *S. racemosa* but of this I am uncertain, as I have not authentic specimens of either it, or of *S. blanda* for examination, and the character under consideration is not indicated in the published definition of either species.

987. FLEMINGIA PROCUMBENS (R.W.) herbaceous, diffuse, procumbent, hairy: leaves palmately trifoliate; middle leaflet obovate, lateral ones ovate, slightly unequal at the base, hairy above, nearly glabrous, except the veins, beneath: peduncles longer than the leaves: flowers capitate: calyx deeply 5-cleft, divisions linear, lanceolate, acute, about the length of the corolla: ovary two-seeded: stigma capitate hairy: legume shorter than the calyx usually, by abortion, one-seeded: seed oval.

Pycarah in pastures, frequent. A very diffuse plant lying flat on the ground and spreading all round, extending from 12 to 18 inches from the root, leaves about an inch long and 8 lines broad, fender surface sprinkled with minute garnet coloured glandular points, flowers dark dull purple.

988. FRAGARIA ELATIOR (Ehrh.) leaflets somewhat coriaceous: hairs on the petioles, peduncles, pedicels and calyx widely spreading: calyx in fruit reflexed: bracteoles similar to the calycine segments.— *W. and A. Prod. p. 300.*

A very common plant about Ootacamund producing abundance of fruit in May and June, but not limited to these months. The fruit is about the size of the wood strawberry of Europe, of a pale yellowish white, except the side exposed to the sun which is generally tinged with a pale rose blush. It is rather insipid, but when seasoned with a little lime juice and sugar, is much relished by some persons.

989. FRAGARIA INDICA (Andrews) leaflets obovate; peduncles axillary, solitary, 1-flowered: bracteoles patulous, cuneate, much larger and broader than the entire calycine segments, deeply 3-5-toothed at the apex.— *W. and A. Prod. p. 300.*

Frequent in shady woods where the soil is somewhat moist. Unlike the rest of the genus the flowers are yellow. The fruit is a bright red, very tempting to the eye, but watery, mawkish and disagreeable to the taste.

990. POTENTILLA LESCHENAULTIANA (Ser.) covered all over with silky long hairs: stems decumbent at the base: radical and lower leaves pinnated, longish petioled; leaflets 5, cuneate-obovate, obtuse, incise-toothed, the lower pair smaller than the others: upper stem leaves palmately 3-5 foliolate; leaflets about equal and similar to the larger leaflets of the radical leaves: stipules large, ovate-lanceolate; lower ones often entire; upper toothed or deeply cut: flowers in terminal forked panicles, or corymbose: calycine segments and bracteoles about equal,

oblong-lanceolate, more obtuse: petals (yellow) slightly obcordate, about equal to the calyx: receptacle villous: carpels slightly wrinkled.— *W. and A. Prod. p. 301.*

Every where common by road side's and ditches, sometimes erect, but often diffuse with the ends of the branches only ascending. The fruit of this species approaches more nearly to that of the strawberry than is usual in the genus, but still it is a true *Potentilla*.

991. PHOTINIA NOTONIANA (Wall.?) leaves from cuneate-lanceolate to oblong, acute, quite entire or with a few inconspicuous scattered teeth: panicles large, very compound; ramifications puberulous: pedicels much shorter than the calyx: cells of the ovary spuriously semi bilocular: fruit glabrous, 2-seeded.— *W. and A. Prod. f. 302.*

A considerable sized tree, abundantly distributed over the Hilla, flowering during March and April, and is then a beautiful object. In June and July the fruit ripen and then are of a dull reddish brown colour. They possess a remarkable degree of the peculiar taste and flavour of those of the mountain ash.

The figures 8, 9, 10, and 11 of this plate, through a blunder of the draftsman, not detected until after the impression was printed off, are inverted. The rudiments should in all have been inferior not superior as here shewn.

992. COTONEASTER BUXIFOLIA (Walk List) shrubby erect, very ramous: leaves oval or subobovate, pointed, glabrous above, tomentose beneath: corymbs few flowered, peduncles and calyx tomentose.

Frequent about Ootacamund, Kulhatty, Orange Valley near Kotergherry &c

This is a small, rigid, scraggy looking very ramous shrub, rarely attaining the height of six feet. De Candolle doubtfully refers this to his *C. affinis* a Himalayan plant, with what justice, I am unable to say. Making use of his doubt and the wide geographical difference, I have adopted Wallich's name. A more minute description is given in the second part of my *Neilgherry Plants*. A plant of what I suppose to be *C. tiffinis*, in Lord Elphinstone's garden at Knitee, differs toto cœlo in habit, the latter being very diffuse, spreading flat on the ground, while this is always erect.

993. PYGEUM ACUMINATUM (Colebrooke) arboreous: leaves alternate, oblong, acuminate, entire, glabrous: racemes axillary shorter than the leaves: flowers yellowish: calyx lobes and corolla indistinguishable, clothed with rusty coloured pubescence: filaments attached to the edge of the tube in flexed in aestivation: ovary ventricose, stigma dilated, two lipped, drupe dry friable, transversely oblong, glabrous.

A large tree of rather rare occurrence. The specimens from which the drawing was taken, were found on the Neilgherries at Kaitee Hills and in the woods about the Avalanche. Mr. Gardner and I found it abundantly, in fruit, in February: I do not recollect any other station in which I have observed it. I am uncertain about the species, because it refers to me, had this been the species from which Colebrooke's description is taken, he would have described the flower as apetalous with a 12-lobed calyx limb. In this respect, if the dissection of my figure of *Polydonta Ceylanica*, No. 256 is correct, and I believe it is this can scarcely be considered a true congener, as it is represented with distinct calyx and petals, but I have not now the specimens to re-examine. Specimens of a Ceylon species which I have, correspond with this.

994. CONOCAEPUS LATIROU (Roxb.) leaves without glands, elliptical or obovate, obtuse or emarginate, glabrous: peduncles branched, bearing several heads of flowers, or very short with the heads densely aggregated, peduncles conspicuous. - *W. and A. Prad. p. 3tj.*

A large and handsome tree frequent on the Eastern slopes of the Neigherries, also in most of the oubal-p-ne jungles, along the whole, of that "mountain range from the Northern Circars to the southern extremity of the Peninsula.

995. SONERILA GSUKDIFLOIU (R. Sr.) erect? glabrous: leaves elliptic, attenuated at both ends, bristle-serrated, 3-nerved at the base: peduncle terminal (always?), about the length of the leaf flattened at the apex and there bearing a slightly curved raceme of several unilateral large flowers; petals ovate, pointed: style as long as the stamens: stigma simple: capsule glabrous, 3-sided, scarcely the length of the pedicel.—*JF. and A. Prad. p. 322.*

A large tree, and as compared with the other species of the genus, well named, I have only met with it, non-existent on the Neigherries in Lonff Valley. It is found between the Avalanche and Sisparah/ where it occurs in considerable abundance on the banks of a stream by which the valley is intersected. The flowers are of a deep pink, congregated on the ends of the branches. It is an erect suffruticose plant, from 12 to 18 inches high, the leaves between 2 and 3 inches long and about 1 broad, three to five distinctly 5-nerved.

SONERUA SPECIOSA (Zenker) stem erect, subUchotonous at the base, somewhat four-sided: leaves petioled, 5-nerved, broadly ovate/acute, mucronately serrated, glabrous; petioles hairy near the apex: calyx and mid-rib of the petiole covered with short rigid glandular hairs: mucronate style and stamens about equal. *Flowers rarely seen in the wilds of the hills.* This when seen in perfect flower is very handsome. Flowers are rarely seen in the wilds of the hills.

995-3. SONERILA ELEGANS (R. W.) herbaceous, erect, stem 4-angled, petioled, penninerved, cordate to 3-angled, acuminate, serrulate; peduncles terminal, cymosely dichotomous; branches 3-angled: flowers numerous, second: calyx pubescent: petals ovate pointed: anthers long with the limb of the calyx: seed hairy.

Sisparah, very abundant all along the road side, in flower and ripe fruit in February. A most conspicuous species at first a few pale pink flowers open, but are quickly followed by others as the branches elongate until at length each branch is several inches long, covered along the upper edge with a row of capsules and two or three flowers at the extremity. The branches in the meantime tending horizontally, rather, the lower part of the latter is as shown in the drawing.

996. OSBEEKIA LICHENAUMANA (D.C.) shrubby branches 4 angled, beset with stiff hairs: leaf sessile, ovate, somewhat acute, approximate, 5-nerved, bristled. Calyx tubelose, covered with palmately ciliated short scaled; segments 4, lanceolate (D. «.) petals 5, orbiculate, blue. Stamens 8, anthers 4, truncated, with a tuft of bristles.

Frequent about Kotergherry, flowering during the month of February. Small, columnar with a portion to the base of the stem, and in proportion to the size of the plant, reaches a height of two and three feet. The flowers are white, with crimson spots. It associates with other species, but is in all other respects amply distinct. *Flowers rarely seen in the wilds of the hills.*

997. OSBEEKIA GARDNERIANA (R. W.) a large-erect ramous shrub; all the young parts clothed with long bristly hairs: leaves sessile, ovate, 3-nerved; usually with two short slender lateral ones near the base, pubescently hairy on both sides: flowers terminal capitate: calyx tube short, campanulate, closely covered with ligulate and towards the apex clavate adpressed scales, furnished with numerous long dark red or rusty coloured bristles; limb 5-cleft, divisions linear, lanceolate, obtuse, more than twice the length of the appendages, both covered with bristles; petals 5, orbicular: stamens 10, anthers recurved, correaigated on the inner edge, shortly beaked.

This, which is the largest and most conspicuous species found on the hills, is very abundant in the woods about Ootacamund extending westwards as far as Sisparah. In favourable situations it becomes a large bush 8 or 10 feet high, though generally about 4 or 5; flowering in profusion during February and March. It is nearly allied to *O. Wightiana* but is abundantly distinct in nature, though, as regards technical characters, the difference is not so clearly seen. I have dedicated it to my friend George Gardner, Esq. Superintendent of the Royal Botanical Garden of Ceylon, as a memorial of many agreeable hours spent in his company while exploring together the wilds of these Hills.

998. OSBECKIA WIGHTIANA (Benth.) shrubby: branches herbaceous, scabrous with short bristles: leaves nearly sessile, ovate, slightly acute, quite entire, 5-7 nerved; upper side covered with expressed somewhat shining hairs; under hirsute on the nerves and shortly tomentose between: flowers (large) terminal, at first densely capitate and bracteated, afterwards often solitary: calyx campanulate, densely covered with short adpressed capitate scales, bearing a tuft of long bristles at the apex; segments 5 deciduous; appendages deciduous covered with bristles; anthers 10, linear-oblong, scarcely beaked: style clavate.—*TV. and A. Prad. p. 320.*

This species is rare about Ootacamund but about Coonoor and Kaitie Falls it is common. It is readily distinguished from the preceding by the short shining adpressed hairs with which the 5-nerved leaves are covered and by the calycine bristles being nearly white, while, in it they are a deep brownish red.

£99. EUGENIA (S.) ARNOTTIANA (R. W. III. Jnd. Bot. *Syzygeum densiflorum* Wall.) leaves elliptic, oblong, acuminate, folded, coriaceous, dotted: cyme dense, corymbose; peduncles lateral, general and partial stout, the partial ones short and bearing at the apex an umbel of 8-12 almost sessile flowers subtended by oblong-linear caducous bracteas; calyx shortly turbinate; limb cup-shaped, shortly and bluntly 4-toothed or lobed: petals expanded before falling off.—*W. & A. Prod.* V. 329.

Abundant in the jungles about Ootacamund and generally met with in the woods on the higher hills. It is a beautiful tree, generally of low growth, with wide spreading branches forming a fine umbrageous head. It is in its greatest perfection in February and March when covered with thousands of large clusters of flowers. In May and June it is covered with myriads of its oblong, dark purple succulent, austere tasted fruit. The Cotyledons are thick and fleshy placed horizontally one above the other with a small radicle between.

The fruit is eaten to a considerable extent by the natives, though, owing to its astringency, by no means palatable.

1000. EUGENIA (S.) CALOPHYLLIFOLIA (R. W.) arboreous, ramuli, 4-sided: leaves approximated towards the ends of the branchlets, form oval, very obtuse, to obovate-orbicular coriaceous; veinless, above, pinninerved beneath, when dry, slightly revolute on the margin, not dotted: cymes terminal, corymbose, short peduncled, many flowered: calyx repandly 4-toothed: petals 4, orbicular, separating as one: fruit drupaceous, oval, oblong, succulent, dark purple when ripe.

A low spreading tree, very abundant in the woods about Ootacamund. The lowers are exceedingly numerous but make no show, so few in each cluster opening at the same time. The tree itself however is a very beautiful one, with a fine round umbrageous head. It is to be met with in flower at all seasons, but is in greatest perfection in March and April. The fruit is so like those of *E. Arnottiana* that the same description will serve for both.

1001. SERPENTARIA HIREUTA (W. and A.) stems hirsute: leaves opposite cuneate-oblong obovate, toothed towards the apex, slightly hairy particularly on the under side: male flowers 8-anded on hairy pedicels twice the length of the leaves.—*W. & A. Prod.* p. 331.

A low creeping procumbent plant very common in moist pastures, especially in the vicinity of springs and water courses. 1. verticil of flowers—2. fertile flower showing the 4-styles—3. male flower unopened—4. the same opened—5. anthers—6. pollen—7. young fruit front view—8. side view—9. stigma—10. ovary split open showing the 4 pendulous ovules—11. full grown fruit—12. cut vertically—13. transversely—U embryo detached.

1002. HYDROCOTYLE CONFERTA (R. W.) procumbent, rooting: every where clothed with long hairs: leaves long petioled, orbicular reniform, obscurely 7-lobed, serrately toothed. flowers all fertile: umbel globular, many flowered, always sessile } fruit turgid ecostate.

Frequent in dense woods: where the soil is moist it grows with great luxuriance extending several feet from the original root. This species is nearly allied

to both *H. Nepalensis* and *capitata*, but seems, so far as I can judge, amply distinct from both in its constantly sessile umbels and bisexual flowers.

1003. HYDROCOTYLE POLYCEPHALA (W. & A.) stems rooting, scabrous or nearly glabrous; branches petioled and peduncled, and the leaves sparingly on both sides, scabrous from short stout hairs: leaves attached by the margin, orbicular-reniform, 7-lobed: lobes scarcely acute, coarsely crenated: peduncles hoary, numerous (6-18) and umbellate in the axil of the uppermost shortly petioled leaf, almost as long as the leaf: flowers all fertile, numerous (20-30 together), at first capitate and almost sessile, afterwards (in fruit) on short glabrous somewhat persistent pedicels: fruit didymous, slightly 2-ribbed on each side, smooth and flat between the ribs.—*W. & A. Prod.* p. 366.

Frequent in low woods in rich moist soil; in such situations very luxuriant, completely covering large patches of ground, I have found it in many and distant stations in similar situations, both on the Continent and in Ceylon.

1004. SANICULA ELATA (Ham.) stem dichotomous at the apex: leaves 3-partite or terfifid, glabrous; segments sessile, ovate, acute, lobed and serrated, cuneate at the base, the lateral ones often bipartite: umbels usually few flowered: flowers polygamous, the males pedicelled.—*W. & A. Prod.* p. 377.

Common in almost every wood about Ootacamund, flowering during the rainy season. It often attains a large size, three or four feet in heights.

1005. PIMPINELLA LESCHIENAUETH (D.C.) biennial? : stem slightly branched, glabrous or minutely pubescent: radical leaves petioled, orbicular, cordate, entire, toothed, firm and hard, many-nerved at the base, glabrous on the upper side, pubescent on the under; cauline ones few, divided, small and almost reduced to the sheaths: umbel with 5-10 pubescent rays; partial ones with many rays: involucre and involucre wanting: styles diverging: fruit ovate-acuminate, glabrous.—*W. & A. Prod.* p. 369.

Generally distributed over the higher ranges of the hills in dry pastures, flowering during the rainy season. From the naked exposed situations in which it usually grows, though in itself little striking, it becomes very conspicuous. The roots are perennial and strike deep into the soil.

1006. BURLEURUM DISTICHOPHYLLUM (W. & A.) perennial stems erect, simple and twiggy below, flexuose and almost simply branched upwards: leaves distichous and usually crowded near the base of the stem, near the distant upwards, somewhat erect, from narrow linear and much acuminate to linear subulate, very sharp, amplexicaul, striated on the under side: general umbel with 5-8 rays; partial with 10-13 flowers: leaflets of the involucre and involucre about 5 and 6, linear acuminate and very flat; the former about twice as sharp as the rays, the latter usually longer than the fruit: fruit prominently ribbed, rather shorter than the pedicels; interstices flattish, with single vittae.—*W. & A. Prod.* p. 370.

Common on the higher ranges of the hills in pastures. The figure represents an average sized plant. It is oftener smaller, more rarely it exceeds that size. Flowering during the rainy and cool season.

1007. BUPLUKUM RAMOSISSIMUM (W. & A.) perennial, diffuse and much branched, leaves oblong-linear, with a long muc/i, narrowed towards the base, amplexicaul, 5-9 nerved, between coriaceous and membranaceous : general umbels with 5-8 rays ; >>artial with 8-12 flowers : leaflets of the involucre and involucre about 5, oblong-linear, mucronate: the former 2-3 times shorter than the rays ; the latter rather longer than the flowers, shorter than the fruit: fruit about a half longer than the pedicels, strongly ribbed ; interstices with 1-2 vittae.— *W. & A. Prod.* p. 370.

Common among bushes and thickets. In such situations it is frequent on every road side, frequently attaining a large size. I have seen plants seven or eight feet or more in height. It is well named ruinosissimum but that of mucronatum seems equally appropriate, and after comparing many specimens in all states and forms, I am now satisfied that one of these species must be reduced. *B. virgatu*?* seems also too nearly allied to these.

1008. PASTINACA SPRINGELTANA (H. W. *Heracleum Sprengelianum* W. and A.) Stem much branched, furrowed when dry, rough; leaves puberulous on both sides, unequally pinnate, pinnules pinnatifid divisions ovate, irregularly lobed, ultimate division 3, lobed, lobes acute serrated *, petals equal: nearly orbicular vittae on the back, linear acute, shorter than the fruit the lateral ones in the middle of the interstices; vittae on the commissure, 4 slightly davate and unequal.

A very large coarse growing species frequent about hedges and enclosures, perhaps in other situations among thickets in moist rich soil: of this however I am not quite certain, as I find there are two species closely resembling each other, which I have hitherto confounded.

1009. PASTINACA RIGENS (R. W. *Heracleum rigens* Wall D. C. W. and A.) stem slightly branched, furrowed, pubescent or hirsute: leaves lernate; divisions roundish, somewhat cordate at the base, toothed, upper side more or less scabrous with short hairs, under densely pubescent or tomentose, lateral ones on a short, terminal one on a long petiole, the latter bluntly 3-lobed or ternate; leaflets of the involucre ovate: petals equal: fruit obovate: vittae on the back linear, much shorter than the fruit, the lateral ones in pairs, and close to the intermediate ridges: vittae on the commissure 4, acute, unequal, the two outer the shorter.— *W. and A. Prod.* p. 373.

Frequent in pastures, flowering during the rainy autumnal months. The radical leaves are usually pinnate and lie on the ground. The specimen selected for representation is a small one, but as compared with many of the others, this is a small species, though larger than the next.

1010. PASTINACA HOOKERIANA, (R. W. *Heracleum hookerianum*. W. and A.) Stem nearly simple, furrowed, coarsely pubescent or somewhat hirsute with short glutinous hairs; leaves nearly radical, 3-lobed, toothed, sparingly pubescent or hairy on the upper side, shortly tomentose on the under; lobes roundish, toothed, the terminal one the largest and often 3-lobed; upper stem-leaves few, and sometimes almost reduced to the mere sheaths; umbels long-peduncled, with 6-10 rays: leaflets [of the involucre] persistent during dowering, afterwards deciduous, lanceolate-subulate: of the involucre oblong lanceolate, longer than the flowers: petals (whitish with a tinge of red) unequal: fruit (very immature) sprinkled with a few short hairs; commissure with 2 vittae... *W. and A. Prod.* p. 337.

Like the preceding this frequents pastures, on the slopes of the hills, and during the rainy season, is equally abundant: it is readily distinguished by its naked stems, the leaves being all radical and lying flat on the ground.

Being unable to discover any characters, by which these species and several others in my collection, may be distinguished generally from *Pastinaca*, the older genus of the two, I have been induced to refer them all to that genus in preference to retaining both it and *Heracleum* in the Indian Flora. It is my impression that there is no difference between the two genera but I leave that for those who have better means of determining the point to decide. So far as written characters go there is no difference but there may be in habit, with which I am unacquainted.

1011 & 12. HEDERA (P.) OBOVATA (R. W.) arboreous, glabrous, leaves digitate; leaflets about 5, petioled, obovate, cuniate, very obtuse or sometimes obcordate, coriaceous; thyrses numerous, aggregated towards the ends of the branches, ebriculate: umbels numerous, solitary in each peduncle, flower pedicelled: petals, stamens and stigmas from six to eight ovary 6-8-celled.

A rather widely distributed tree, of small size, occurring in alpine jungle. I have specimens from Courtallum; Shevagherry Hills; Hills near Coimbatore, and from the jungles about Coonoor. The specimen from which the drawing was taken is from the latter station, where it flowers in April and May.

1013-14. HEDERA (P.) ROSTRATA (H. W.) arboreous, glabrous: leaves digitate; leaflets 5 to 9 longish petioled, ovate lanceolate acuminate, serrated: thyrses solitary, terminal, at first furnished with several sheathing cuspidate bracts; (abortive leaves) lateral peduncles bracteate, from one to three umbels: flowers numerous pedicelled: petals 5, dehiscent before falling: stamens and styles 5, exerted, cohering and forming a beak, persistent in the fruit: ovary and fruit 5-celled.

A considerable tree frequent in woods near Nedawuttem and Sisaiah on the Nilgherries. The serrated leaves and long beak-like style at once distinguish this species. The branches of the thyrses, in the specimen from which the drawing was made, seem all to have borne solitary umbels, my specimens, however, in some instances, have three umbels on one branch. This species seems to go far towards reducing the genus *Gilibertia*.

1015. HEDERA (P.) RACEMOSA (R. W.) arboreous, leaves digitate: leaflets about 7, form oblong, lanceolate acuminate, undulate on the margin, to elliptic cuspidate: thyrses paniced, usually lateral from the previous year's wood, branches racemose, flowers pedicel, furnished at the base of the pedicel with a small somewhat subulate bractea: petals and stamens 5, styles 6 short stigmas distinct obtuse: fruit 5-celled.

A large tree of rather rare occurrence in the few fine trees 70 or 80 feet high, and large in proportion, are growing in the woods behind Kelso land in Ooiaçamund. I have met with it in several other places, but no where abundant. The very peculiar inflorescence at once distinguishes it from the rest of the genus. The leaflets vary in good deal in form and size; in some of my specimens they are scarcely waved nearly elliptic with a short cuspidate point, under 4 inches long, and 1\ broad, in others they are 6 or 7 inches long and about 2\ broad, mucti' waved. Flowers June and July/

OBS. In our P*ODROMUS it is remarked that *Paratropia* appears in natural gems, having the leaves digitate and umbels of flowers arranged in racemes forming thyrses, &c. being now impressed with conviction that, so far as characters derived from the fructification are concerned, no generic difference exists between *Hedera* and *Paratropia*, I have referred all these species to the former, but have retained the latter as a very natural and characteristic subgenus, on account of their digitate leaves and thyrsoid inflorescence; these, in the absence of structural difference of the reproductive organs, not being held of sufficient weight to entitle them to generic value.

1016. VISCUM ORBICULATUM (R. W.) monoicous, branches foursided, angled: leaves opposite, orbicular, much wared on the margin, slightly 3-5 nerved: flowers sessile, axillary, aggregated, male and female mixed: anther sessile on the lobes of the calyx, flat, composed of numerous little scales, berries oval, obtuse at both ends.

A very rare shrub; the plants from which the drawing was made being the only ones I have seen; they were growing on the branches of *Agapetus arboria*. The Draftsman has not correctly represented the anthers, the other parts of the figure are unexceptionable.

1017. VISCUM RAMOSISSIMUM (Wall.) entirely or almost leafless, much branched: stem and branches terete, verticillate or opposite, younger branches usually long and slender: leaves (when present) narrow, oblong, 3-nerved: flowers usually 3 together, axillary, sessile or nearly so; berries almost globose. — *Wand A. Prod. p. 380.*

This like the preceding is monoicous, and is frequently met with in all parts of the country.

1018. VISCUM MONILIFORME (Bluræ) leafless¹, stems terete at the base; branches opposite or fasciated, compressed: articulations obovate-oblong, tapering at the base, 3-4 times longer than broad, costate along the middle, but not striated: flowers sessile at the apex of the joints, opposite or in opposite fascicles of 3 together, sometimes nearly verticillate. — *W. and A. Prod. p. 380.*

This is, like the preceding, a widely distributed plant and is found on all kinds of trees, the specimen here given, grew on the *Rhododendron arboreum* a portion of which accompanies.

1019. VISCUM MONILIFORME *fi coraloides* (R. W.) This variety occurs, in the most profuse abundance on the hills, frequenting nearly all kinds of trees and shrubs, but is probably most frequent on a species of *Ilex*. The specimen from which the drawing was taken grew on a species of *agapetes* on the banks of the Pycarah River. This variety seems quite dioecious; but I have never met with a male plant among hundreds that I have examined. Judging from the specimen figured, it might well be considered a distinct species, but extended examination of the plant in all its forms scarcely warrants its separation from the preceding.

1020. LORANTHUS NBILGHIRRENENSIS (W. & A.) glabrous: branches terete, young ones obscurely and bluntly angled: leaves alternate, elliptic-oblong shortly petioled, thick and somewhat fleshy, ultimate one of the branch (always?) orbicular ovate: peduncles axillary, aggregated, very short, about the length of the petiole, bearing an umbel of 3-7, very shortly pedicelled flowers: bractea solitary under the

ovary and close to it, lateral, ovate: margin of the calyx obscurely repand-toothed: cordilla glabrous, ventricosely gibbous at the base, equally 5-cleft to beyond the middle, segments cuneate-linear, recurved. — *W. and A. Prod. p. 382.*

This is a fine species of great size, and when in perfection, most conspicuous from its numerous deep red, almost crimson coloured flowers, which completely cover the branches, while the young leaves on the new shoots are also often deep red.

1021. VIBURNUM ACUMINATUM, (Wall.) young branches, petioles, and peduncles dotted with small rusty-coloured scales: leaves elliptical, acuminate at both ends, coriaceous, quite entire with the margin slightly recurved, glabrous: upper side shining, under covered with minute shining rusty-coloured dots: corymb terminal, large, trichotomous, often larger than the leaves: stigma sessile: berry oval-oblong. — *W. and A. Prod. p. 388.*

A common and widely distributed species, but rarely, if ever, met with at the elevation of Ootacamund, at Coonor, and for two or three miles below that place, it is very common and when in flower, a very handsome shrub I have specimens from several other alpine stations, but have never seen it under three or four thousand feet of elevation.

In some situations it may almost be called a small tree generally it is a large ramous shrub.

1022. VIBURNUM CAPITELLATUM, (W. & A.) free from scales, quite glabrous except in the axils of the nerves: leaves oval-lanceolate, with a few distant wavy teeth, attenuated at the apex into a rather fine point, under side with the axils of the nerves woolly: cymes compound, somewhat umbel-shaped, 3-6 partite; flowers umbellate, several together, nearly sessile at the extremity of the ultimate divisions: flower-buds viscous and shining: stigma sessile: berries oval-oblong. — *W. and A. Prod. p. 388.*

The specimens from which the accompanying drawing was made were found in the neighbourhood of Kottagherry. I have other specimens from the Pulny range, found at a nearly similar elevation: but I do not recollect having observed it about Ootacamund. It is a handsome shrub, very nearly allied to the next, but evidently distinct. Flowers during the autumnal months.

1023. VIBURNUM HBBANTHUM, (W. & A.) branches, petioles, and general peduncles glabrous: leaves elliptical or obovate, shortly acuminate, obtuse or acute at the base, slightly sinuate-toothed on the lower half, coarsely so toward the apex: woolly in the axils of the nerves on the under side, otherwise glabrous: partial peduncles of the corymb pubescent: corolla tubular campanulas, softly pubescent, limb very small, nearly erect, 4-5 times shorter than the tube: style very short and thick. — *W. and A. Prod. p. 388.*

A very common shrub or small tree all over the higher range of the hills. The specimen from which the figure is taken does not convey a favourable impression of the inflorescence, but can scarcely be said to be unfavourable, as in that respect it is certainly the least striking of the Neilgherry species. It begins to show its flowers in February, but is not in perfection until March and April.

1024. VIBURNUM WIGHTIANUM, (Wall.) branches, petioles, peduncles, pedicels, and flowers glabrous : leaves oval, shortly acuminate, obtuse at the base, quite entire on the lower half, sharply serrated towards the apex; upper side glabrous, under slightly puberulous when young, nearly glabrous when old, the nerves densely pubescent and their axils woolly : corymb shortly peduncled, somewhat panic-shaped : bracteas linear, pubescent and ciliated: corolla hypocrateriform ; limb spreading, conspicuous, a lobe 4 times shorter than the tube: ovary linear : style very short and thick.— *W. and A. Prod.* p. 388.

A moderate tree or large shrub frequent in the woods about Ootacamund, flowering in April and May, but generally to be met with at other seasons. The fruit in this, like those of the preceding, is an oval succulent drupe red, and subacid when ripe.

OBS. It will be remarked from an examination of the dissections of the ovary of all these species that it is one-celled with a single pendulous ovule. This structure led me at one time to suppose these formed a genus distinct from the European genus *Viburnum*, but on comparing the ovary of 2 European species—*V. Opulus* and *V. Lantana*, I found the same structure, though, judging from the descriptions of the most recent writers, I was led to expect them 5-celled.

1025. LONICERA (X.) LIGUSTRINA, (Wall.) stem somewhat erect and bushy ; branches slender, slightly twining, younger ones hairy or pubescent : leaves shortly petioled, ovate-lanceolate, acute, obtuse at the base, quite entire, shining, sprinkled on the margin and when young on the midrib underneath with spreading hairs: peduncles a little longer than the petioles, slightly drooping at the apex, flowered, axillary and solitary : bracteas, a subulate one at the back of each ovary, and one cup-shaped closely surrounding and containing both ovaries: calyx; limb constricted in the middle, the margin 5-toothed teeth oblong, short : corolla puberulous, infundibuliform ; tube rather short, gibbous on one side, at the base; berries distinct, both covered by the common bractea.— *W. and A. Prod.* p. 389.

This a very common plant about Ootacamund and like the privet is much used as a fence about gardens for which purpose it answers well, forming a very compact one. The flowers are too small and too few in proportion to the quantity of leaves to admit of its being considered an ornamental flowering shrub, but so far as general form is concerned, were shrubberies more in vogue on the hill, it would well merit a place in them.

1026. HEDYOTIS (D.) LAWSONI, (W. & A.) shrubby, glabrous : branches 4-angled: leaves oblong-lanceolate, acuminate at both ends, petioled ; nerves few and distant, curved : stipules deciduous, triangular-ovate, acuminate, the point thickened and glandular-lobed ; the margin entire: panicle spreading: calyx-limb cup-shaped, 4-toothed : corolla externally glabrous, villous in the mouth and on the segments slightly protruded: style considerably protruded : capsule obovate, dicocous.— *IV. and A. Prod.* p. 407.

A handsome but neglected shrub, found in the woods about Ootacamund and elsewhere, not very rare on the Hills. The flowers which in fine plants, form much large clusters than those here represented, are so much of lilac colour, that introduced into shrubberies, and some care bestowed on its cultivation,

it might become a passing good substitute for the lilac.

1027. HEDYOTIS (D.) STYLCSA (Brown) shrubby, glabrous : branches somewhat terete of obtusely 4-angled : leaves from oval to oblong-lanceolate, acuminate at both ends, petioled; the nerve? on the underside strong, armed, slightly branched: stipules somewhat permanent, triangular-ovate ; their margin pectinately pinnatifid, the segments long, filiform, hirsute: panicle spreading: calyx-limb cup-shaped, 4-toothed : corolla externally glabrous, villous in the mouth on the segments : filaments considerably protruded : style much protruded : capsule ovoid, dicocous.— *W. and A. Prod.* p. 389.

This is a much more abundant shrub than the preceding, and the clusters of flowers being larger it is really a showy plant, but I have not once seen it in cultivation though abundant in the woods. The flowers are nearly white, and it is in flower at nearly all seasons.

1028. HEDYOTIS (D.) ARTICULARIS (Brown) shrubby, glabrous : branches terete or obscurely 4-angled : leaves approximated sessile, narrow, oblong-lanceolate with the margins recurved, coriaceous, minutely papillose ; nerves on the under side striate, simple : stipules ovate lanceolate, the opposite ones connate at the base; the margins divided into several filiform rigid segments ; panicle coarctate : calyx, limb cup shaped, 4-toothed : corolla externally puberulous, villous in the mouth and on the segments: filaments protruded ; anthers oblong-linear: style scarcely longer than the tube of the corolla : capsule oblong-obovate, dicocous.— *W. and A. Prod.* p. 389.

A common flowering shrub on the hill and to be met with in nearly all situations, especially when the soil is somewhat humid. It is usually a dry scraggy looking plant, almost always to be met with covered with flowers and dry yellow sickly looking capsules. Judging from its appearance in the wild state there is little in its appearance to recommend it to the attention of the Amator.

1029. HEDYOTIS (D.) VERTICILLARIS (Wall. *Hid. plantaginifolia* Am. pvg?) perennial herbaceous, leaves nearly all radical, linear-lanceolate, nerved, plaited between the nerves glabrous, overlapping at the base; those of the scapes linear lanceolate: scapes as long or longer than the leaves leafy ; lower pairs distant opposite ; upper ones approximated verticelled : stipules between the distant pairs bristle toothed: flowers sessile, apitate and terminal, or verticelled in the axils of the upper leaves: heads from the axils of the lower pairs peduncled : calyx segments linear lanceolate as long or longer than the tube of the corolla : corolla infundibuliform, hairy in the throat: stamens more or less exerted or included.

Very abundant in marshy soil on the banks of the river fit Pycarah, also all along the river from a mile or two beyond the Avalanche to Sisparah, and is generally distributed in marshy grounds over the Koodahs. When in full flower it is certainly a beautiful plant. I can see no difference between this and *H. plantaginifolia* Arnott, and feel confident this last has been added to the list of described species owing to Dr. Arnott's having a specimen to compare, and our description having been made from a scape only not a perfect plant. The proper terms of both are under ground rhizome, the leaves and scapes are the game in both—and so are the flowers and seed.

1030. *HIDYOTIS* (A.) Appinii (W. & A.) herbaceous, procumbent, rooting / stems flexuose, branched, branches villous, particularly near the extremities : hairs on the branches and leaves flat and jointed : leaves deltoid-ovate, acute, tapering rightly at the base into a petiole about one-third of the length of the limb, sprinkled with hairs on both sides, paler on the under : bristles of the stipules 24 on each side, much shorter than the petioles : corymbs shortly hirsute, terminal, peduncled, tripartite : calyx-segments cuneate-lanceolate, becoming larger and somewhat foliaceous immediately after flowering ; corolla infundibuliform ; tube slender, 4-5 times longer than the calyx-segments : filaments exerted and the style short, or filaments short and the style elongated : capsule with 6-8 seeds in each cell.— *W. and A. Prod. p. 411.*

This is a very common plant on the Neilgherries, especially on the banks of water courses and in places where the soil is somewhat humid. I long considered it the *Ned. deltoidea* and it was only recently, when arranging the whole of my collections of the genus, I ascertained that the one here represented was more correctly referable to *affinis* than to *deltoidea*; the two species might, I think with advantage, be united. *H. Lesckenii* tiana, might however be retained as a good species, distinguished by its sessile, cordate, ovate, somewhat amplexicaul leaves.

1031. *HIDYOTIS* (A.) *MINUSPERMA* (W. and A.) herbaceous, procumbent, rooting : stems and branches slender, glabrous below, hairy towards the extremities : leaves petioled with the petioles more than one-half the length of the limb, deltoid-ovate, acute; upper side thickly, under thinly sprinkled with flat jointed hairs : stipules with 2-4 hairy bristles on each side : corymbs somewhat terminal, simple, small, few flowered ; corolla shortly infundibuliform, the tube about twice the length of the calyx-segments : capsule compressed-globose, crowned with the distant spreading calyx-teeth ; seeds solitary ! in each cell — *W. and A. Prod. p. 410.*

This is a common and widely diffused plant, my specimens being derived from Courtallum, Shevagherry, Malabar and the Neilgherries, &c. As a species it is very distinct from all the rest of the genus, unless by the way I chance to have confounded two or more species, having a similar structure, which seems not improbable as viewed as one, it seems rather polymorphous, but this point still remains for closer examination than I have yet had leisure to bestow.

1032. *LASIANTHUS VENULOSUS* (R. W. *Santia venulosa* W. & A.) shrubby, glabrous : stipules triangular hairy : leaves coriaceous, short petioled, elliptic-oblong, cuspidate or acuminate, glabrous above ; veins prominent on both sides beneath sprinkled with hairs : cymes axillary, short peduncled few (3-5) flowered : bracteas small hairy : calyx 4-5 parted, divisions subulate, as long as the tube of the corolla : corolla 4-5 cleft throat and lobes hairy : stamens 4-6 : style as long or often longer than the corolla 3-5 lobed : cells of the ovary equalling the lobes of the stigma ; a single erect ovule in each.

Common in the woods about Ootacamund, and generally distributed over the higher ranges of the Hills — a very ramous shrub : leaves from 2 to 4 inches long by about half as much broad, of a light yellowish green colour, sometimes acuminate often cuspidate. Flowers pale yellow or cream coloured, berries about the size of a pea, succulent blue. The long teeth of the calyx of this species, is very charac-

teristic. The inflorescence is essentially cymose, but the peduncles are sometimes reduced to one flower.

1033. *WENDLANDIA NOTONIANA* (Wall.) arboreous, with the young shoots hirsute : leaves petioled, oblong, slightly tapering at both ends ; upper side glabrous, under somewhat glaucous, more or less minutely pubescent, often nearly quite glabrous except on the nerves and veins : stipules triangular ovate-hirsute at the base ; the upper part glabrous, recurved : branches of the panicle hirsute, somewhat erect, flowers crowded and forming interrupted spikes : calyx hoary, the teeth triangular, acuminate : corolla glabrous, 6-8 times longer than the limb of the calyx tube widened at the mouth ; divisions of the limb oval, obtuse, recurved ; anthers nearly sessile : capsule sprinkled with short hairs.— *W. and A. Prod. p. 403.*

A large and very beautiful shrub frequent about Coonoor and Kotergherry, but not ascending to the elevation of Ootacamund. It also occurs abundantly and in great perfection about Kaitie Falls flowering in February and March, when it is most abundant often attaining a height of from 10 to 15 feet with every branch terminated by a large panicle of reddish white flowers.

1034. *CANTHAM UMBELLATUM* (R. W.) shrubby or subarborescent, unarmed ; young branches four-sided : leaves short petioled, oval acuminate glabrous, coriaceous : flowers axillary umbelled on a short thick peduncle : calyx limb obtusely 5-lobed : tube of the corolla hairy within, the lower hairs pointing downwards : stamens 5 : style exerted : stigma unilobed, 2 lobed, fruit obovate didymous.

An alpine plant rather rare on the Neilgherries about the elevation of Kotergherry, wherein Orange Valley I found it forming a moderate sized tree. I also found it in great abundance on the tops of the Hills at Shevagherry in full flower in September. It is very nearly allied to *C. didymum* from which it scarcely differs except in the inflorescence, and subarborescent habit of the plant generally : the two when compared are found much larger and more coriaceous in this, but its most striking characteristic, is the union of all the branches of the cyme into a single stout peduncle from the dilated apex of which, the flowers rise on short pedicels— Flowers white.

1035. *PATETTA BREVIFLOEA* (D. C.) leaves oval acute at the base, acuminate, short petioled, submembranaceous glabrous : panicles corymbous, many flowered, its opposite branches, ramuli, and flowers glabrous : tube of the corolla scarcely longer than the lobes.— Tube of the corolla about 3 lines long : style 4 lines clavate at the apex : stipules broad membranaceous : panicle turning black in drying.— *C. Prod. 4. p. 401.*

A shrub not uncommon in the woods above Ootacamund flowering in March and April. The leaves which are thin and translucent when held between the eye and the light are seen marked with numerous dark glandular points. DeCandolle's specimens were from the Neilgherries, and as this is his only species I have seen there, presume this is his plant though he has failed to notice the ciliate margins of the calyx lobes. There are however two forms one with the calyx lobes minute, glabrous, the other with them larger and ciliated, but beyond that I can see no other point of difference of any importance, I have therefore united them as mere varieties. In the description of the plant both forms are given.

1036. GRUMELTA ELONGATA (R. W.) shrubby glabrous : leaves short petioled, obovate, oblong, cuspidately acuminate ; pinnately becoming yellowish indrying: stipules caducous, ovate oblong, broadpointed cymes elongated, panicle-shaped, compact when in flower, enlarging somewhat in fruit : calyx limb minutely 5-toothed : tube of the corolla short, throat closed with hairs : style unbraced at the base by a thick convex fleshy disk, stigma exserted, dilated 2-lobed.

In woods about Ootacamund but rather sparingly. I also possess specimens from several other stations, Courtallum, Shevagherry &c. It is unquestionably very nearly allied to the next, but is, I think, an abundantly distinct species, as we will see by character as habit; the two bushes, even when growing side by side, generally flowering at different seasons. The flowering season of this is in the autumnal months, of that the spring ones.

1037 GRUMELIA CONGESTA (W. & A.) erect: leaves short petioled, oblong, acuminate at both ends, pinnately becoming yellowish by drying: stipules broadly triangular, cuspidate, caducous : corymbs sessile, at first compact and scarcely longer than the stipules, afterwards larger but also compact or rarely spreading when in fruit, naked calyx-limb somewhat bluntly 5-toothed : tube of the corolla short, scarcely longer than the calyx-limb : berry ovoid, not furrowed.—W. and A. *Prod.* p. 432.

With the preceding and much resembling it.

1038. PSYCHOTRIA SARMENTOSA ? (Blume) stem climbing rooting : leaves short petioled lanceolate; acuminate at both ends, slenderly veined, coriaceous, glabrous; stipules connate : corymbs terminal divaricately trichotomous : tube of the corolla funnel-shaped : drupes elliptic, globose, furrowed by dry ridge.—D. C. *Prod.* 4.522.

Malabar about Calicut : also in Ceylon. The drawing is taken from a Malabar specimen, I have others from Ceylon. Though this plant corresponds well with De Candolle's character, so far as it goes, I am doubtful of its being Blume's plant.

The tube of the corolla of my plant is scarcely to be said to be funnel shaped, and no notice is taken of the very hairy throat ; but still these differences are too slight to justify me in describing it as distinct while unacquainted with the original species.

1039. PSYCHOTRIA BISULCATA (W. & A.) shrubby, diffuse, glabrous: leaves with a short petiole slightly dilated at the base, oblong-lanceolate, tapering at the base : stipules triangular-acuminate, caducous: corymb terminal, peduncled, small, few-flowered, trichotomous or with the primary nerves in fives, with minute acute bractees subtending the ramifications : calyx-limb 5 lobed ; lobes roundish-ovate : tube of the corolla bearded in the throat, about twice the length of the calyx limb : filaments exserted ; anther oblong: stigma nearly included, short and thick, bipartite! berry ovate, 4 furrowed by drying : seed and albumen flat on the inner side, with two deep dorsal furrows and an intermediate broad blunt ridge.—W. and A. *Prod.* p. 43-1.

In woods about Ootacamund but rather sparingly. The leaves are of a light lively green, and dry almost unchanged in colour.

OBS. These two genera *Grumelia* and *Psychotria* ought to be united as they are truly one in every thing, except the ruminated albumen of the former ; a character, which, however good in a mere carpological system, is too limited for a vegetable one (which requires its generic characters to be taken from more organs and structure than one) as it can only be made out from ripe seed ; if both are preserved then, I believe, I may almost predict that probably half the present genus *Psychotria* must ultimately be transferred to *Grumelia* then, without objection

furnished with ripe fruit no man can tell whether an Unknown species belongs to the one or other genus. Our *P. bractiata* I feel certain will, when the ripe seed is found, prove a *Grumelia* : Wallich's *P. truncata* I am all but certain is a *Grumelia*, and I think identical with our *G. congesta*—Genera in a natural system ought not to rest on a solitary character, since only the most artificial can be so limited and still less so when that is derived from the ripe seed which, as distinct from *Psychotria* is certainly the case with *Grumelia*.

1040. COFFEA ALPESTRIS (R. W.) shrubby, glabrous : leaves lanceolate, cuneate towards the base, pointed, coriaceous : peduncles axillary, confined to the upper leaf, longer than the petioles, aggregated forming terminal corymbs: corolla 5 cleft; division much longer than the tube, lanceolate obtuse : filaments exserted style gibbous, near the base, hairy : stigma clavate, glabrous : berry oval 2-seeded.

Ootacamund in woods flowering March and April. A low very ramous shrub the branches nearly naked, the ramuli covered with closely approximated coriaceous shining leaves : peduncles confined to the terminal axils, generally about 3 flowered; flowers white with a hairy throat and line of hairs extending along the segments of the corolla.

1041. COFFEA GEUMELIODES (R. W.) shrubby or subarborescent glabrous : leaves obovate cuneate, shortly and bluntly acuminate, coriaceous : peduncles axillary, confined to the upper axils, about 3 flowered forming terminal corymb : corolla 5 cleft, throat hairy, divisions oblong elliptic obtuse ; anthers exserted : style not gibbous : stigma clavate, slightly cleft at the apex : berry ovoid, crowned with the persistent calyx.

A large shrub or small tree, in low woods by the road side going to Pycarah, flowering in February. This seems to be a rarer species than the preceding and is confined to a lower range of elevation. Though in many respects like *C. alpestris* this is certainly a distinct species.

1042. GALIUM RUBICANTJUM (W. & A.) perennial : stems diffuse, ascending, branched, and the branches 4-angled, clothed with much soft spreading or deflexed hair, when old more glabrous : leaves in fours, roundish-ovate, mucronate, 3-nerved ; upper sides sprinkled with hairs ; under more copiously hairy, particularly on the nerves and margin : peduncles axillary or terminal, few-flowered trichotomous, hairy : divisions of the corolla roundish-ovate, slightly hairy on the outside : fruit roundish, hispid with hooked bristles.—IV. and A. *Prod.* p. 443.

This is a low growing procumbent plant which, but for the large patches it forms, would be but little conspicuous from the grass among which it grows. I believe it is in flower the greater part of the year.

The late Mr. Griffith was of opinion that the Stellate division of Rubiaceae were not indeed retorted and erroneously described in calling the yellow petaloid part of the flower, a corolla. That he once framed in a letter, he corrected merely the coloured dilated calyx limb, I have since often examined the flower with reference to that view of it, but have scarcely been able to satisfy myself that there is not both a calyx and corolla. The Draftsman seems here to have settled the point in Mr. Griffith's favour. He knows nothing of Botanical opinions or theories, but sets down what he sees, and here he is assuredly given no corolla, and I think he is right ; in which case this section must, as Lindley has done, be elevated to the rank of an order and will stand in the same relationship to *Spermacoce* that *JSyctafint* does *Plumbago*.

P. S. subsequent examination has left no doubt on my mind on this point.

1043. VALERIAS BRUNONIANA (W. & A.) herbaceous glabrous or very lightly puberulous : stems erect with 1-2 pairs of leaves near the root, and another small pair about the middle, slightly hirsute on the knots : leaves somewhat fleshy ; lower ones quite entire, ovate, bluntly acuminate, longpetioled, the radical one often emarginate at the base; uppermost or small pair somewhat sessile, narrow oblong entire or toothed along the margin; corymb terminal, trichotomous, paniced, with a pair of foliaceous bractea similar to the uppermost leaves subtending the principal branches: corolla 5-cleft : fruit linear-oblong, glabrous— *W. and A. Prod. p. Art.*

Common in pasture lands on the high sides all over the hills, flowering during the rains. It generally attains a larger size than the specimen represented : In the figure the pubescence is a little too distinct but it varies in that respect.

1044. VALEEIANA LESCHENAULTII (D. C.) herbaceous : stem erect, simple, with the knots hairy, otherwise glabrous : radical leaves petioled, ovate, obtuse, crenate, hirsute on both sides ; stalk-leaves remote, sessile, the uppermost cut in a pinnate manner into 3-5 linear glabrous lobes, the odd one the longest, corymb contracted : fruit trioblong.— *W. and A. Prod. p. 444.*

This, like the preceding? grows in pastures, but prefers richer soil and shade, being met with about the skirts of woods in moist soil: though nearly allied, it seems distinct from the other both in characters and habit. In my specimens the leaves and petioles are ciliate. The fruit in this is pentangular, in that compressed, furnished with 3 hairy nerves on one side and one on the other.

1045 & 6. VALERTANA ARNOTTUNA (R. W.) herbaceous, erect puberulous : radical leaves on the upper part of the stem unequally pinnate ; about 2 pairs and a pair of leaflets alternate, upper pair opposite, all ovate or ovate-cordate, grossly, crenate-serrate, the odd one much the largest; cauline ones unequally pinnate about 3 pairs; leaflets ovate or cordate, crenately dentate, obtuse, slightly acuminate; panicle large diffuse, divisions dichotomous : corolla 5-cleft, fruit compressed, 3 ribbed on the one side, one on the other, very hairy between.

In woods near Sispana, on the Neilgherrie, and on the Pulney mountains, flowering April and September. This appears very distinct from *V. Hookeriana* the species to which it most nearly approaches.

EXPLANATION OF PLACES',

VOL. III.—PART IV.

1047. CAPPARIS PYRIFOLIA (Lam.) stipules thorny, short, hooked : leaves between ovate and oval-lanceolate, naicronate; the younger ones densely pubescent, older ones glabrous: pedicels short and stcfn, axillary, solitary, I-flowered, 2-3 times longer than the [etiole: ovarium narrow-oblong, glabrous, furrowed.—IV. and A. Prod. p. 25.

A low thorny shrub with spreading branches : it rarely attains over iwo feet in height but the lateral branches cover a larger space. The flowers are large and handsome, but very fugacious. Frequent towards the bottom of the Neilgherries on their Easte^i aspect flowering the most part of the year, but in greatest perfection during the cool season immediately after the rains.

1048. CAPPARIS ROXBURGHII (D. C.) shrubby: stipules thorny, recurved, hooked : leaves elliptic-oblong, obtuse, tapering at the base, glabrous: racemes terminal, corymbiform, leafless: ovarium obovoid ? : berry globose, many-seeded.—W'. and A. Prod. p. 26.

A large diffuse very ramous shrub: flowering in April and May. The only plant I recojlect having seen grows near the foot of the descent from the Neilgherries by the Coonor road. It forms a large straggling climbing bush : the prickles on it are always smaM and often altogether wantino-. Flowers pure white and very

1049. IMPATIENS MUNRONII (R. W.) erect spar- ingly ramous: leaves crowded towards the summits or the branches ovate, slightly serrated, acute, hairy on both sides: pedicels axillary, solitary, one flowered, about the length o' the leaves, furnished near the base with a minute biactea, lateral sepals ovate, toothed at the apex ; posterior concave helmate shaped, suimounted by a membranous crest; lower one terminating in a conical hooked very hairy spur: lower lobes of the petals a little larger than the upper.—It. #. 4100. In. Bot. 1 p. 160.

Neilghernesin Jungles near Sisparah, February 1845.

This seems an almost suffruticose species: it grows among bushes completely shaded from strong light. All those that I saw seemed to have naked stems a few straggling branches tipped with a bunch of leaves from the axils of a few of which the curious shaped flowermen. Flowers long peduncled, about 3^together on the apex, pale yellow: calyx 4 scaled: petals 4: stamen? 8 : ovaries 4, cohering below free at the apex, with 2 ascending^ovules in each : styles 4 free below, apex and stigmas cohering. As the lri.it advances one of the ovules abort and the other becomes pensions: coriaceous, devariealed, dehiscingkbov: steel cap, b, i, ht sli. fng, nearly

1050. IMPATIENS CARDNERANA (R. W.) diffuse, pearly glabrous, at first procumbent, root, g at the (jon, ts) afterwards ascending: leaves vern^ed in t l. ^ r of the serraturesbnsUe pointe. l: ped. ee s « * * * * * than the leaves, filiform: lateral sepals ovate, acumi Date, shorter than the petals; anterior ovate pointed, with a filiform spur as long as the flower afid slightly gibbous at the point; posterior abSut the length of the p&sterior lobes of the petals: petals obovate, very obtuse, the upper lobes a little shorter than the larger anterior ones : capsule oblong, pointed, Small, glabrous.

Western slopes of the Neilgherries about 5 miles below Sisparah in moist pasture, flowering in January and

I dedicate thi, species to my friend Georse Gardner, Esq., superintendent of the Koyal Botanic Garden,

Ceylon, who accompanied rife during the excursion, in the course of which we found this and many other interesting novelties.

A very slight error of the draftsman has been so greatly magnified between the tran&ferrer and printer that a plant almost glabrous, or with merely a few hair\$ scattered on its surface, has come rut of their hands deddedly. hirsute, the character is correct, the*figure is wrong.

" In the?plate will be found two sets of diagrams A and B elucidating the views of Messrs. Ivuuth and Roejfer—A representing the position of the parts as understood by Kunth, li as understood by ltoeper. In these diagrams the dark lines a,a,u,a,a, reprn-si-nt the parts respectively called sepals by these l3avant&, anc* the double lines, b,b,b,b,b, f>, the petals. Fiom these it will be seen at a glance that, whde Kunth allows only four petals, united by pairs, und 5 sepals, the upper two of them united into one, that Romper accounts for only three sepals constantly,pre\$ent and 2 minute ones only occasionally found, but gives the full number of petals as always present; the upper or posterior compound sepal *of Kunth being viewed by him as l»» anterior petal, he accounting for this reversed position of the flower on the supposition that the pedicel has got a twist in the course of its growth, a view which is supported by analogy, a similar disposition of parts being met with in both Tropaeolum and F'elozia. wium two nearly allied tribes. And is not further supported by the genus H'ydoraceu which is simply a regular flowered Huzsam. The two dissected flowers given in the plnie are similarly marked so as to show by the corresponding letters, the parts indicated in the diagrams: the other figures require

1051. MA LOPE INDICA (R. W.) leaves simple obovate cuspiateley acuminate.

W^pods near the Avalanche, Neilgherries ; flowering and in fruit in 1 ebruary.

A large shrub or in favourable situations a small tree. Of m^s species two^plantc only were found, one on the bank of astnamina deep ravine which had attained the size of a tree, the other a large very ramous shrub, in a jungle by the road side going to Sisparah near the top of the ascent. The leaves are subalternate, petiol- ed, glabrous, shining, from 3 to 4 inches long by about half the breadth, broader above and tapering sl'ghtly towards the petiol, ending abruptly in a short acuminate. Flowers long peduncled, about 3^together on the apex, pale yellow: calyx 4 scaled: petals 4: stamen? 8 : ovaries 4, cohering below free at the apex, with 2 ascending^ovules in each : styles 4 free below, apex and stigmas cohering. As the lri.it advances one of the ovules abort and the other becomes pensions: coriaceous, devariealed, dehiscingkbov: steel cap, b, i, ht sli. fng, nearly

The other 2 species of this gei?us are both natives of New Zealand. I have, therefore given this a geog'raphical specific name though ignore appropriate one might easily* have been found. The genus seems very nearly allied to Zanthoxylon, difTerjng principally in the stamens beint? double the number of the petals. In habit they nearly acre?, and the seed of this phnt r^u»«ely correspond, with the description of those o. ZaMoxylon.

MICROTROPIS.

Calyx 5 parted imbricated. Corolla 5-petaled perigynous inserted into the outer edge of an annular disk, aestivation imbricated. Stamens alternate with the petals rising from the edge of the disk. Anthers introrse, dehiscent longitudinally, sometimes alternating with short epipetalous scales (squamulae 5, breves, epipetalae staminibus alternates. Arn.) Ovary semi-superior 2-celled with 2 dependent collateral ovules in each style short, conical: stigma obtuse, obscurely four-lobed. Capsule superior 1-celled, two-valved, but usually dehiscent on one side only. Seed solitary, rarely paired, erect: testa thin, succulent, coloured. Embryo erect, enclosed in a copious firm tenacious albumen. Cotyledons foliaceous. Radicle cylindrical.

Shrubs or trees, leaves entire opposite, exstipulate, glabrous, shining, coriaceous. Cymes axillary or from the scars of fallen leaves, either furnished with longish peduncles or sessile, forming dense capitulae on the older branches. Flowers small white, sepals and petals orbicular concave, very coriaceous. Fruit capsular, oval oblong pointed with the persistent base of the style; capsule corticose, (resembling bark in colour and texture) testa thin, friable, somewhat resembling semi-indurated pulp, and, in all species I have seen, deeply coloured: albumen tenacious, translucent, easily scissile: cotyledons, when fresh, green.

This genus was named by Dr. Wallich, but without a character, in his List of Indian plants. Lindley adopted it in his Natural System but without defining it. Drs. Meisner and Arnott having got specimens, both published characters quite independent of each other. Their generic characters are both good so far as their imperfect materials enabled them to go, but admit of alterations. The materials in my hands being more perfect than those they had, has induced me to endeavour to render more perfect their characters. The pair I have described as the testa of the seed, Roxburgh has called an arilius ("Semina solitaria ariUotenni'mccC-lento involuta." Arnott from Roxb.) I do so from finding no other part corresponding to that organ, from its completely investing the seed, without any opening, which a true arilius must have, and from its being distinctly vascular, showing that it cannot be merely indurated pulp. I have not observed in any of the Hill species the epipetalous scales mentioned by A. W. Pitt. In Arnott's character the ovules are said to be ascending, in all the Neilgherry species the ovules are pendulous, the seed erect, and the radicle inferior. How this change of position is brought about still remains for investigation.

When Dr. Arnott published his remarks on this genus, he doubted whether it belonged to this order, a point on which there cannot, I think, be any longer a doubt, even supposing the corolla gamopetalous. This it certainly is not, but polypetalous, the petals attached to a disk. This structure is most easily made out in the unopened flower bud.

1052. MICROTROPIS DENSIFLORA (R. W.) leaves short petioled broad oval obtuse, somewhat attenuated towards the base, coriaceous, glabrous: cymes axillary, erect, compact, many flowered; much shorter than the leaves: capsule slender cylindrical, pointed, 2 valved: seed like the capsule, testa crimson coloured.

On the western slopes of the Neilgherries below Sisparah in dense jungles, flowering and bearing ripe fruit in February.

This seems a very distinct species from any of those previously figured, it forms a large straggling shrub or small tree. The dense almost capitate clusters of flow-

ers combined with the slender fruit, are very characteristic and the outline of the leaves is besides very different from that of all the others.

1053. EUONYMUS ANGULATUS (R. W.) arboreous, ramuli prominently 4 angled and furrowed between: leaves ovate lanceolate, acuminate, quite entire, glabrous: cymes axillary, dichotamous, lax: flowers long pedicelled: calyx fimbriated on the margin, petals orbicular: capsules turbinate 5 celled: cells by abortion 1 seeded, seed partially enclosed in an arilius accompanied by the remains of the aborted ovule.

Slopes of the Neilgherries below Sisparah on the banks of streams. The flowers, owing to the size of the cymes, are more conspicuous than in any of the others I have seen. They are of a dull purple colour, the specimens were gathered in February and as they were accompanied by ripe fruit, the tree is probably in flower most part of the year.

1054. EDWARDSIA MADRASPATANA (R. W.) leaflets about 25, glabrous from elliptic to sub-ovate obtuse, mucronate, or frequently retuse at the apex: racemes axillary or terminal, very slightly pubescent, many flowered: calyx cup shaped, slightly oblique, 5 toothed: legume's villous.

Balaghaut mountains near Madras.

My collectors brought me seed of this plant some years ago, which were transmitted to the Calcutta Botanic Garden and there vegetated. From these plants the specimen represented was taken. Owing to some error whether of the Draftsman or Lithographer or both, (I have not the original drawing by me to ascertain the point.) the petioles and flower bearing branches are represented densely hairy, while the specimens are so slightly pubescent that a magnifier is required to detect its presence. I suspect the error is principally attributable to the transferer, but be that as it may it is an error as the plant might without much impropriety be described as glabrous. I am indebted to the kindness of Dr. Wallich for the drawing from which the figure is taken, as my specimens were not in flower.

I possess a somewhat imperfect specimen of what appears to be a new species from China, it is not in fruit, but the calyx and flower are unquestionably those of an *HSwardsia* it may be thus defined.

E. parvifolia (L.Y.*) every where glabrous; leaflets about 7 from ovate attenuated towards the apex, to elliptic, mucronate: racemes axillary, congregated towards the extremities of the branches, many flowered: flowers secund: calyx cupshaped obtusely 5 toothed, glabrous; filaments about the length of the corolla free to the base, ovary slender glabrous, ovules about ten.

The flowers so far as I can judge from indifferently dried specimen are well represented in the accompanying drawing of *E. Madraspatana*. I was indebted for the specimen to Asst. Surgeon Dorward of the Madras Establishment, who during a short residence collected a considerable number of plants which he kindly communicated.

1055. TAVERNIERA CUNEIFOLIA (Am.) leaves petioled 1-foliolate, from the almost constant abortion of the lateral pair; leaflet from orbicular to obovate-cuneate, recurvedly mucronate, thickish, glabrous or pubescent: peduncles short, from the axils of leafless stipules bearing, towards the apex, from 1 to 4" shortly pedicellate flowers: legume with the inferior joint abortive stipitiform, the superior one unequally, obovate, echinate, with rigid hooked bristles.—*Arn. pvgil-lus* 14.

The drawing for which I am indebted to Dr. Wal-

lich was taken from plants raised in the Calcutta Botanic Garden from seed communicated by Dr. Gibson. It is a native of Mysore extending northwards in the direction of the Western Ghats. I have never met with it in the Southern provinces.

1056. NICOLSONIA CONGESTA (R. W.) suffruticose, very diffuse, procumbent, all the young parts except the upper surface of the leaves pubescent or hairy: leaves 3 or by abortion 1 foliolate, leaflets elliptic or suborbicular, mucronate: flowers congested on the extremities of the branches: calyx 5 parted; segments subulate hairy, longer than the corolla: stamens diadelphous: ovary with a single ovule: (always?) legume 1 seeded.

Pycarrah, Neilgherries, on the banks of the river, abundant—I have also met with it at Ootacamund but very rare. This plant has the appearance of being a true Nicolsonia notwithstanding the discrepancy between the generic character and my plant as regards the legume 'constans articulis plurimis' as I find on referring to D. C.'s figure that his specimens had one or two, and an ovary with 3 ovules. In my plant the ovary (fig. 6) is represented with a single ovule whether or not that is always the case I am unable to say.

1057. SONERILA VERSICOLOR (R. W.) herbaceous; stems erect roundish hairy afterwards glabrous, marked with a slight decurrent rib from the insertions of the leaves: leaves opposite ovate or slightly unequal at the base, acute or somewhat acuminate, crenulate, flybescent on both sides; penninerved: peduncles axillary, and terminal: racemes curved secund many flowered: calyx glabrous: petals obovate Cuspidate: anthers cordate at the base, rostrate: style equalling the stamens: stigma obtuse: capsule clavate, trigonous, with a prominent nerve between the angles.

Western slopes of the Neilgherries below Sisparah among grass and low jungle.

The under surface of the leaves is usually dark crimson or purplish, flowers pink; in the earlier stages the whole plant is sprinkled over with scattered hairs but afterwards the stalks are nearly glabrous. It seems nearly allied to *S. Brunonis* but is at once distinguished by its penninerved leaves, and obovate petals; it seems still more closely allied to the following form which it is distinguished by its long curved many flowered racemes; the form of its petals, and more copious pubescence.

1058. SONERILA AXILLARIS (R. W.) herbaceous erect sparingly sprinkled all over with hairs: stems terete: leaves opposite or subalternate, long petioled, ovate or subcordate at the base, acuminate, sparingly hairy above, nearly glabrous beneath: peduncles axillary erect, about the length of the petioles, few flowered: calyx limb 3 lobed, lobes pointed deciduous: petals elliptic mucronate: anthers rostrate: style the length of the stamens: capsule clavate, somewhat triangular, 6 nerved, glabrous.

Western slopes of the Neilgherries two or three miles below Sisparah: frequent by the road side, flowering December and January. My specimens were gathered in February, but I only succeeded in obtaining one or two in flower. It seems fit very distinct species, its nearest neighbour being, apparently, the preceding.

1059. SONERILA BRUNONIS (W. & A.) herbaceous: stems (about a foot high or more) erect, branched; branches acutely 4-angled, glabrous: leaves long-petioled, ovate, bristle-serrated, 5-7-nerved at the base, hairy or at length glabrous: peduncles terminal, longer than the leaves: flowers unilateral, longish-pedicelled,

racemose: calyx glabrous: petals lanceolate, pointed: anthers ovate, short-pointed: style about the length of the stamens: stigma capitate: capsules trigonate, 3-sided, strongly & prominently ribbed, three of the ribs forming the angles, the other three on the sides.—*W. and A. Prod. p. 321.*

The specimens from which the figure was taken were gathered at Courtallum in 1836, in general habit and in the form of its capsule, it approaches both the preceding, but is amply distinct from both.

1060. EUGENIA (SYZYGEUM) MONTANA (R. W.)—arborescent, young shoots acutely 4 angled the sides depressed or concave between: leaves coriaceous from above bluntly acuminate to suborbicular, short petioled: cymes terminal corymbose many flowered, each extreme division terminating in a fascicle of three flowers: flowers small: petals adhering and separating as one: calyx obtusely 4 lobed persistent, crowning the fruit: fruit globose about the size of a currant purple:

Neilgherries not unfrequent in woods, sometimes attaining a large size. This species is very nearly allied in many respects to *Moons, jfi. sylvestris* but is certainly distinct. Its most characteristic feature is the form of the young shoots which are prominently 4 angled with concave sides between. In the specimen figured the leaves are represented as occasionally alternate. This form, however, is of rare occurrence, and, though it certainly does occasionally present itself, cannot be admitted as part of the specific character.

1061. HALORAGIS OLIGANTHA (W. and A.) herbaceous?, glabrous, procumbent: leaves alternate, narrow-linear, tapering at both ends, serrated towards the apex: flowers minute, axillary, solitary, sessile: calyx-tube marked with four projecting angles: petals linear-lanceolate, obtuse, much longer than the segments of the calyx: stamens 4: stigmas 4, large, sessile, papulose: fruit muricated, 1-celled, 1-seeded.—*W. and A. Prod. p. 338.*

This plant occurs in great abundance in shallow water in the lake at Ootacamund and in marshy ground along its borders. I have also seen specimens from Ceylon, but more abundantly covered with fruit.

1062. HEDERA ACUMINATA (R. W.) arborescent, glabrous; leaves usually pinnate many paired, leaflets oval-oblong acuminate short petioled: thyrses numerous elongated, peduncles, involucrate at the base with minute subulate bracts: flowers very numerous, short pedicelled, forming subcapitate umbels, each having a minute caducous bractiole at the base: calyx 5 lobed petals expanding: styles 5 free at the apex: ovary 5 celled with a pendulous ovule in each: fruit—

Courtallum and on the western slopes of the Neilgherries about 2 miles below Sisparah. Apparently a small erect growing tree. The plant from which the specimen represented was taken had been injured and six or eight tall, erect, luxuriant branches had sprung from the stump. The wood appears very soft; the larger leaves were full 2 feet long and the leaflets twice or thrice the size of those in the plate. As a species it seems nearly allied to Don's *H. Jackiana*, if not indeed the same plant, a point his character does not enable me to determine with certainty, but I think they must be distinct as the characters differ in several points. I have not seen the fruit.

1063. LORANTHUS (SCURRULA) EUPHORBIA (R. W.) glabrous, erect, very ramous, branches terete: leaves short petioled, elliptic or orbicular, with a tendency to attenuation downwards, succulent when dry obscurely

3 nerved, veinless when green : flowers sessile, axillary or fascicled round the knots of the branches: bractea lateral, embracing the base of the ovary, very obtuse : calyx truncated entire : tube of the corolla terete, limb elongated indurated, acute before expansion, lacinae subulate, becoming elastically involute on dehiscence : filaments red ; anthers subulate : stigma clavate, berry red about the size of a small bean.

Frequent about Coimbatore parasitic on *Euphorbia antiquorum* and *tortilis*, flowering in July. Very nearly allied to *L. elasticus*, but I think quite distinct; differing in the form of the leaves and in their being only 3, not 5 nerved. The flowers of this are slender, about an inch and a half long, one-third of which only is truly petaloid, forming the proper tube; they limb is firm and coriaceous, at first bursting with elasticity, and then becoming spirally involute like the main spring of a watch. The whole plant is exceedingly fragile, and will scarcely bear the gentlest handling, all turning to pieces in drying. The juices of this plant do not show a trace of milkiness.

1064. *STYLOCORONE RIGIDA* (R. W.) shrubby, glabrous : leaves elliptic shortly acuminate at both ends, coriaceous shining: cymes terminal and from the axils of the upper leaves, compact, trichotomous : calyx limb 5 cleft, lobes obtuse, nearly equaling the tube of the corolla : corolla 5 cleft, tube short, with a ring of hairs within below the stamens throat hairy, limb spreading or reflexed, segments obtuse, villous near the base: anthers linear, cuspidate : ovary 2 celled with numerous ovules.

Neilgherries in woods near the Avalanche Bungalow, flowering February and March. The mature fruit I have not seen. The leaves on the flowering branchlets, are about 2½ inches long and about half as broad ; below they are considerably larger; of a very firm rigid texture, the transverse veins large and prominent on both sides : the young shoots, and peduncles, thickly covered with an abundant resinous exudation. This, as compared with several other species in my herbarium, is a very distinct one: it comes nearest Moons *S. cerefera* of which I have an indifferent specimen but is I think distinct.

1064. (*bis.*) *CANTHIUM NEILGHERRENSE* (R. W.) shrubby or subarborescent unarmed, branchlets solitary 4 sided glabrous : leaves short petioled, ovate, bluntly acuminate, membranous ; nearly glabrous above, hirsutulate beneath : peduncles axillary, about the length of the petioles, bearing a small umbel of from 5 to 7 flowers, furnished with subulate bracts : calyx limb truncate 5 toothed : corolla 5 cleft, throat hairy : stamens short nestling among the hairs : ovary 2 celled, 1 pendulous ovule in each : stigma capitate: drupe glabrous obovate compressed succulent.

Sisparah on the Neilgherries in jungles flowering most part of the year. Leaves 4-5 inches long about half as broad, ending in a short obtuse acumen, thin and membranous : flowers small white very hairy in the throat fruit succulent glabrous pale yellowish or cream coloured

1065. *PAVETTA BRUNOIS* (Wall.) soft and villous all over : leaves obovate : stipules and bracteas broad, membranous: peduncles trichotomous, having the branches dense and corymbose : lobes of the calyx subulate. —G. Don.

Northern slopes of the Neilgherries flowering April and May. This seems clearly the plant described by Mr. Don, the only difference being that here the lobes of the calyx are not subulate, I do not however think it can be kept distinct from *P. llotiitina*, supposing this to be truly Wallich's plant, it differs (torn Roths charac-

ter and description, but not sufficiently, at least in my estimation, to constitute it a distinct species. In Koth's plant the leaves are described as elliptic sprinkled with short hairs, here they are obovate shortly and bluntly acuminate and clothed on both sides with soft short villi. This seems the only difference : in his the calyx is described as very minute "dentibus triangulis obtusis" which is the case here. There is no station assigned to Roth's plant, Neilgherries is appended to this—but I have other specimens from Malabar and Mysore, the latter being the country, where most of Heyne's plants were collected. The similarity of the two plants, to each other did not strike me when naming the drawing, otherwise I think, I should have given this the older name.

1066. *TXORA POLVANTHA* (R. W.) shrubby, everywhere except the inflorescence glabrous, leaves elliptic oblong obtuse or sometimes bluntly acuminate: stipules acuminate or subulate, pointed : corymbs terminal, contracted, many flowered, branches and tube of the calyx densely hairy : scarious bracts and ovate lanceolate acuminate lobes of the calyx glabrous : calyx limb 4 parted, divisions subulate pointed : corolla glabrous, tube long, slender, limb 4 cleft, segments obtuse reflexed : style exserted, stigma 2 lobed.

Calicut Malabar, flowering in March. I have not seen the growing plant, but judging from a coloured drawing and specimens it seems to be a very handsome shrub. The larger leaves exceed a foot in length and are about 6 inches broad. The very dense hairy corymbs, scarious bracts, and large 4 parted limb of the calyx, at once mark this as a peculiar and distinct species.

4067. *OPHIORRHIZA ERIANTHA* (R. W.) suffruticose, erect, nearly glabrous, except the young shoots and inflorescence : leaves elliptic, lanceolate acuminate, tapering at the base : stipules about the length of the petioles subulate : bracts linear filiform and with the calyx and corolla hairy : corolla funnel shaped, tube glabrous within, much longer than the dilated 5 cleft limb : stamens and style included : stigma deeply 2 cleft. Western slopes of the Shevagherry mountains under the shade of brush wood. Leaves from 5 to 6 inches long, and from 1 to 2 broad thin and membranous, terminating in a slender acumen: cymes terminal compact hairy : anthers linear blunt: seed irregularly angled.

1068. *OPHIORRHIZA ROXBURGHIANA* (R. W.) suffruticose erect or somewhat diffuse ; young shoots and corymbs villous: leaves from ovate to oblong-lanceolate, acuminate, glabrous, except the veins, on the under surface : Stipules lanceolate acute, shorter than the petioles : corymbs terminal congested, villous: bracts narrow linear lanceolate and with the calyx hairy : corolla funnel shaped, tube much longer than the dilated 5 lobed limb, villous without hairy within : style and stamens included : anthers linear acute : stigma dilated 2 lobed.

Shevagherry mountains with the preceding near the base on the western face, August 1836. This though a nearly allied species is quite distinct from the preceding.

1069. *OPHIORRHIZA GRANDIFLORA* (R. W.) suffruticose erect glabrous : leaves ovate lanceolate acuminate : stipules minute triangular: corymbs terminal glabrous : bracts linear subulate and like the calyx glabrous : corolla funnel shaped, a few hairs near the base, and along the veins ; tube much longer than the dilated limb, glabrous within : style and stamens included : stigma tapering to a point 2 cleft.

Shevagherry mountains with the 2 preceding species. The corolla in this is nearly an inch and half long. It

is distinguished from the preceding by its minute stipules, glabrous calyx, and the want of hairs within the tube of the corolla.

LAWIA (R. W.)

GM. CHAR.—Calyx limb 5-6 parted. Corolla tubular gibbous at the apex; limb 5-6 cleft. Stamens 5-6 attached to the very base of the corolla, filaments very short. Ovary 5-6 celled; ovules numerous; placenta free attached by a short pedicel to the inner angle of the cell. Seeds numerous, small, irregularly shaped, (resembling grains of gun powder) black.

Herbaceous plants, puberulous all over; leaves longish petioled, oblong-oval, acuminate at both ends, membranaceous, transversely veined; deep green above, glaucous beneath. Stipules triangular acute? Cymes terminal twice or thrice trichotomous lax; each division embraced by two connate membranaceous bracts: flowers yellow pedicelled, small: calyx tube short campanulate; limb deeply cleft into 5 or 6 narrow somewhat subulate divisions: corolla tubular about the length of the calyx 5-6 cleft, somewhat hairy within, yellow: stamens very short, apparently scarcely attached to the corolla: style short: stigma large 5-6 lobed, segments acute.

In dense jungles about Courtallum and Shevagherry, flowering and bearing ripe fruit in August and September. I have dedicated this very distinct genus to my valued correspondent J. S. Low, Esq., of the Bombay Civil Service; an enthusiastic Botanist, who in the midst of the fatiguing duties appertaining to the office of a Collector, still finds some leisure for the prosecution of his favourite pursuit, and has made many valuable additions to my collection, from that side of India. Plants not found to the Eastward of the Ghats. This genus seems clearly referable to the tribe Jiamelitae of D. C. and is the only one so far as I know belonging to the Flora of the Indian Peninsula.

1070. LAWIA ACUMINATA (R. W.)

Courtallum and western slopes of the Shevagherry mountains, flowering in August.—See *Calcutta Journal of Nat. History*, vol. 6.

1071. SCLITEA RHEEDIANA (R. W.) shrubby armed with a few scattered recurved prickles: leaves subopposite approximated, from broad ovate to orbicular, tipped with a minute point, conspicuously, parallel-veined, bright green above subglaucous beneath: ovary 2 celled; fruit 2 celled: seed compressed.

Neilgherries abundant near Kaitie Falls, apparently in flower at all seasons.

This seems very distinct from *S. Indica*. When naming it I thought it Rheede's plant, to which it bears a considerable resemblance, but he represents the fruit with 5 seed, in both his figures, a form I have not yet met with, and, if that part of his figure is correct, I doubt whether his plants belong to this genus. This I have never seen with more than two. It is at once distinguished from *S. indica*, by the venation of the leaves, which in this is prominent on the upper surface, running in parallel curved lines from the costa to the margin; while in that, it is barely conspicuous and at irregular distances: the leaves in this are besides ovate or approximated that form, while in that they are cuneate or obovate: this is nearly unarmed, while the ramuli of that are constantly furnished with numerous stout recurved prickles.

1072. POLANISIA BIJAPURENSIS (Munro) stem together with the leaves thickly covered with prickly hairs; leaves simple; lobes lanceolate acute; radicle ones attenuated into a petiole; cauline sessile: stamens 10-12: siliqua linear, not compressed, sessile, about the length of the peduncle.

Plains of Roobass near Blmrtipore, flowering in September. Flowers rose coloured.—*Munro Hort. Agrensis* p. 35.

I am indebted to Captain Munro, H. M. 39th foot, for the drawings and characters of this, and the two following plants.

1073. CORCHORUS HUMILIS (Munro) perennial prostrate: leaves ovate crenate long petioled: peduncles 2 flowered: capsules linear, oblong 6-8 times longer than broad, nearly glabrous, 4-5 celled, 4-5, valved; septa nearly obstate.—*Munro, l. c.*

**A small prostrate plant growing in very hard dry soils. This may be *C. prostratus*. Royle who, however, gives no character.—*M.*

MONSONIA HUMBALENSIS. (R. W. *Erodium Ckumbulense*, Munro).

1074. (ERODIUM CHUMBULENSE Muuro.)—Annual, with a short decumbent stem covered with glandular hairs: leaves long petioled, oblong, cordate, crenate: peduncles one flowered, thicker towards the top, jointed near the base, furnished at the joint with two bracteas: sepals pointed: carpels including the awns nearly 2 inches long.—*Munro, l. c.*

Chumbul, near Agra in ravines. "I believe it is the first instance of an *Erodium* having been found on the plains of India."—*M.*

As this is certainly a species of *Momonium*, I have changed Captain Munro's generic name but for the present retain the specific one, though I suspect it is identical with *Geranium Luwianum* of Graham's catalogue, because the drawing differs somewhat from specimens of that plant communicated by Mr. Stokes of Bombay, under the name of *Momonium Laiviana* a full description of which will soon appear in the *Calcutta Journal of Natural History* under the following specific character.

M. Lawiana (Stokes) densely clothed with lymphatic glanduliferous pubescence; leaves ovate-cordate, acuminate, dentate: stipules and bracts herbaceous: peduncles axillary 1 flowered: carpels obliquely truncated at the apex hispid.—The peduncles are long, jointed near the base, and when in fruit, twice bent, somewhat resembling the long form of the letter *f* inverted thus ?.

1075. VOGELIA INDICA (Gibson f. S.S.) leaves ovate obtuse roundish at the base perforate.—R. W.

Found by Dr. Gibson of Bombay, near Agra, to whom I am indebted for the specimens from which the drawing was taken. The station given is "Ilumicul Ghaut" leading down to Sungunnure in the Deccan.

A large shrub from 6-10 feet high with cylindrical ramuli and ovate obtuse coriaceous glabrous perfoliate leaves. Inflorescence paniculately spicate; flowers closely congested on the extremities of the branch lots forming a conical spike. Calyx 5 sepaled; sepals lanceolate corrugated on the margins. Corolla tubular 5 cleft aestivation convolute; lobes reflexed obovate mucronate. Stamens included. Ovary superior one celled with a solitary ovule pendulous from the apex. Style

filiform stigma 5 cleft. Capsule 5 valved separating from the seed. Seed ovate, pedicel dulous; embryo foliaceous, enclosed in a farinaceous albumen.

I have to apologize to Dr. Gibson for not introducing some alterations and corrections which he suggested on the drawing being submitted to him for comparison with growing plants. This originated in his letter having been mislaid and supposed lost when sending the drawing to the printer. Since then I have found it, and will do what I can towards correcting the first error by introducing some extracts here, premising, however, that the outline of the figure correctly represents the specimens first sent and that the errors are confined to some of the details.

" 1st. The leaves are considerably too lanceolate only the younger ones are generally acuminate the older ones rounded and sometimes crenate."

" 2d. The leaves have not the net work of veins shown, but simple cross veins faintly visible; colour of the leaf light glaucous or sea green texture almost coriaceous." [The venous net work is certainly more distinct in the drawing than the specimen, but being on a white ground that is unavoidable, it however exists in the original.]

" 3d. Folia majora firma, semper margine retroversa."

" 4th. The inflorescence is much too panicular it should be more of a spike with a few branchlets, rather converging than diffuse, the inflorescence also is too rounded at the ends it should be considerably more conical." [As regards the outline of the inflorescence the figure is correct for the specimen, which was the most luxuriant of those sent. For the rest I cannot so well speak now as most of the flowers, owing to its having got wet and injured in coming, fell off almost immediately after it was opened.]

" 5th The same remark applies to the petals as drawn previous to expansion: they are pointed, not rounded and ventricose as in the drawing. The stivation is convolute as in *Apocynia*."

These remarks are introduced in the hope that they will tend, with the aid of the figure, to convey a more correct idea of the varying forms of the plant, than even the most correct figure of any one of them could give.

1076. *VERNONIA CONYZOIDE** (D.C.) suffruticose, erect, striated, shortly pubescent: leaves ovate, or oblong lanceolate, acuminate, attenuated into a short petiole, serrate; glabrous above pubescently villous beneath: corymb compound, many-rayed; polycephalous: scales of the involucre linear lanceolate, acuminate, pubescently villous, shorter than the disk.—*D. C. Prod.* 5. 25.

On the plains, this is comparatively a small plant; on the Neilgherries, especially, when growing among bushes where it finds support, I have seen it 10 or 12 feet in height. Flowering time February and March, flowers rose coloured.

1077. *VERNONIA PECTENIFORMIS* (D. C.) shrubby, branches terete smooth, younger ones angled, pubescent: leaves shortly petioled, lanceolate, acuminate, pectinately and deeply serrated, membranaceous; glabrous above pilose beneath: cymes terminal, corymbose, naked; capitula long pedicelled, many flowered, ovate: scales of the involucre many, glabrous, ciliated, ovate, oblong, subacute.—*l) C. Prod.* 5. p. 31.

I have compared the Neilgherry plants from which the drawing was made with the Dimijul one examined and named by DeCandolle and cannot find any permanent difference, where a number of specimens are under examination: I therefore think the two plants should be united as 1 species. *V. Pauiiformis* being the older

published name by 2 years, and moreover feeling sure that this species, I adopt it.,

1078. *VERNONIA NILGIRIENSIS* (D. C.) herbaceous, roundish, subpuberulous: leaves short petioled ovate acuminate, prickly serrated; rough above, tawny coloured beneath: cymes terminal panicle-shaped, branches very ramous polycephalous: capitulae ovate crowded 2-5 flowered: scales of the involucre dry, oval oblong acute, glabrous, pilose at the apex: achaenium glabrous: external series of the pappus very short deciduous.—*D. C. l. c.*

A large annual, common in hedges on the Neilgherries, flowering in March and April: flowers pale pink. This plant is so exceedingly like *Decaneurum divergens* that they can only be distinguished by a reference to the generic character.

1079. *VERNONIA SALVIFOLIA* (R. W.) shrubby tomentose: leaves long narrow lanceolate, rugose, glabrous above, densely white-tomentose beneath: corymbs axillary and terminal naked or with a few small scattered leaves: capitulae numerous, densely aggregated, subsessile; many flowered: involucre subcapitate tomentose: scales lanceolate, subacute, callous at the apex: achaenium glabrous somewhat 4 angled, the sides sprinkled with glutinous points, exterior pappus paleaceous.

• Ceterum tallum. This species is nearly allied in habit to *V. Wigftiana*, Arnott, but is certainly most distinct in its characters.

* 1080. *DECANEURUM RETICULATUM* (D. C.) stem suffruticose, erect, ramous, every where rough with bristly hairs: leaves sessile, ovate, mucronate, and mucronately subdentate; rough above, densely whitish tomentose beneath; nerves and veins scabrous reticulated: peduncles few, axillary and terminal, capitulae closely embraced by numerous fallacious bracts; interior scales of the involucre scarious, glabrous, longer than the bracteas.—*D. C. Prod.* 5. p. 866.

Neilgherries, frequent on the banks of streams all over the hills, and in flower nearly all the year; but in greatest perfection from June to September. Plant from 2 to 4 feet high flowers purple.

1081. *DECANEURUM COURTALLENSE* (R. W.) stems scabrous, suffruticose, erect, ramous: leaves attenuated into the petiole, ovate lanceolate obtuse, slightly mucronate-dentate; rough above, softly whitish tomentose beneath, at first uniformly white afterwards reticulately veined: peduncles axillary 1-cephalous capitulae closely bound by several ovate-obtuse mucronate 3 nerved bracts: interior scales of the involucre scarious, glabrous, longer than the bracts.

Courtallum flowering in February, this species seems intermediate between 1). *reticulatum* and *molle* but very distinct from both.

1082. *DECANEURUM MOLLE* (D.C.) stem herbaceous erect, somewhat scabrous, tomentose towards the apex; leaves attenuated into the petiole, ovate lanceolate acuminate, coarsely and irregularly serrated; above setose, scabrous or nearly glabrous; beneath whitish tomentose; interior scales of the involucre scarious, glabrous, subacute.—*l) C. l. c. p. 7.*

This seems to be a widely distributed and variable species. I have specimens from the Southern extremity of the Peninsula and others communicated by Mr. Law, from the vicinity of Bombay. Between the Southern and Northern forms there is considerable dif-

ference but not enough, it appears to me, to constitute them distinct species the principal one being derived from the comparative size of the capital* which may be accidental and confined to my specimens.

1083. *DECANEURUM SILHETENSE* (D. Q.) stem herbaceous, erect, ramous: leaves shortly petioled, oblong lanceolate acuminate at both ends, remotely bristly serrated; above glabrous-scabrous; beneath along the nerves scabrous: capitals; at the apices of the branches, usually solitary subcorymbose: interior scales of the involucre oblong mucronate; exterior ones filiform subulate subpatulous a few scattered on the peduncle.—*D. C. I. c. p. 113.*

Courtallum—February 1836.—The remote geographical station of my plant from that whence the original was obtained made me hesitate for some time to consider them the same but the characters generally correspond so well that I cannot separate them, though this has white pappus and that red, a difference perhaps depending on accidental circumstances connected with the preservation of the specimen. The stems in my plant somewhat resemble the achenia in having prominent nerves and furrows between.

1084. *DECANEURUM DIVERGENS* (D. C.) stem herbaceous, erect, velvino-scabrous, pinnicately branched: leaves short petioled, elliptic, acuminate at both ends, dentate; glabrous above, reticulated lomentose beneath: brandies of the panicle leafy, elongated, diverging and themselves paniculate: capital* crowded on the extremities of the branches, 7-8 flowered: scales of the involucre oblong acutely mucronate yearly glabrous: achaenium glabrous, glandulose.—*D. C. I. c. p. 68.*

Neilgherries frequent. It may almost be called a shrub and does not appear to be an annual. D. f. inquires, *an potius vanonia specks V. multiflora proxima?* The plant here represented certainly is not a *Vernonia* but *V. multiflora* and perhaps *V. Nilgherryensis* may possibly be *Decaneura*. The latter is not distinguishable by any mark except the smooth achenia and it seems to me young specimens only are found to represent it.

1085. *MONOSIS WICHTIANA* (D. C.) Arboreous, branches terete, velvino tomentose: leaves petioled ebovate subacute, cuniate and obtuse or subcordate at the base, entire, penninerved, glabrous and somewhat velvety on the nerves above; velvino hirsute beneath: panicle very ramous, capitals sessile at the apices of the subcorymbose ramuli: scales of the involucre obtuse, tomentose on the back.—*J. C. I. c. p. 77.*

A large tree, abundant on the Eastern slopes of the Neilgherries below Coonoor.

1086. *ELEPHANTOPUS SCABER* (Linn.) stem dichotomous, ramous; strigoso villous: leaves scabrous, radical ones eremite, cuniate, attenuated at the base; cauline ones lanceolate; floral ones broad cordate acuminate canescent.—*1). C. I. c. p. 86.*

A widely diffused plant—found in Malabar, abundant at Courtallum in Ceylon, Maulmain, Malacca (?) and elsewhere.

1087. *ADENOSTEMMA LATIFOLIUM* (D. Don.) stem erect ramous puberulously—hirsute towards the apex: leaves petioled, cuniate acuminate at the base, broadly ovate-rhomboid or subcordate, scarcely acute; coarsely serrated and puberulous on the veins: panicle corymbose hairy polycephalous: scales of the involucre subacute, rough on the back: achenia rounded tuberculate.—*D. C. I. c. p. 112.*

Neilgherries in low lying humid ground and on the banks of streams frequent.

1088. *ADENOSTEMMA FETICULATUM* (D. C.) stem erect subtetragonous glabrous, the very diverging branches of the panicle glandulose—puberulous: leaves ovate, coarsely toothed, rigid, the prominent reticulated nerves beneath puberulous: scales of the involucre linear oblong obtuse scarcely pubescent: achenia smooth.—*D. C. I. c. p. 113.*

This like the preceding is found on the Neilgherries, but I greatly doubt whether they should be kept distinct the only character of any weight is that taken from the seed, and it is of very secondary value.

1089. *CALLESTEPHCUS WIGHTIANUS* (D. C.) leaves sessile, oblong linear entire or subserrated, shortly mucronate: branches leafy compressed at the apex, minutely puberulous: exterior scales of the involucre bilobed, linear oblong, not ciliated, scarcely longer than the interior.—*D. C. I. c. p. 275.*

A rather common plant in many places in the Southern provinces; about Goimbatore it is not unfrequent, flowering during the cool season after the rains.

1090. *ARIGIRON WIGHTII* (D. C.) stem erect shortly ramous; leaves oblong, the inferior ones attenuated at the base, subserrated, somewhat obtuse; superior ones entire, acute, all puberulous on both sides: capitula 1 & pedicelled subracemose: scales of the involucre rough on the back, linear subulate, equaling the disk: ligulae very slender, longer than the disk: achenia glabrous.—*D. C. I. c. p. 286.*

On the Neilgherries not unfrequent in moist pastures, flowering during the rainy season. Louise pulle purple several series, branches hispid plant greyish white.

1091. *MYRIACTIS WIGHTII* (D. C.) sparingly [ilose.: inferior leaves ovate with a long cuniate attenuation at the base, coarsely inciso-serrate; the superior ones oblong entire sessile; the apices of the teeth and of the leaves themselves callosomucronate.—*1). C. I. c. p. 5. 308.*

Neilgherries not unfrequent in pastures, minute forms of it growing in arid stony ground sometimes resemble the Daisy. Radical leaves ovate attenuated into the petiole the inferior cauline ones cuniate at the base, sparingly dentate, the upper ones subsessile acuminate at both ends: capitals terminal solitary, 4-6 lines in diameter: involucre somewhat hairy reflexed after blooming: ligulae white about 2 series becoming revolute in drying.—*D. C.*

1092. *BLEPHARISPERMUM PETIOLARE* (D. C.) leaves petioled, ovate—lanceolate acuminate: glomerules several long peduncled.—*D. C. I. c. p. 5—368, Courtallum 1836.*

De Candolle in his generic character describes the capitula as 2 flowered in place of 4—viz. 2 male and 2 female, the former central: each flower is furnished with a partial palse while a shorter common involucral one appertains to each capitulum.

1093. *BLEPHARISPERMUM SUBSESSILE* (D. C.) leaves elliptic, attenuated at both ends subsessile: glomerulus terminal solitary subsessile, with foliaceous bractea longer than the capitulum.—*Z. C. I. f.*

Bellary in arid stony soils—October 1834.

Dr. Arnott proposes to remove this plant from the genus and make it the type of an intermediate one between *Blepharispermum* and *Athroisma*. I am unacquainted with the latter except by description, but think

this associates better with it than the former, and I even think it might without impropriety be referred there, by which the necessity for a new genus would be avoided.

1094. *SPHRANTHUS HIRTUS* (Willd) has obovate serrated, roughish on both sides, prolonged into serrated wings : glomeruli ovate globose, peduncles three times as long as the glomeruli usually furnished with serrately cleft wings.—*D. C. I. c. 5. 369*_v.

This is a widely distributed plant, generally found in rice fields, flowering during the cool season.

In this species there are 2 or 3 central hermaph flowers, surrounded by about 10 or 12 female ones* The glomerulus is usually purple of an oval shape, and shortly hairy all over.

1095. *DICHOCEPHALA CHRYSANTHEMIFOLIA* (D.C.) erect ramous, the whole plant rough from close set short hairyness : inferior leaves lyrate pinnatifid : the superior ones oblong, cordately semiamplexicaul, coarsely serrated ; the upper ones entire : peduncles much longer than the capitula.—*D. C. I. c. 5. 372*.

Frequent on the Neilgherries about road sides and in neglected places, apparently in flower most part of the year.

1096. *DICHOCEPHALA LATIFOLIA* (D. C.) Stem erect, sparingly pilose, leaves obovate attenuated into the petiole, coarsely toothed, often incise-pinnatifid at the base ; flowering branches ramous nearly naked ; pedicels rigid divaricated longer than the globose capitula.—*D. C. I. c. 5. 372*.

Neilgherries very common. The capitula of this are scarcely half the size of the preceding, but the leaves are much larger. This in suitable situations is a lax, luxuriant growing plant, the other is always an erect rigid one.

1097. *GRANGEA MADRASPATANA* (Poir) stems pro-cumbent or diffuse, the extremities villously pubescent.—*D. C. I. c. 5. 373*.

A common plant near the borders of tanks all over Southern India.

1098. *CYATHOCLINE LYRATA* (Cassine) inferior leaves lyrate, upper lobes of the leaves larger, obovate.—*D. C. I. c. 5. 374*.

This so far as my own observation extends is a rare plant. The specimens here represented were gathered on the banks of a stream in Orange valley, on the Neilgherries, generally past flower, in August.

1099. *BLUMEA HIERACEFOLIA* (D. C.) every where hairy : stem herbaceous erect terete simple : leaves callously dentate, the inferior ones obovate obtuse, attenuated into the petiole ; the superior ones oval or oblong, acute, sessile or semiamplexicaul : capitula sessile, crowded, forming an ovate oblong thyse : scales of the involucre linear, acuminate, smoothish, longer than the disk.—*D. C. I. c. 5. 442*.

Rather frequent on the Neilgherries in moist soil near springs or on the banks of streams and watercourses. It is either a variable plant in habit, or there are other species so nearly allied that it seems almost impossible to distinguish them by written characters. The plant represented seems to be the true form, further described by D. C. as follows. "Herbaceous* about a foot high : laves more hairy beneath : involucre purplish on the margin : female flowers innumerable, slender : style exerted undivided ; males 5 in the centre : ovaria pubescent.

1100. *BLUMEA PTERODONTIJK* (D. C.) stem herbaceous terete ramous ; scarcely puberulous ; viscid towards the extremities : leaves elliptic oblong glabrous, subserrated, decurrent, forming a long deeply and acutely dentate or cleft wing : branches leafy, subpanicled, with one or few capitula at the apex ; pedicels naked : exterior scales of the involucre oblong foliaceous short ; the interior ones scariose linear acute, a little longer than the flowers.—*D. C. I. c. 5. 448*.

Neilgherries near Kaitie falls, a widely distributed plant occurring equally on the plains and mountains and D. C. saw specimens from Madagascar.

1101. *BLUMEA ALATA* (D. C.) stem herbaceous erect ramous and, like the leaves, clothed with short redish pubescence : leaves elliptic oblong, dentate, decurrent, forming wings along the stem : peduncles axillary or few headed, racemosely panicled : capitula suberect : exterior scales of the involucre lanceolate, foliaceous, squarose, pubescent ; interior linear scariose as long as the flowers.—Flowers purple males 10 or 12.—*D. C. I. c. 5. 448*.

Neilgherries not unfrequent. Of this species there are 7 varieties referred to by D. C. /Scernua and <y Napalensis the plant, represented belongs to the former—"stems herbaceous erect ramous, like the leaves clothed with short redish pubescence : leaves oblong acuminate, denticulate, decurrent, forming wings along the stem, peduncles-axillary 1 or few headed racemosely panicled recurved ; capitula cernuous : exterior scales of the involucre lanceolate foliaceous pubescent, the interior ones long shining scariose recurved at the points, at length patent." This species seems very near *B. vernonioides*, are they not varieties of the same species differing in the degree of clothing, the one "tota dense vellutino-hirsuta" the other (*V. alata*) "pube brevi subrufo pubescenti-velutinis."

1102. *CISULEA AXILLARIS* (Roxb.) D. C. I. C. 5. 482.

Mysore in marshy soil, the specimen represented was gathered in the reservoir of a ruinous hill fort. I have met with this plant in other places but it is far from common. This may possibly be a distinct species as it differs from Roxburgh's figure in the form of the stigma, here it is spatulate included within the tube of the corolla : there filiform exerted. As however, in all other points, it agrees with Roxburgh's figure, I have referred it to his species under the impression that the slight difference may be attributable to the artist who made the drawing.

1103. *SIEGESBECKIA ORIENTALES* (Linn) leaves ovate, cuniate at the base, acuminate, coarsely toothed ; the upper ones oblong lanceolate : exterior scales of the involucre twice the length of the interior.—*D. C. I. c. 5. 495*.

This is a widely distributed plant in India, it also found in China, thr. Mauritius, Society Islands and in Chili. It is principally interesting as having been named by Linnaeus in derision of the high preteritions of one of his cotemporaries who contemned his sexual system.

1104. *XANTHEUM INDICUM*. (Roxb.)

The fruit bearing involucre oval, pubescent between the prickles, and at the base of the beaks : beaks hooked at the points.—*D. C. I. c. 5. 523*.

A large coarse rank growing plant found among rubbish and dunghills. The genus, among *Compositae*, is a very abnormal one, and has by one Botanist been referred to *Urticaceae* and by another to *Cucurbitaceae*. It

seems as if it might justly be removed from its present station to form the type of a few order.

1105. MOONIA ARNOTTIANA (R. W.) shrubby, erect, ramous : leaves opposite, unequally pinnatifid, the terminal lobe larger, deeply 3 cleft: pinnae lanceolate, acuminate, coarsely inciso-serrated, glabrous : flowers of the ray numerous: achaenia entire at the apex.—*W. M.S.S.*

Neilgherries and Pulney mountains in clumps or jungle—on the former common near the Avalanche Bungalow and in almost every clump of jungle from thence to near Sisparah.

M. heterophylla (Arnott) suffruticose? leaves opposite, petioled, entire or biterrmately divided, with mucronate serratures : flowers of the ray about 5 : acaenia marginate bicornute at the apex. Ceylon.—*Am. pugil D. C. prod. 7—289.*

1106. WEDELIA URTICEFOLIA (D. C.) herbaceous subsucculent: leaves petioled ovate lanceolate coarsely and unequally serrated ; strigosely hispid on both sides; acuminate often incurved at the apex : peduncles solitary 1 cephalous: scales of the involucrem 10 in two series, acuminate, rough on the back: palae of the receptacle much acuminate : achsenia surmountued by a short denticulate calyculus.—*D. C. l. c. 5. 539.*

£ Wightii peduncles about the length of the leaves. leaves shortly acuminate at the base : sparingly strigose.—*D. C.*

My specimens of this plant are from the Neilgherries, Pulneys and Shevagherry mountains—showing*its Alpine tendencies.

1107. WEDELIA CALEDULACEA (Lessing) leaves oblong—lanceolate, attenuated towards the base, strigosely pilose on both sides, with a few serratures at the apex : peduncles 1 cephalous, axillary, solitary*^{in rec} times longer than the leaves: exterior scales of the involucrem oblong, subacute, longer than the disk: calyculus of the achaenium substipetate, denticulate.—*V. C l. c. 5. 539.*

A widely diffused plant—varies in the leaves being obtuse or acuminate entire or more or less serrated cut or even, but rarely, almost 3 lobed.—*D. C.*

1108. WOLLASTONIA BIFLORA (D. C.) leaves petioled ovate, at the base shortly at the apex long acuminate, acutely serrated ; above scabrous from scattered hairs, nearly glabrous beneath : peduncles one to three, 1-cephalbus ; one terminal and 1-2 from the superior axils : scales of the involucrem two series, oblong lanceolate : achaenium bald or with a single arista.—*D. C. l. c. 5. 546.*

1109. SPILANTHES CALVA (D. C.) stem ascending, repent at the base hirsutulous at the apex: leaves petioled, ovate obtuse, serrated or crenate, nearly smooth, ciliated at the base ; peduncles thrice the length at the leaves: capitula ovate discoid : achamia glabrous baia. *D. C. l. c. 5. 625.*

A widely distributed plant very common on the neulgherries.

This plant is scarcely distinguishable from *S. oleracia* except by the achsenia which in this is glabrous in tijai ciliate on the margin. The analysis under 13 in the accompanying plate are those of *S. Meracia* taken from plants collected in Coimbatore, where, in cocoanut plantations, it is not unfrequent, showing that it is truly native of India which D. C. questions.

P. S.—Through some umnuer on the *part of the transferrer, the dissections of *S. calva* have been altogether suppressed. Those 011 the plate all belong to *S. oleracia*.

1110. GLOSSOCAHDIA BOSWALLEA (D. C.) a herbaceous diffuse many stemmed annual, with alternate pinnatifid leaves, linear at the base, und solitary capitula on short naked peduncles : flowers yellow.—*JD. C. 5. 631.*

The specimen figured is an unusually luxuriant 01/e and does not give a very good idea of the plant, as usually ^net with, growing in arid sterile pas lures Where it lies flat on the ground, spreading all round the root. I believe, however that it is simply a luxuriant variety of the same species grown in more fertile cultivated soil.

LRjuve not met with it in the immediate vicinity of Coimbatore but it abounds at Ootaculmund, a village a few miles distant.

1111. ARTIMESIA GLABRATA (Wall.) suffruticose, erect, theramu, U and younger leaves beneath subvilvous, radical leaves, and the lower caufiue ones stipellately cleft, lanceolato—cuniute, acutely trifid at the apex : racemes slender subsecuiiu forming a panicle : capitulas cernuous pedicelled smallish globose: scales of the involucrem ovate, margined, the interior ones with a membranaceous margin.—*D. C. l. e. 6. 100.*

Very frequent on the Neilgherries flowering after the rains. Inferior leaves obovate cuniate deeply and coarsely toothed : the middle ones usually 3-5 parted, the midie lobe larger more or less deeply 3 cleft, the outside ones subulate ; the upper floral leaves simple, lanceolate acute: anthers of the male flowers free.

1112. ARTIMESIA INDICA (Willd.) suffruticose erect: leaves greyish tomentose beneath ; the lower ones pinnatifid, the middle trifid, the upper ones undivided and like the lanceolate lobes of the lower ones dentate or incis&l: capitula ovate racemosely panicled : panicle leafy spreading ; racetnulae before blooming pendulous : the young involucrem subtomentose,*afterwards glabrous, the exterior scales foliaceous acute, interior membranaceous obtuse : corolla naked.—*D. C. £ c. 6. 1*4.*

This is a common enough plant bin, so far as I recollect, generally seen only about the habitations of men in gardens &c. apparently never under cultivation, but as if only allowed to remain by sufferance, not being considered a weed. The only figure I can find is in Hump, Herb amb. 5. 91 & 2.

1113. HELICHRYSUM BUDDLEIODES (D. C.) stem suffruticose erect ramous woolly towards the apex: leaves sessile ovate lanceolate acuminate entire, 7—9 nerved, glabrous above whitish tomentose beneath : corymbs*compound polycephalous at the apices *of the stems and branches-: capitula? ovate, densely crowded : scales of the involucrem oval obtuse, about equal, a little longer than the disk.—*D. C. l. c. 6. 201.*

A rather common plant on the Neilgherries forming dense clumps or bushes from 4 to 6 leet high. The white stems and undersurfaces of the leaves contrasting with green upper ones and large clusters of yellow flowers, render this a conspicuous plant. The leaves >e from 3 to 4 inches long, 8-10 lines broad: receptacle alveolate shortly fimbriate: flower of the outer series female or sterile, the rest% hermaphrodite: style and stamens, included: pappus*1 series pilose scabrous: achaenia glabrous.

1114. GNAPHALIUM HYPOLEUCUM (D. C.) stem erect terete, scabrous below, ramos and tomentose above: leaves linear acamhfcite, somewhat revolute on the margin, roughish above, niveo tomentose beneath, adnate, semi-amplexicaul at the base, subdecurent: capitula congested on the apices of the branches sessile glomerules corymbosely paniced: scales of the involucre yellow, oval oblong obtuse, a little longer than the disk.—*D. C. I. c. 6. 222.*

Neilgherries about Kotergherry and the lower slopes, less frequent towards the highest ranges? Easily distinguished by the leaves green above and white beneath and the yellow flowers. Females many series, Hermaph. few.

1115. GNAPHALIUM MARCESCENS (R. W.) shrubby, somewhat diffuse at the base, branches ascending terete, the lower portions clothed with numerous persistent withered leaves: withered leaves revolute on the edges, linear subulate; green ones narrow lanceolate acute, glabrous above, tomentose beneath; thinly scattered on the floriferous branches not decurrent: floriferous branches umbellate at the apex, cupitula aggregated on the apices of the ramuli; scales of the involucre ovate lanceolate, woolly at the base, nivo-scariose towards the apex: marginal florets 2 series: styles not exerted: achaenia obcvoid puberulous: pappus uniform scabrous.

Neilgherries.—This species if, to either, belongs to the section Axanthina. It might perhaps with about equal propriety be referred to either *Anaphalis* or *Gnaphalium* or to neither. I cannot however identify it with any species of the former genus and, as it is my belief the two genera are not distinct, I place it here in preference to adding it to a genus which I think must ultimately be reduced. I retain that generic name for the following 4 species, not because I approve of it as applied to them, but because it has already been given and because I do not think this the place to make innovations, except on the surest ground. I therefore so far adopt D. C.'s genus though I consider it, as it now stands, untenable.

1116. ANAPHALIS NOTONIANA (D. C.) Woolly all over: stem fruticulose leafy to the top, leaves sessile subdecurent, broad linear or oblong, obtuse, with the thickly woolly margin revolute: corymbs terminal compound dense: scales of the involucre many series, imbricated, whitish scarios acute, crisp at the apex, at length stellately patulous.—Pappus rough, white, involucre white.—*D. C. L. c. 6. 273.*

Neilgherries—rather rare. I have given D. C. character as I find it, but remark the discrepancy between the involucre, as correctly shown in the drawing, and the character. The plant named by him in my herbarium is evidently the same species but in a much younger state, whence perhaps the mistake. The character should have been "r//e.srt//^/-scariosis obtusis apice subcrispis" &c. as shown by the specimen he examined and described.

1117. ANAPHALIS WIGHTIANA (D. C.) stem suffruticose at the base, erect, kafy to the apex, pilose scabrous at the base, woolly at the apex: leaves sessile or subadnate, oblong, linear, obtuse, pilosely scabrous above, whitish woolly beneath; the nerve beneath often prominent, rough; the upper ones callously hooked at the point: corymb terminal truly compound, but most densely polycephalous: scales of the involucre oblong, somewhat acute, white, a little longer than the disk.—Receptacle naked, female flowers many series,

exterior; central ones 10—12: pappus 1 series: achaeneum round, subpuberulous; involucre white flowers yellow.—*D. C. I. c. 6—273.*

Neilgherries common. A somewhat variable plant especially as concerns the degree of roughness rigidity and size of the leaves, dependent of course on the varying fertility and moisture of the soil in which it grows.

1118. ANAPHALIS? ELLIPTICA (D. C.) every where clothed with white tomentum: stem ramos, short, fruticulose at the base: leaves elliptic, mucronate, entire with the tomentum rubbed off the 5—7 nerves, adnate, or shortly decurrent: capitula densely congested, forming an ovate terminal corymb, surrounded by leaves: Scales of the involucre acute, scarios at the apex; redish white.—*D. U. I. c. 6-274.*

Neilgherries not unfrequent, found on the highest range, in pastures and by road sides on Dodabetta and elsewhere. It appears to me that this and *A. oblonga* are different states of the same species. The specimen of *A. elliptica* examined by D. C. was in a very young state, that of *oblonga* more advanced and perhaps more luxuriant. When full blown the glomerulus is ill embraced by the leaves, but is borne on an elongated leafy stalk, the upper leaves much reduced in size and I find on the same specimen some leaves in which only one nerve can be detected and others with three or more: that character is moreover a very difficult one to make out, owing to the quantity of tomentum with which in the recent state they are usually covered and would appear, from the above fact, less valuable when made out than might a priori be supposed, I think they ought to be united.

1119. ANAPHALIS ARISTATA (D. C.) stem ramos, suffruticulose at the base, erect; leafy to the apex; scabrous at the base tomentose at the apex: leaves long linear, aristate—mucronate at the apex, revolute on the margin, cordately dilated at the base, shortly decurrent; scabrous above with the midrib subtomentose; beneath whitish tomentose and the midrib scabrous: capitula densely congested, forming an ovate compound terminal corymb: scales of the involucre obtuse, white and rose coloured, glabrous. Flowers within the involucre 15-18, of which 5-6 are hermaphrodite the rest exterior about 2 series female: leaves about 2 inches long and 2-3 lines broad.—*J., C. f. c. 6—374.*

Neilgherries on the Northern slopes near Nedawutern not unfrequent by the road side; readily distinguished when growing by the deep rose colour of the involucre, when seen before quite blown. When blown and the seed maturing the tips of the scales become pale or nearly white, the base however retains its colour.

1120. CARPESIMUM NEPALENSE (Lessing) hirsutovillous: leaves elliptico-lanceolate, acuminate, dentate, attenuated into the petiole: capitula subcernuous, campanulate: interior scales of the involucre subacute.—Petioles and branches villos-hirsute, leaves pale and more villous beneath: capitula 4 lines broad.—*P. C. I. e. 6—281.*

A common plant in all the woods about Ootacamund.

1121. GYNURA NITIDA (D. C.) glabrous; stems thickish terete at the base; branches elongate, obovate, nearly naked at the apex: leaves lanceolate, attenuated at both ends, short petioled, coarsely serrated: corymbs terminal 5—7 cephalous: involucre cylindrical, a little shorter than the flowers, four times

as long as the subulate bractioles Receptacle naked, involucre 6-7 lines long. D. C. 6-299.

Neilgherries—Puloey Mountains, &c. This is a large stout plant, several feet in height, which I have collected finding it on the plains.

1122. GYNURA WALKERI (R. W.) stems naked at the base terete, US w J f n L S Mais of fallen leaves, leafy toward, the apex : leaves long pooled, ovate lanceolate, acuminate, entire or only slightly creivlute on the margin : corymbs terminal, large, loose, many cephalous : involucre cylindrical shorter than the flowers, much longer than the slender subulate bractioles.

Neilgherries not unfrequent in woods, usually in moist soil near streams, also in Ceylon. The stems at the base are woody, but soft and juicy, often upwards of an inch in diameter, and 6 or 7 feet in height, terminated by large corymbs. The leaves are from 4-6 inches long and about half as broad, of a light yellowish green, probably owing to the plant generally growing under the shade of surrounding trees. Flowered white!

I first became acquainted with this-plant through Uylon specimens, communicated by Colonel Walker, to whom I at that time dedicated the species and at this distance of time, full eight years after, confirm my first suggestion.

1123. MALIABIA stem ascending, and densely hirtillous at the base, naked, smooth at the apex lowest leaves lyrate, cauliiwones cordate semi-amplicaul, ovate lanceolate, rather obtuse, dentate; rough on both sides from scattered hairs: corymbs terminal 5-7 cephalous ; involucre, scarcely shorter than the flowers : about 100 flowers within the involucre.—D. C. I.e. 6-303.

An obscure weed, not by any means uncommon, but almost always appearing as solitary plants.

1124. DORONICUM WIOHTH (D. C.) glabrous, stem simple, angularly, serrated at the base : leaves lanceolate, coarsely dentate, subrevolute on the lower ones attenuated at the base, those above amplexicaul : corymbs few-flowered ; the pedicels bactiolate at the apex : scales of the involucre linear, subacute : ligulae 8-10, flat : achaenia glabrous.—Ligulae 7-nerved, styliferous, but probably abortive, destitute of pappus.—D. C. 6, Zn.—Madaructis glabm D. C. 6,

Neilgherries in pastures and near the banks of water end of the rainy season.

1125. ARNOTTII (D. C.) stem simple, set towards the base, cordately semi-amplicaul : corymbs few-flowered ; bractioles linear subulate, scales about 15 linear, probably sterile by achænia glabrous.—Stigmata short included : pappus numerous : pappus redish.—D. C. I. c. 6. near Nedawutem, flowering October and November.

1126. LESSENGIANUM (Arn.) stem long, striated hairy: leaves cordate, amplexicaul,

oblong lanceolate, few-nerved, deeply and irregularly inciso-serrated : corymbs few cephalate, terminal involucre hemispherical, scales linear subulate, the interior ones oblong lanceolate muricately hispid : Uylon 8-10, narrow oval, about 9 nerved.—D. C. I. c. 6 322-T Aniot'spu—Madaractis (abra) D. C. I. c. Neilgherries, &c. flowering cool season after the rains, Allied to the preceding, but I think quite distinct.

1127. DORONICUM CANDOLIANUM (Am.) suffruticose, ramous, brandies striated nearly glabrous, few (1-2) cephalous : leaves whitish, hispidly pubescent Pinnatifid, lobe, short, oblong acute, very shortly denate: peduncles minutely bractiolate at the apex: involucre 1 series, scales lanceolate, whitish hispid on the back: ligulae 8-10, narrow, 3-nerved.—JJ. I. c. 6 322.—Amott's pugi Uylon Mal aractis pinnatifida—D. C. (3. 439.

Neilgherries frequent in pastures/A very ramous somewhat diffuse plant, branches terete glabrous naked towards the base, very leafy about the Middle, ending in slender somewhat leafy peduncles, bearing two or rarely three, nearly naked pedicelled, capitula leaves oblong, narrow, pinnatifidly lobed nearly to the base, revolute on the margin, hispid on both sides, but especially the under: peduncles leafy at the base pedicels furnished with a few minute scattered bractioles. Scales of the involucre linear, pointed, coarsely hispid on the back : ligulae about 9, lanceolate acutish, 4 nerved.

1128. DORONICUM RUPESTRE (R. W.) suffruticose, erect, ramous ; branches near the base terete naked above leafy : leaves long petioled ; limb lobed or somewhat pinnatifid attenuated into a long slender petiole nearly glabrous above, nerves beneath bristly hispid pedicels leafy at the base, closely beset towards the apex with minute subulate bractioles : involucre 1 series oalyculate, leaflets linear acuminate, nearly glabrous on the back : ligulae 8, linear lanceolate, obtuse, 4 nerved,

In clefts of rocks Shevagherry mountains flowering August and September. This species is perhaps more closely allied to the preceding, the more so, as I have only once met with it leads to a suspicion that it is a variation produced by local circumstances, as however specimens found in the mountains form throughout, and all most readily distinguishable from specimens of D. Candollium. I think I am quite justified in considering it a species. The Ligulae are nearly twice the size, being much longer and broader : the leaves generally have the outline of a long petioled spathulate leaf cut lobed at the apex, many however are more distinctly pinnatifid.

1129. DORONICUM TENUIFOLIUM (R. W.) herbaceous, erect or ascending, ramous, glabrous; leaves pinnatifid or bipinnatifid; leaflets linear acute, variously toothed or lobed, glabrous: corymbs few cephalate capitula peduncled, leaflets of the involucre linear lanceolate acute glabrous, or slightly puberulous at the point, ligulae about 8, broad oval obtuse, 4 nerved.

Neilgherries, &c. This appears a very widely distributed plant on both the subalpine plains and mountains, of Southern India. My collection presents specimens from all quarters. It is not therefore to be wondered at that so common a plant should vary and should have received different names, viz. Senecio tenuifolius Burm. Ft Ind. Sen.: muticus Wild, Wall, D. C. Sen. lacinosus Arnott. These synonyms may I think be depended upon, and as all have referred the plant to

Senecio in place of *Doronicum* I am enabled to restore Burman's specific name, which ought never to have been superseded.* The same circumstance, namely, this being a *Doronicum* strengthens the suspicion that the two preceding plants, are merely alpine varieties of this, the original species.

1130. *SENECIO CORYMBOSUS* (Wall.—D. C.) stem scandant, terete araneose (appearing as if covered with cobwebs :) leaves petioled exstipulate, cordately suborbicular, shortly acuminate, subserrated; glabrous above densely tomentose beneath, 5-7 nerved at the base: corymbs axillary and terminal compactly polycephalous: involucrem 8-leaved, bracteolate at the base: ligulae none: achenia glabrous.—Petioles of the leaves 6-12 lines long, limb about 2 inches in diameter, 10 tubular florets.—D. C. l. c. 6. 364.

Neilgherries in clumps of jungle climbing ferns a great extent over the adjoining trees. De Candolle asks is not this rather a *Cacalia*

1131. *SENECIO WALKERI* (Arnott) stem scandent terete araneose towards the extremities: leaves exstipulate, petioled, cordiform, acute, callosodentate, glabrous, above flosculosely araneose; peduncles axillary, longer than the leaves; corymbosely-polycephalous: capitula discoid 6-7 flowered: scales of the involucrem 8 with a few subulate squamellae at the base: ligulae none achenia glabrous.—D. C. l. c. 6. 364—Arnott's *pugillus*—very near *S. corymbosus*, but seems sufficiently distinct from the difference in nervation, the want of tomentum on the under surface of the leaves, and fewer florets in the capitula.

Neilgherries, &c. and in Ceylon climbing on trees.

1132. *SENECIO NEILGHERIANUS* (D. C.) stem erect suffruticose, roughly striated at the base, leaves linear lanceolate acute, hirsutely tomentose beneath, rough above, the lower ones attenuated at the base semi-pinnatifid, the middle ones sessile, dentate, the upper auriculate-amplexicaul, nearly entire: corymbs low-cephalous, pedicels bracteolate at the apex: scales of the involucrem linear, scarcely acute: ligulae 12-14 flat: achenia glabrous.—Ligulae 4 nerved, revolute when dry; pappus very white.—i). D. C. l. c. 6. 368.

Neilgherries in moist pastures near springs and water courses.

1133. *SENECIO LAVANDULAFOLIUS* (Wall. D. C.) stem erect terete hirsutely striated: leaves crowded, oblong linear, entire, revolute on the margin, tomentose beneath, hairy or hispid above; the upper ones linear distant: racemes corymbose simple: peduncles bractioled, involucrem nearly glabrous 15 leaved calyculate: flowers about 40, ligulae 15, long, spreading, 4 nerved: achenia glabrous.—D. C. l. c. 6. 368.

Common in pastures on the hills flowering during the cool season.

1134. *SENECIO CUNDICANS* (Wall) climbing, every where clothed with white tomentum, branches striated: leaves petioled, auricled with reniform stipules, cordate acute serrate, arachnoid above, afterwards glabrous; beneath niveous: panicle corymbose: bractea linear subulate: pedicels diverging: involucrem white, campanulate, sparingly bractioled at the base: ligulae 6, oblong flat: achenia glabrous.—D. C. l. c. 6. 369.

Neilgherries, frequent in clumps of jungle climbing in the adjoining trees.

1135. *SENECIO INTIRMEDIUS* (R. W.) scandent

glabrous, leaves petioled glabrous triangular, acuminate, unequally crenately-dentate: petioles auricled at the base, with a large reniform stipule: panicles corymbose: bractea linear subulate: pedicels divaricate: capitula many flowered: involucrem calyculate: ligulae 12-14 oblong lanceolate obtuse: achenia papillose.

Neilgherries climbing on trees and bushes near the Avalanche Bungalow, flowering February and March.

This species seems quite intermediate between *S. candicans* and *S. Wightianus* but is certainly distinct from both. It has the large reniform auricled stipules of the former, the glabrous habit of the latter, and differs from both in its numerous and large sized ligulae.

1136. *SENECIO WIGHTIANUS* (D. C.) glabrous, branches scandent, angularly striated: leaves petioled, ovate or elliptic lanceolate, acuminate, serrated; limb obtuse at the base or shortly cuniate; petioles with a small auricle at the base: panicle divaricate; pedicels bractioled at the apex: capitulae small, 8-10 flowered; ligulae 3-4 small: achenia puberulous.—D. C. l. c. 6. 370.

A widely distributed species, like both the preceding native of the Neilgherries, but descends to much lower levels, the specimen figured was obtained from the Malabar jungles.

1137, 1138. *CIRSIIUM ARGYRACANTHUM* (D. C.) leaves semi-amplexicaul serrately pinnatifid, ciliatospinulose, the lobes ending in strong spines; beneath and the stem arachnoideo-villous: capitula paniculately congested: bractea many cleft very prickly: scales of the involucrem terminating in strong spines.—D. C. l. c. 6. 640.

Very common on the Neilgherries, about equally so on the Pulney mountains. In moist rich soil it not infrequently attains the height of 6 or 7 feet. It may be abundant with at most seasons in flower, but is in perfection in August and September. Flowers pale purple.

1139. *TRICHOLEPIS PROCUMBENS* (R. W.) stem short flexicose ramous: branches diffuse procumbent, angularly striated, subglabrous; leaves shortly pubescent or subglabrous, those of the stem lyrate, of the branches sinuately pinnatifid, the lobes sparsely mucronate: involucrem ovate; scales ovate at the base arachnoid, terminating in a slender prickly-like appendage: stamens a little longer than the corolla: stigmas exerted, diverging at the apex: achenia smooth, pappus double, exterior of many series setaceous; interior of 5 lanceolate paleae, nearly equalling the corolla.

Bellary in arid stony soils flowering October and November.—Coimbatore in similar situations flowering in January.

This seems most nearly allied to our *T. Candoliana* a figure and description of which is published in the Compendium to the Botanical Magazine vol 1 p. 81. It seems however abundantly distinct.

The double pappus seems to associate this with *Microlonchus* but the homogamous not heterogamous capitula keeps them distinct.

1140. *DICOMA LANUGINOSA* (D. C.) erect, very ramous, woolly: involucrem ovate, scales exteriorly subglabrous: paleae of the pappus serrated, scarcely twice the length of the very hairy fruit.—D. C. l. c. 7. 36.

Found in light gravelly soils flowering during the rainy and cool seasons rather common about Coimbatore.

1141. *SONCHUS CILIATUS* (Lam. D. C.) stem erect, glabrous, or rarely pilosely glandular towards the extremities of the branches: cauline leaves stem clasping, acutely dentate—ciliate, runcinate or undivided; the auricles acuminate: involucre, and pedicels nearly glabrous: achenia along the nerves transversely muculato—rugous.—D. C. l. c. 7. 185.

Widely distributed over India especially among rubbish by wall sides in sheltered places.

1142. *SONCHUS WIGHTIANUS* (D. C.) root lignous: stem ascending erect, somewhat angular, glabrous: leaves stem clasping, with roundish auricles, oblong-lanceolate, unequally and acutely dentate, glaucous; the upper ones nearly linear: the axillary corymbose pedicels and involucre glanduloso—pilose: achenia oblong striated, very slenderly transversely-rugose.—D. C. l. c. 7. 187.

Shady places—In cocanot plantations at UOUKUMUND near Coimbatore rather frequent, flowering during the rainy and cool season. In the shaded soil of these plantations, this plant sometimes though rarely attains a height of nearly 4 feet but seems quite an annual.

It seems quite distinct from the preceding.

1143. *PICRIS HIERACIOIDES* (Lim) stem erect, usually rough with barbed hairs, corymbosely ramose, the apex: leaves semi-amplexicaul lanceolate, coarsely dentate, rough: exterior scales of the involucre long lax.—D. C. l. c. 7. 128.—Vur «y Indica. Corymb much divaricated.

Neilgherries frequent, flowering during the rainy and cool seasons. This is to be a widely distributed species both in India and Europe, I have specimens from Courtallam, the Pulney mountains and Nepal, according to D. C. P. *hamubsa* Wai. Nepal plant does not differ.

1144. *MULGEDIUM NEILGHERRENSE* (R. W.) stem erect glabrous, somewhat panicled at the apex: cauline leaves runcinately pinnatifid, doubly crenate, dilated and somewhat stem-clasping at the base, subrhomboid, attenuated upwards, mucronate, somewhat hairy on both sides especially on the veins beneath, floral ones entire lanceolate: pedicels hairy at the apex, capitula ovate, scales of the involucre imbricate, exterior ones hairy on the back: achenia compressed, ending in a long beak short paliaceous; interior long slender setaceous from two to four feet high, flowers

Neilgherries not unfrequent in jungly ground and on road sides flowering during rainy and cool seasons.

The double pappus of this species seems that technically it does not belong to this genus, but its whole habit is strongly in accordance with it, I without hesitation place it here.

1145. *MICROMALVUS OLIVERI* (R. W.) *Lactuca* (D. C.) glabrous, stem naked, dichotomously branched: leaves linear-lanceolate, either entire or dentate: capitula corymbose long 7-8 flowered: involucre scarioso on the margin, thrice as long as broad.

leaves 2-3 inches long, 2-4 lines broad.—D. C. l. f. 7.—135 under *Lactuca*.

Neilgherries rather common to be met with in flower at all seasons but most abundant during the rains from July to December. I have ventured to remove this plant from the genus in which D. C. placed it as the achenium corresponds accurately with the one and not at all with the other. In *Lactuca* the achenium is flattened and abruptly lengthened into a long filiform beak: in this it is pentagonal and scarcely beaked.

1146. *BRACHYRAMPIUS HEYNEANUS* (R. W.) *Lactuca Heyneana* D. C.) stem erect, glabrous, terete, naked above: leaves rigid subradicle, runcinate, coarsely sitos-ciliate; the rest glabrous stem clasping: capitula cylindrical short pedicelled remotely fascicled along the branches: achenia compressed striated slightly mucronate, shortly beaked.—Achaenia black scabrous pappus white very soft.—J. C. 7. 140.

Coimbatore and elsewhere by wall sides and hedges, flowering during the rainy season. The oblong mucronate achenia ending abruptly in a short thick beak, not a long filiform one has induced me to remove this also from the genus *Lactuca* with which it certainly does not associate but sorts well with *Brachyramphum*.

1147. *YOUNGIA NAPIFOLIA* (D. C.) glabrous or subhirsute at the base; stem erect, terete, loosely panicled and nearly leafless at the apex: radicle and inferior cauline leaves petioled, runcinate—lyrate, lobes oval oblong obtusely sinuate, mucronately dentate, the extreme ones confluent: involucre 8-phyllous minutely calyculate: achenia attenuated at the apex.—D. C. l. c. 7. 193.

Coimbatore rather frequent about hedges and in neglected places where it meets with some shelter, flowering during the rainy season. I leave this as placed by D. C. though according to my own impression erroneously. DeCandolle suggests that it might almost be placed in the section *Mycdis* of *Lactuca* along with the preceding. To my mind the whole section, and this along with them, would have been more appropriately referred to *Brachyramphum*, that is, if they all correspond with the sectional character "beak twice or three times shorter than the achenium."

1148. *Vicia INDICA* (D. C.) leaves anjicled at the base lanceolate acuminate serrated or nearly entire, more or less puberulous on both sides: ligulae twice as long as the disk.—D. C. prod. 5. 474.

A very common plant to be met with all over India and generally in flower during rainy weather. Flowers bright yellow.

OLIGOLEPIS (It. W. not Cassini.)

GEN. CHAR. Capitula numerous heterogamous about 5 flowered. Flowers all tubular: females (about 4) in the circumference, pedicelled, slender, hermaphrodite solitary, 5-toothed: style 4-lobed in the female, undivided in the herm. Achenia beakless of the female terete hairy, of the disk absolutely 4 sided glabrous. Pappus none. Involucre usually with decurrent subspathulate serrated lobes and dense ovate oblong axillary glomerated scales, usually one scale to each flower, rules. Achenia beakless of the female terete hairy, of the disk absolutely 4 sided glabrous.

times truncated, folded round the flower and adhering to the pedicel. Disk flower larger subcampanulate, texture fragile, cellular cells quadrangular (much resembling those of the sheath of a plantain leaf.)

1149. OLIGOLEPIS AMARANTHOIDES (R. W. *Sphranthus amaranthoides* Burm. *Flora Ind. D. C. prod.*)

The specimens from which the drawing was made were somewhat deteriorated by age, and the analysis are not so complete as I could have wished, but enough, I think, is shown to prove that it is not a true congener of No. 1094. They were gathered many years ago in rice fields near the sea coast at Negapatam.

Figure 4 of the plate is a portion of the disk corolla, slightly magnified.

1150. CYATHOCLINE LUTEA (Law's Mss.) leaves nearly all radicle minute (mossy looking) sub-bipinnatifid pubescent: stems slender, erect, dichotomously branched, often with a capitulum in the fork, and one to three on the ends of the branches: flowers yellow.

Tannah district near Bombay, (Law.)—The whole plant rarely exceeds 3-4 inches in height but often bears 10 or 12 rather large capitula. It is a most distinct species both by habit and colour of the flowers.

1151. (A.) DORONICUM TOMENTOSUM (R. W.) stem herbaceous erect subtomentose, at first simple, leafy, afterwards corymbosely branched; ramuli nearly naked: leaves rough, lower ones, elliptic tapering to the base: upper ones subovate-lanceolate, auricled and sub-amplexicaul, coarsely and unequally dentate, rough and slightly arachnoid above, densely white tomentose beneath: corymbs lax peduncles bractiolate: ligulae about 14 sterile, disk flowers numerous 5 cleft: pappus setaceous hispid: achaenium costate hairy.

North western slopes of the Neilgherries by the road side flowering September and October. Flowers yellow, ligulae linear 4 nerved 3 toothed: stigmas wanting, or 2 lobed when present, apparently sterile disk flowers bisexual 5 cleft, tubular pappus nearly as long as the corolla silaceous rough: achaenium linear costate hispid on the ribs.

1151. (B.) DORONICUM RETICULATUM (R. W.) Herbaceous, erect, ramous, stem and branches glabrous: leaves somewhat rhomboidal, coarsely and unequally dentate, teeth mucronate; rough and arachnoid pubescent above, tomentose between the veins beneath, veins glabrous: capitula laxly corymbose, longish pedicelled; bracts subulate: ligulae 10-12 sterile, throat hairy within, pappus none; disk flowers numerous, tube contracted, throat dilated, campanulate: pappus paliaceous hispid achaenium ribbed conical hairy.

Tannah district Bombay, (Law.) The difference of the shape of the pappus and corolla of this species seems to indicate that it might, were I so disposed, be made to form the type of a new genus, but such appears to me a most unnecessary refinement, the essential character of *Doronicum* < ray flowers bald, disk ones crowned with pappus—being here well marked the particular kind of pappus and shape of the corolla then form excellent specific characters. Both these species are referable to DeCandolle's genus *Madaractis* which however is not distinct from *Doronicum*.

MADACARPUS (R. W.)

Gen. Char. Capitula radice heterogamous. Ray flowers 1 series sterile: disk ones numerous heterophro-

dite. Achaenia beakless, oblong, furrowed; without pappus.—Herbaceous plants, capitula, corymbose: involucre campanulate 1 series, scales linear lanceolate mucronate: receptacle convex, foveolate: corolla subinfundibuliform costae & the Achaenia hispid.—*R. W. Calcutta Jour. Nat. Hist.*

1152. MADACARPUS BEEGAUMENSIS (R. W.)

BELGAUM—J. S. LAW, Esq.—I am indebted to Mr. Law for my specimens of this plant which in habit so much resembles *Dor. reticulatum* that it was at first mistaken for that plant. Annual, erect, hirsute, leaves ovate crenate-dentate, auricled at the base, pubescent above, tomentose beneath. Capitula corymbose, scales of the involucre cohering at the base, linear, mucronate: receptacle conical foveolate: ligulae about 8, 4 nerved, style and stigma none: disk flowers tubular infundibuliform 5 cleft segments with a distinct mid rib: anthers ecaudate, stigmas recurved truncated: achaenia 10-nerved nerves hispid: pappus none.

APODYTES. Mejer—Benth.

GEN. CHAA, Flowers bisexual, calyx small, unchanged. Petals 4-5. Stamens as many, alternate with them, none sterile. Ovary 1-celled. Fruit ovate-reniform subcompressed, bearing on one side a fleshy appendage.—Inflorescence terminal.—*Benth. Lin. Tr. vol. 10, p. 680.*

1153. APODYTES BENTHAMIANA (R. W.) leaves elliptic obtuse at both ends: panicles terminal, contracted, rigid, shorter than the leaves, style straight scarcely excentric: fleshy appendage of the drupe scutelliform.—*R. W. MSS.*

Neilgherries rare. A single tree observed in the woods near the top of the Hills behind the Avalanche Bungalow—flowering in February. Shevagherry August.

Arboreous, ramuli terete glabrous: leaves alternate, exstipulate, coriaceous, glabrous, oblong elliptic, obtuse at both ends from 3 to 4 inches long, including the petiole, by 1/2 broad. Panicles terminal, rigid, shorter than the leaves: Bracts minute or wanting: flowers white, 3 lines long, calyx minuter-toothed: petals elliptic, inflexed at the point, stamens length of the petals; anthers linear obtuse, longer than the filaments, adnate: ovary free hairy ovate 1-celled with 2 lateral superposed ovules: style slightly lateral straight: stigma truncated: drupe semiovate, reniform, crowned with the persistent base of the style and furnished with a lateral scutelliform appendage one-seeded: seed pendulous obovate cuneate compressed: embryo minute in the apex of a large albumen radicle next the hilum.

1154. LEEA MACROPHYLLA (Roxb.) stem herbaceous erect angled, petioles and leaves glabrous: leaves simple broad cordate, dentato-serrated: cymes large terminal; berry, black succulent six or more celled; cells 1-seeded.

Walliar jungles, between Coimbatore and Paulghat abundant, flowering during the rains. Leaves nearly orbicular, when full grown from 12 to 18 inches in diameter, traversed by numerous large prominent veins.

DeCandolle quotes Roxburgh for this species, but must have had a wrong plant before him when he defined it, as he describes the leaves as pinnated.

1155. SOPHORA HEPTAPHYLLA (Linn.) shrubby or subarborescent: leaflets alternate 7-13 ovate oblong acuminate, glabrous above, pubescent beneath: stipules

rigid subulate: racemes leaf opposed lax about the length of the leaves : bracts subulate : calyx campanulate suboblique slightly 5-toothed : ovary 3-4 ovuled : legume villous, 2-4 seeded attenuated at the apex much contracted between the seed : seed 2-4 oval bright shining red.

Neilgherries, in Jungles below Neddawutem. Flowering during the rains and maturing its seed in October and November. The Neilgherry plant differs from the Ceylon one, in having the leaflets more oblong and pubescent on the under surface; to neither of which characters I attach much importance.

The Linnean specimen of this plant seems to have been a very indifferent one. Arnott's character in his Pugillus is much more correct.

The above is principally applicable to the Neilgherry plant and was in great part communicated, along with the flowering specimen on the drawing, by Captain Munro who first found it on the Hills. The legumes were added from specimens I collected in October 1845.

1156. DALBERGIA LATIFOLIA (Roxb.) W. and A.—arborescent: leaflets 3-7, generally 5, alternate, orbicular, emarginate; upper side glabrous; under when young minutely pubescent: panicles axillary, branched and divaricating; flowers on slender pedicels: calyx-segments oblong, more or less obtuse: stamens 9 (or 10?), all united into a sheath open on the upper side: ovary stalked, about 5-ovuled, glabrous: style slender, nearly as long as the ovary stigma small: legume stalked, oblong-lanceolate, usually 1-seeded.

Paulghaut jungles, flowering during the rainy season. A most magnificent tree from which the well known Malabar blackwood is obtained, planks of which I have seen nearly four feet in breadth, after the removal of all white wood and these are not the largest obtainable.

My figure differs from Roxburgh's, in the smaller size and undulation of the leaves, it however seems to be the same species, only less luxuriant, according to description it seems to be more justly referable to Roxburgh's *D. emarginata* than to *latifolia*, but the wood of the former is not black which I think fatal to their identity. It is possible however that the Malabar tree may be specifically distinct from the Bengal one, a point which my specimens does not enable me to determine.

1157. ACACIA LATRONUM (Willd.) W. and A.—somewhat arboreous, armed; thorns numerous, stipular, very large, terete, tapering, united at the base: leaves bipinnate; pinnae 3-5 pair, with a gland on the petiole; leaflets 6-15 pair, very small, narrow linear, obtuse, without any glands between the pairs: spikes axillary, usually in pairs, peduncled, cylindrical, longer than the leaves, many-flowered: corolla 4-5-cleft: stamens numerous, distinct: legume flat, thickish, oval-falcate, 3-4-seeded.

Coimbatore frequent in sterile stony soils and in such situations always a scraggy thorny shrub. When in full flower in July and August, it exhales a most fragrant scent not unlike honey-suckle, quite perfuming the air for some distance round. In this district I have never seen it as a tree.

1158. KALANCHOE LACINIATA (D. C.) W. and A.—leaves decomposed and pinnatifid, the segments oblong, acute, coarsely toothed; upper ones nearly entire: sepals lanceolate, acuminate, spreading, cyme panicked.

Frequent about hedges and low jungle about Ootakalmund, near Coimbatore, flowering during July and

August. In favourable situations it frequently attains the height of 3 or 4 feet with large spreading much divided leaves, the lobes of which are succulent and nearly cylindrical: flowers yellow. It is the glabrous form which is principally found here.

1159. HYMENODYCTION OBOVATUM (Vall. not Wight's *Icones*, No. 80) arboreous: leaves obovate, abruptly and shortly acuminate, glabrous, finely reticulated beneath with coloured veins; thickly congested near the ends of the branches: stipules ovate glanduliferous on the margin very deciduous: racemes axillary spicate with one or two short branches: tube of the corolla contracted limb campanulate 5-cleft: stamens inserted on the throat, filaments much longer than the anthers.

In dry and stony soils about Matecarry near Coimbatore, flowering during May and June, seed ripen about the close of the year.

This plant agrees so well with Dr. Wallich's description of his, II. obovatum that I cannot hesitate as to the propriety of giving it to that species, and considering the plant figured table 8C. of this work a new species, to which I have given the name *H. vitile* with reference to its extensive use, in this neighbourhood, in cabinet making under the English name of Bastard Cedar. It maybe thus distinguished from the above to which it is closely allied.

HYMENODYCTION UTILE (R. W. *H. obovatum* Wight's *Icones* No. 80.) leaves roundish ovate abruptly acuminate, glabrous above, villous beneath: stipules broad ovate obtuse, glanduliferous on the margin: panicles terminal loose, branches racemose; flowers pedicelled, bractiolate, fascicled: corolla subrotate; tube about the length of the calyx-limb filaments inserted on the throat a little shorter than the oblong ovate anthers.—*H. exechum* Wight's *Cat.* No. 1264 and *W. and A.* *p. 101 not of Roxburgh and Wallich.

Common in the Paulghaut jungles, often attaining a large size. The wood is nearly the colour of mahogany but of a loose texture soft and very hygroscopic.

1160. ARGOSTEMMA COURTALLENSE (Am.) stem repent, extremities erect simple pubescent; leaves glabrous verticelled somewhat irregular, or two approximated pairs towards the apex: stipules obsolete, umbel peduncled 2-6 flowered shorter than the larger leaves: pedicels and calyx pubescent: flowers quaternary: filaments bent, anthers distinct, dehiscing by a double pore near the apex. Arnott. *Annals of Natural History*, vol. 3. p. 22.

The drawing was made in 1835 at Courtallum; where only I have met with the plant. Limb of the corolla white, tube yellowish green.

1161. GREENIA WIGHTIANA (W. and A.)—leaves almost quite glabrous on both sides except on the midrib and nerves.

Mergui—The specimens represented were received from the late Mr. Griffith and quite correspond with our original specimens, whence I suspect this is not a Peninsular but Tenasserim plant.

1162. OPHIORRHIZA HARRISONII (Wall.) stem, petioles, peduncles and nerves, the underside of the leaves pubescent: leaves ovate or roundish ovate acutish: glabrous and green above, pale beneath: peduncles terminal corymbose, and dichotomously branched at the apex.—Root creeping—G. Don, *diet*; 3—523.

Courtallum—Flowering during the rainy season.

ADDENDUM;

SOPHORA ROBUSTA (Rox.)-The character and descriptions of Roxburgh's *Sophora robusta* figured No. 245 of this work having been omitted in the Flora Indica, I here publish it having been furnished with a copy by Dr. Wallich. It confirms the opinion formerly expressed that the plant is not a species of *Sophora*, but more nearly approaches *Ormosia*. It however widely differs from that genus in the character of the legume which is *fleshy* in this, *woody* in that. Besides this, there are others, apparently of less moment, but which seem to indicate that if the two were compared, more important ones might be found; in which case it may prove the type of a new genus between *Ormosia* and *Diploptropis*: but as I am unacquainted with both these genera, except by written characters, I can offer no opinion on this point. Roxburgh describes the seed as being "enveloped in a complete thick fleshy scarlet aril." The meaning of this is not very obvious unless we suppose that owing to the vague definition of the term, at the time he wrote, he applied it to a coloured fleshy testa, in place of an enlargement of the placenta. This supposition seems the more probable, as the figure presents no indication of any growth or enlargement of the placenta.

"Leaves unequally pinnate; leaflets 4-5 pairs, lanceolate. Panicles terminal, ligumes fleshy, 1-2 seeded.

Peuple the vernacular name in the Silhet district, where it grows to be a very large timber tree. Flowering in April and May, and the seed ripen in July.

Young shoots as well as all the other tender parts densely clothed with ferruginous down.

Leaves alternate, unequally-pinnate, 6-12 inches long.

Leaflets generally 4 or 5 pairs, opposite, short-petiolate lanceolate entire, smooth, 3-5 inches long, by 1-2 broad.

Petioles round, downy.

Panicles terminal, and from the exterior axils, as long as the leaves ovate; composed of many; patent, simple, or compound, downy branches.

Stipules ensiform, caducous, ferruginous.

Flowers numerous, pretty large, short-pedicelled dull white.

Calyx bowl-shaped, 5-toothed very villous, permanent.

Corol papilionaceous; Banner nearly round, supported by a pretty long claw, with two callosities at the inside of its apex. *Wings* and *Keel* nearly equal, and rather shorter than the banner.

Filaments 10 distinct smooth, length of the pistil 1 um ascending Anthers ovate two lobed.

Germ short-pedicelled, oblong,* very hairy, one-celled: ovula two attached to the upper margin. Style as long as the germ, apex with a spiral turn. -Stigma rather large glandular.

Legume generally one-seeded, and then ovate; if two-seeded more lengthened, smooth, bright yellow, fleshy, size of a pullet's egg, one-celled, two-valved.

Seed for the most part one oblong, enveloped in a complete, thick, fleshy, scarlet aril.

Perisperm none.

Embryo conform to the seed. *Cotyledons* equal, line of separation serpentine. *Plumule** two-lobed. Radicalle patilliform, centrifugal."

From Dr. Roxburgh's MSS. Flora Indica.

IRKAL.

No. 80 For *Hym. obovatum* (Wall.) read *H. utile* (R, W.) see No. 1159 for the character of the species.

No. 829. for *Vernonia conyzoides*, read *Fern. Dendigulensis* (D. C. V. *Candolleana* Arnott not Martius,) fruticose, branches velvoso-pubescent: leaves oblong lanceolate subacuminate, attenuated at the base into a short villous petiole; hispidulous above, more or less pubescent, beneath serrated; serratures mucronate: corymbs lax compound naked: scales of the involucre mucronate pubescently hirsute at the point; achsenium glabrous, exterior pappus short paliaceous. *Am. pugilp.* 28.—D. C. *Prod.* 7.p. 263.

These two are very nearly allied species, I had al-

most said only certainly distinguishable by the exterior pappus which in *V. conyzoides* is spreading, and so short that it does not exceed the diameter of the seed forming quite a setaceous ray round the apex, while in the other it is erect paliate, and nearly half the length of the seed. In *conyzoides* the achsenia are hairy: in *Dendigulensis* glabrous. These most essential parts of the character are not, I regret to say, very well brought out in either of the figures. No. 829, was prepared many years ago, during my absence in Europe, and was published before I had properly made myself master of the details of this difficult family, otherwise the oversight would have been corrected.

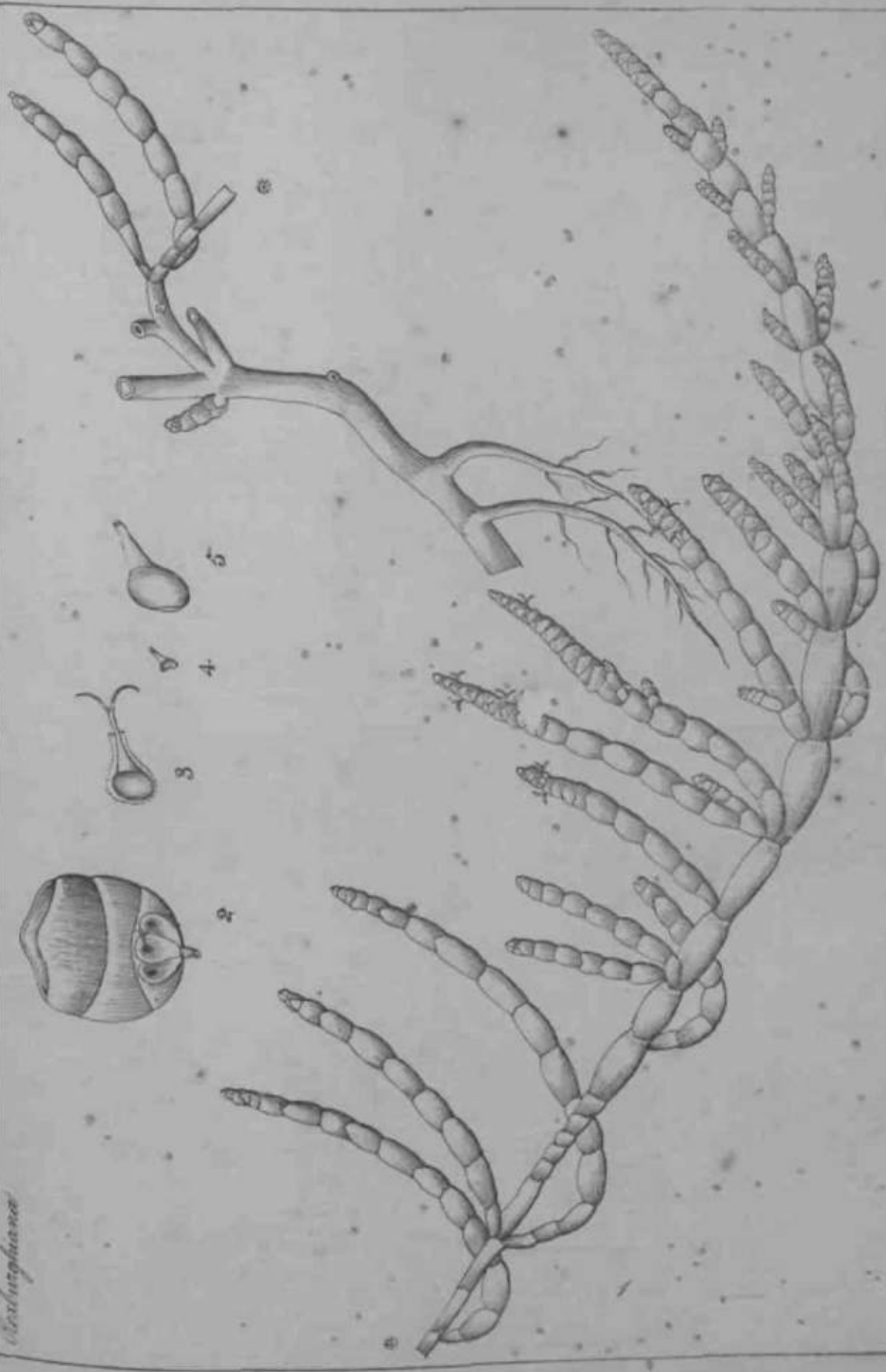
Salicornia

A 809

Chenopodiaceae

737

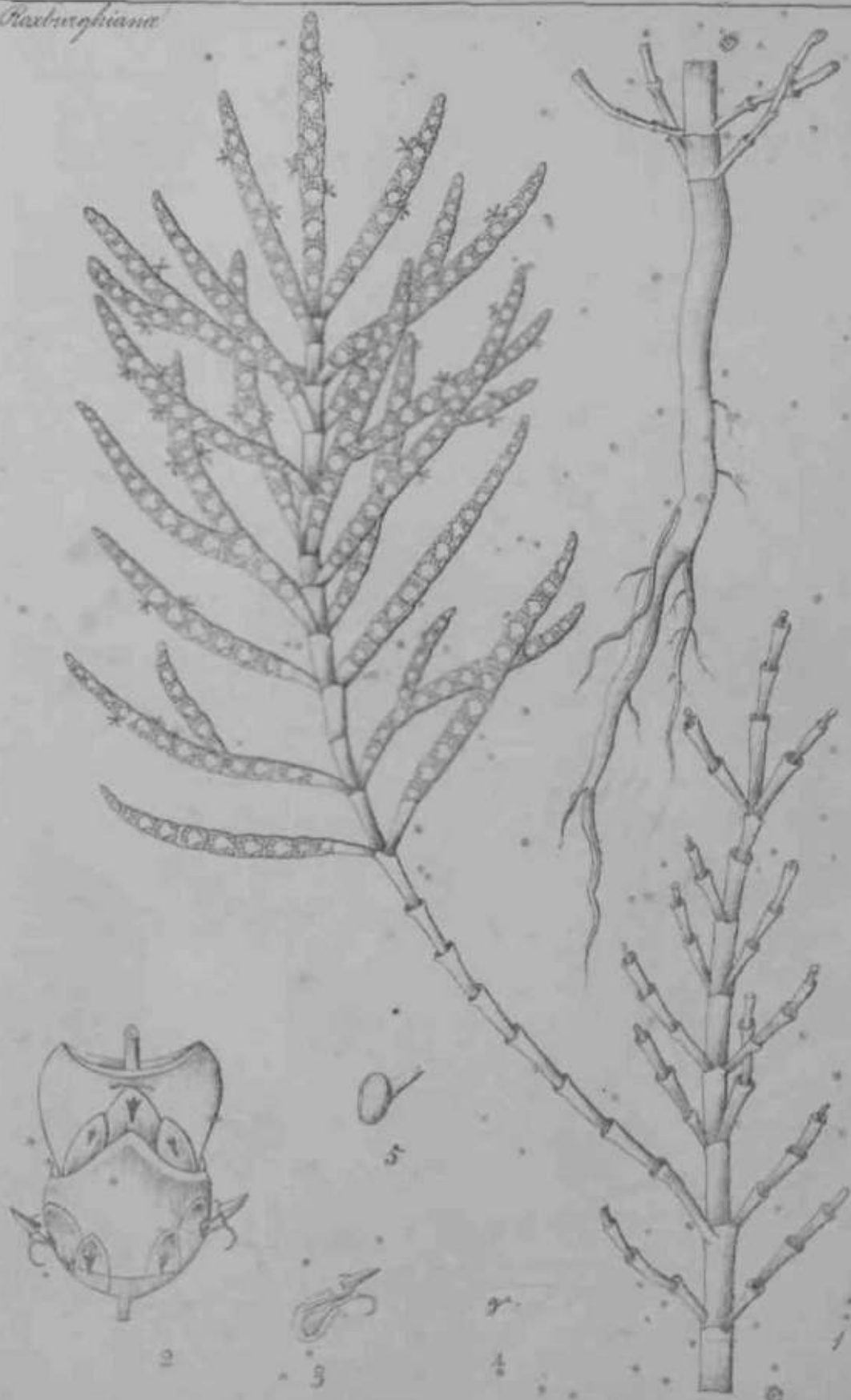
Wexleriana



Salicornia indica (Vahl. Herb.)

Wexleriana

Barbuziana



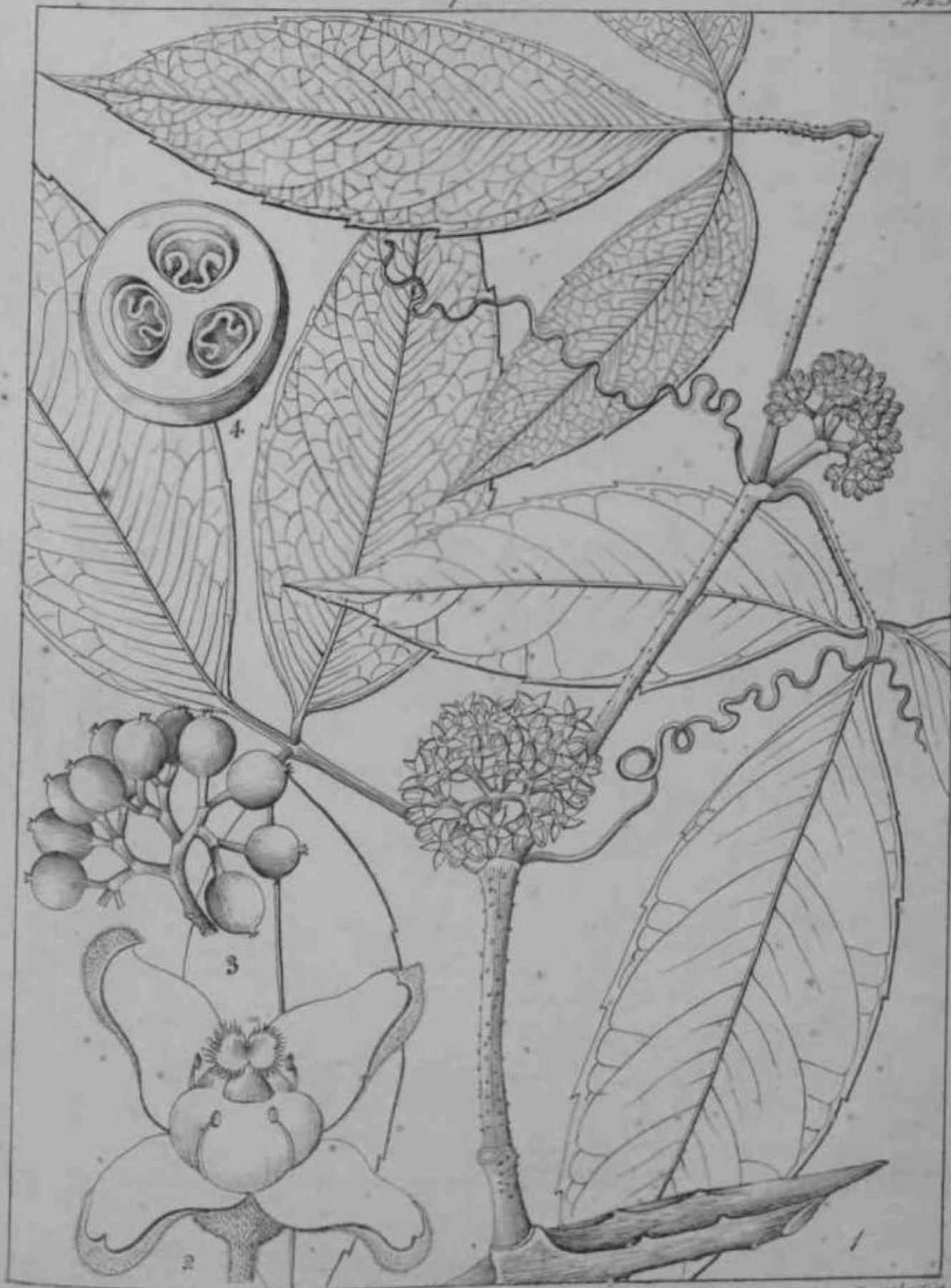
Salicornia brachiata (Roxb.)



Kunth, Bot.

Thunberg, Bot.

Corchorus acutangulus (Lam.)

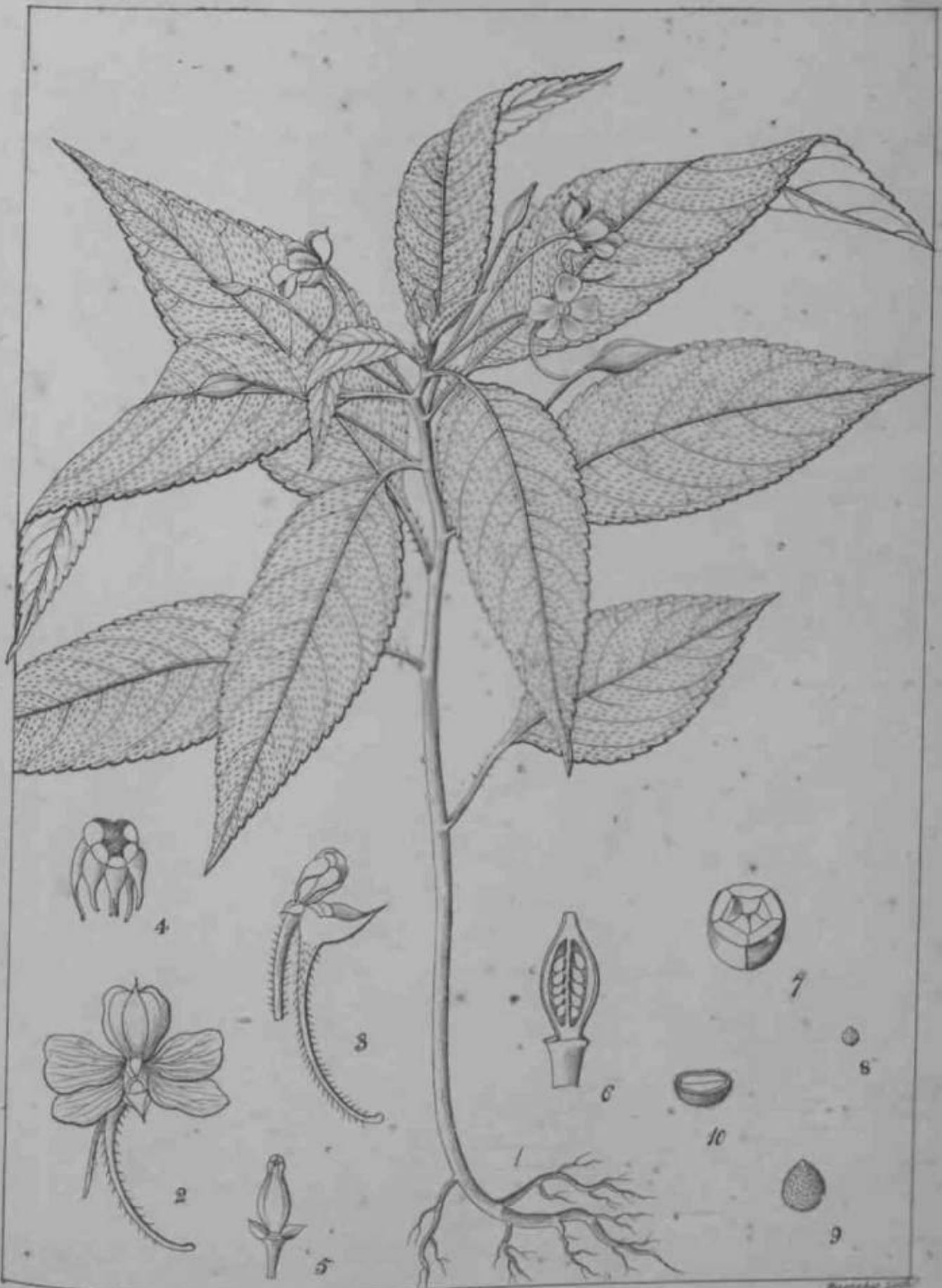




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Impatiens dasysperma (R. W.)

Parishy 1861



Balsaminae (R. W.)

Deless.

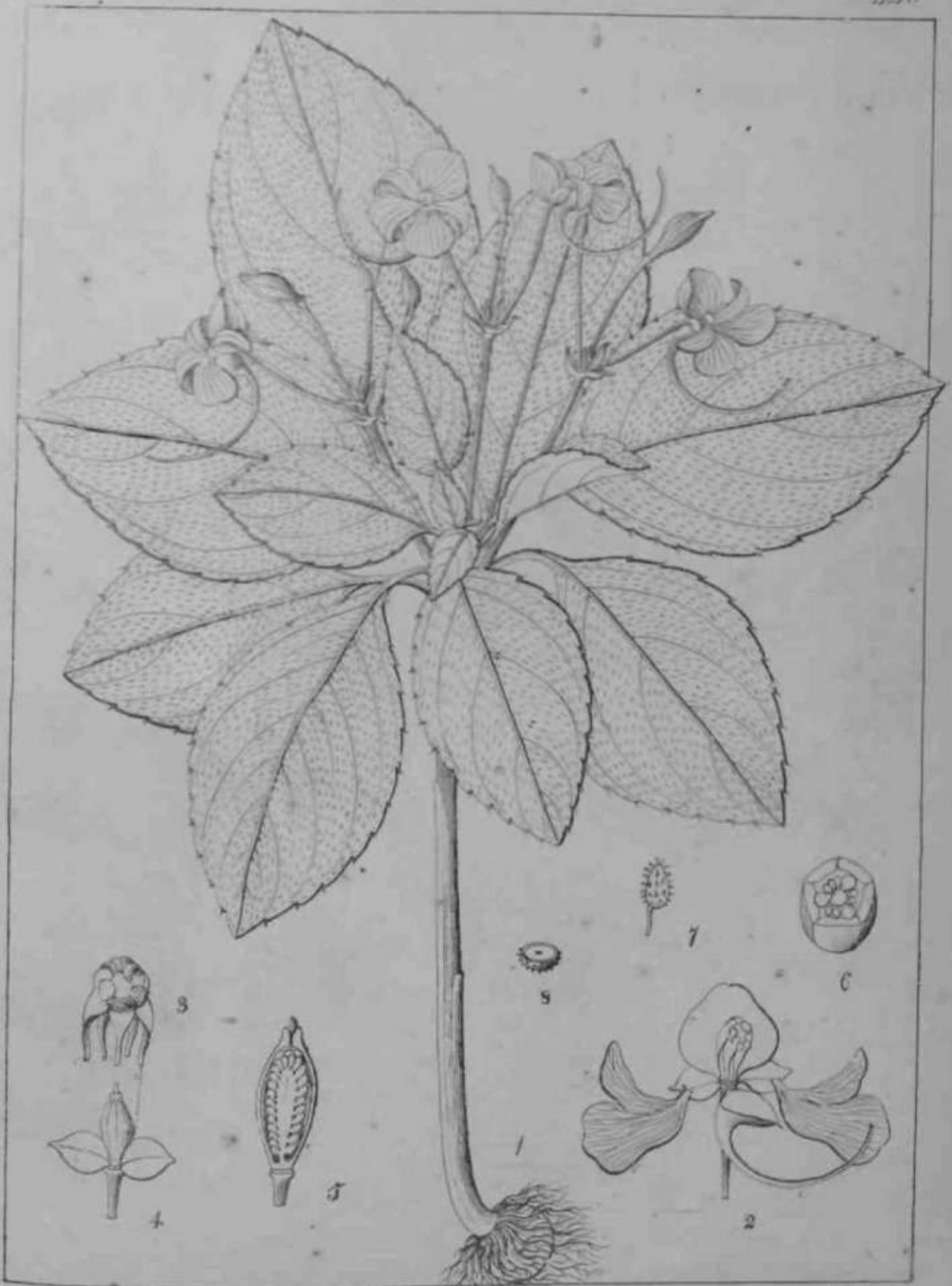


Impatiens campanulata (R. W.)

Drummond, Icon.

Balsaminac.

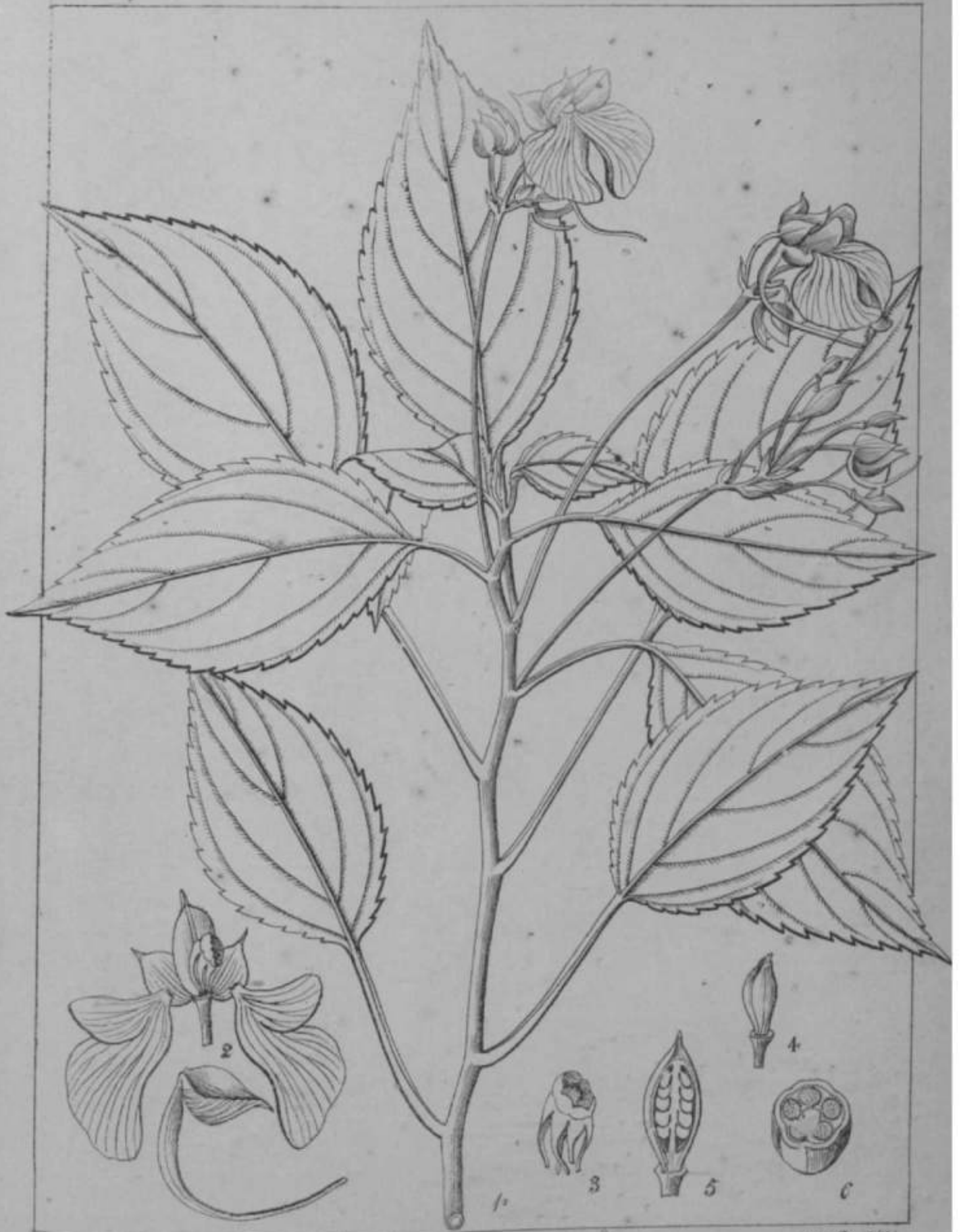
745
1858



Kumpak, del.

Impatiens umbellata (Heyne)

Reinhold, sculp.

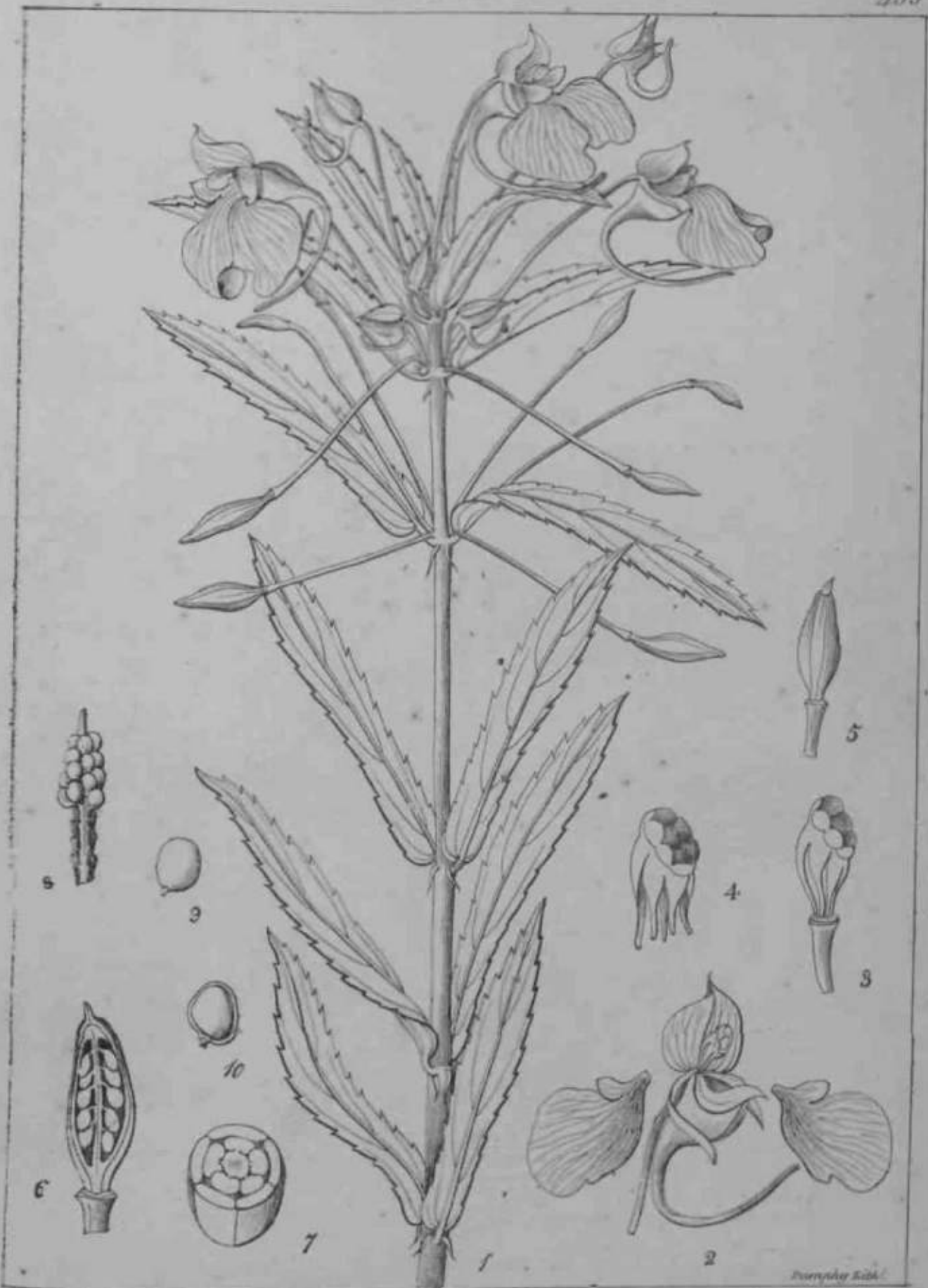


Impatiens viscida (R. ay)

Prunsky, Lith.

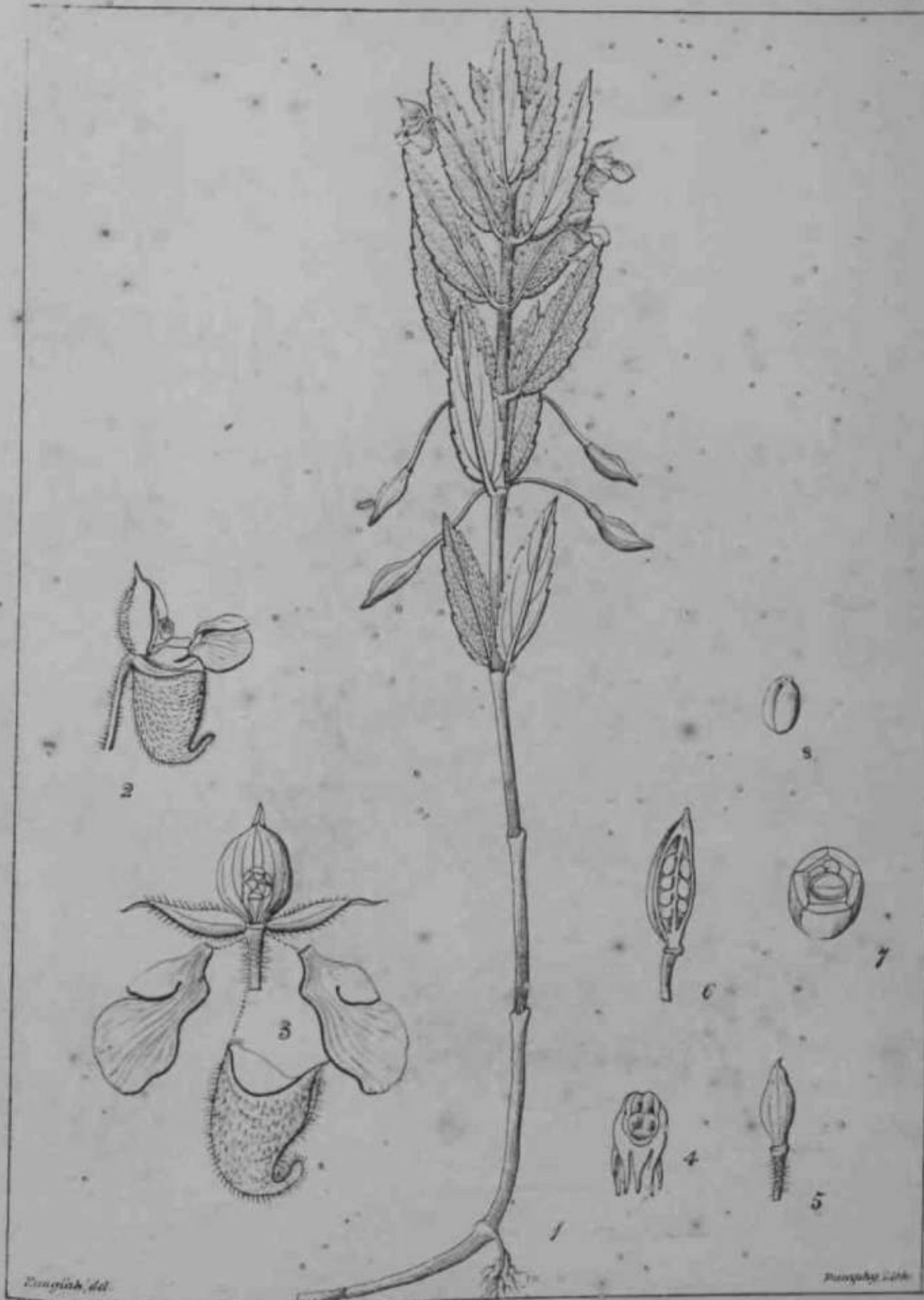


Impatiens uncinata (R. W.)

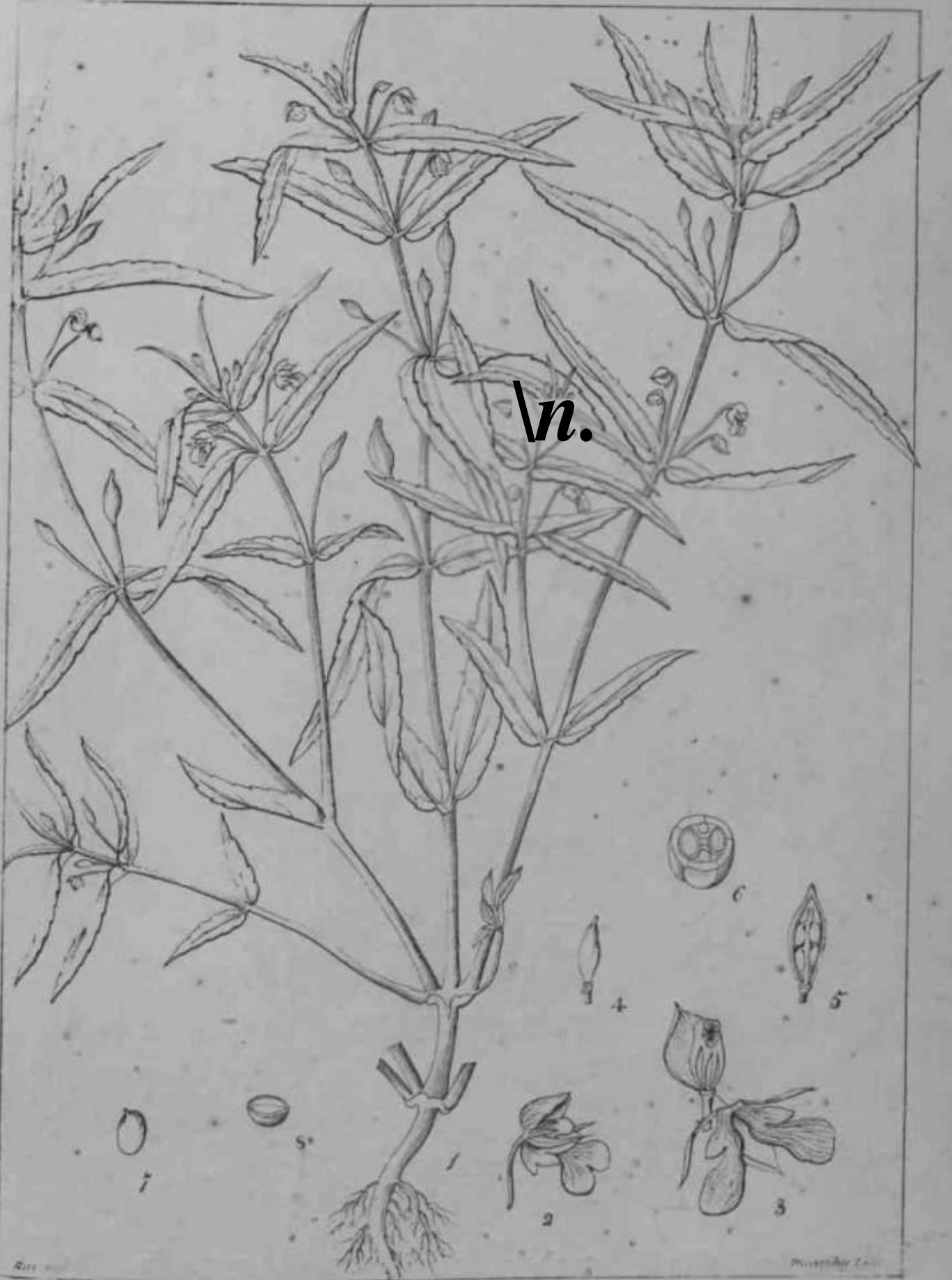


F. von Sieber del.

Impatiens fasciculata (Lam.)



Impatiens tomentosa (Steyne)



ln.

Rott. 1841

Weylandt del.

Impatiens rosmariifolia W&* (Rott.)



Impatiens rivalis

Solan.

*Legu t/mvne *ft*

752
398

I *



R. n. g. a. h. d. l.

Crotalaria Niton u . 1 ; . 1 (1)

Dumphy, Lith.



Canavalia gladiata (D.C.)

Dumortier, Lath.



Wimperley del.

Aylesia cana (Willd.) W & A

Wimperley del.



Kunzsch, del.

పండ్ల పండ్ల పండ్ల
Peanoocollie Nam

Phaseolus lunatus (Linn.)

పండ్ల పండ్ల
Peanoocollie - Id.

Mimosaceae.

Leguminosae.

756
836



Desmanthus biquadratus

Desmanthus biquadratus (Willd.)

Boissier, 1842



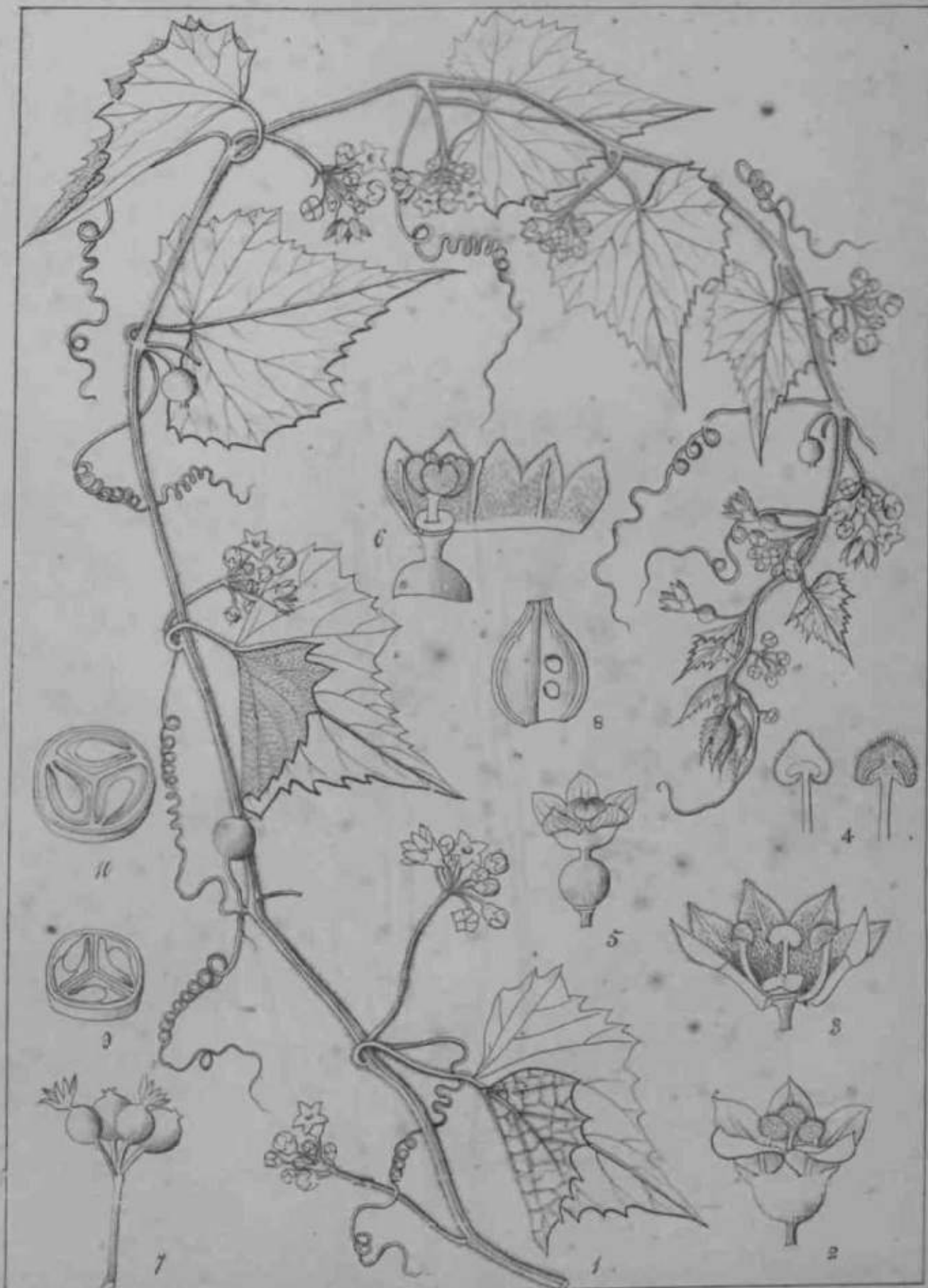
Kunzian del.

7

சிலைமரம்
Acclavaria } Tam.

Cassia (S) Alusia (Roxb.)

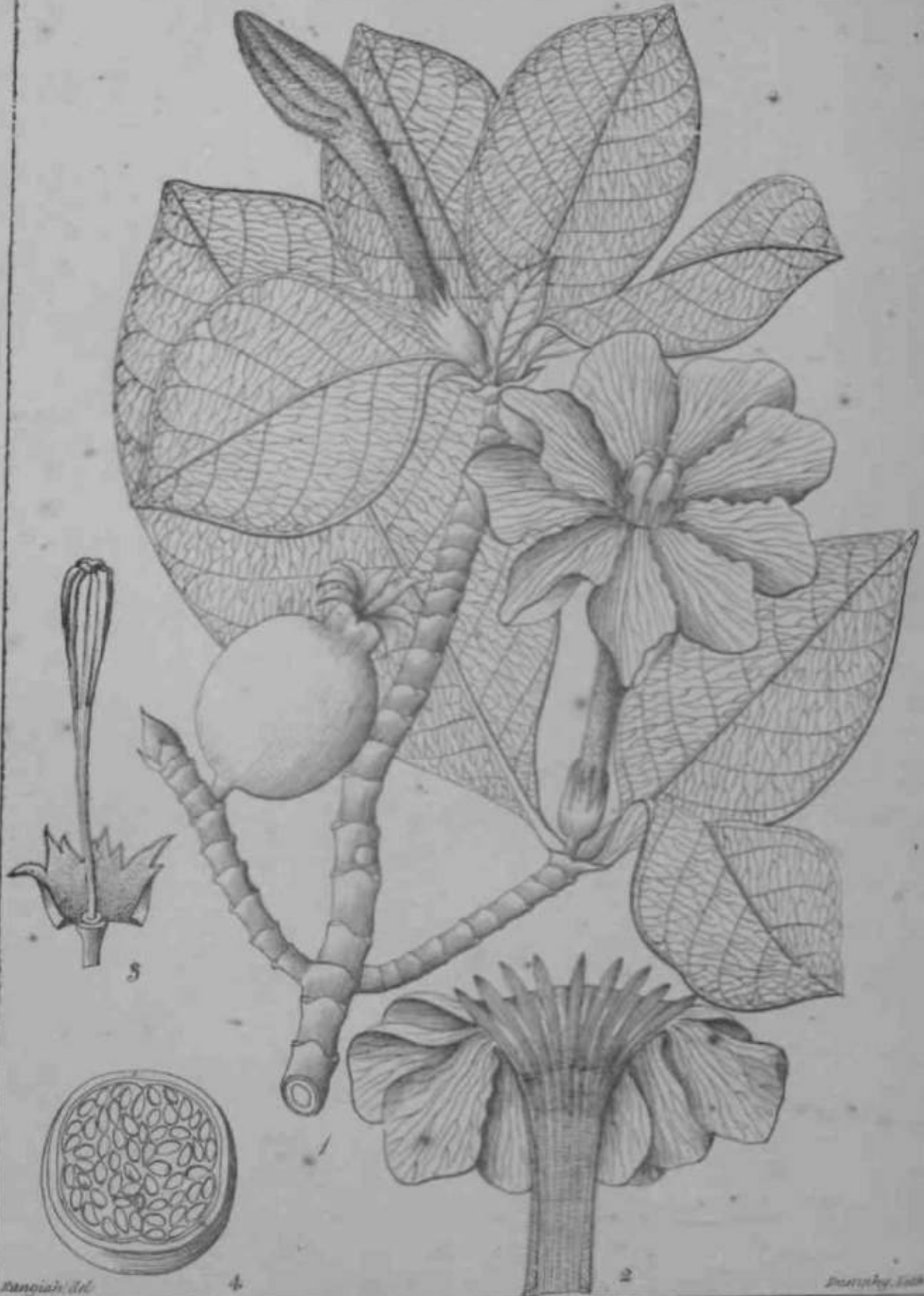
சீலமரம்
Ailanthoides - 12



Gardeniacea

Rubiacea

759
7218



Bongainville

4

2

Barthelemy

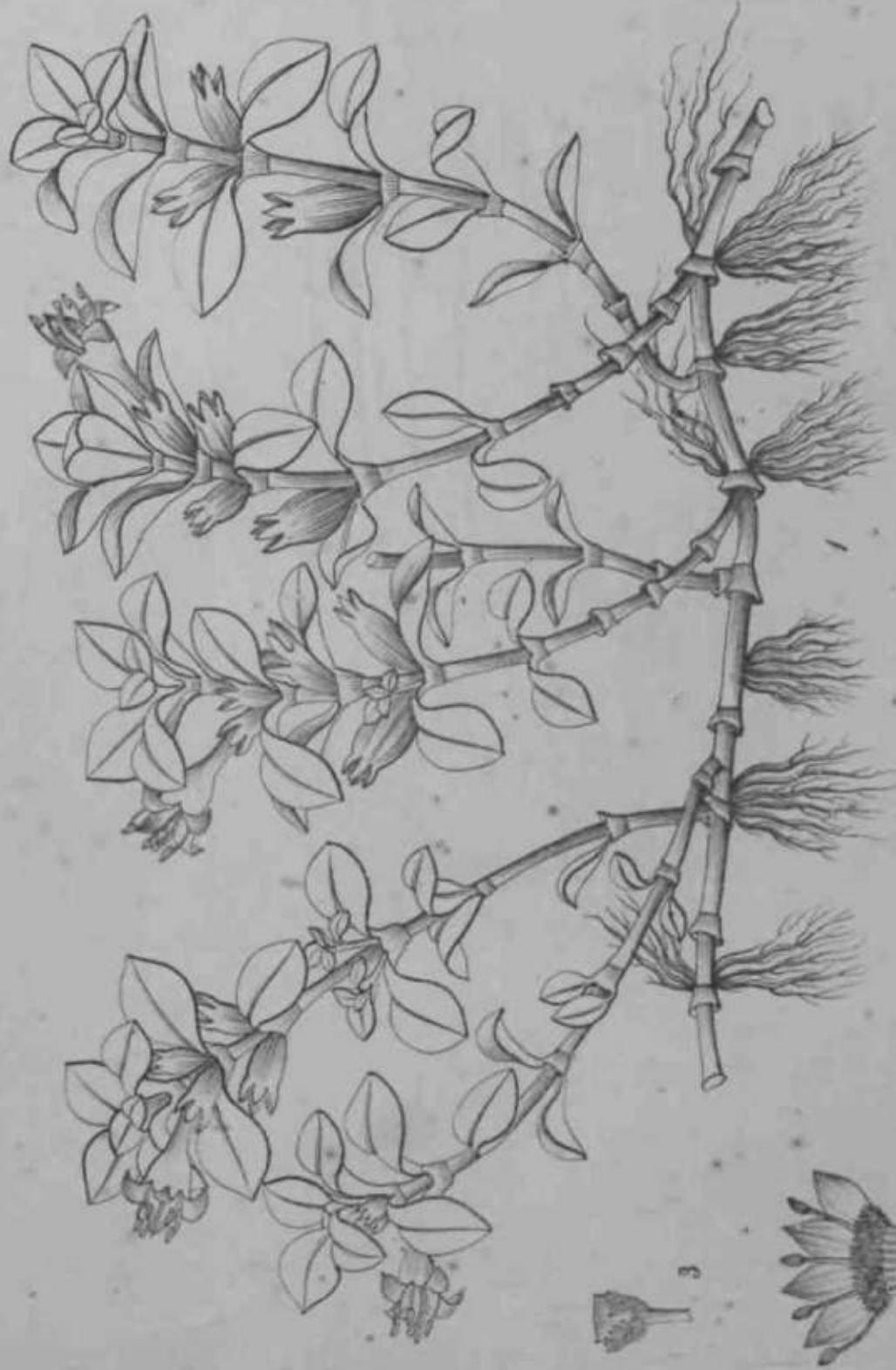
சுமையமரம்
Simbamarum } *Tour*

Gardenia latifolia (Ait)

Euphorbiaceae.

Rubiaceae.

760
1837



Boissier, det.

Boissier, det.

Hydrophylax maritima (Lam.)

Roxburghiana

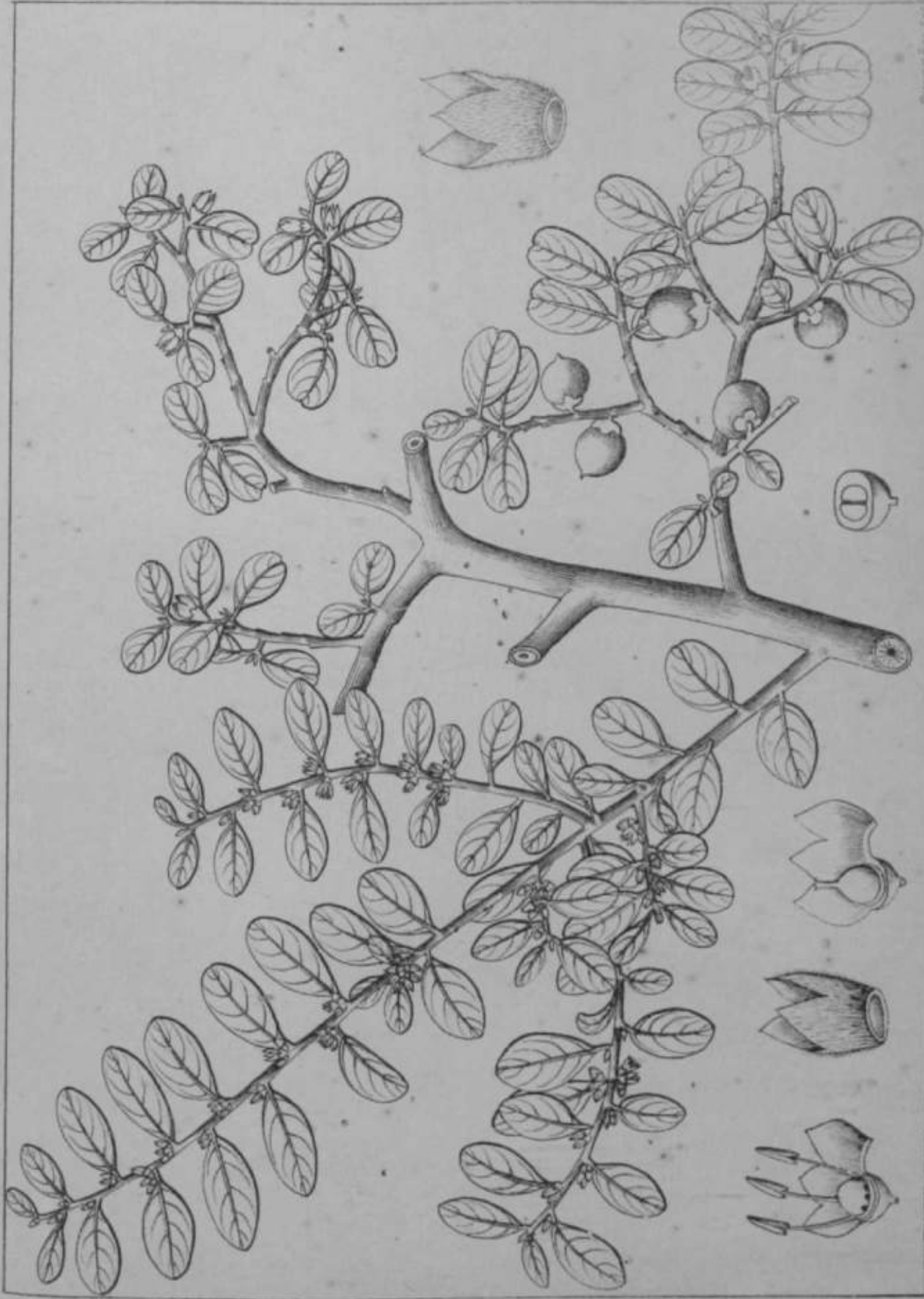


Microtopia garcinifolia Wall.
Euonymus garcinifolius Roxb.

Dumphy del.



Ludovigia prostrata (Roxb.)



Parsons, Bot.

*Alaba buxifolia (Sw.)
Serrula buxifolia (Roxb.)*

Castrochiana.

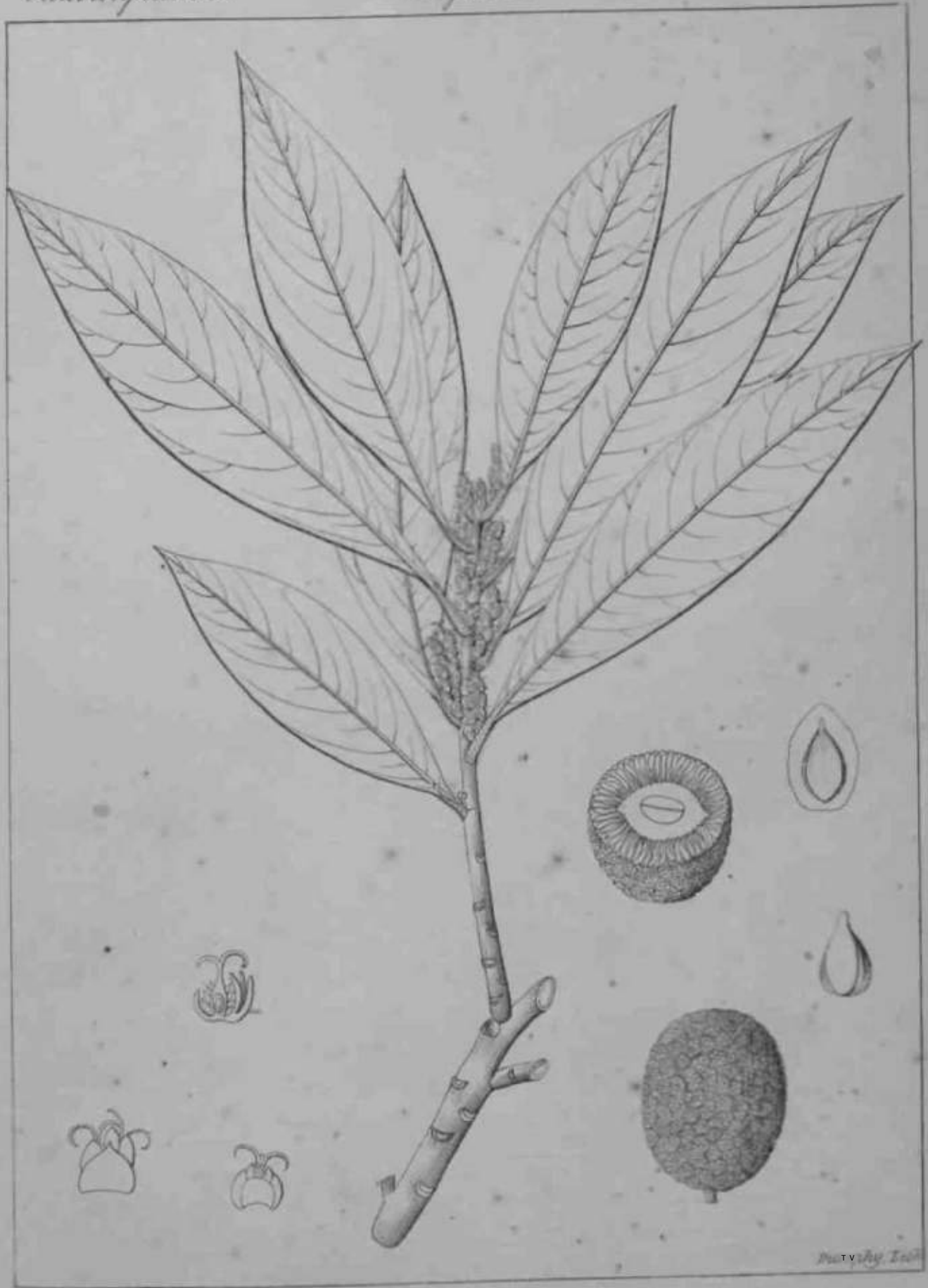
Myrica.

764



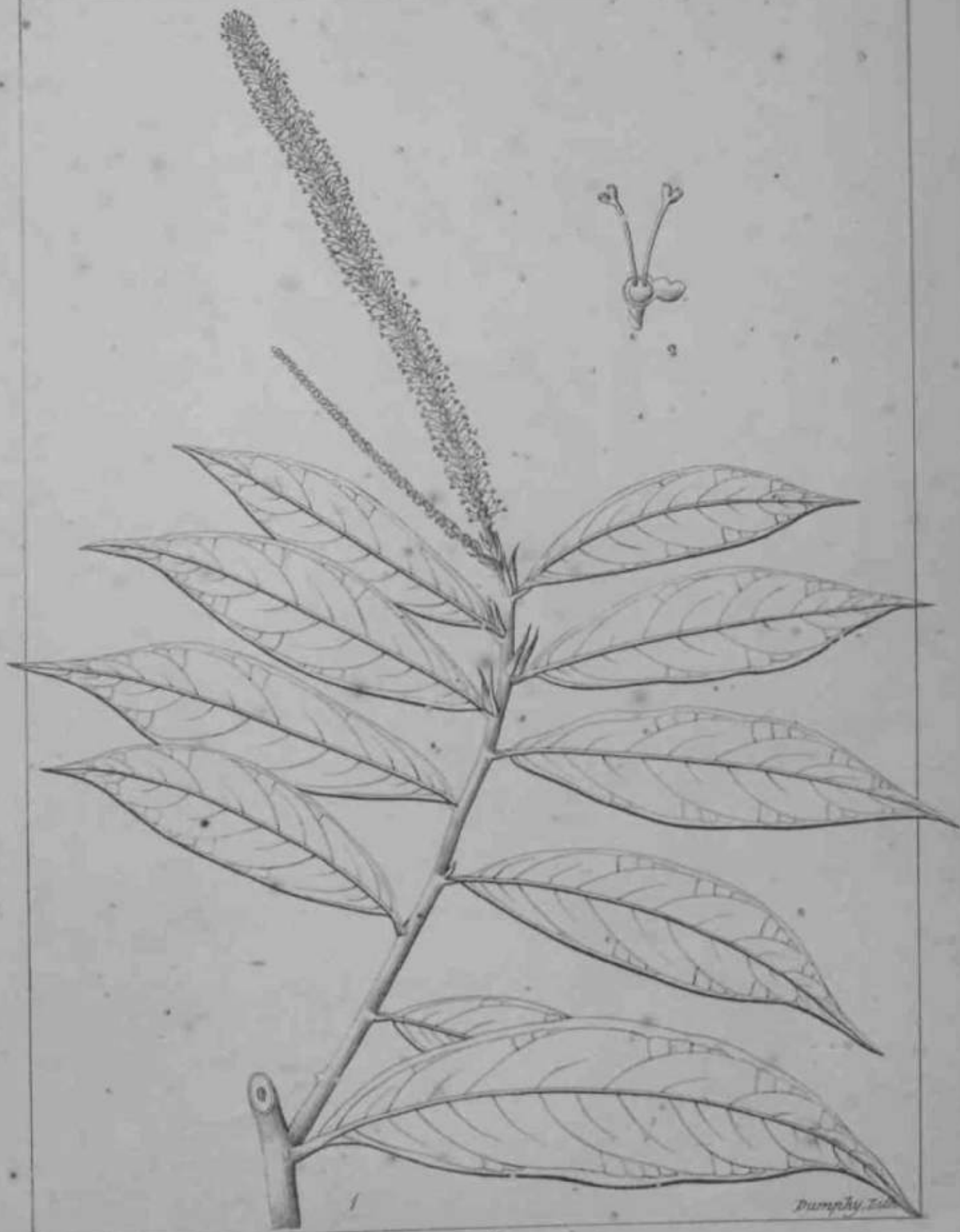
Myrica integrifolia (Roxb.)

Pamphylus Lat.



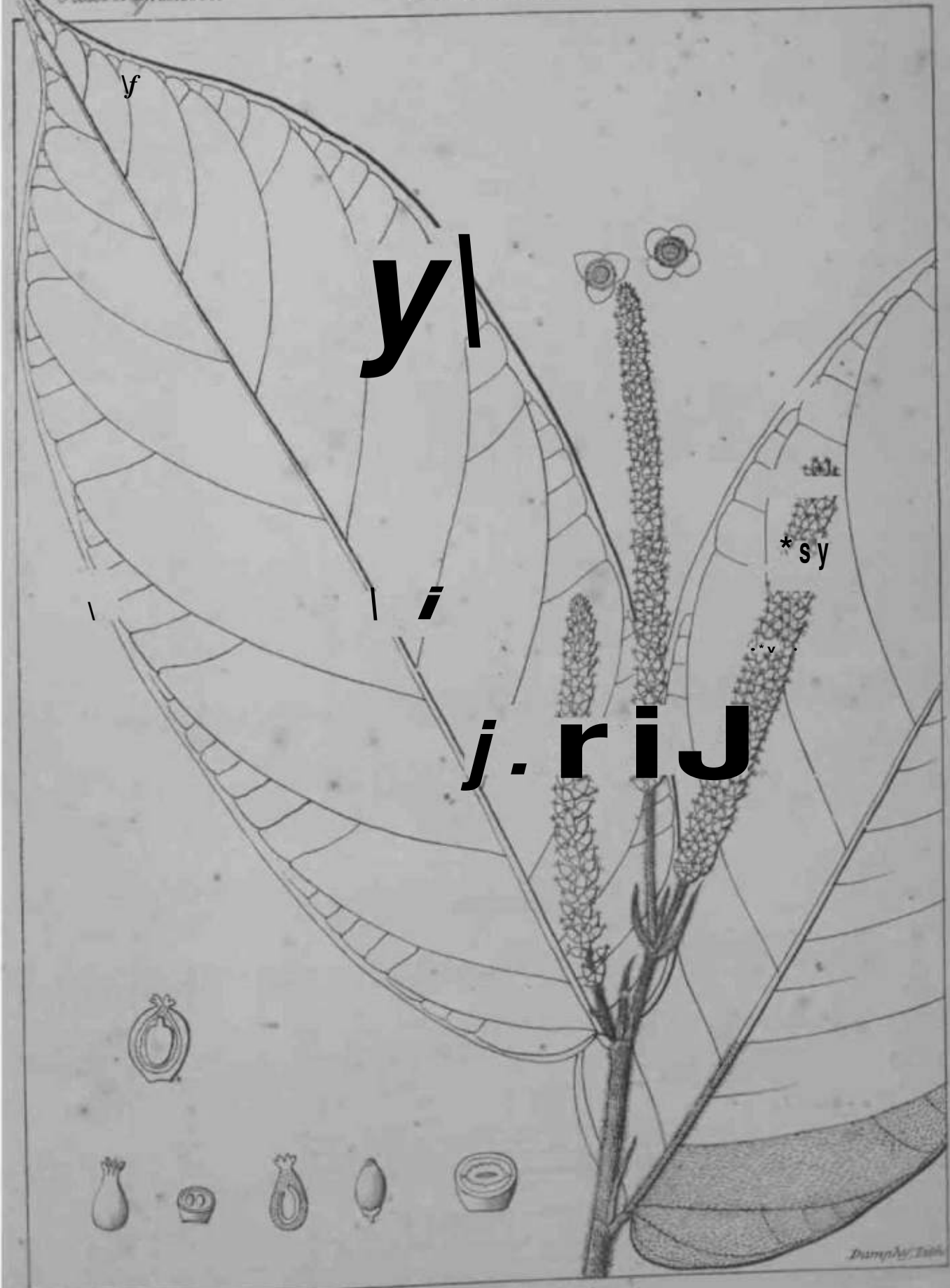
Dr. V. S. S. S.

Myrica integrifolia (Roxb.)



Antidesma lanceolaria
Silago lanceolaria (Roxb.)

Dumphy, Lill.



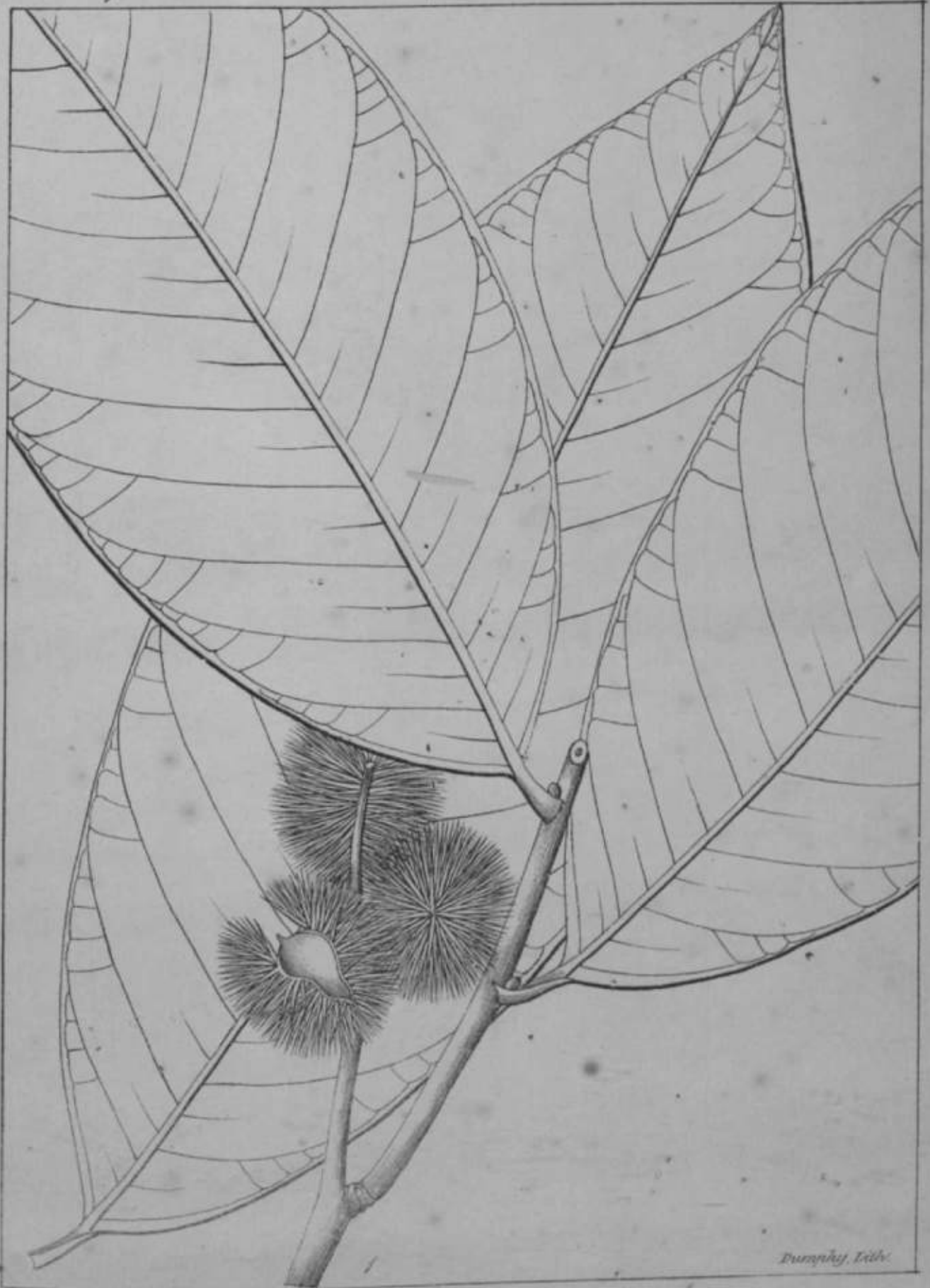
Antidesma tomentosa ♀
Antidesma tomentosa (Roel)

Andisomesa

Andisomesa fomentosa &
Chilae fomentosa (Reich)

Barbaryhuana





Dumortier, Lith.

Quercus castaniifolia Nutt. / Roxb.

Reichb. f.

Cupulifera.

770



Barthol. Ktbe.

Quercus armata (Red)

Boerhaavia

Aristolochia

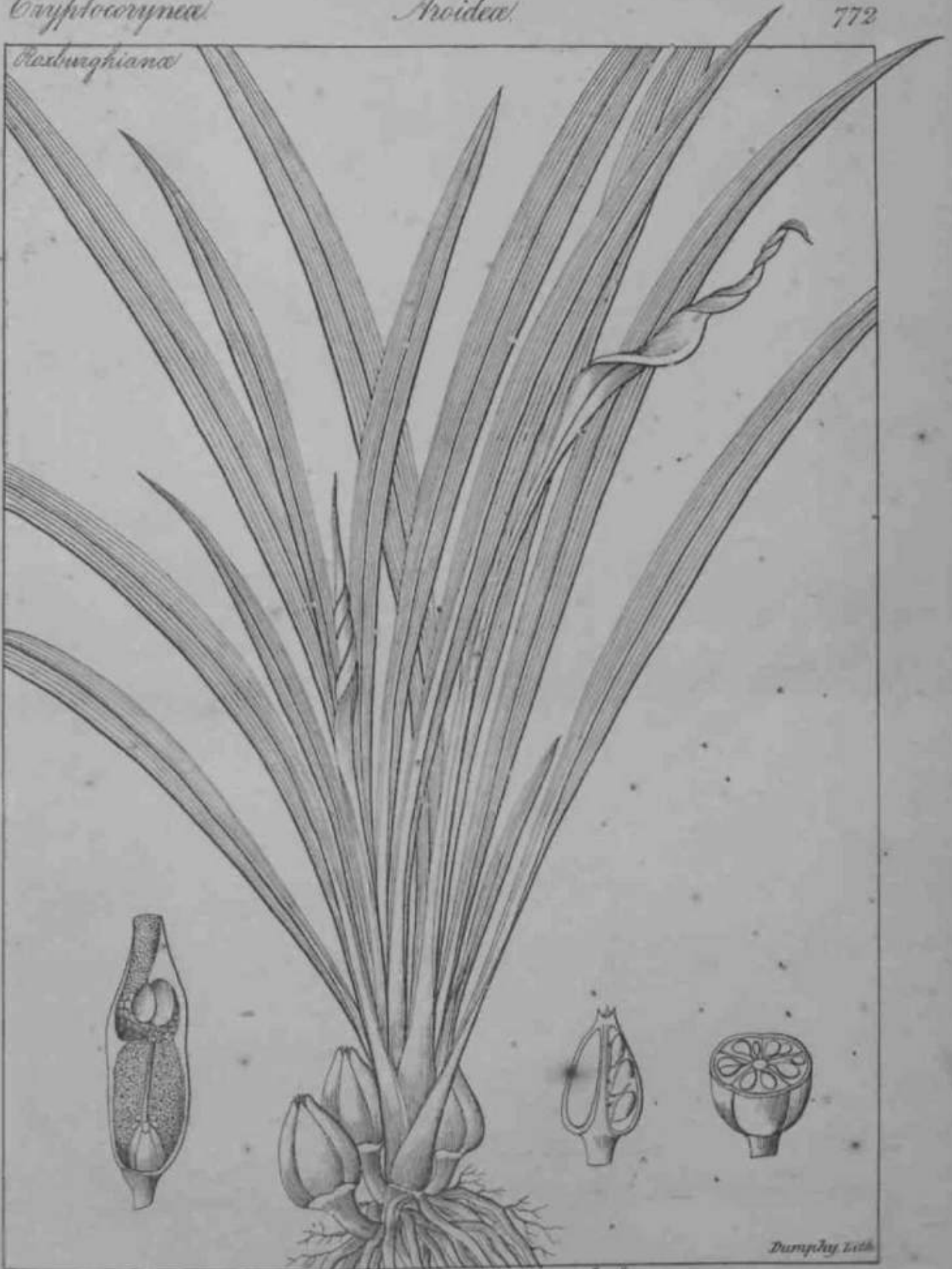
771



Aristolochia aristolochioides (Roxb.)

Zeitschrift für Naturgeschichte

Roxburghiana



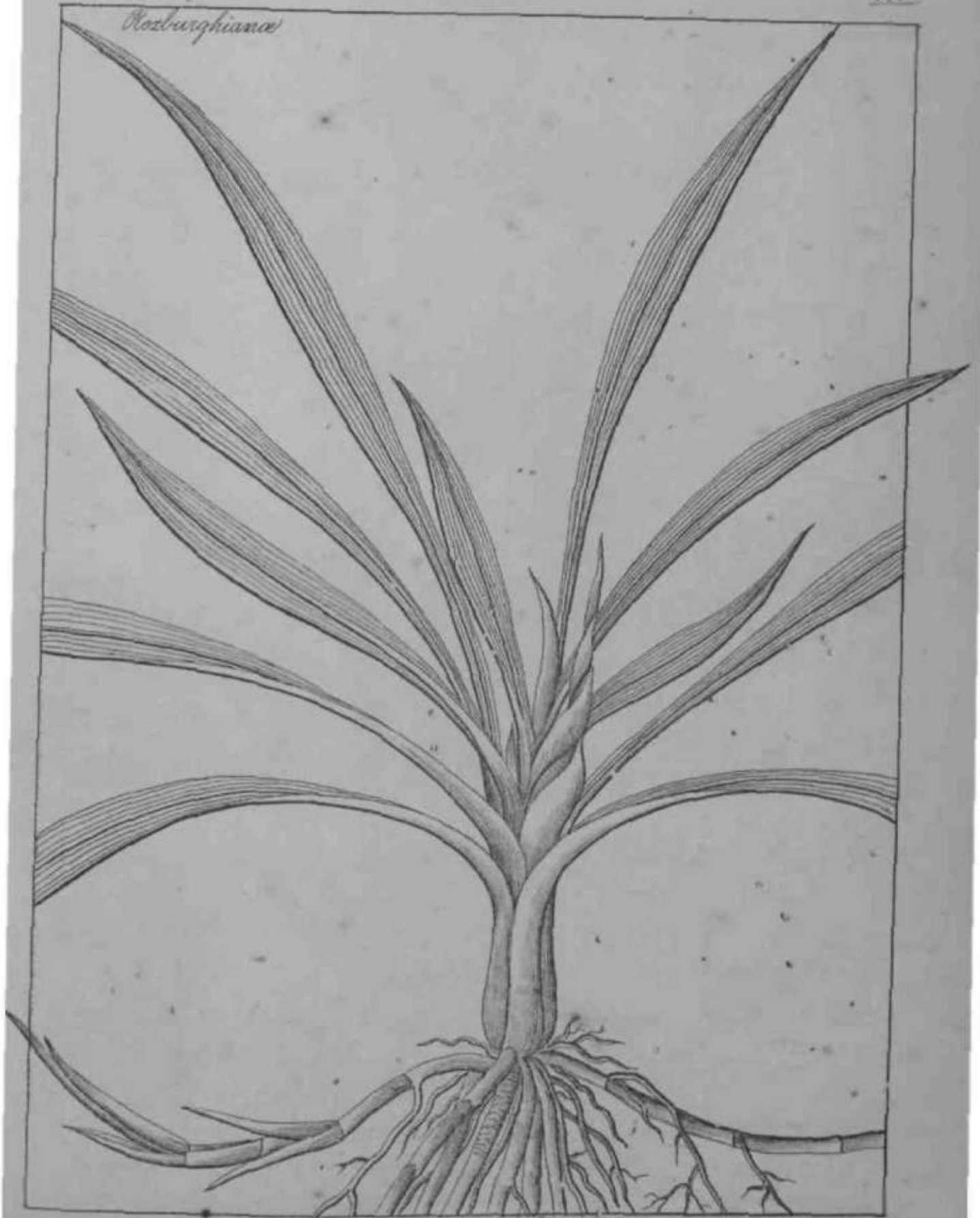
Cryptocoryne roxburghiana (Fisch.)
Ambrosinia roxburghiana (Roxb.)

Cryptocoryne

Acidea.

773

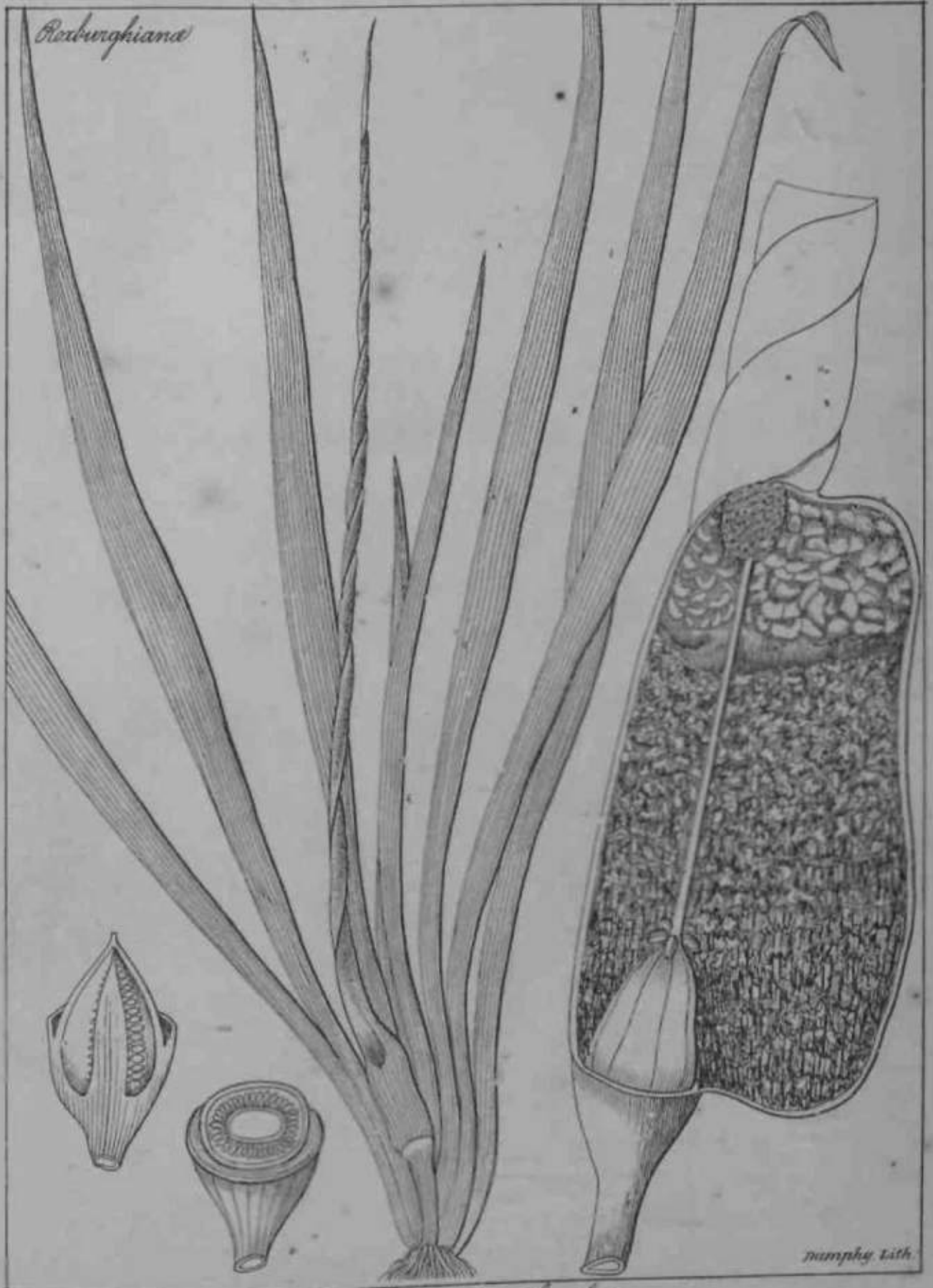
Rosburghiana



Cryptocoryne rosburghiana

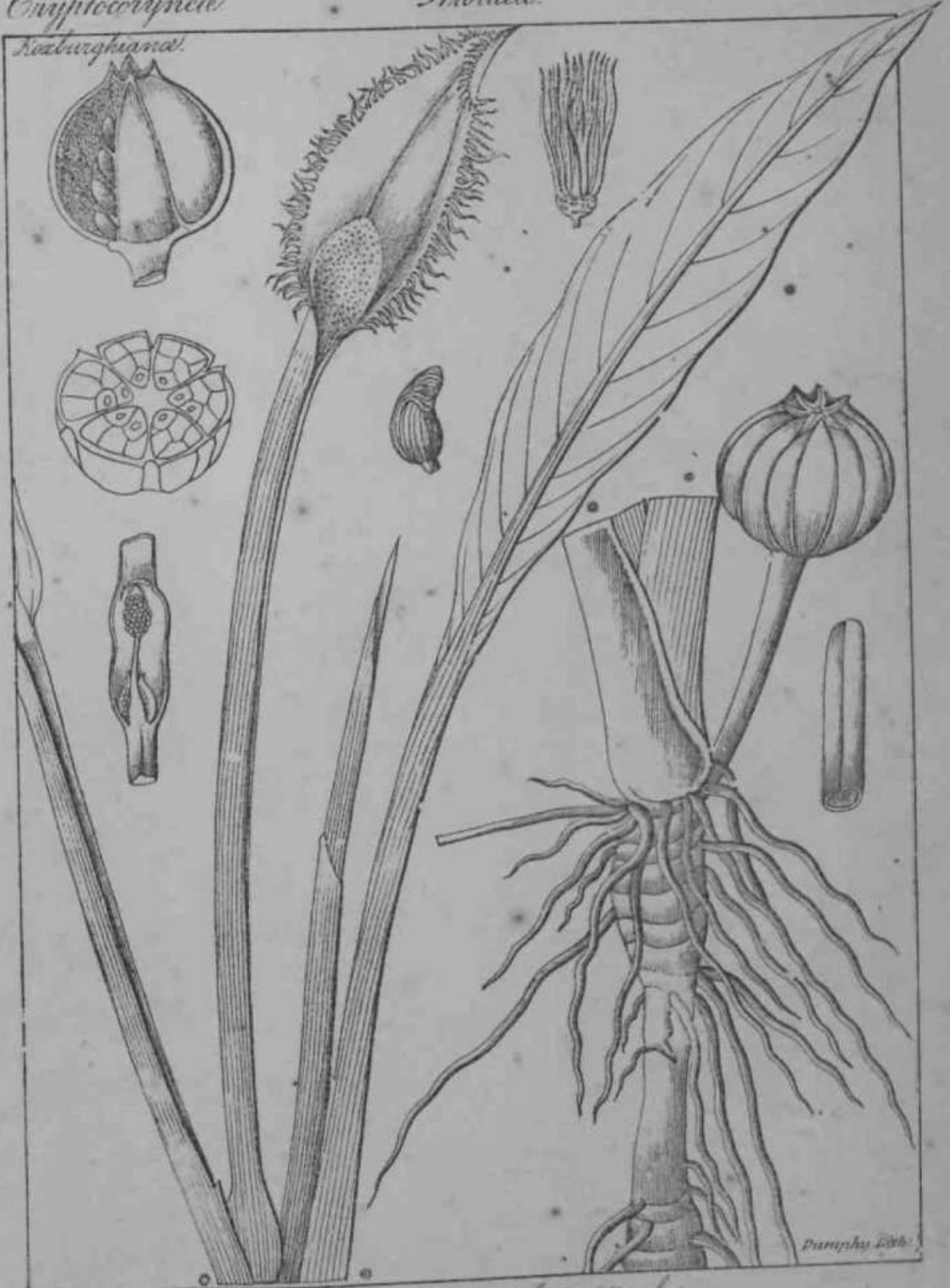
Dumphy. Lith.

Redburghiana

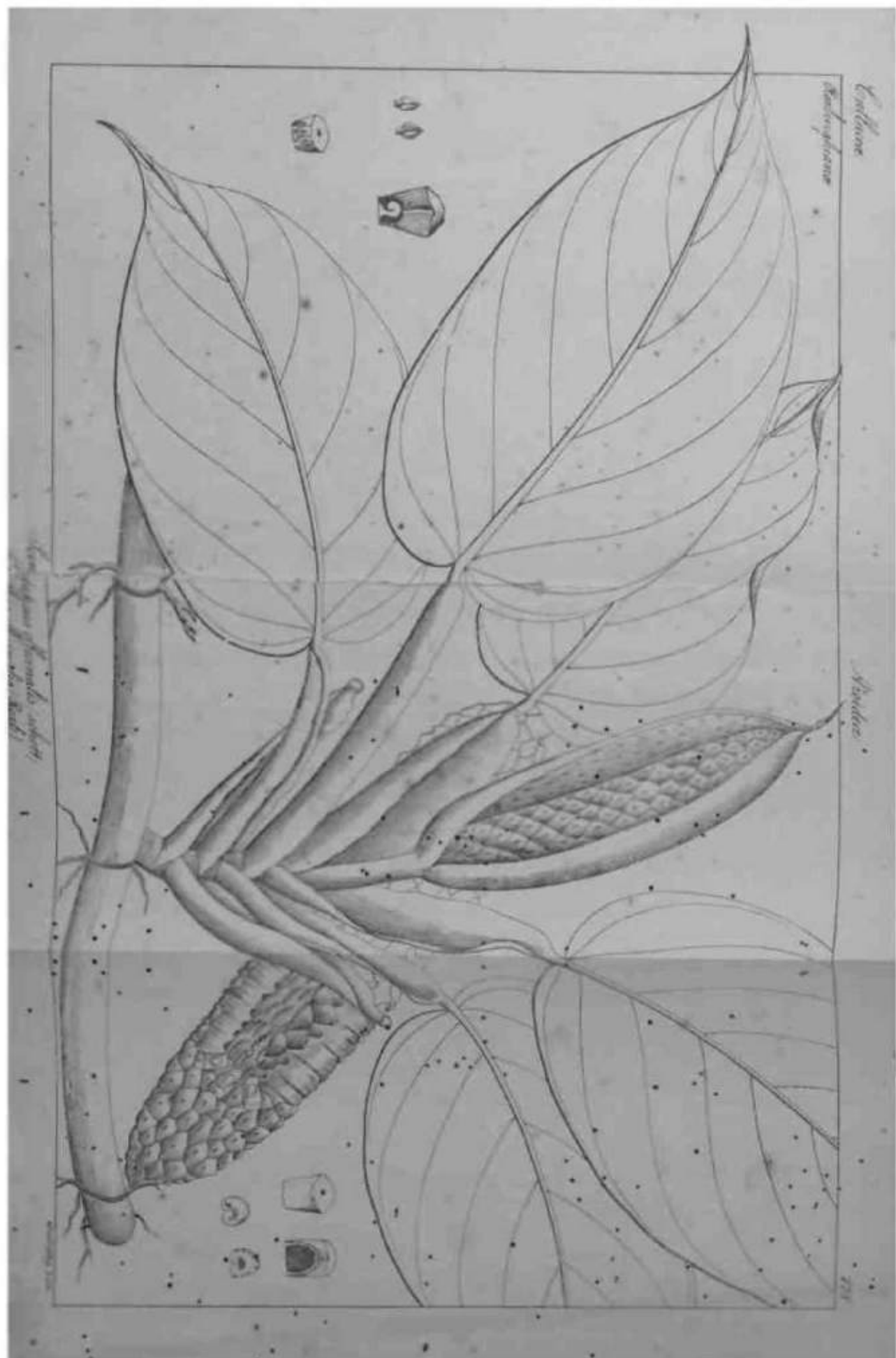


Cryptoc. ft/M? unilocularis
Ambrosinua uniloc. laris (Reel)

Koeburghiana.



Cryptocoryne ciliata (Fisch.)
Ambrosinia ciliata (Reab.)

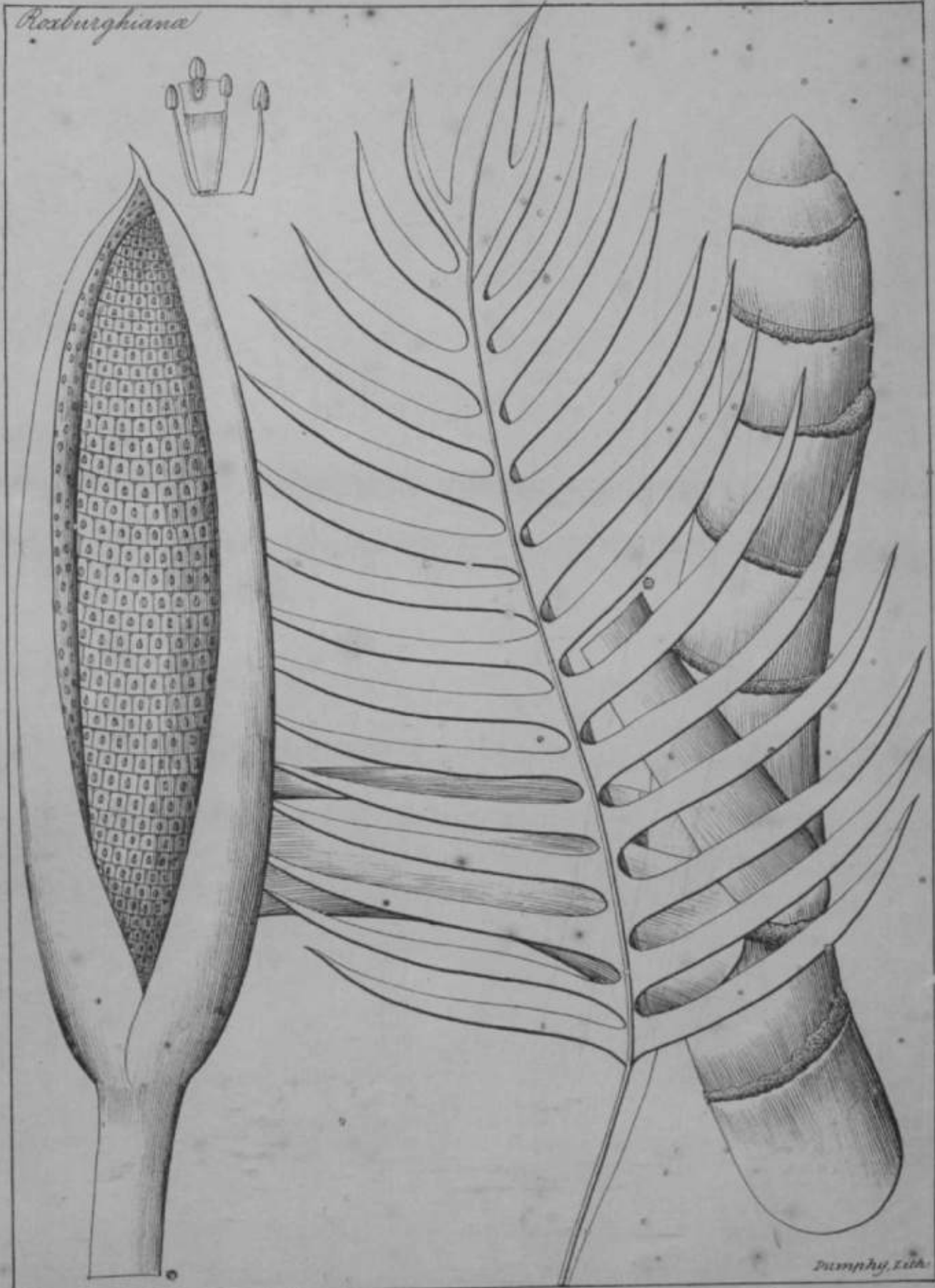


Conocarpus
floridus

floridus

Conocarpus floridus
Michx.

Roxburghiana



Scindapsus decursivus (Scholl.)
Pothos decursivus (Rosl.)

Collacea

Arioidea

280

Roxburghiana



Dumort. Lith.

Scindapsus peepala (Schott)
Pothos peepala (Rox)

Callaceae
Rubiaceae

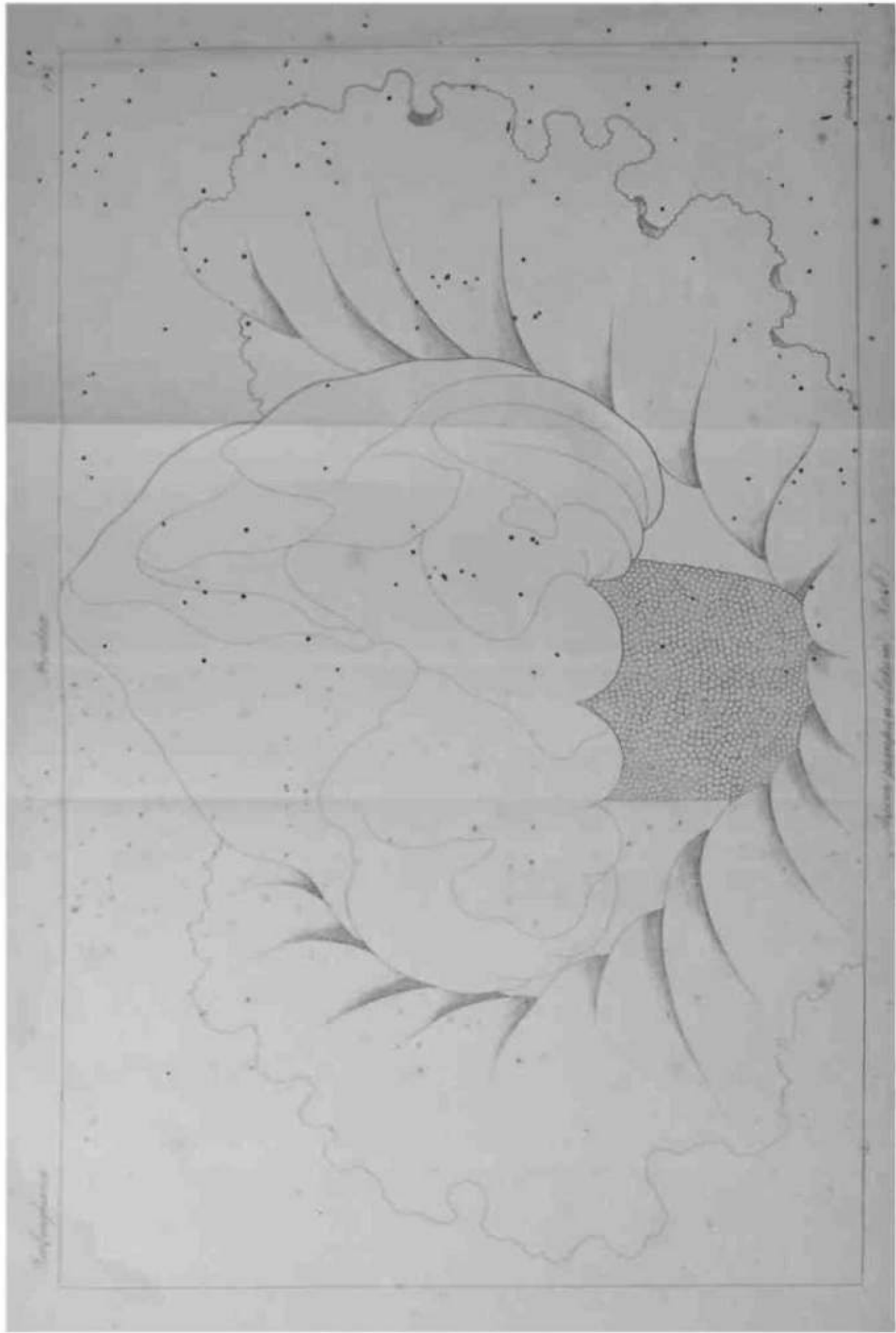
Ardisia

781



Sundappus peruviana (Schell)
Pitheca peruviana (Kral)

r\/-



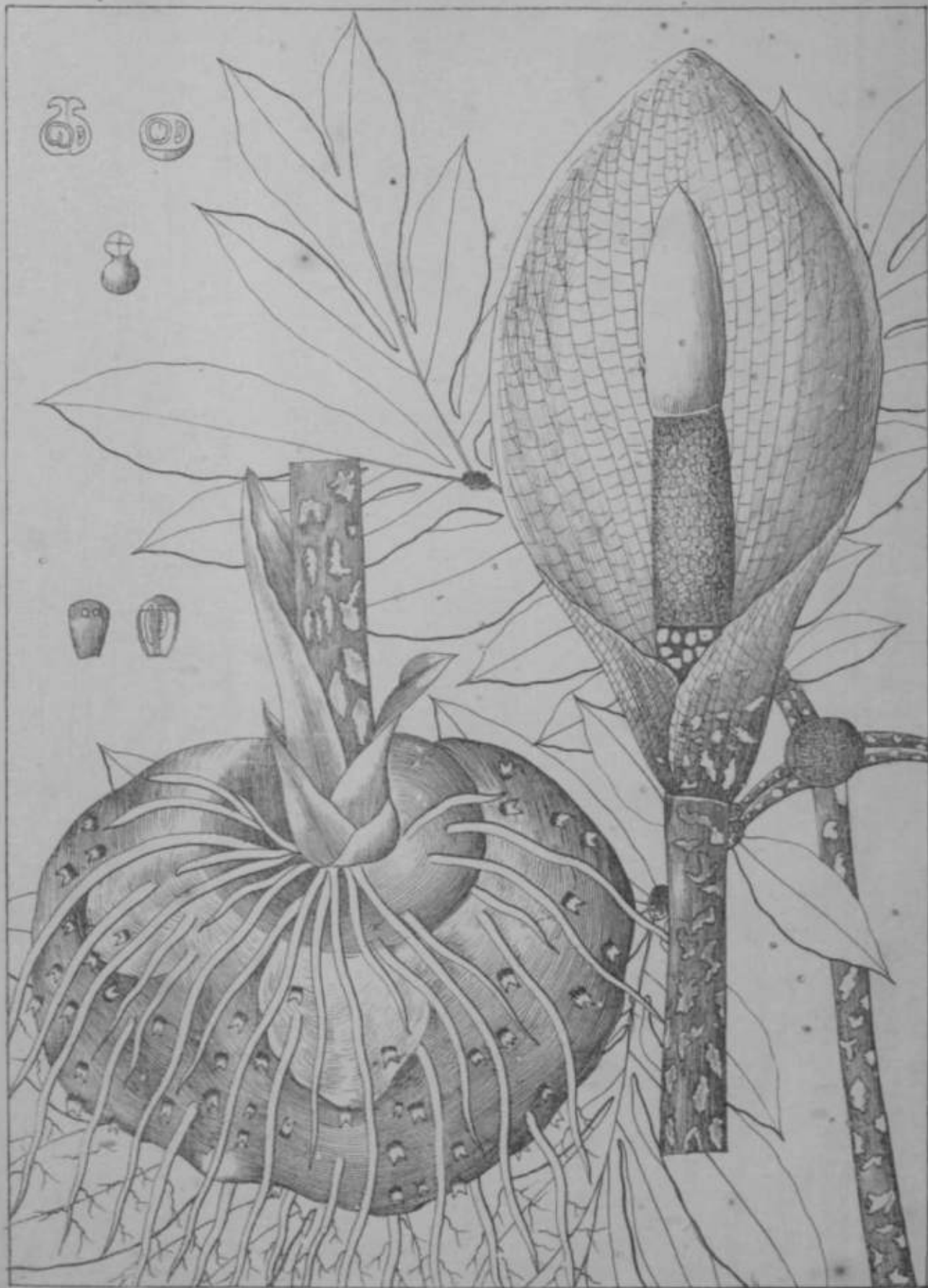
1892

Asplenium

Asplenium

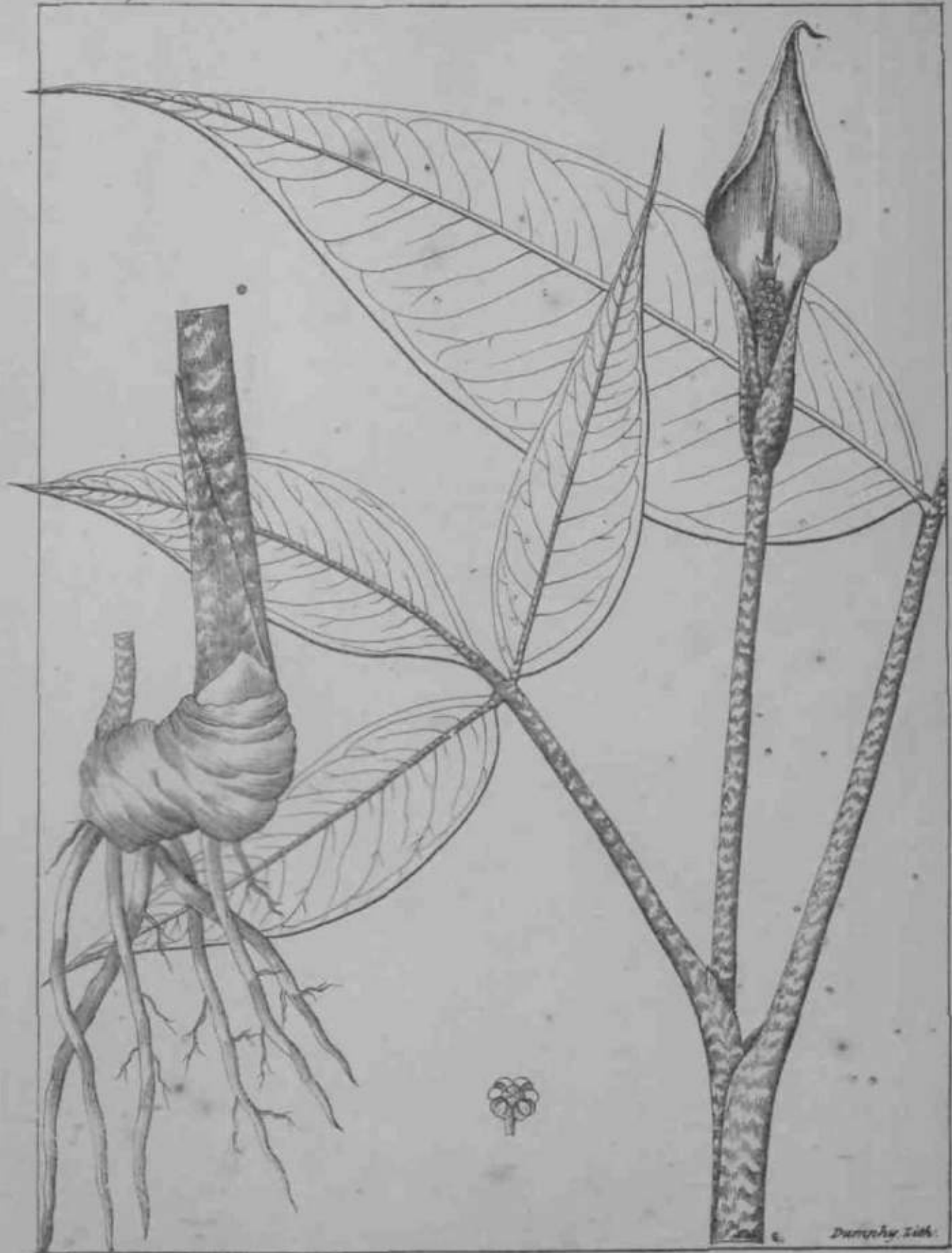
1892

Asplenium platyneuron (L.)



Arum bulleferum (Roab)
Pythonium (Schott)

Dumphy, Lic.

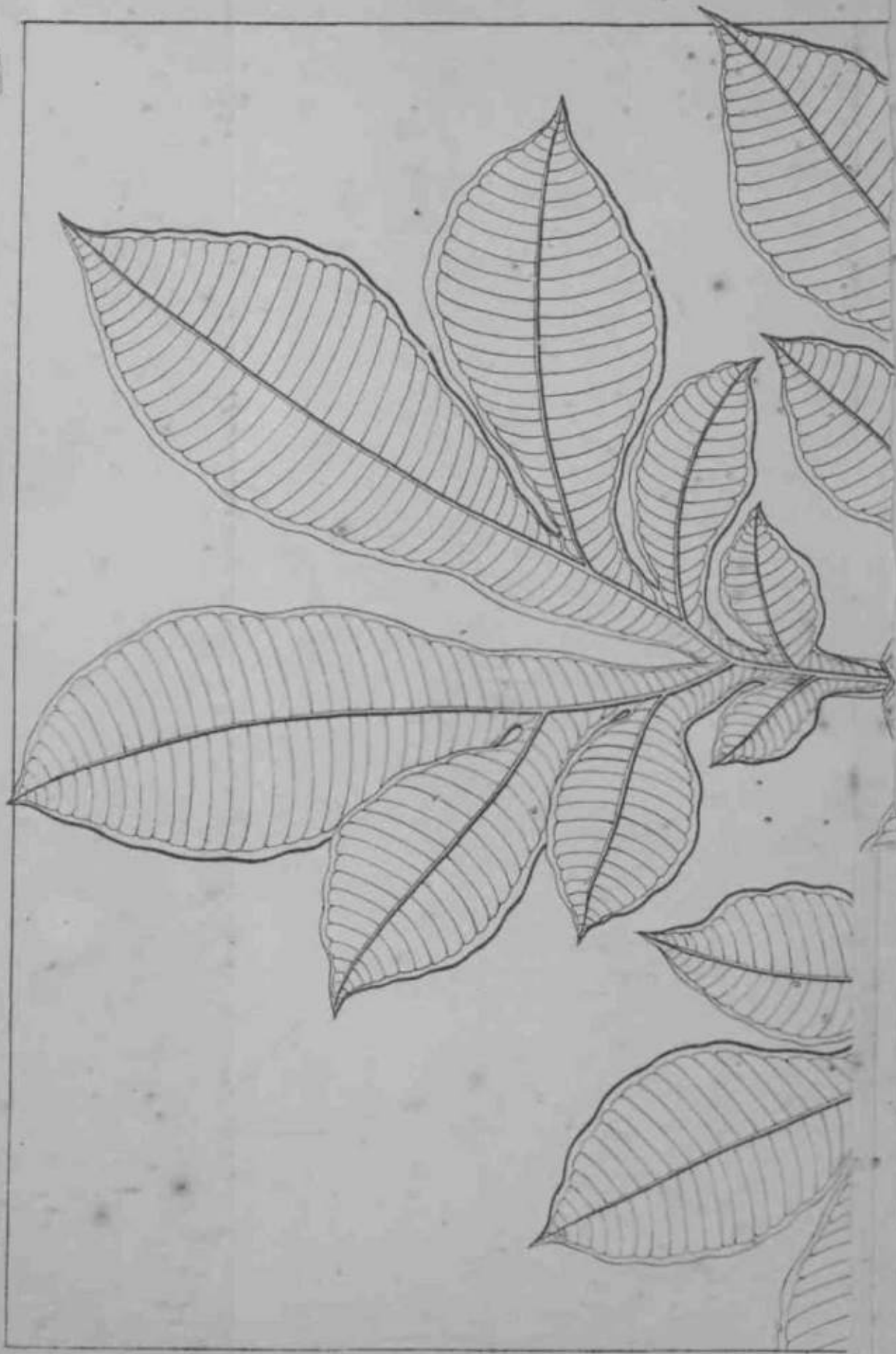


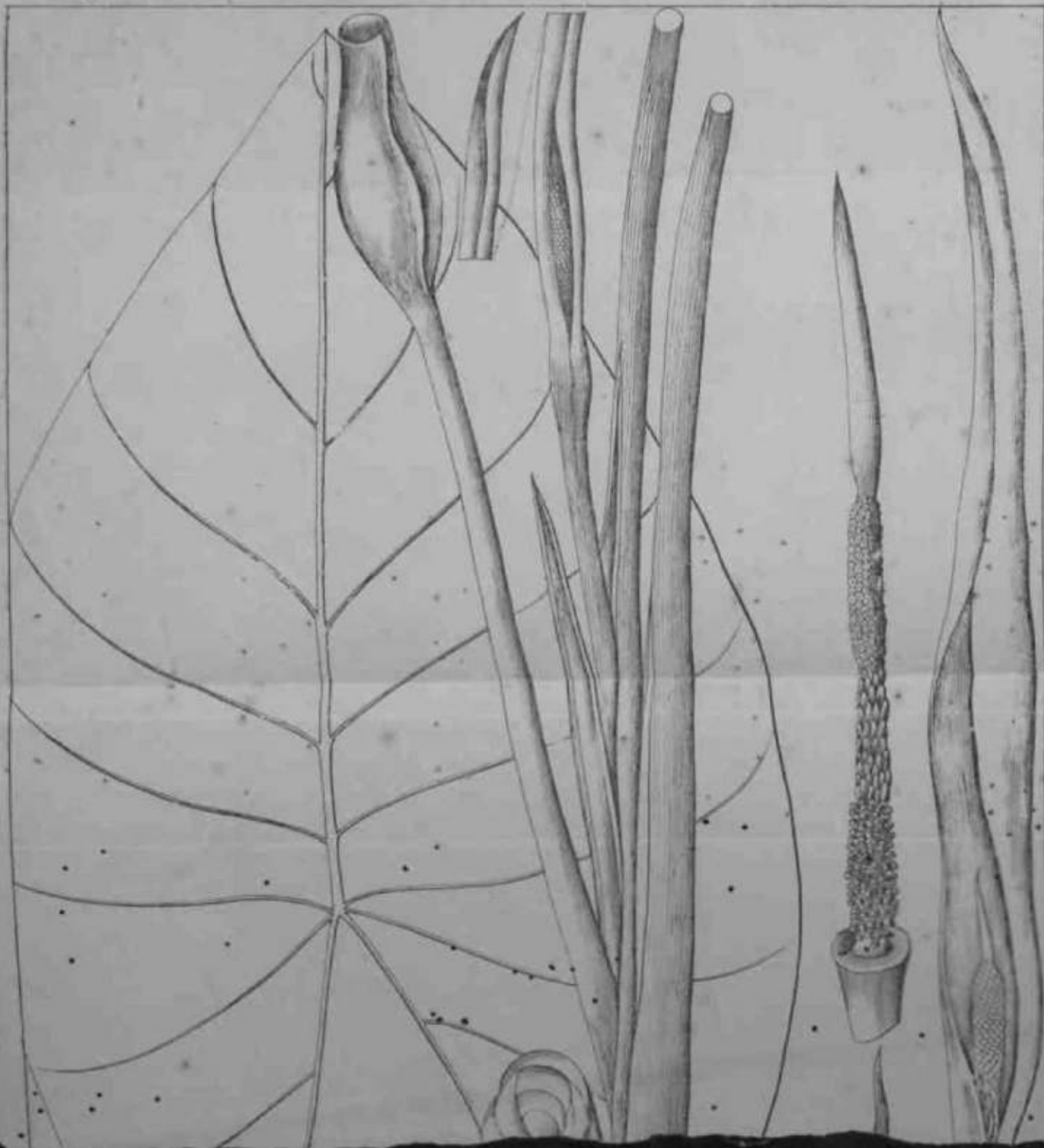
Arum cuspidatum (Reich.)

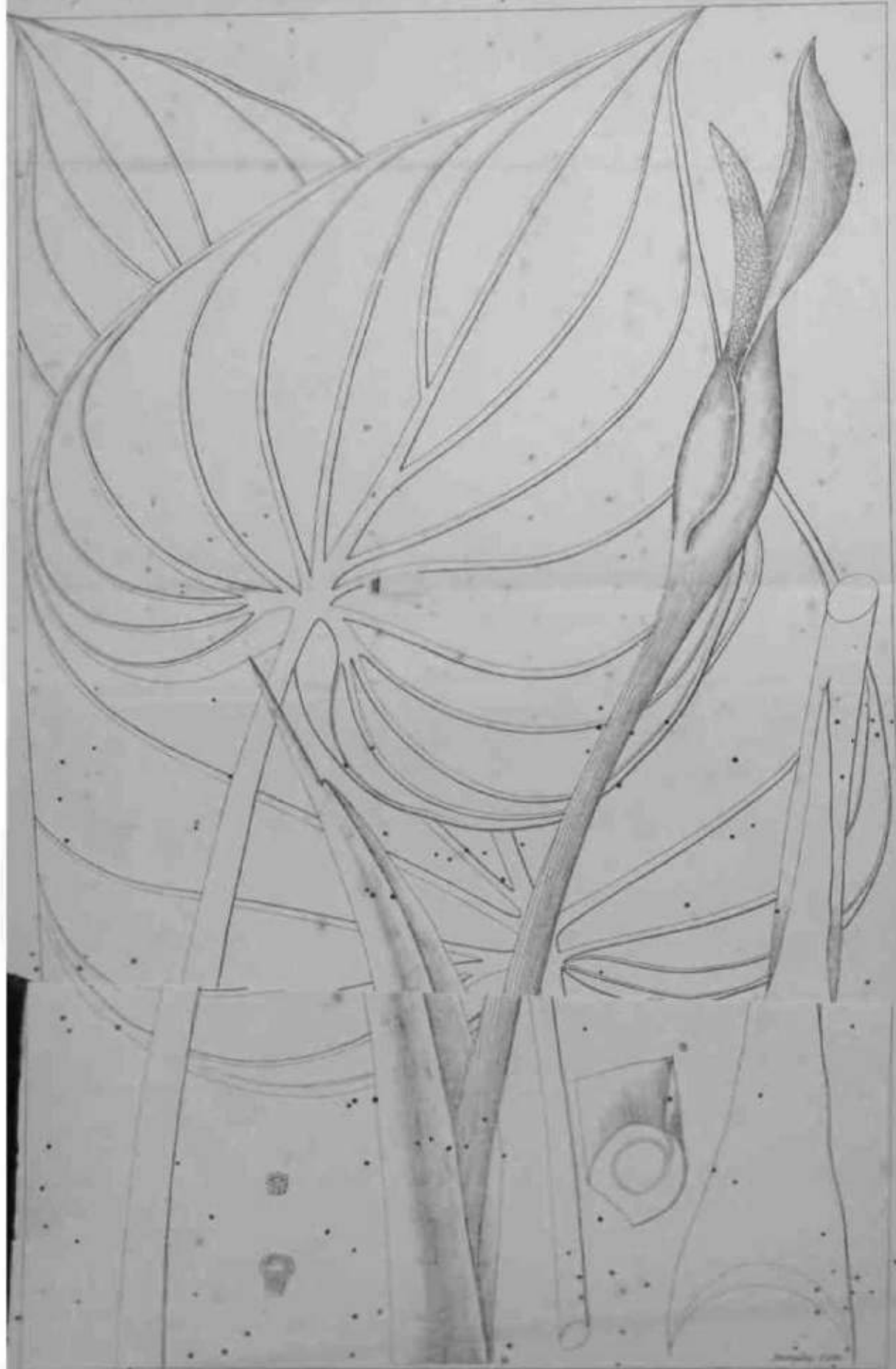
Reuborgiana

Arcidea

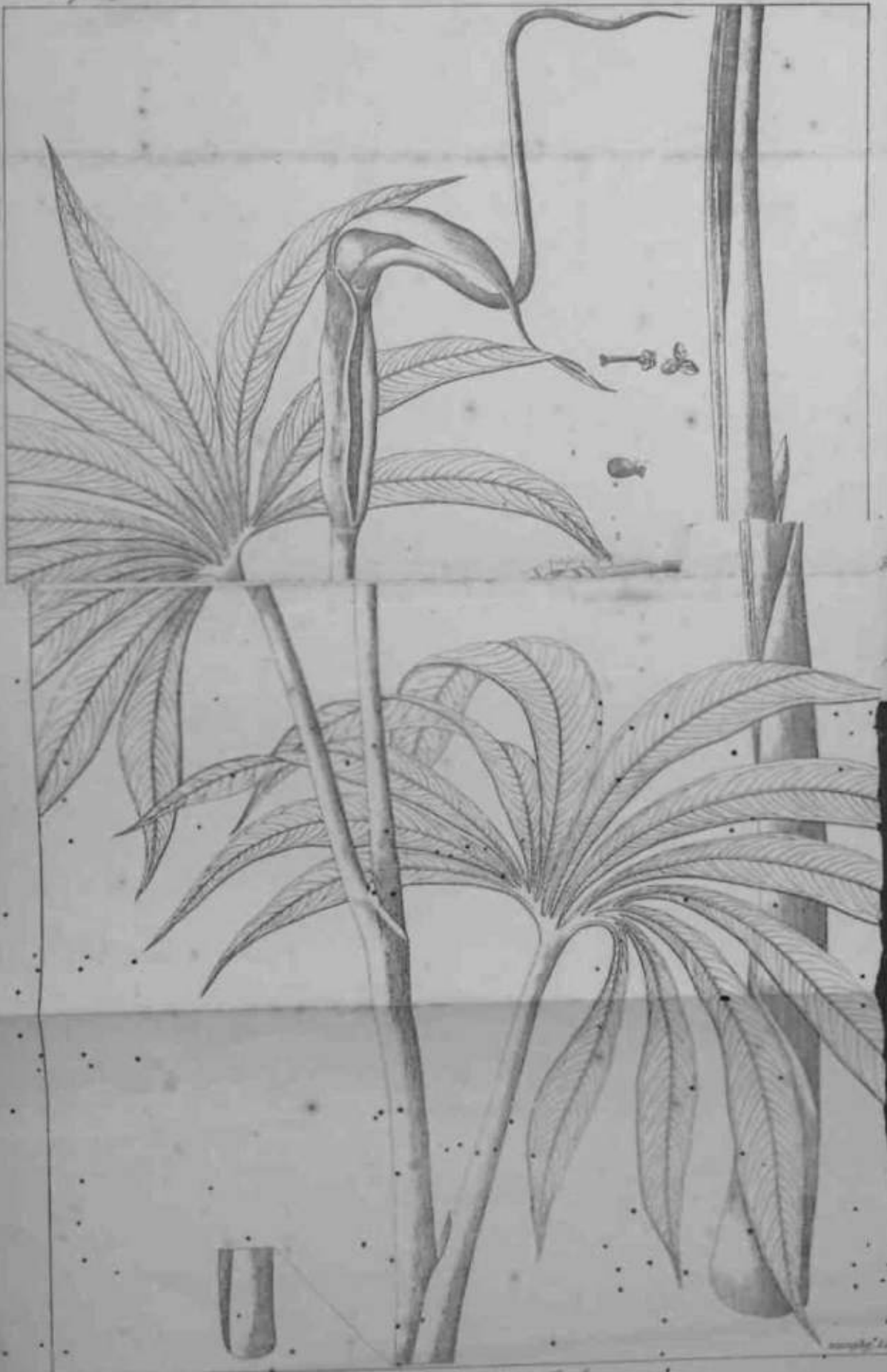
785



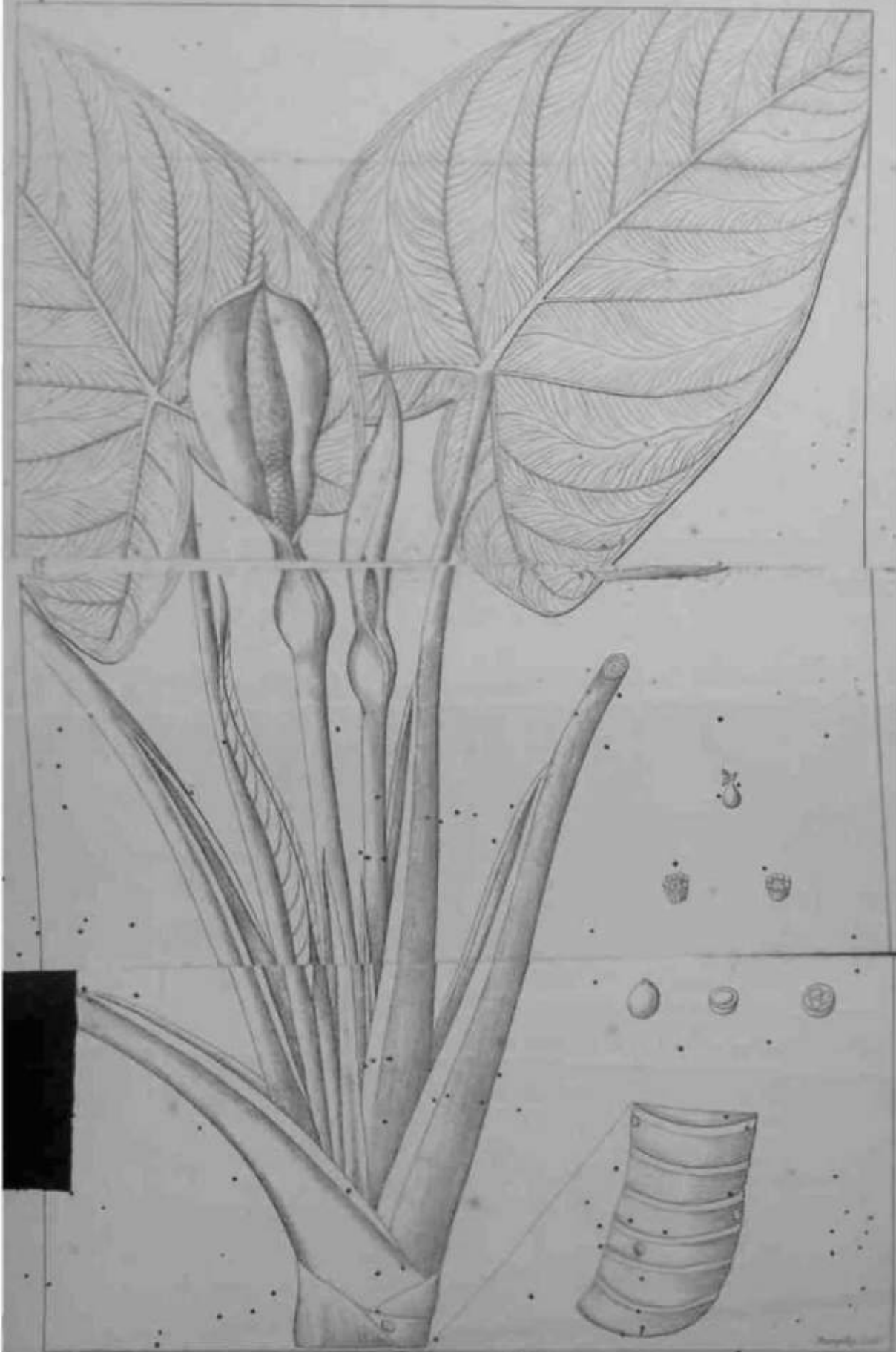




Polypodium acido-ferum (L.) Kuhn
Polypodium L. var. acido-ferum (L.) Kuhn



Arisaema caryophyllum Karst.
Arisaema Marl.

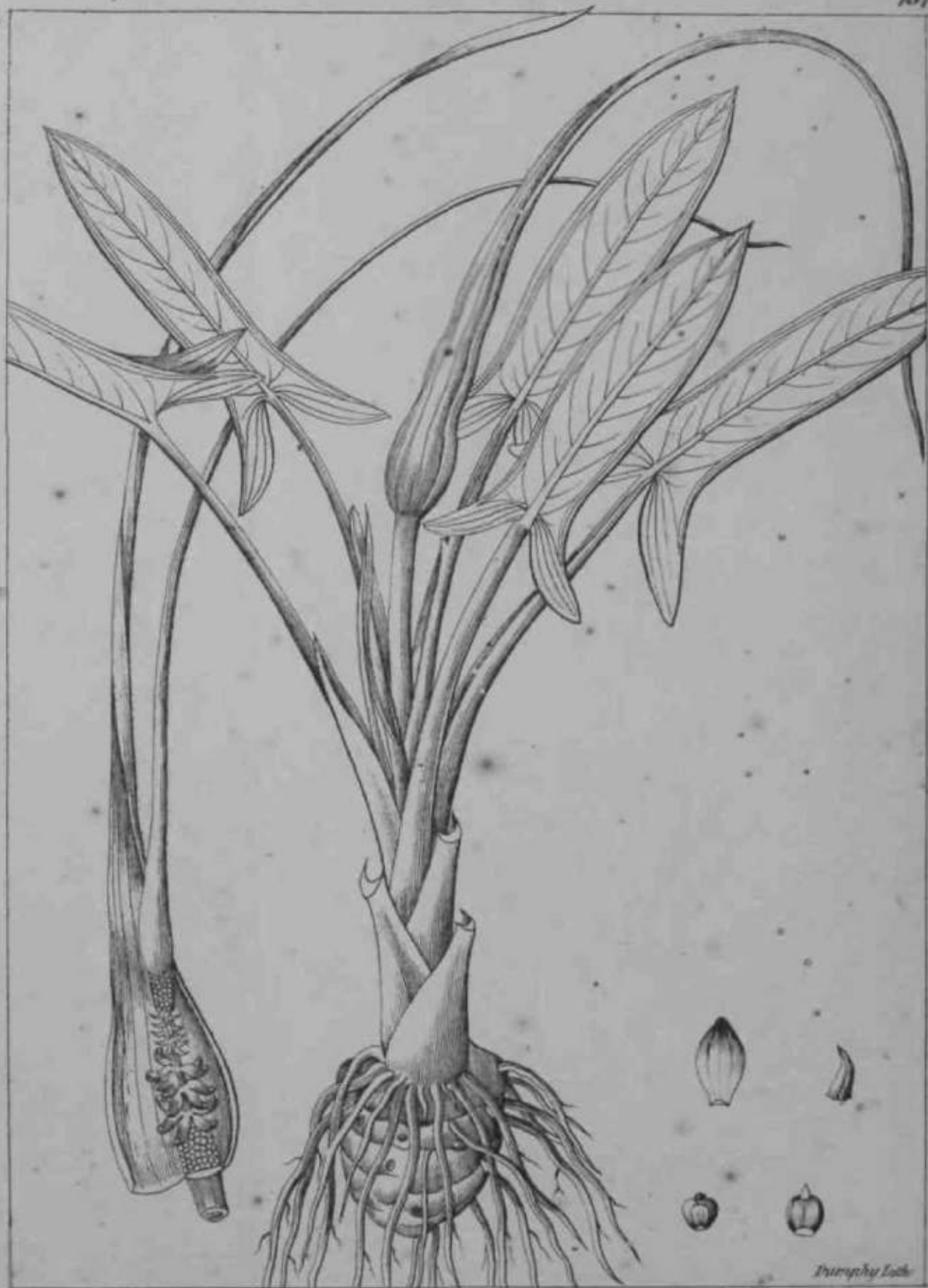


Calophyllum (Rubiaceae)
Calophyllum (Rubiaceae)



Demaree del.

Arum divaricatum (Linn. Presl)
Typhonium (Schott)



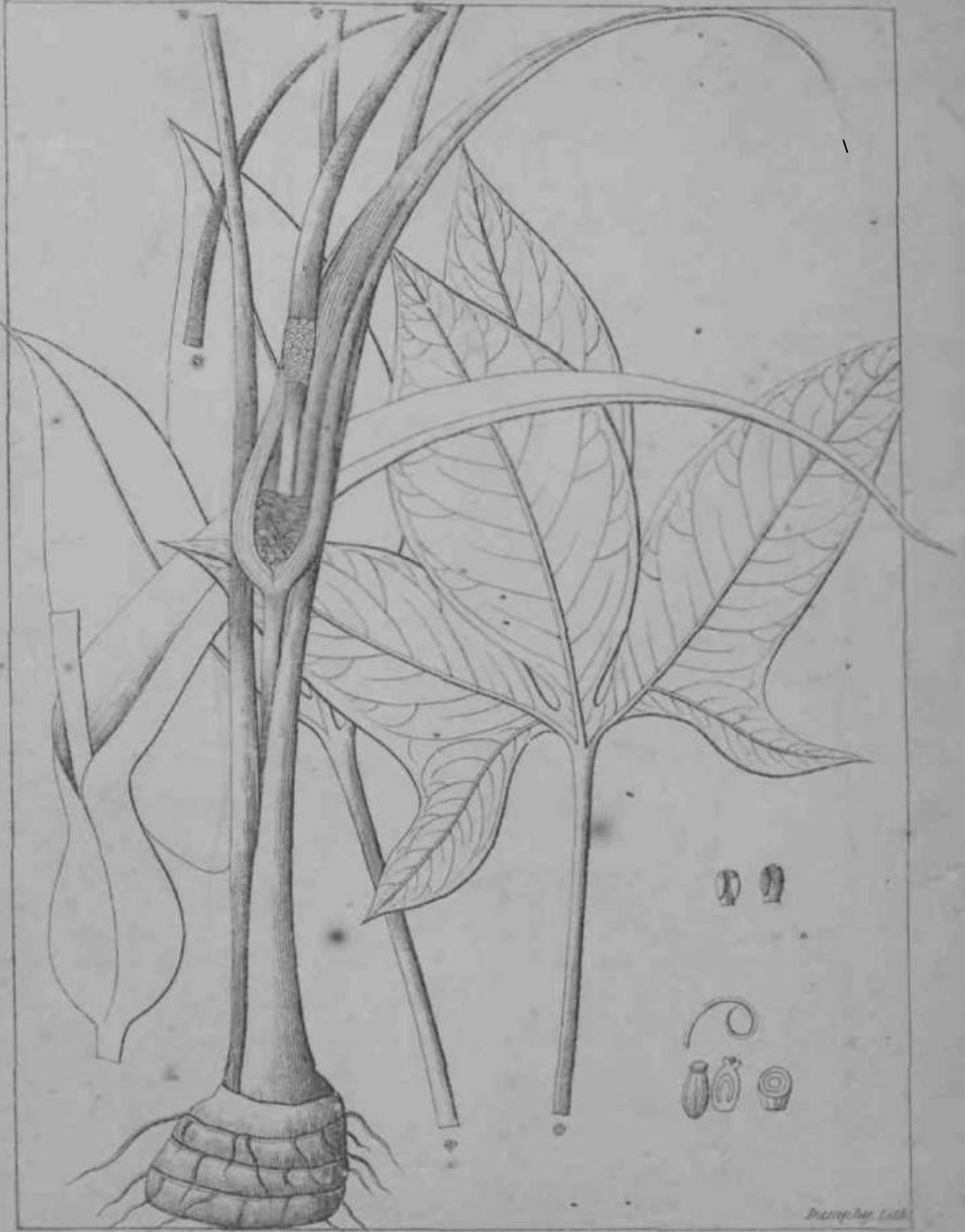
Durand & Schimper

Anum flagelliforme (Roxb.)
Typhonium?



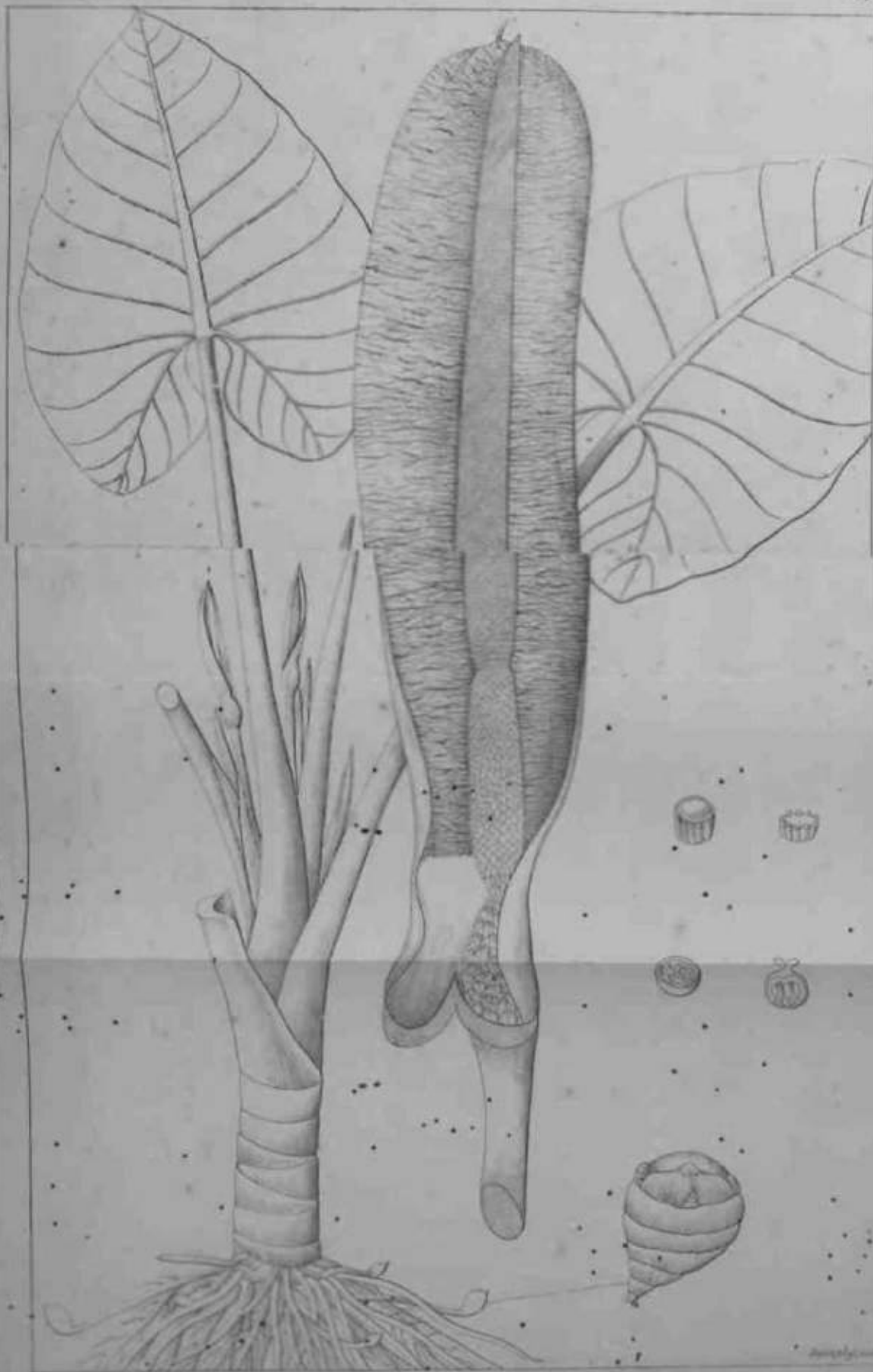
Arum fornicatum

Dumphy. Esch.

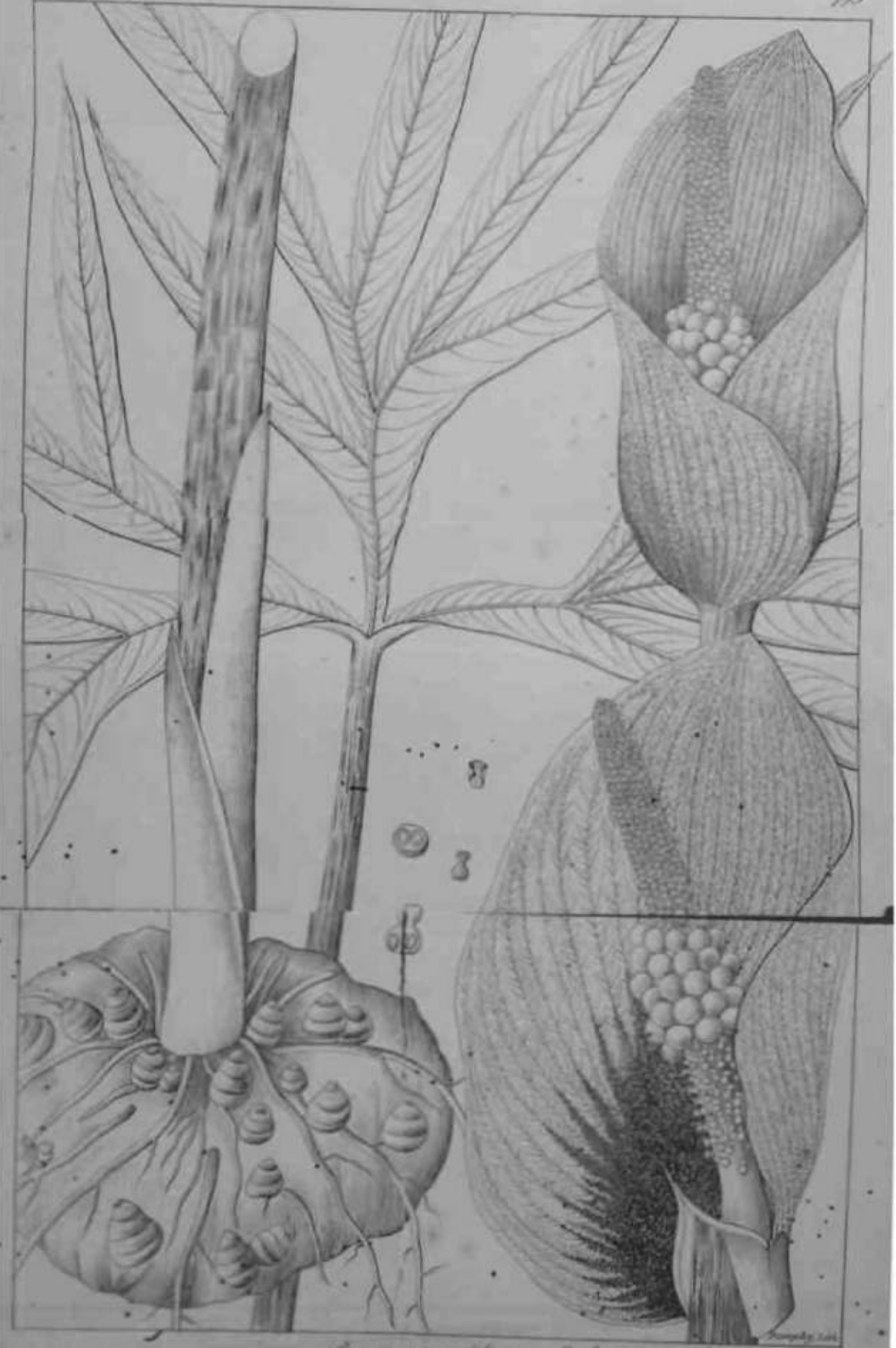


Dumort. Lich.

1. *Arum gracile* (Roch.)
 Syn. *Philodendron gracile*.
 2. a flower. Nat. size

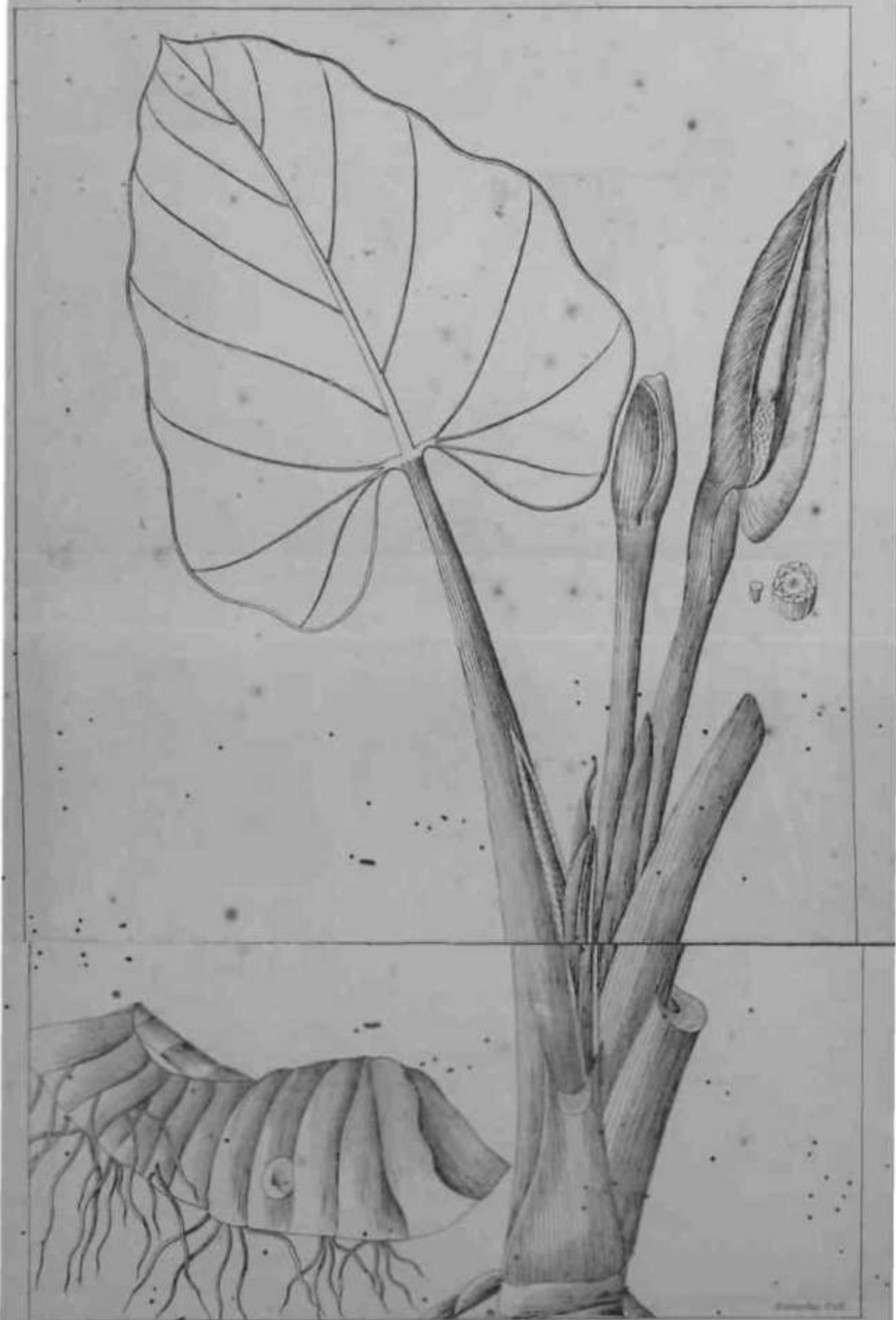


Asplenium (Long Root)
Asplenium (Key Schott)

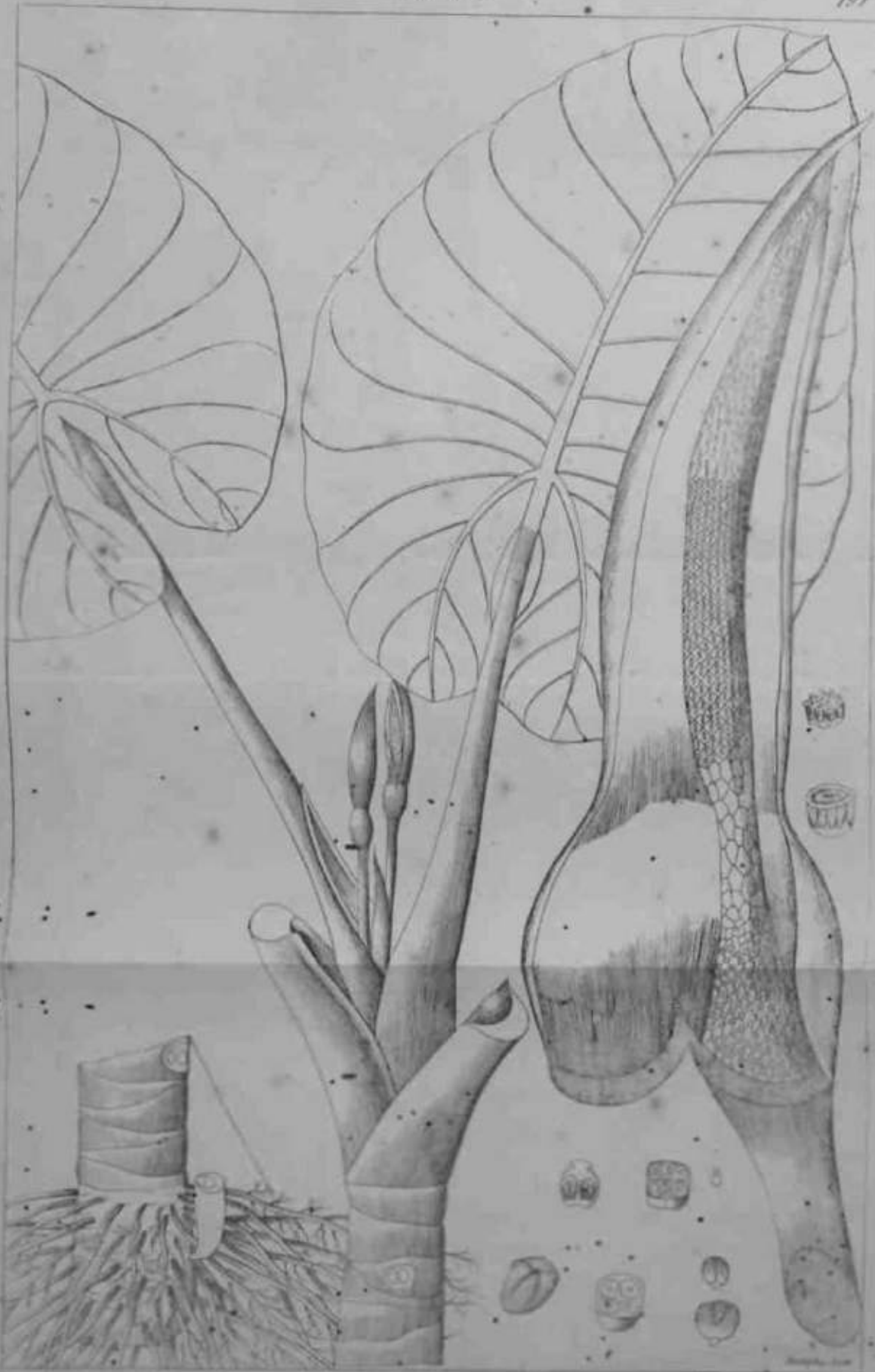


Arum macrathes (L.)

W. Smith del.



Arum montanum Pol.
Colocasia (Hayden)



Arundo donax, Linn.
Culm. Arundo



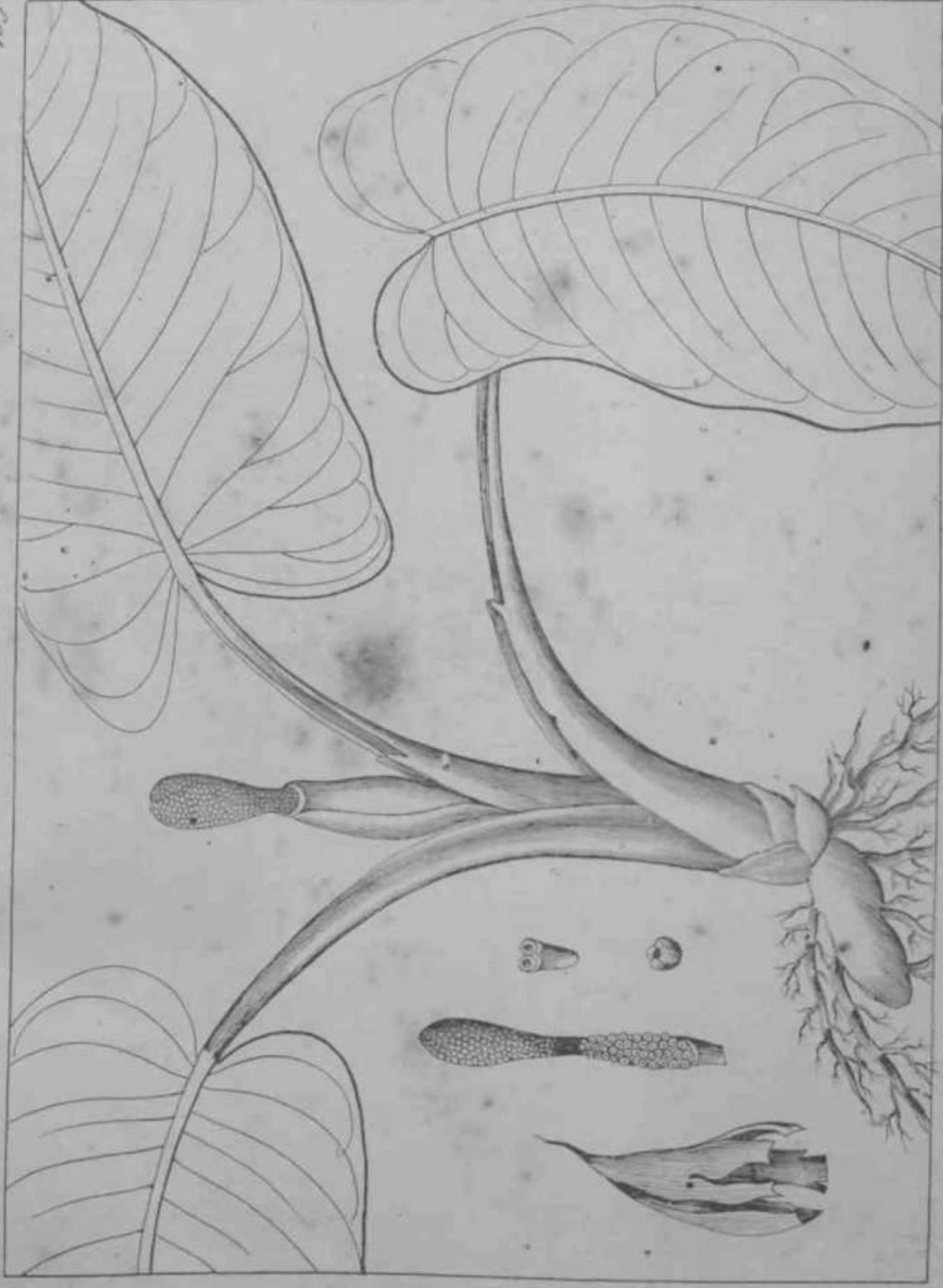
Dumortier, Lich

Arum viviparum (Roxb.)
Pomusatia (Schott)

Barburghiana

Arctica

799



Calla bulbophora (Reichb.)

W. Purshy. del.

Herveyana

Aroidea

800

Arctostaphylos

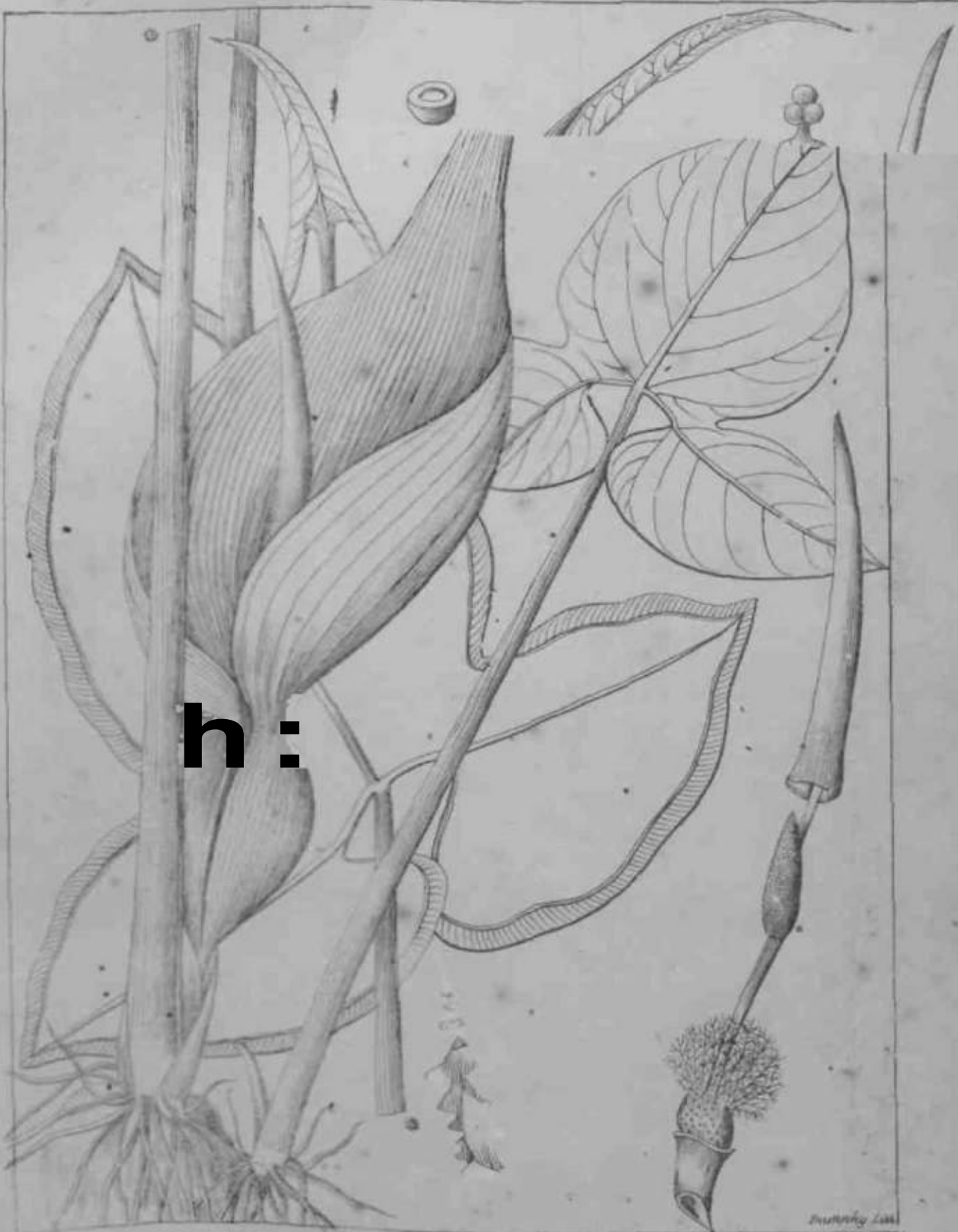
802



Rochfordiana

Arctostaphylos

102



h:

Sium Orixense (Rost.)
Siphonium (Schott) *trilobatum*

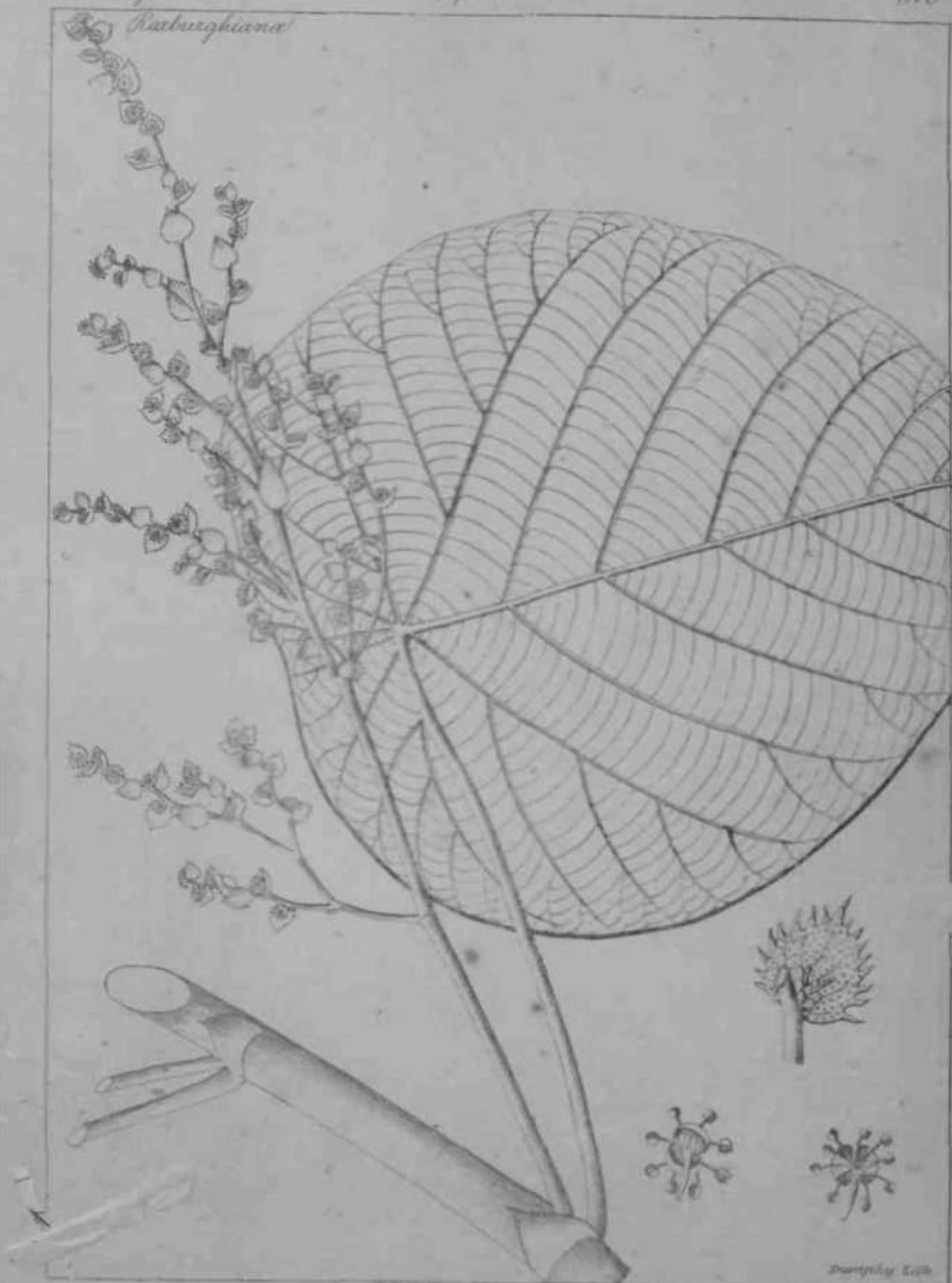
Dr. J. J. L. L.

Acalypha

Euphorbiaceae

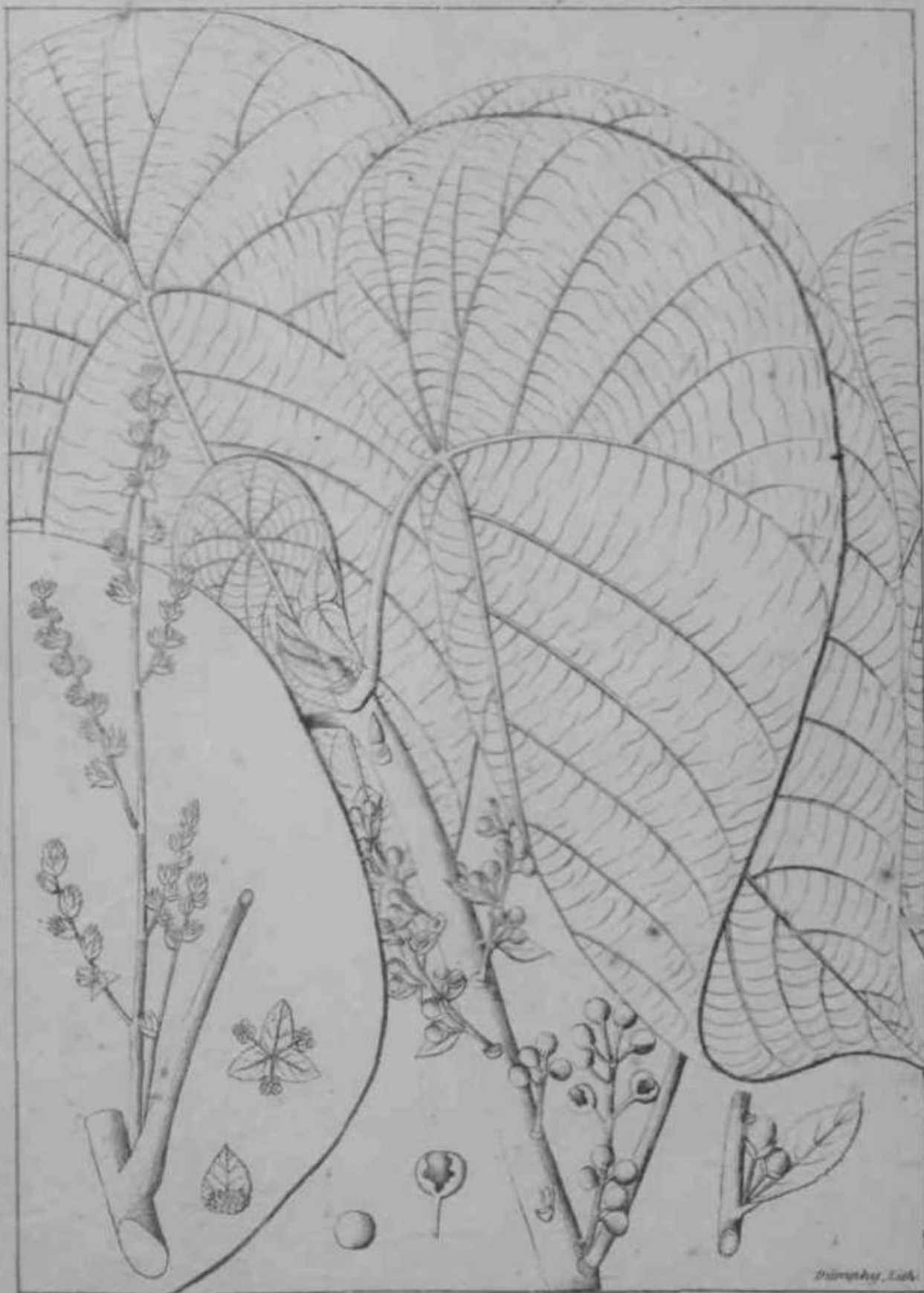
216

Karlsruhiana



Acalypha velutina (Ait.)
Acalypha velutina (Ait.) *Acalypha* Willd.

Darwiny 1816



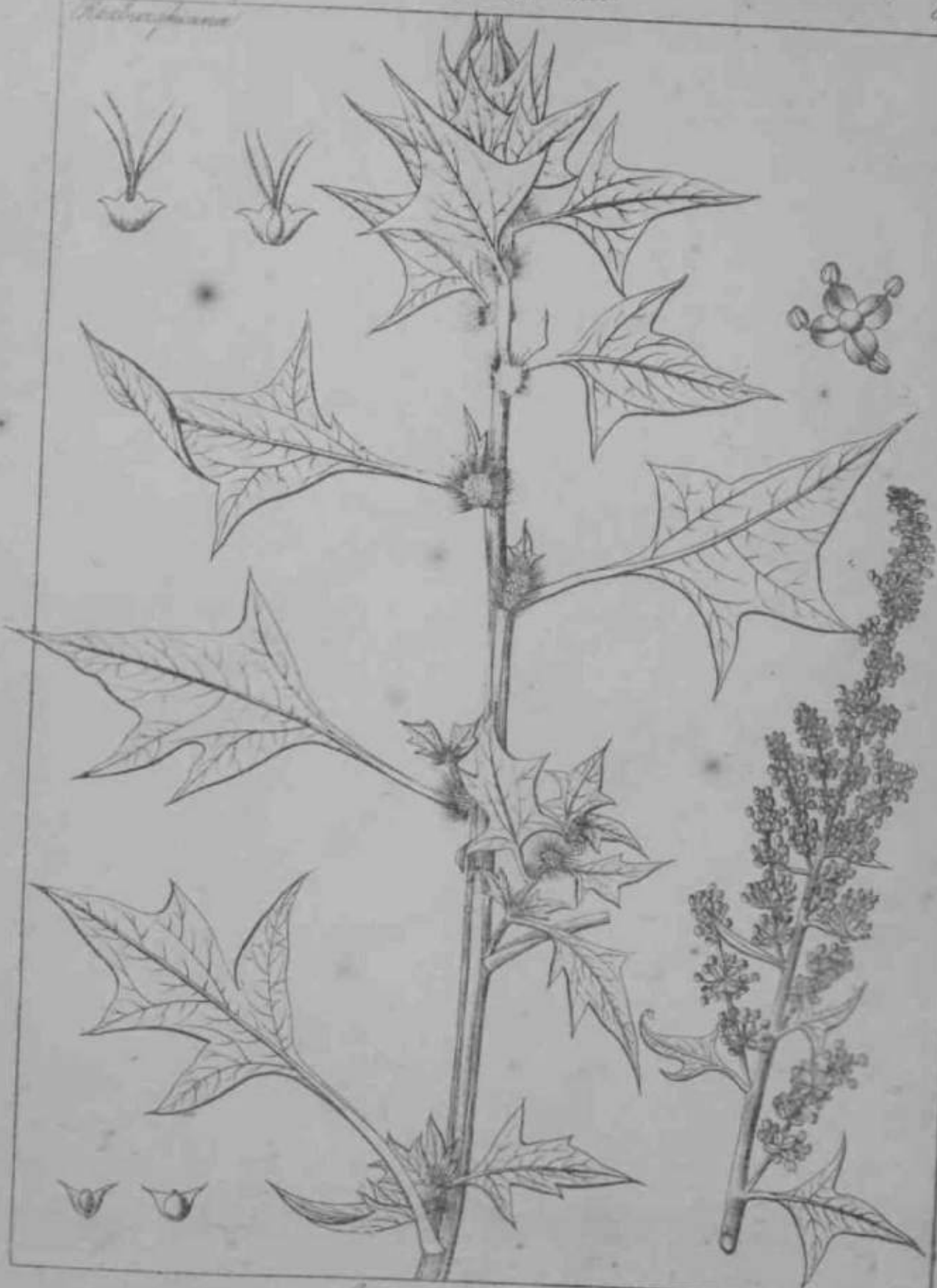
Acalypha? pellata (R. W.)
Acalypha pellata (Roxb.)

Hesperis

Chenop. VIUta.

818

Resb. phana

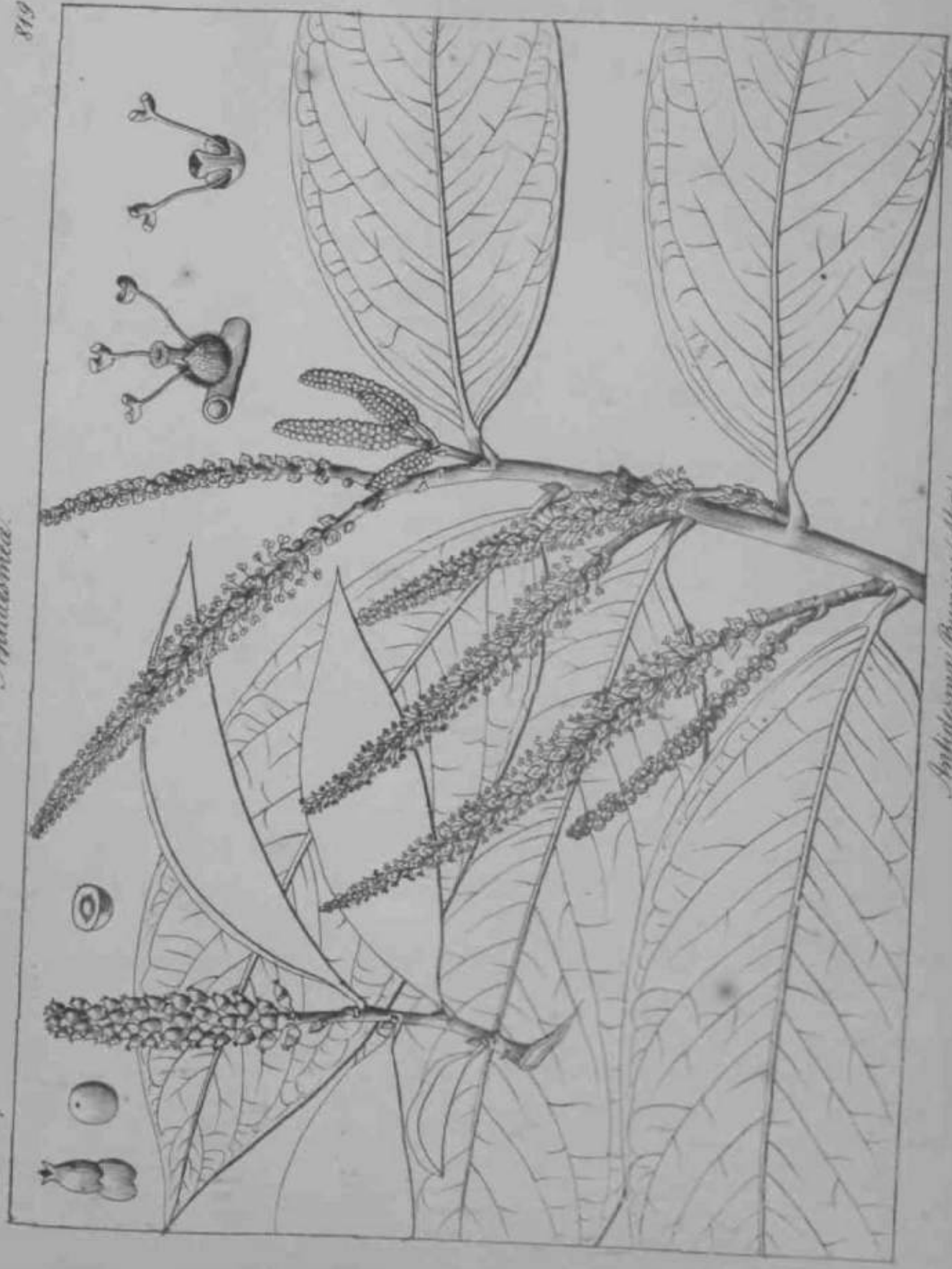


Spicaria tetrandra (Resb.)

Drummond, Lach.

Antidesma.

Roxburghiana



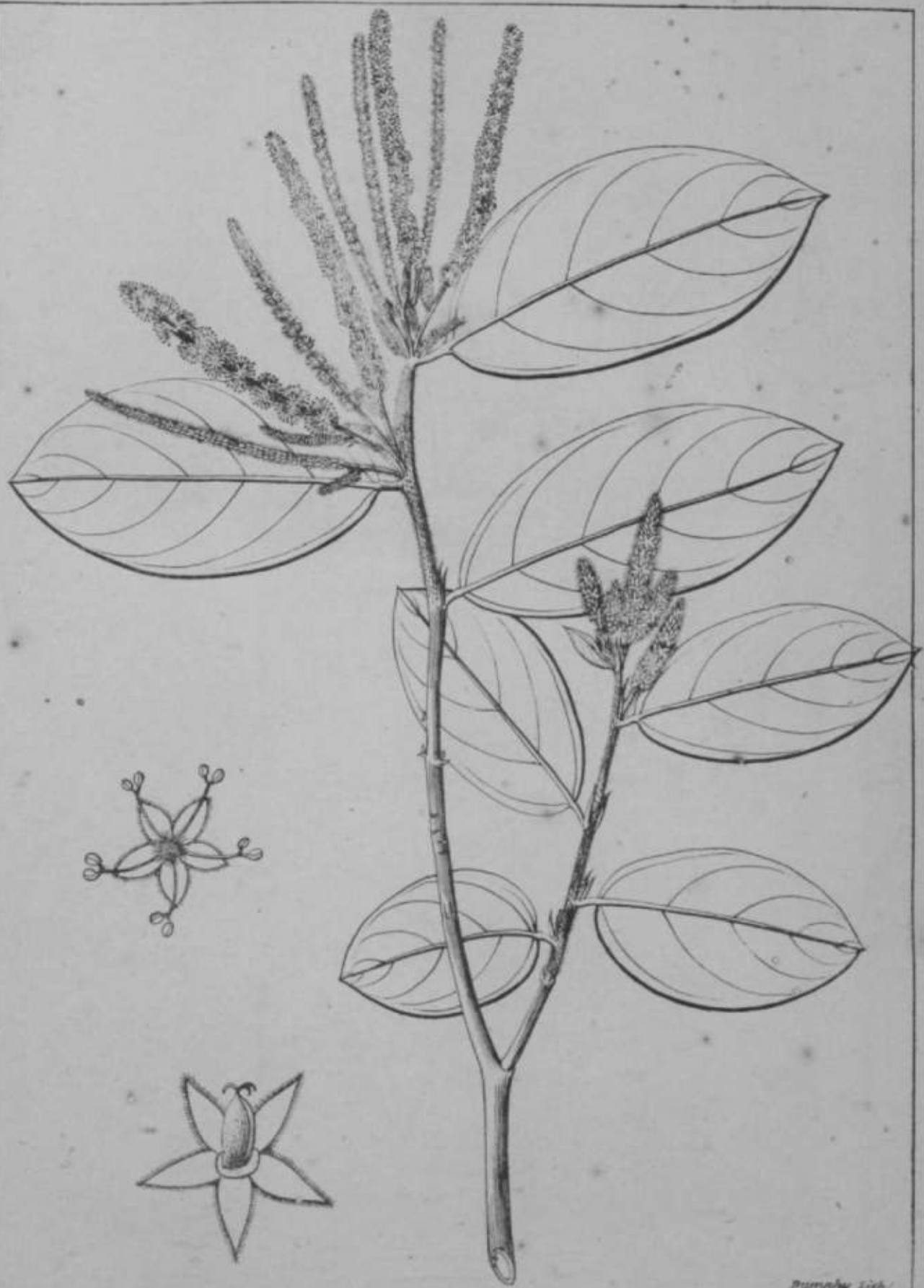
Antidesma Roxburghiana (Spreng.)
Philago (Lamour.) Roxb.

Antidesmea

Rooburghiana



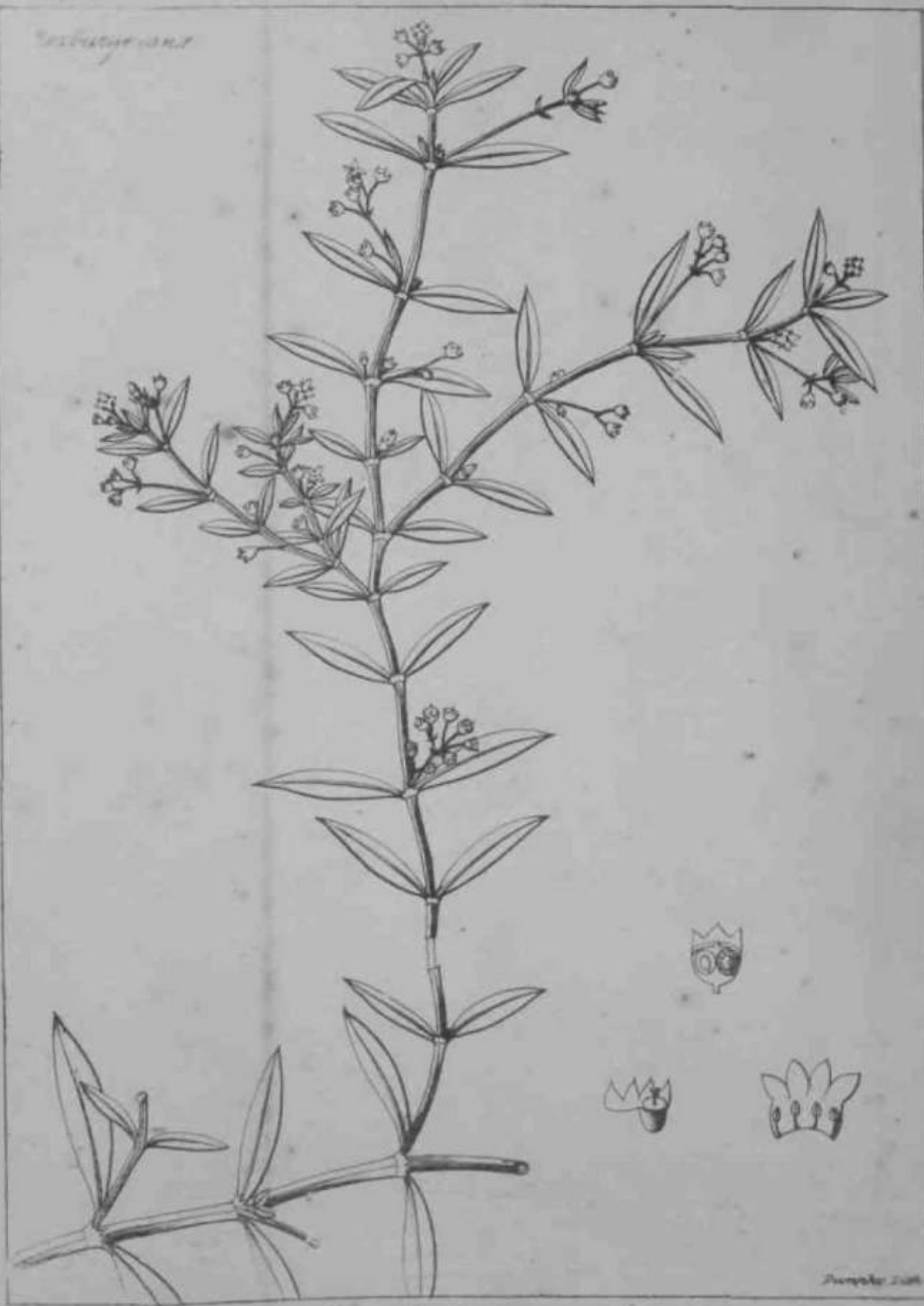
Antidesma paniculata (Roob)



Bumby Lich.

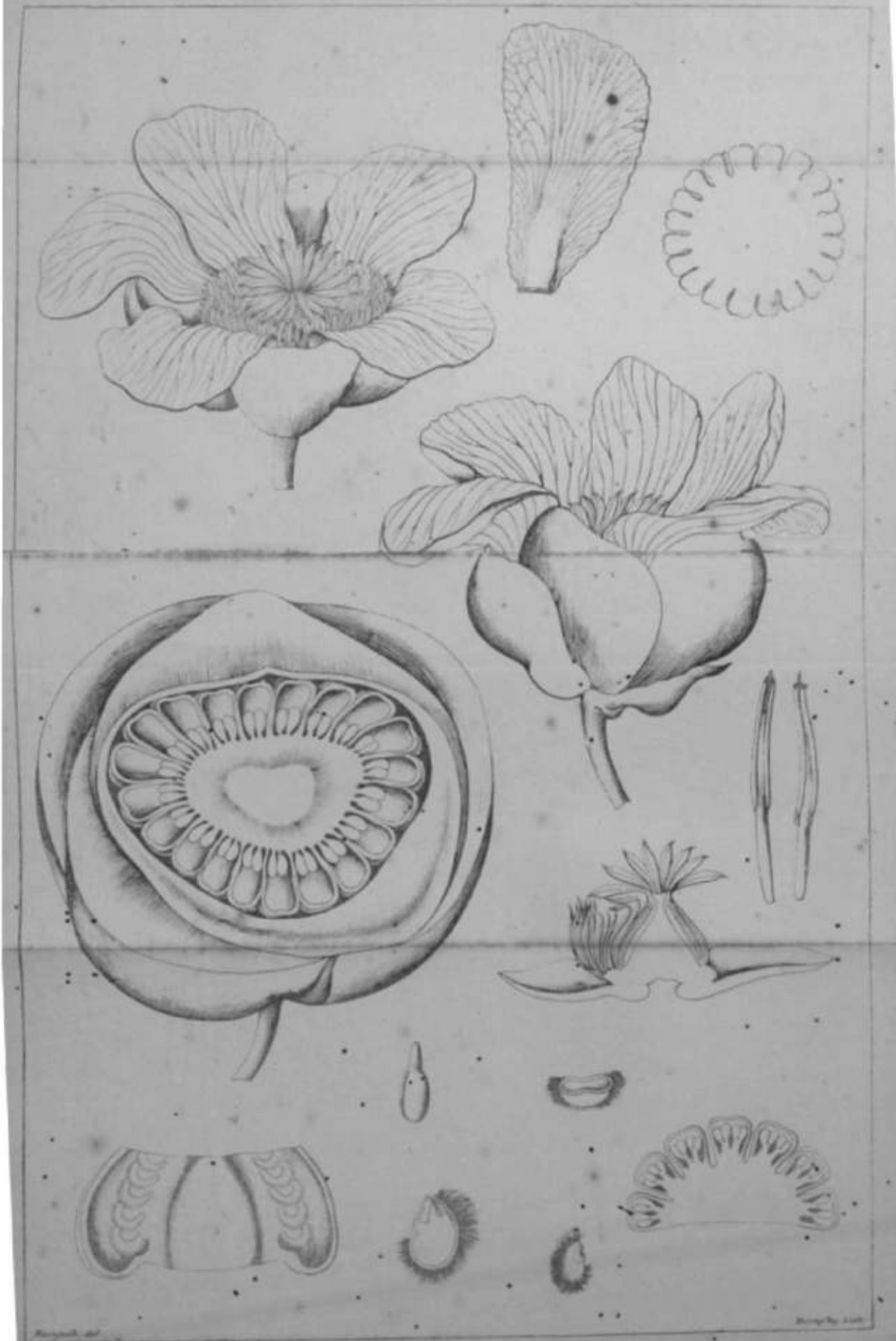
Antidesma pubescens (Roxb.)

Hydrocotyle



Hydrocotyle DC.

Hydrocotyle (C) ramosa (Blume)
(Lindlania ramosa) (Koch)



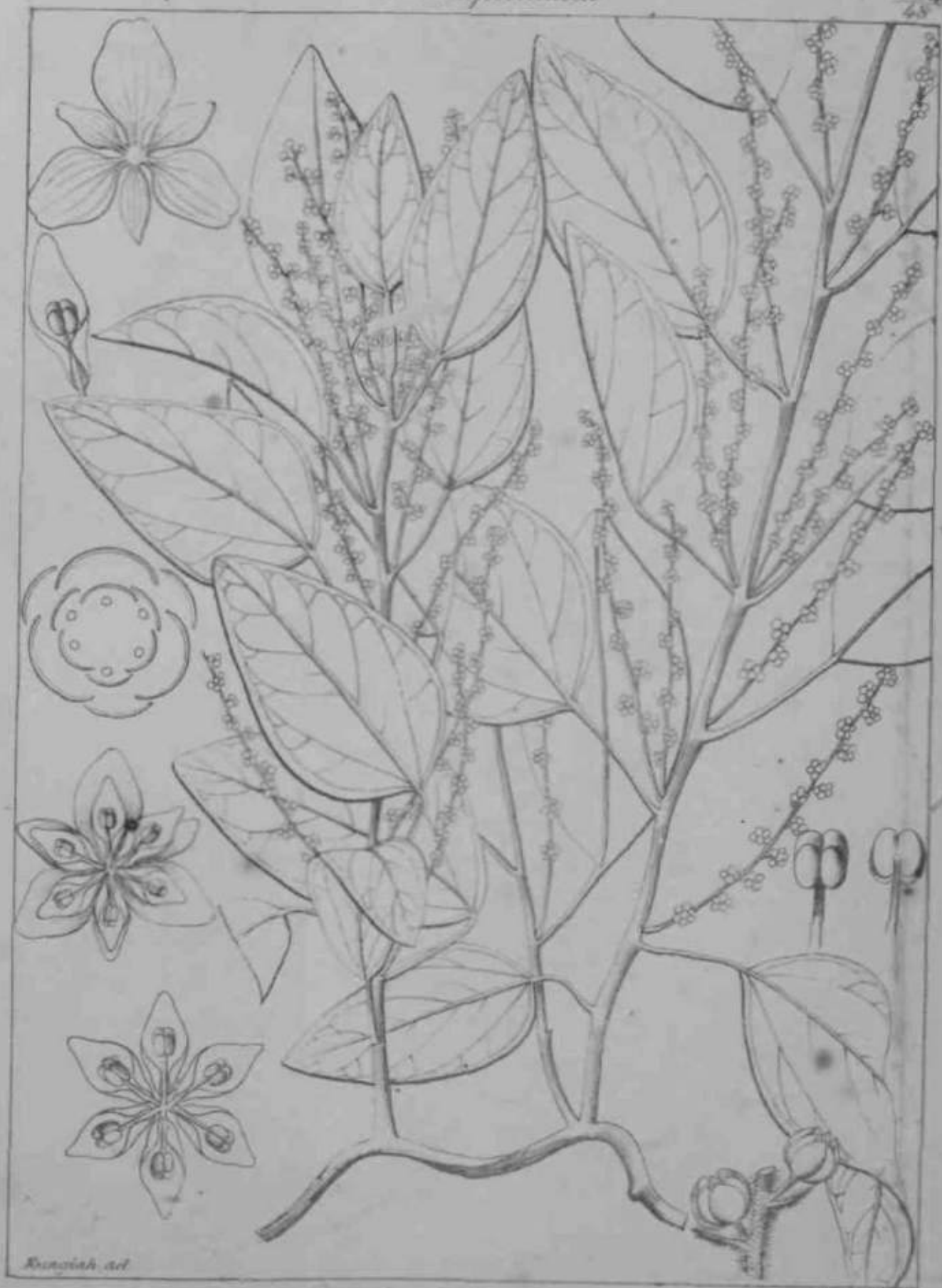
Dillenia speciosa (Thunb.)

Reynolds del.

Wright Sculp.

Menispermaceae

124



Kunze's art

Cocculus flukenschii (D. Don)

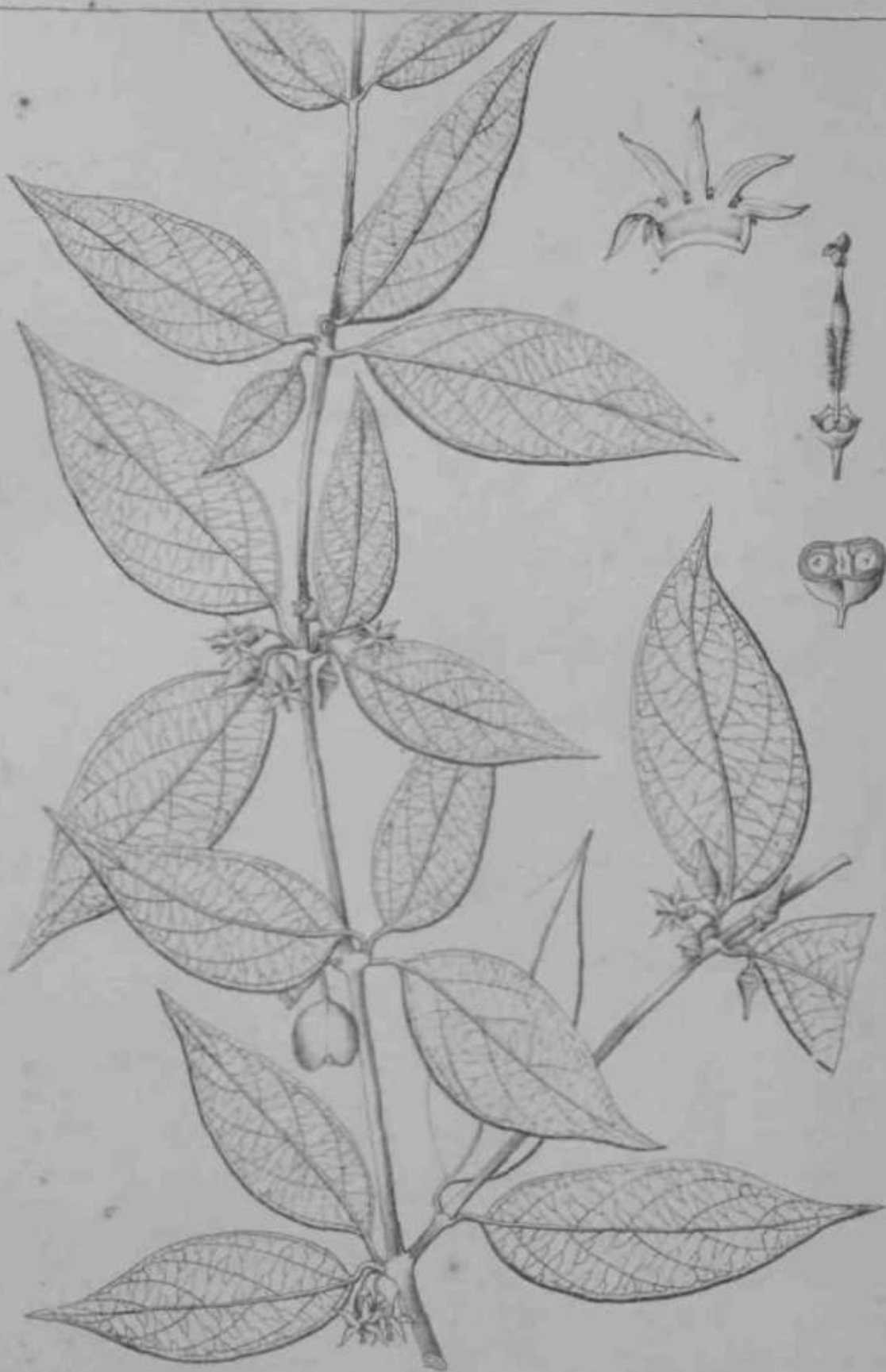
Thompson, Lich



Rungtsh. del.

Dumphy Lith.

Cocculus Plukonensis (D.C.)



Rungtsh. det.

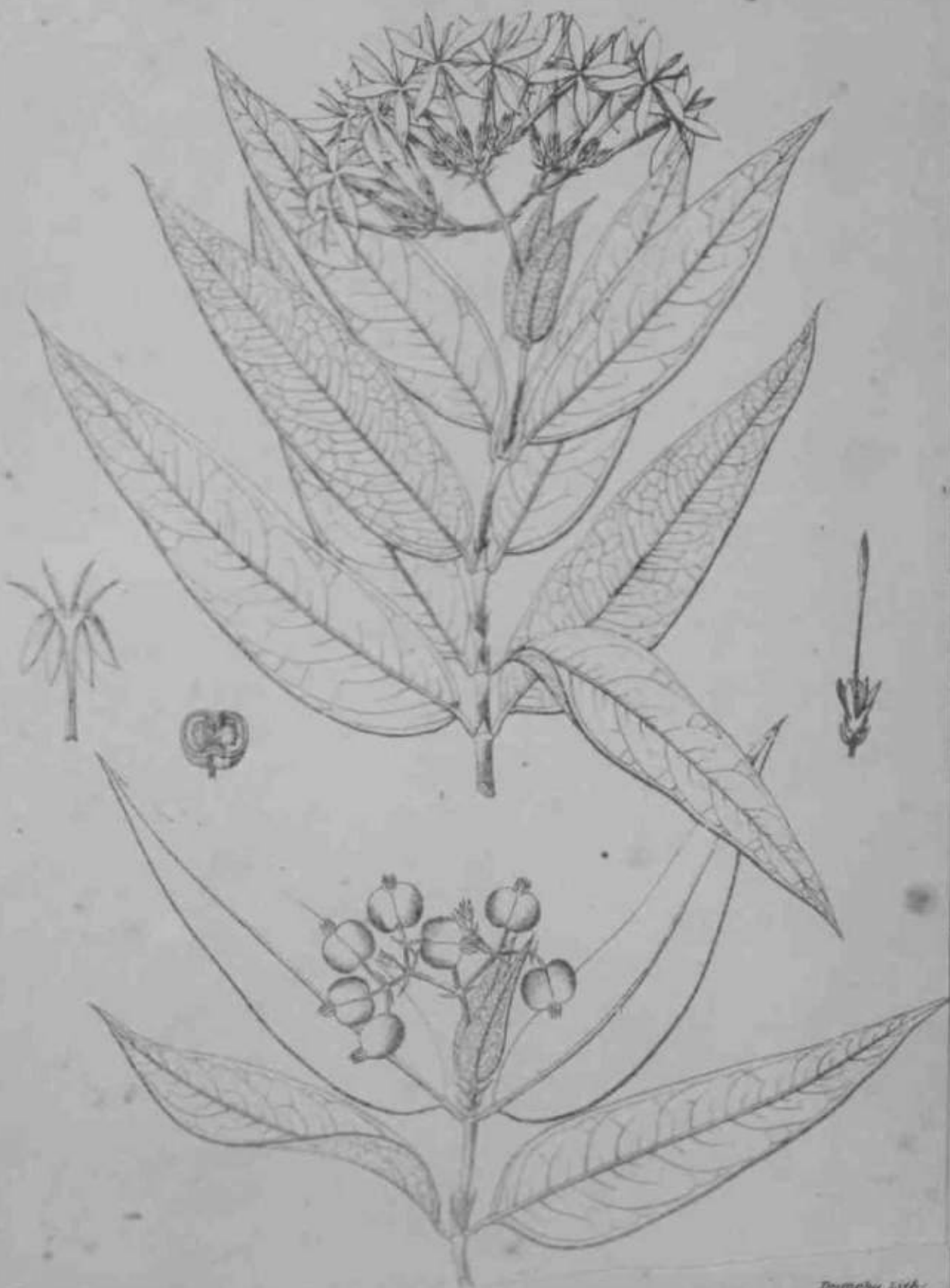
Purpurey. Lith.

Canthium teschenaultii (Wald.)

Coffeaceae

Rubiaceae

827
1373



L. ... del.

Dumort. sculp.

Psychotria lavigata (W & A)

Famil

Coffeacea

Rubiacea

828
1334



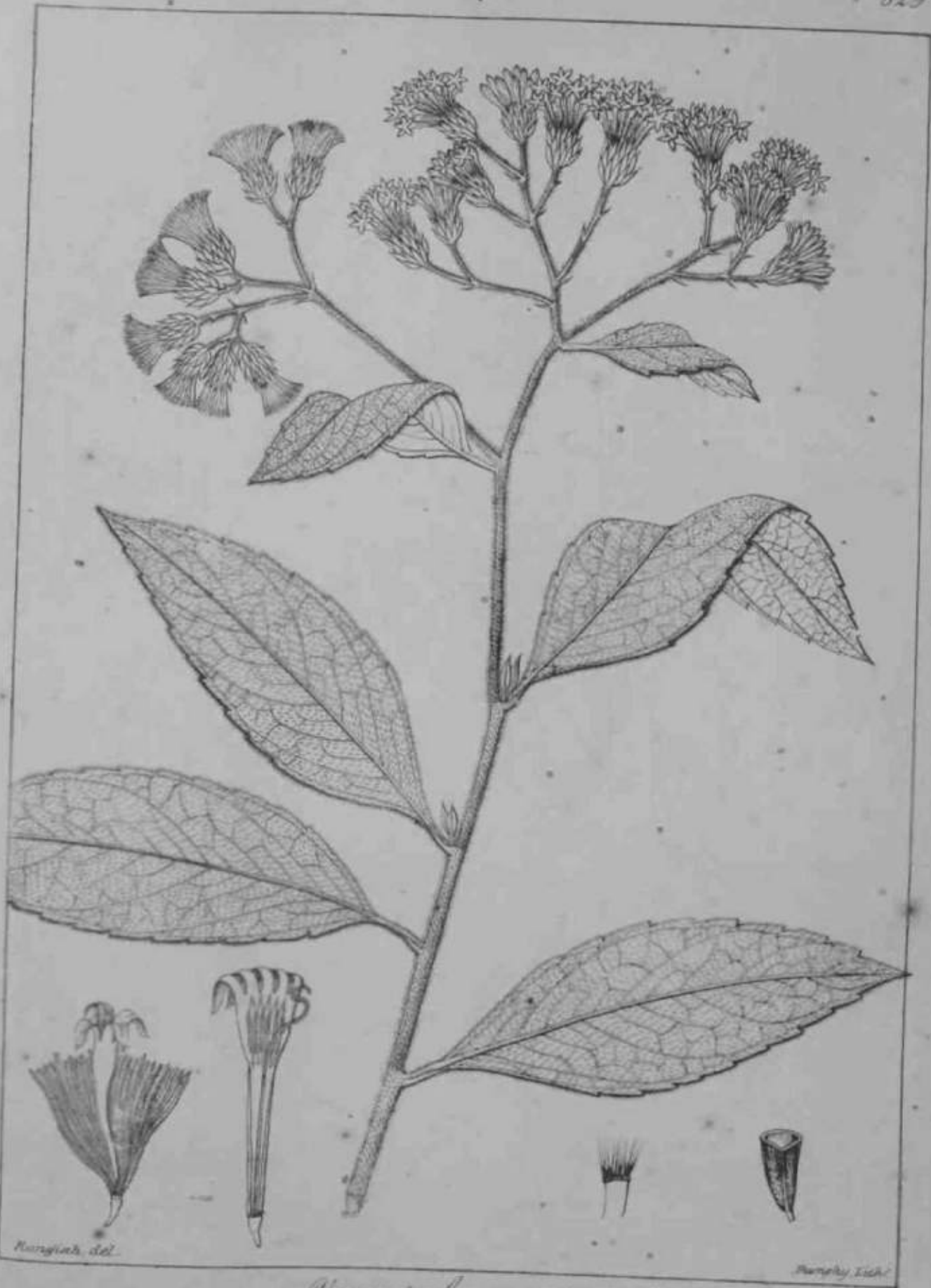
Rungiah, del.

Dumphy, lith.

Sesmoet-poerwe

Tan, uir

Psychotria (W. & A.) (1849)



Kunze del.

Munz, Ichi

Vernonia conyzoides (D.C.)



Kunze, det.

Gymnomma degans (W & A)

Dumort. Lith.



Kunze! del.

grandiflora (R. W.)

Dumphy, Lith.



Rungtsh del.

Dunlop Lith.

Cryptostegia grandiflora (R. B.?)
Neriur grandiflorum (Roxb.)



Rungtiah. del.

Aniseia calycina (Ch.)

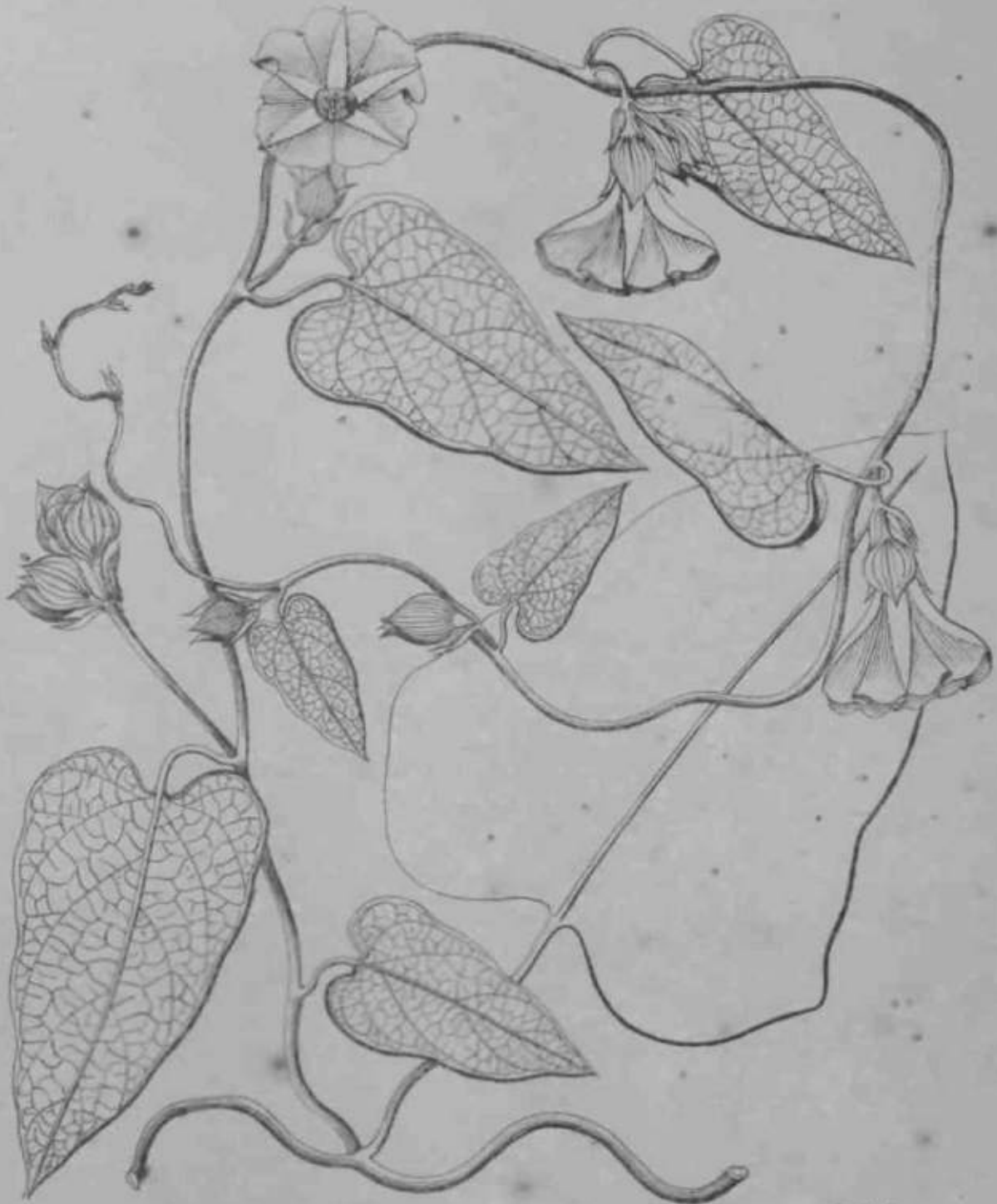
Dumphy, Lith.



Hartig del.

Batatas pentaphylla

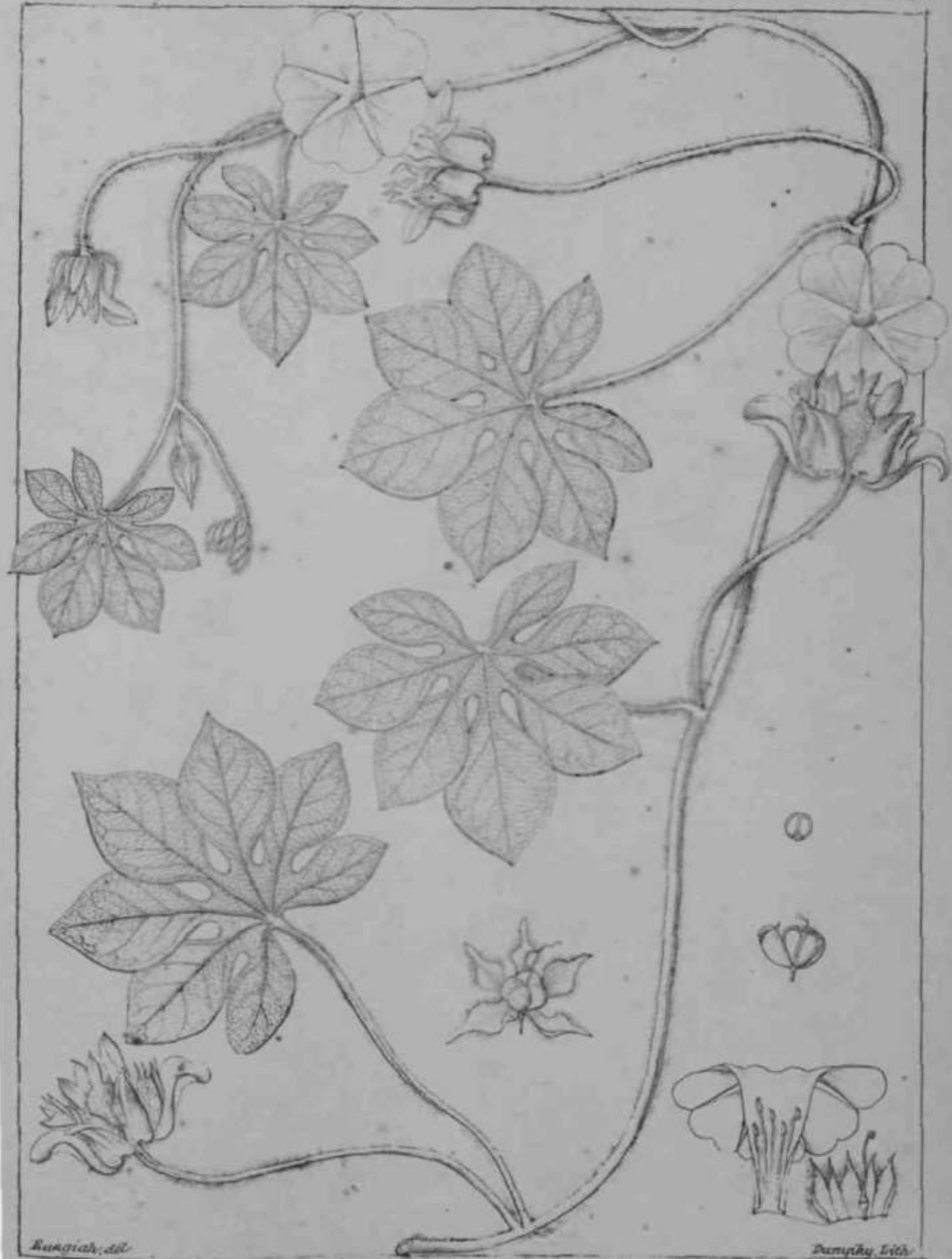
Hartig sculp.



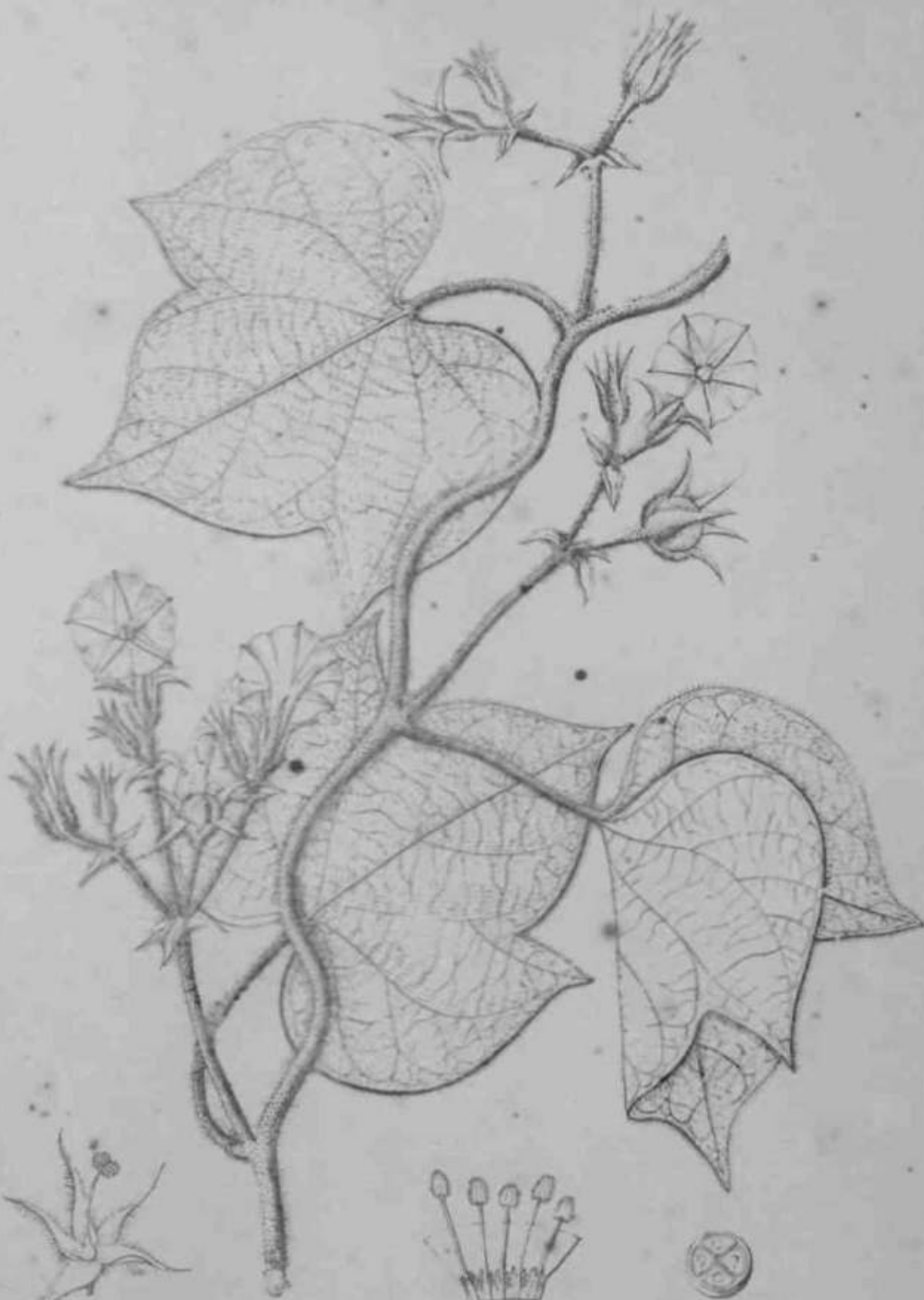
Amgiah, del.

Dumphy, del.

Heliotropium bicolor, 2)
Thurberia bicolor (Ch.)



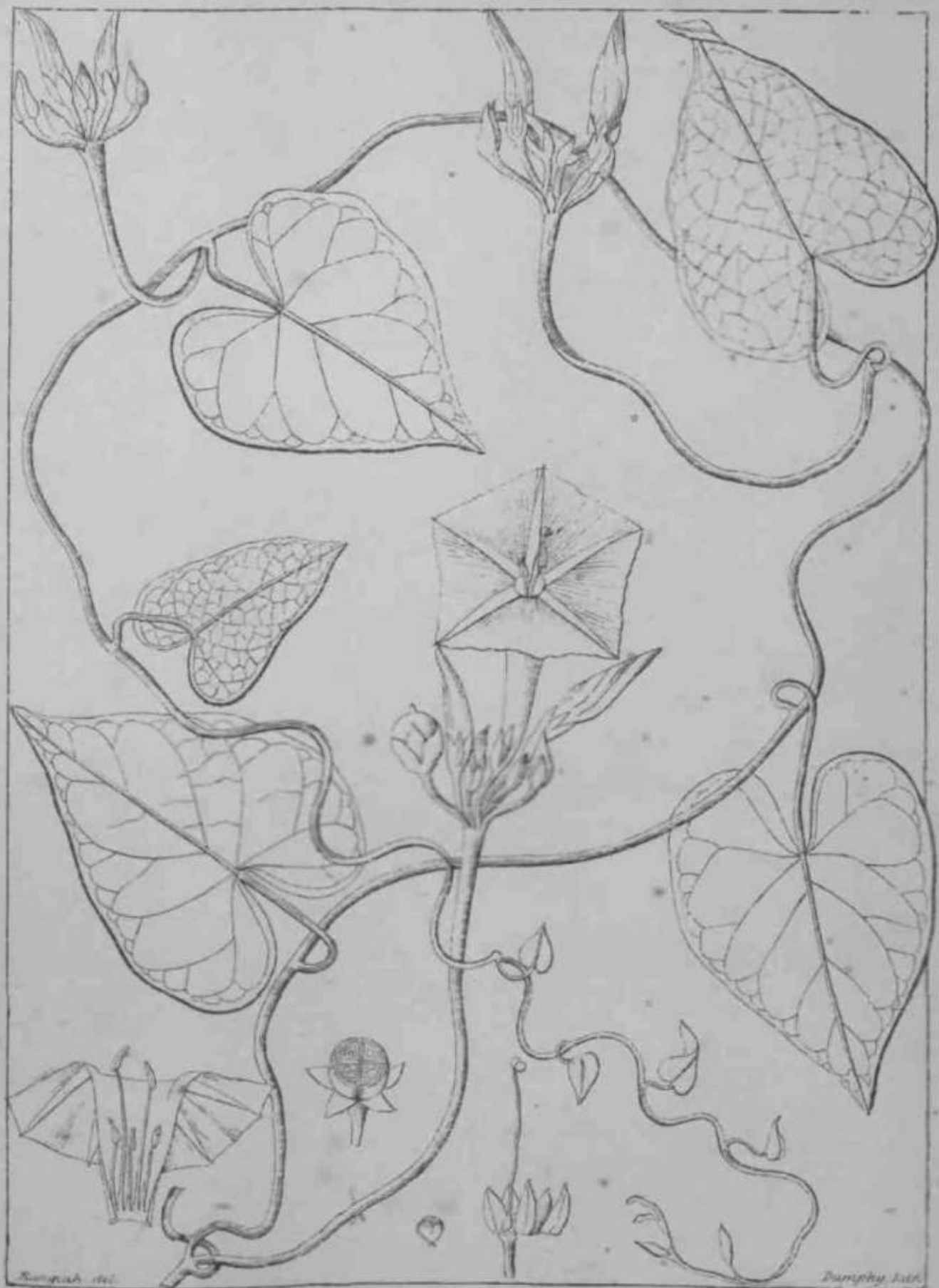
Ipomoea pestigridis (Linn.)



Kunigund

August 1841

Ipomoea pilosa (Ch.)

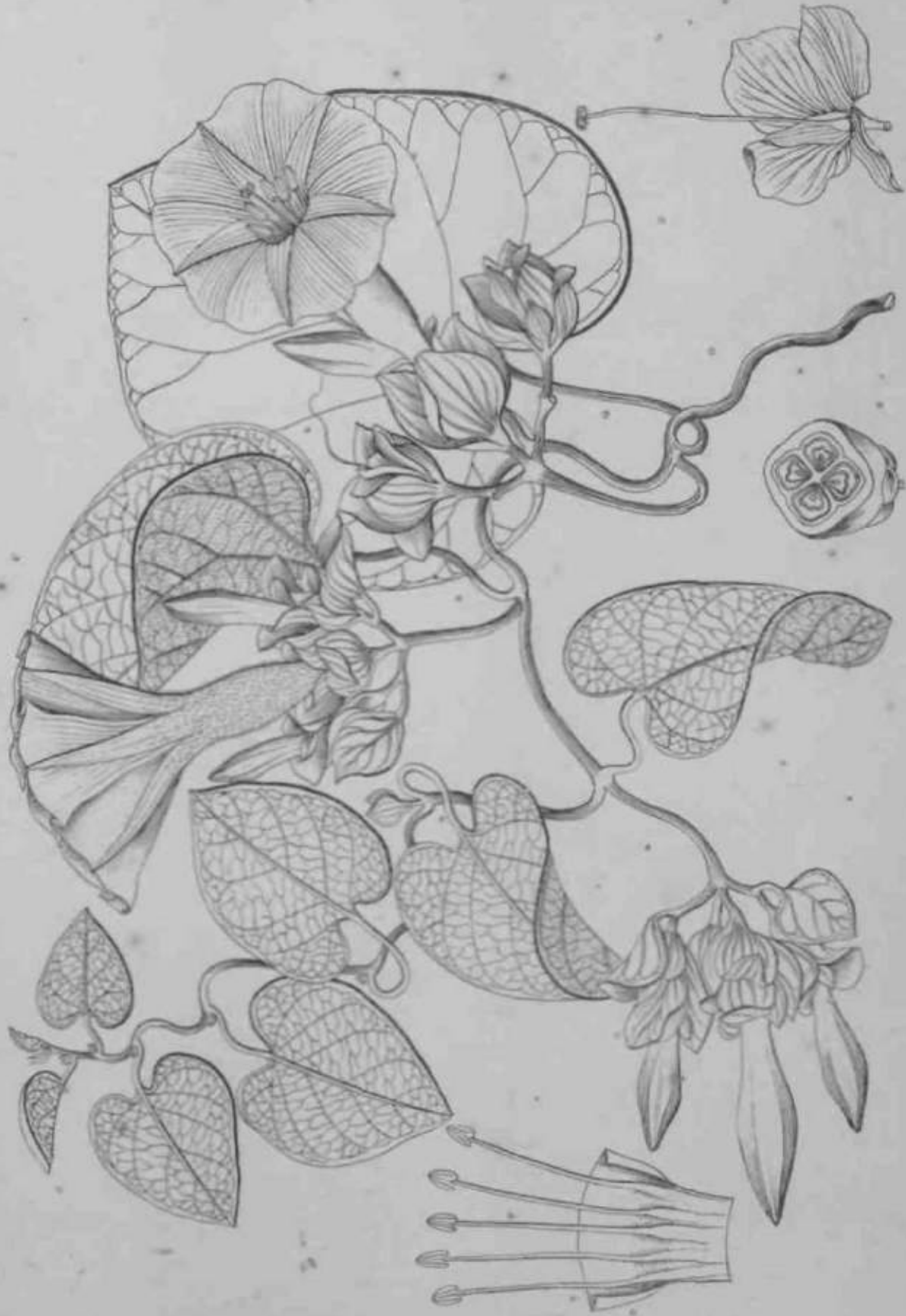


Ipomoea sepium (Hornig)

Argyrea.

Convolvulacea.

839



Pringle, del.

Argyrea cynosu (Ch.)

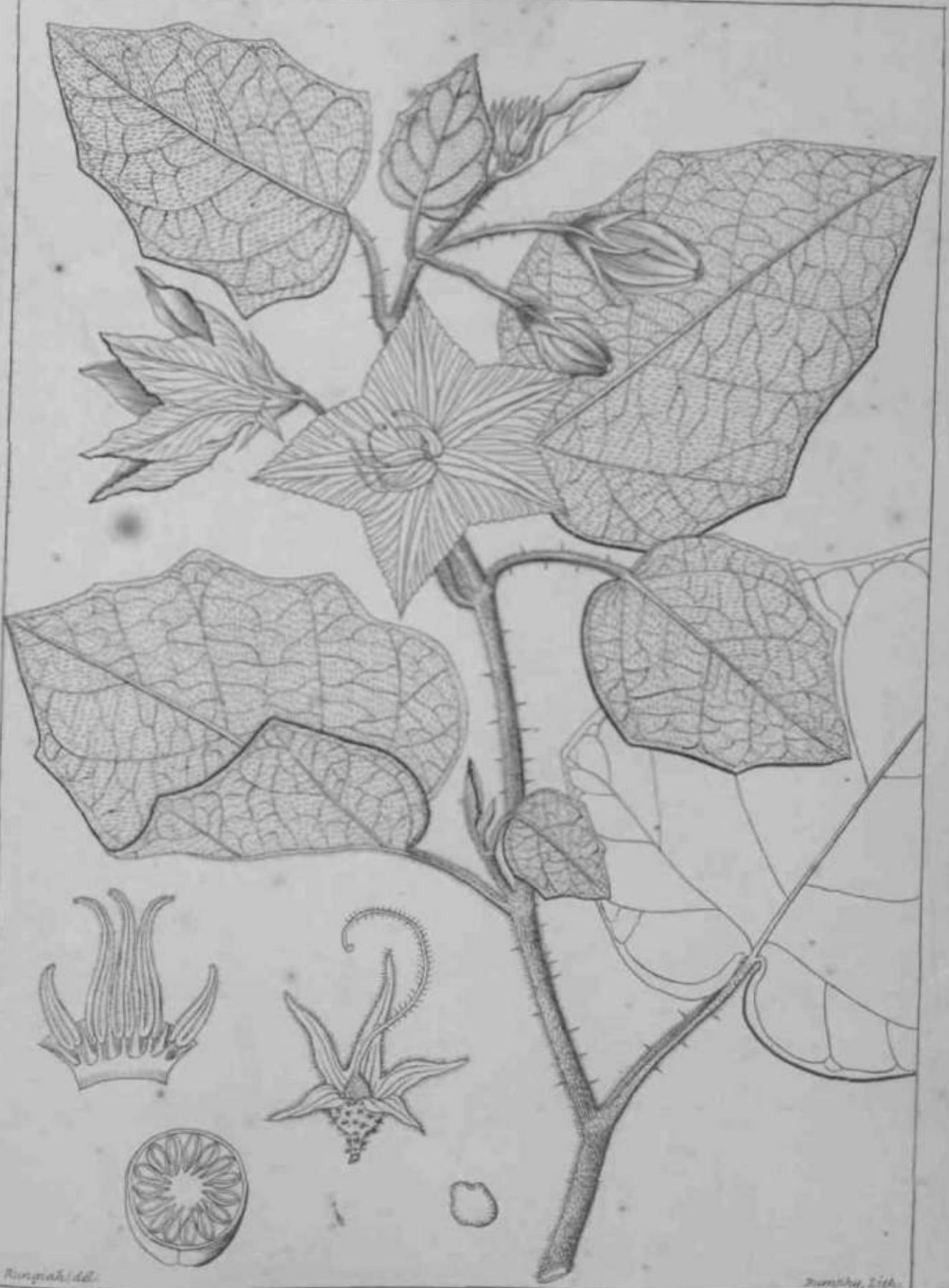
200000-5100



Knapp, del.

Wright, del.

Exacum Wightianum (/. Arn.)

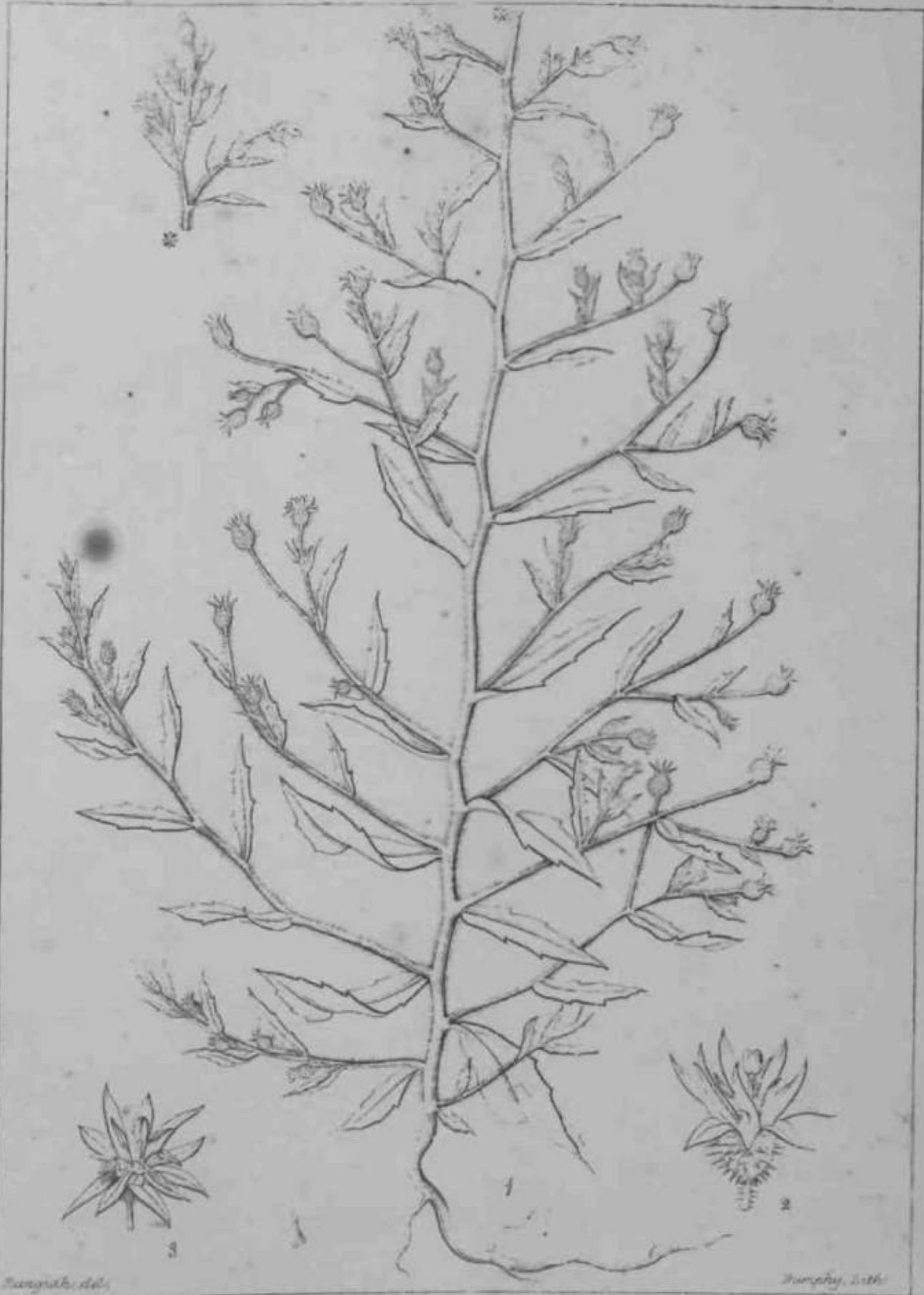


Ringrahl del.

Smalley, Lith.

சொல்லுமரம் } tam
Coffea aurora

Solanum Wightii (Nees)



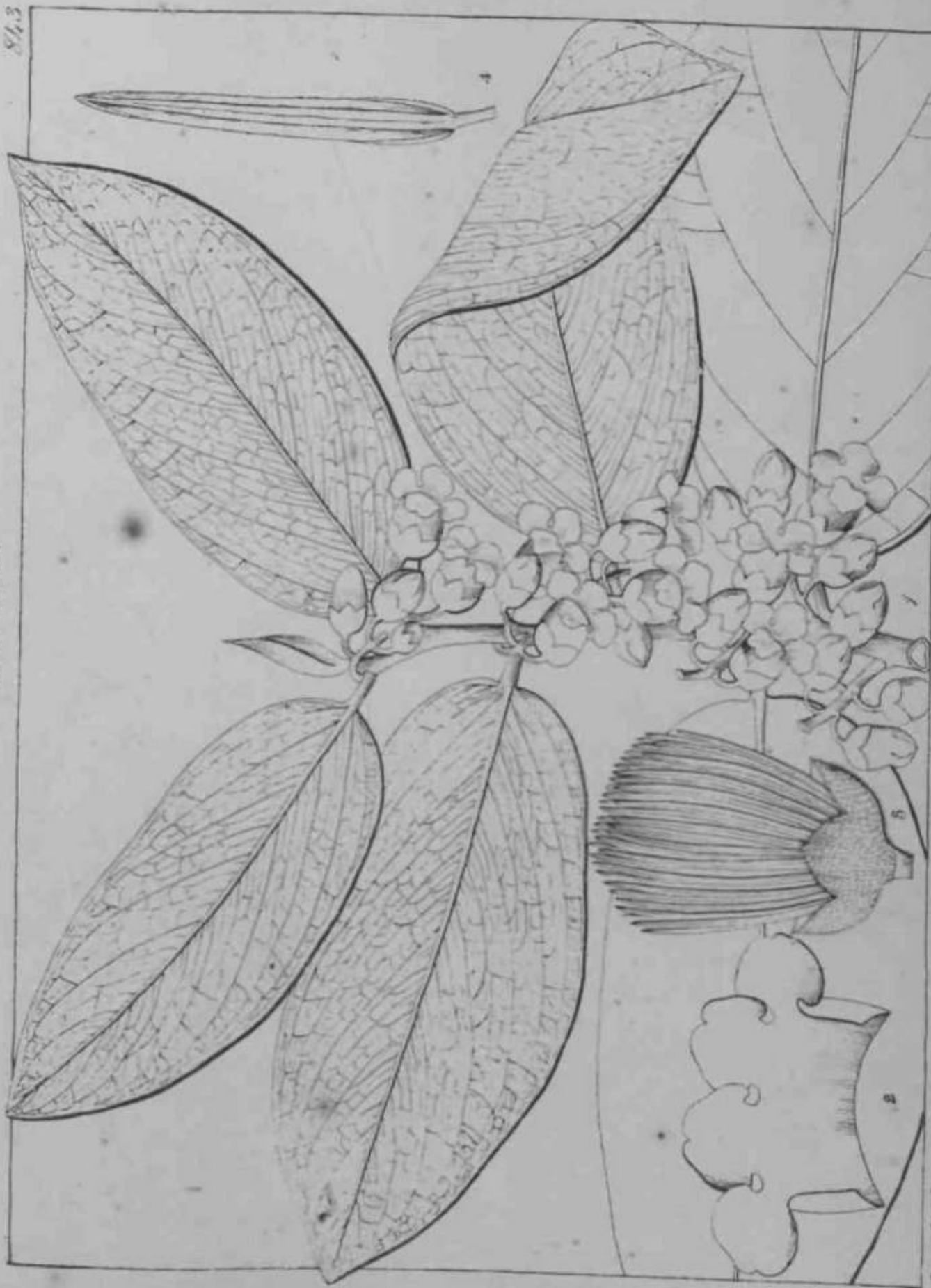
Swartz, det.

Humboldt, det.

Wahlenbergia porotifolia (W & A)

Ebenaceae.

843



Embryopteris glutinifera (Hook)

A. Gray del.

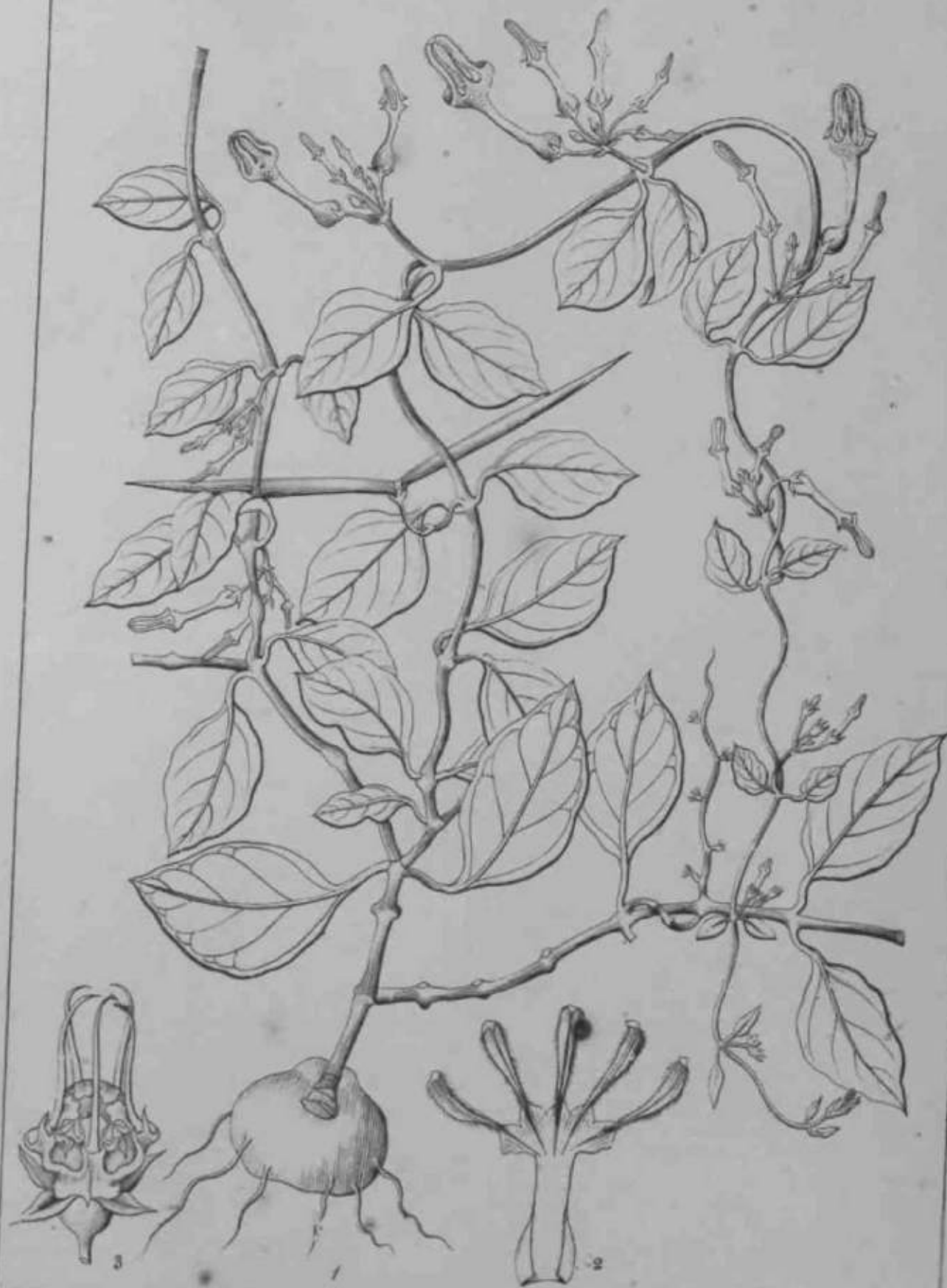
Thompson, sculp.



Wiegand del.

Embryopteris glutinosifera ♀ (Recht)

Wiegand sculp.



Zingari, del.

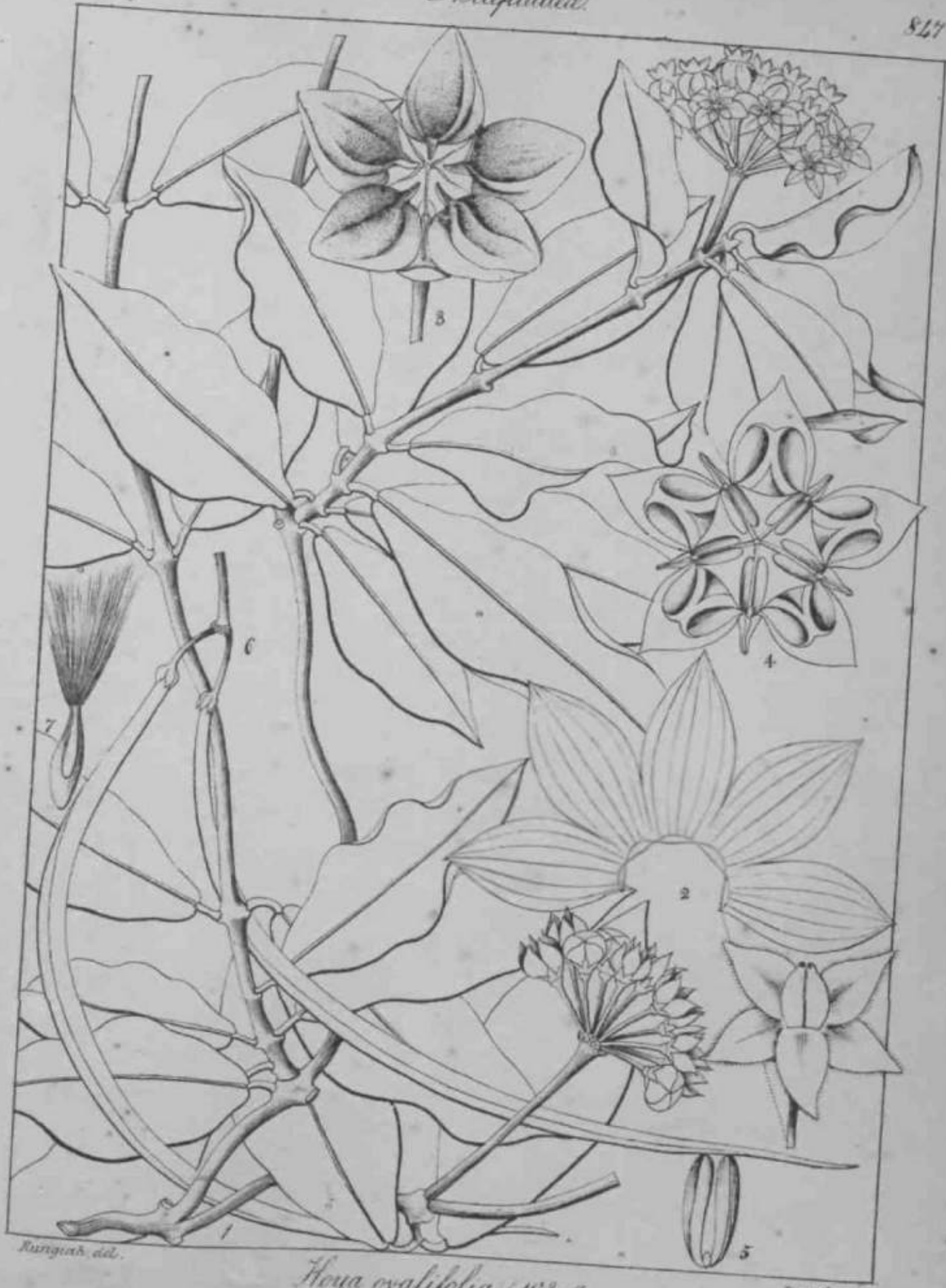
Ceropegia bulbosa (Roxb.)



Ravenscl. del.

Ceropegia mysorensis (R.W.)

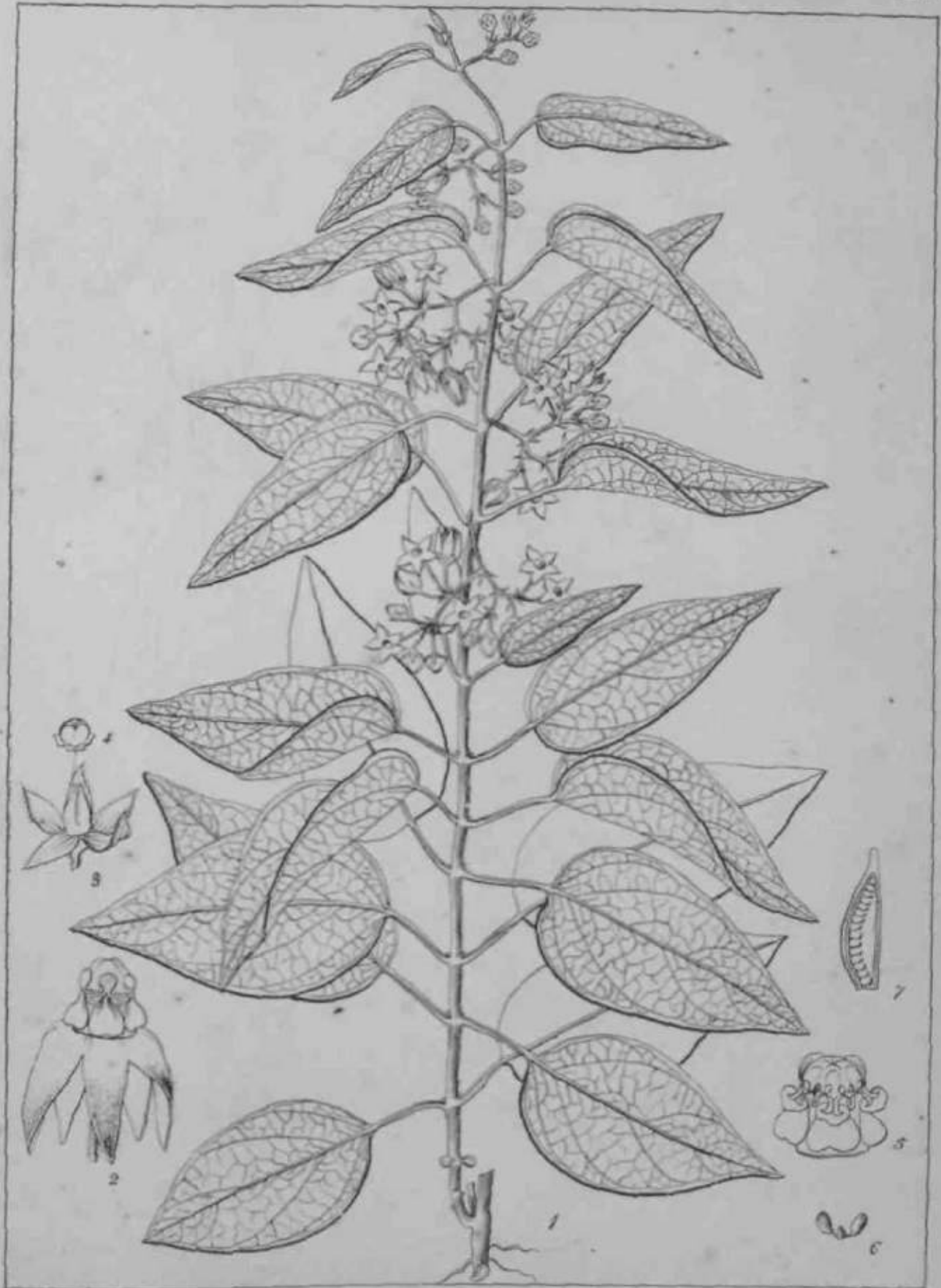
1879



Rungtsh. del.

Hoya ovalifolia (W & A)

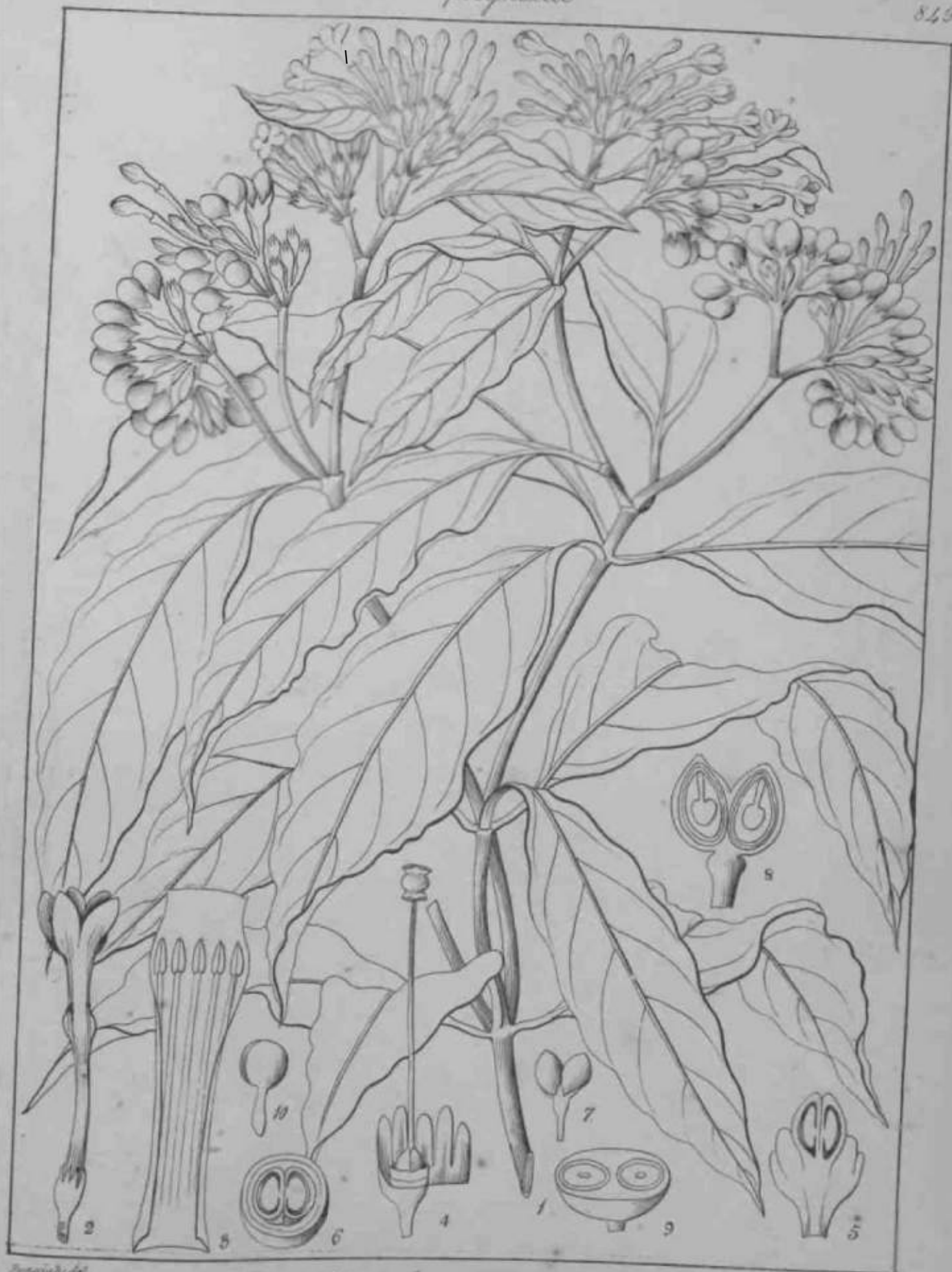
Sm. & S. del.



Ameych, del.

*Sylophora fascicul. (L.) (Ham)**

Botany 218



Engelm. del.

Ophioxylon capentinum (Linn.)

Dumort. del.



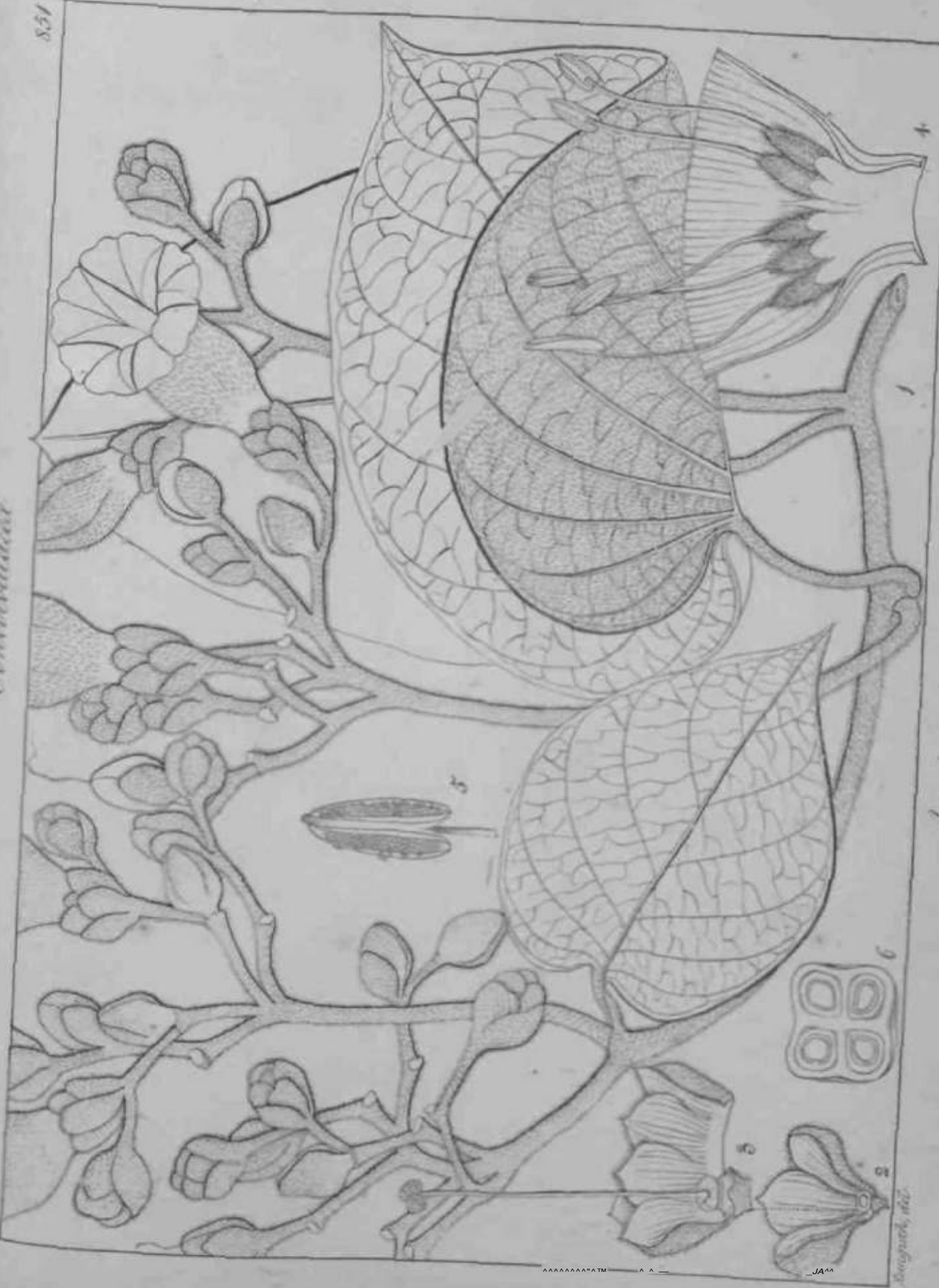
Kunze del.

Munz del.

Ipomoea uniflora (Chois)
Convolvulus Rheedii, Wall.

Convolvulaceae

Convolvulaceae

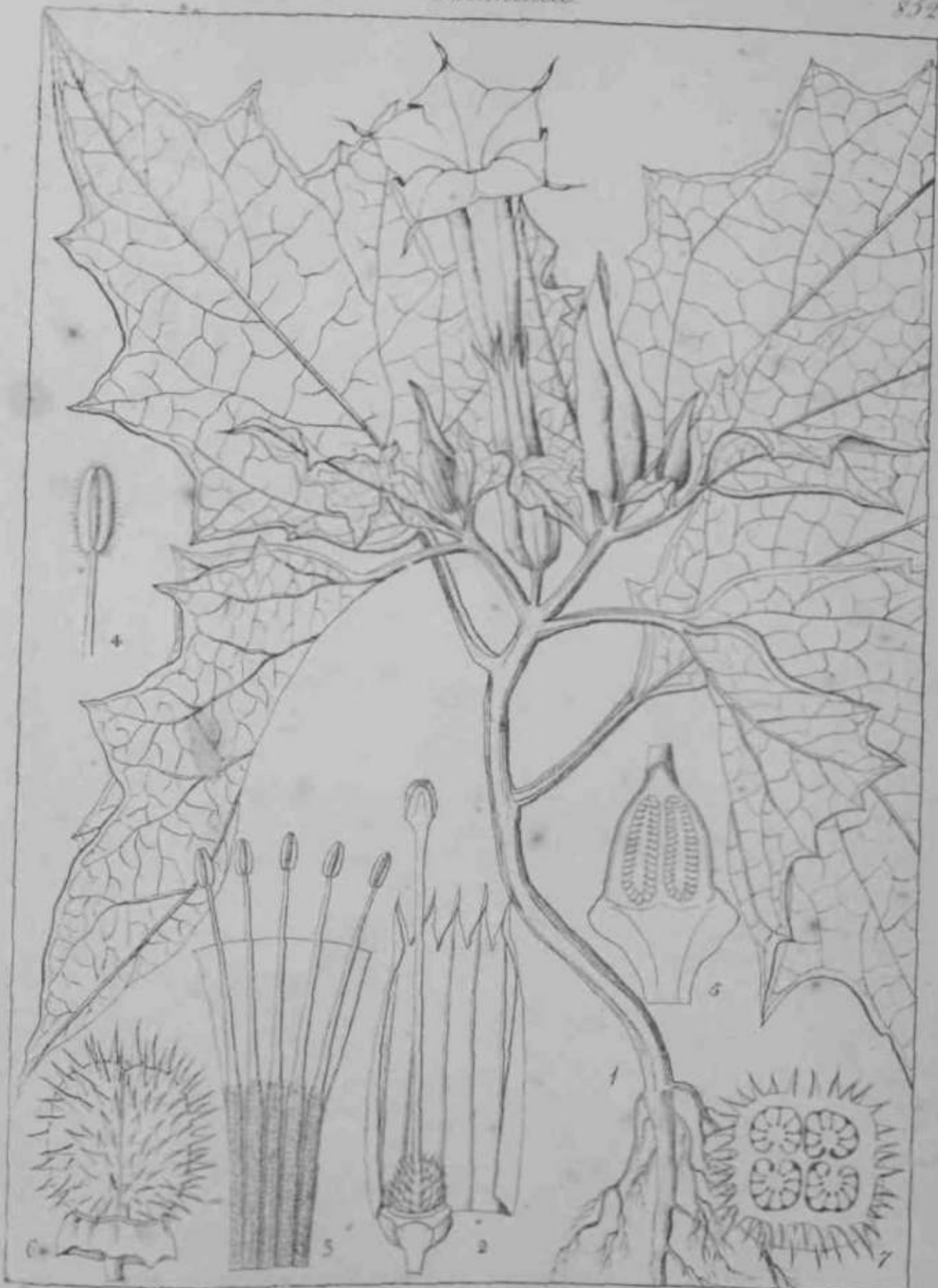


Argemone speciosa (Sweet)

Boissier, Hist.

Boissier, Hist.

JAM



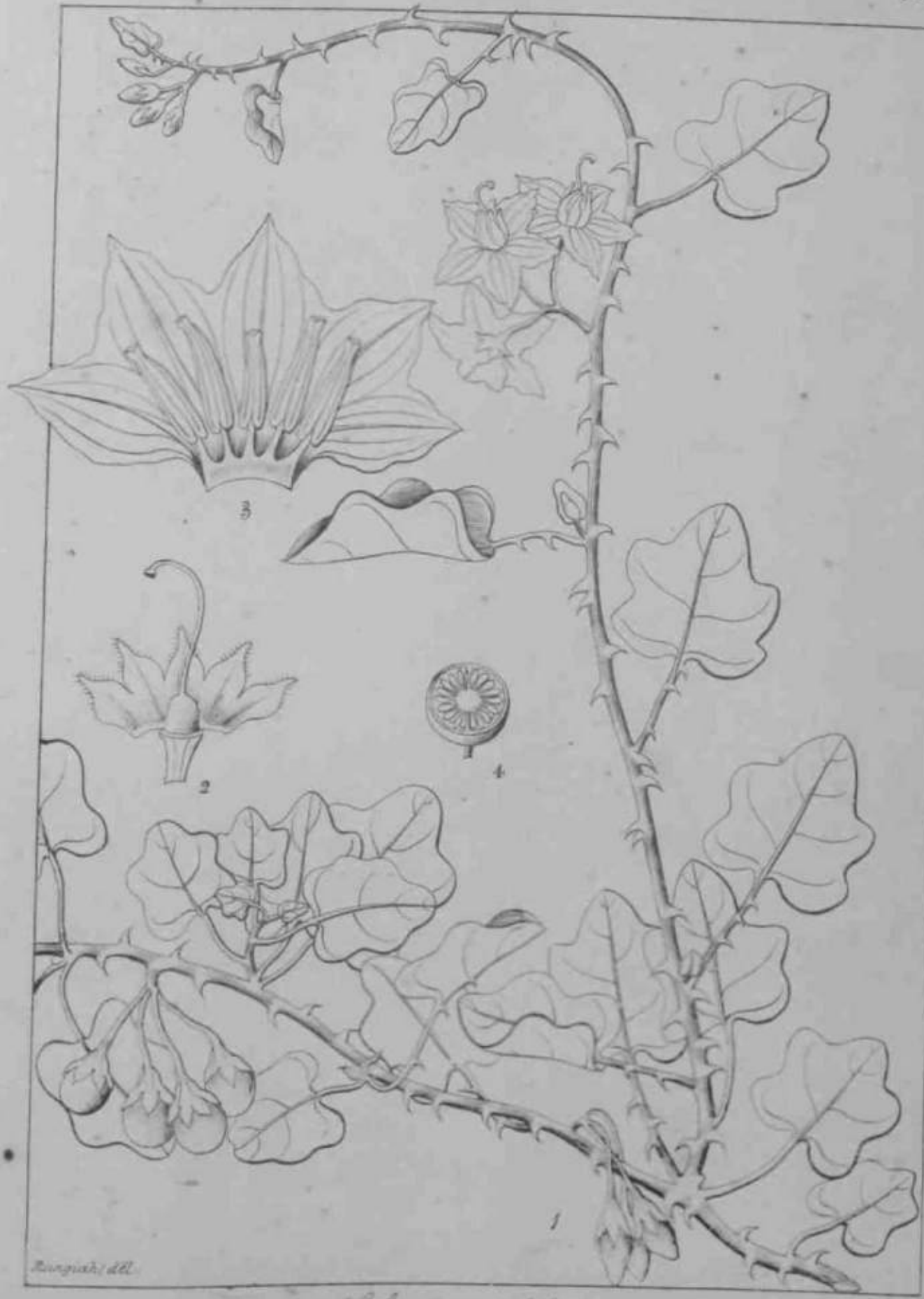
Datura alba (Nico)



အိပ်ဆေးပင် (အိပ်ဆေးပင်) (အိပ်ဆေးပင်)

Physalis somnifera (Link.)
var. *flexuosa* (Nees)

အိပ်ဆေးပင် (အိပ်ဆေးပင်) (အိပ်ဆေးပင်)



Boissier del.

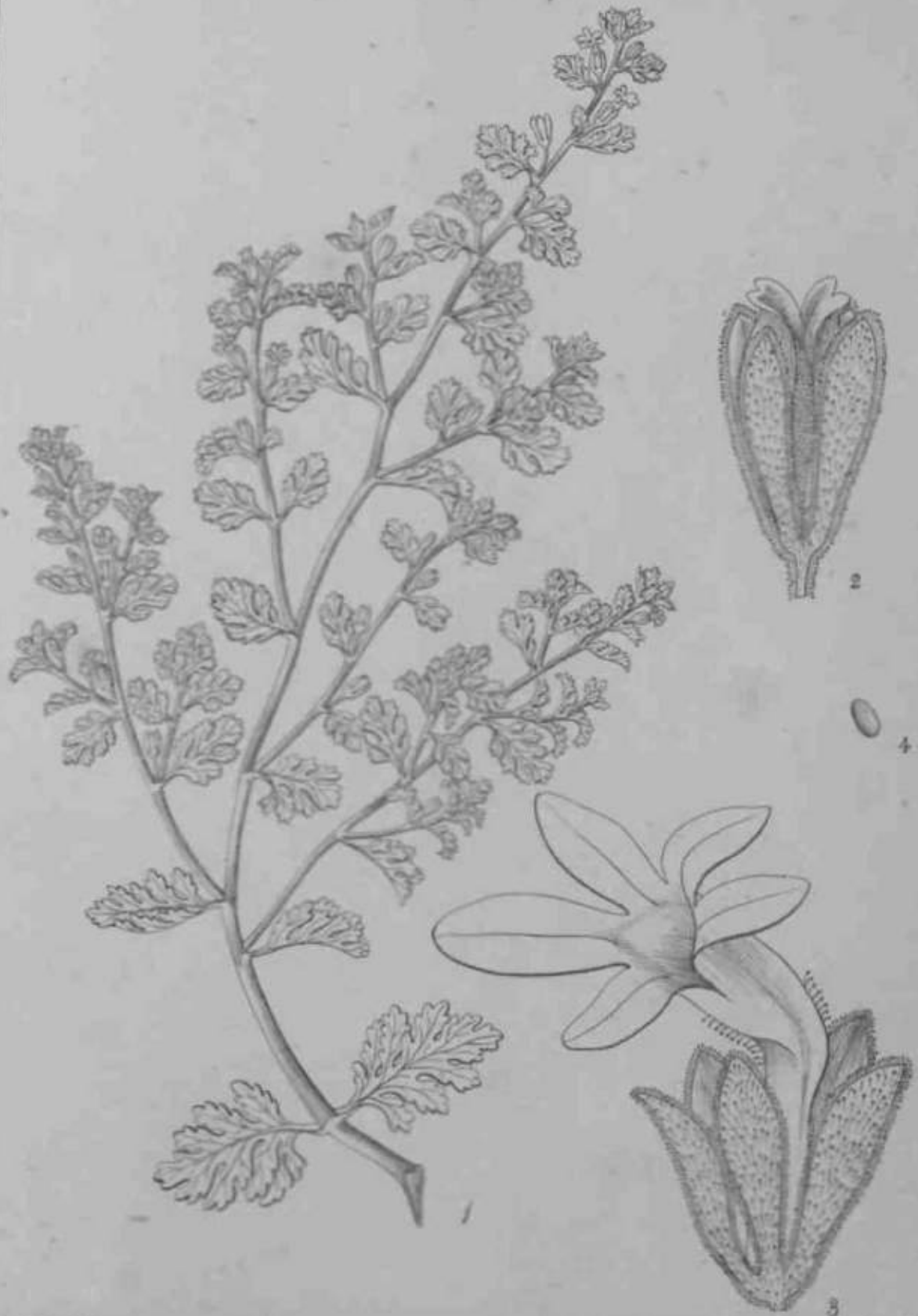
Solanum trilobatum



Rurgh, del.

Dumphy, lith.

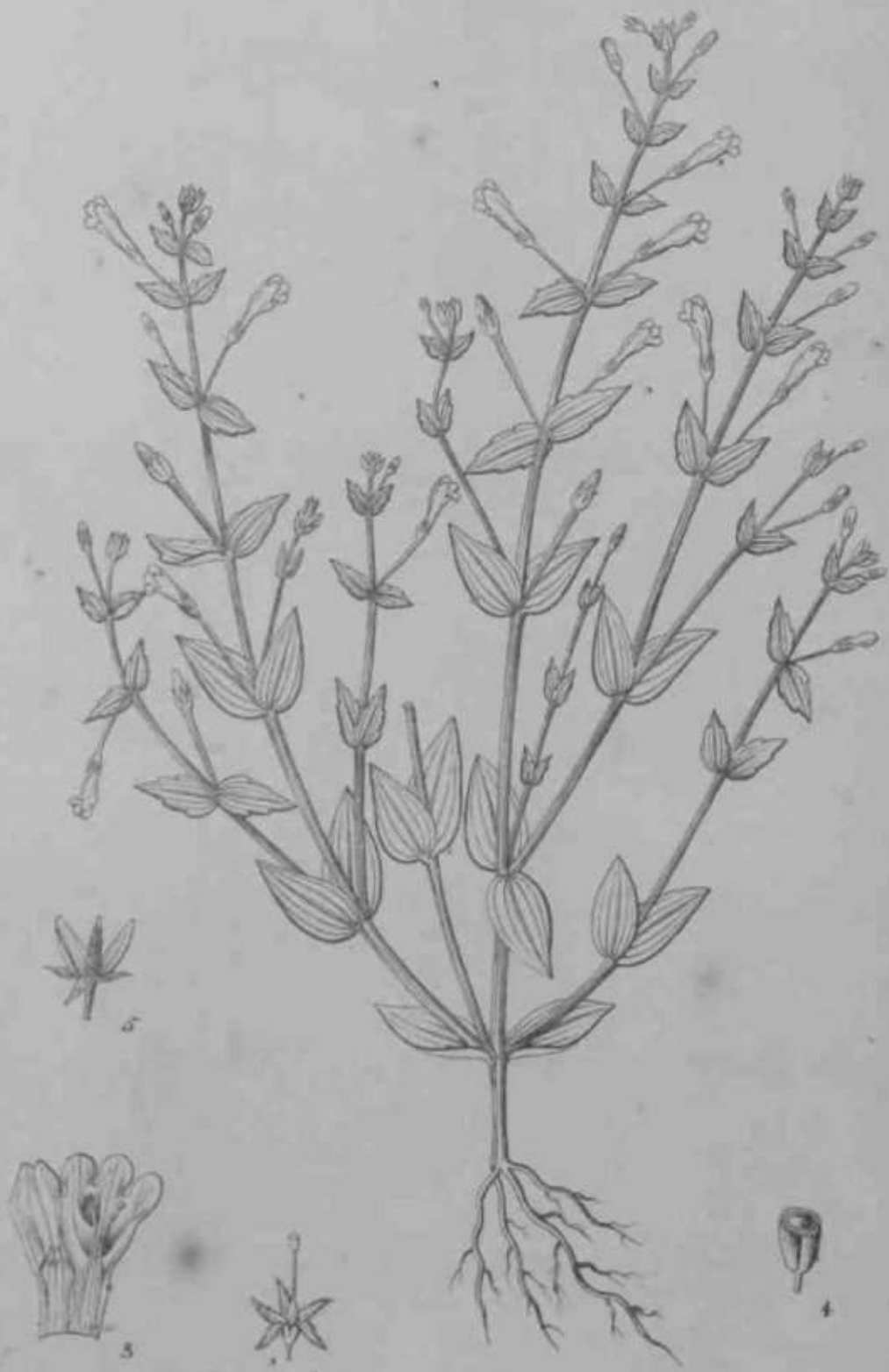
Buchneria cuphrasoides Benth.



Ricciardi del.

Beempfe del.

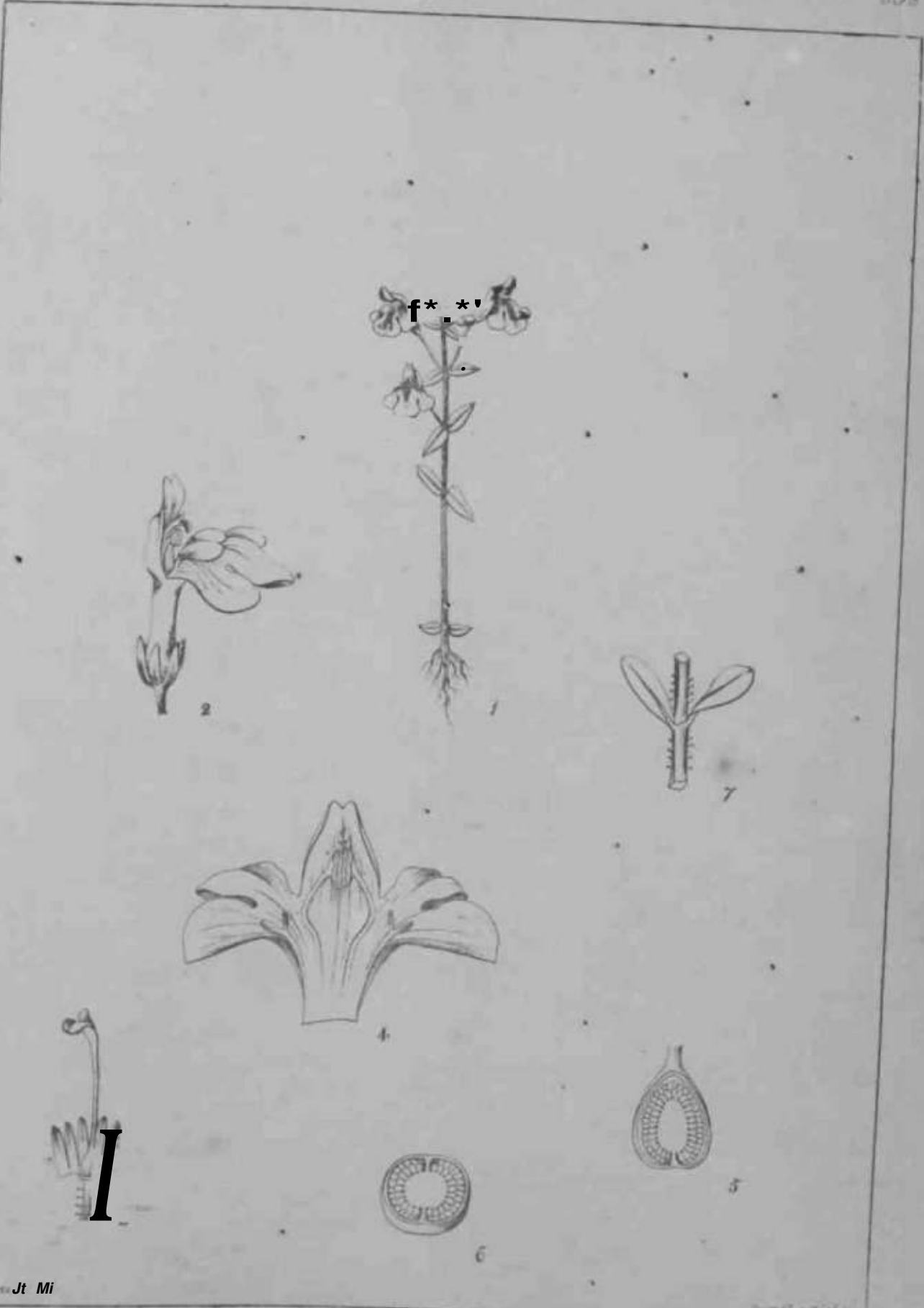
Sutura glandulosa (C. Th.)



alt. det.

W. & A. G. Smith

Bonniaya hyssopoides



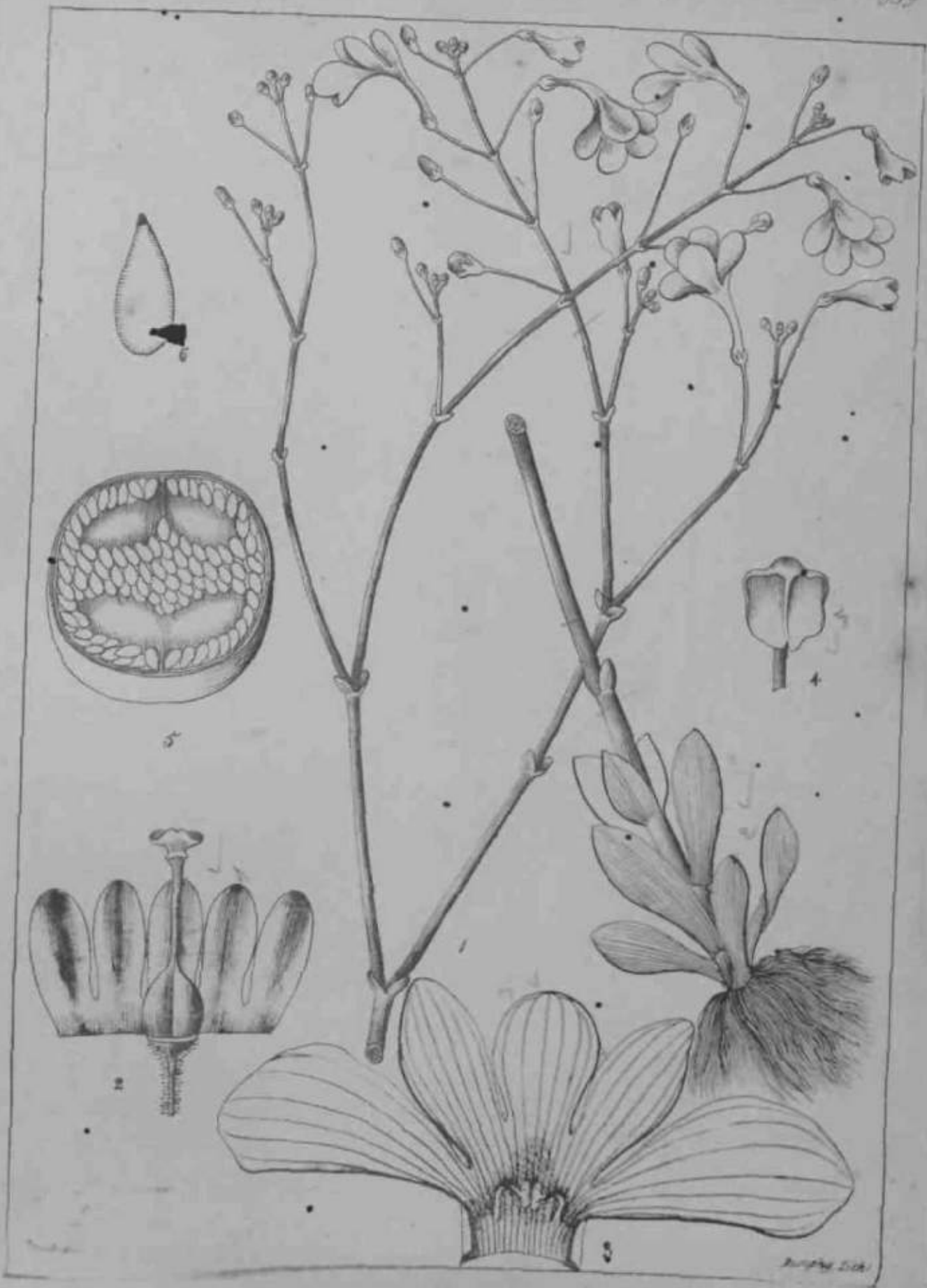
f*.*'

I

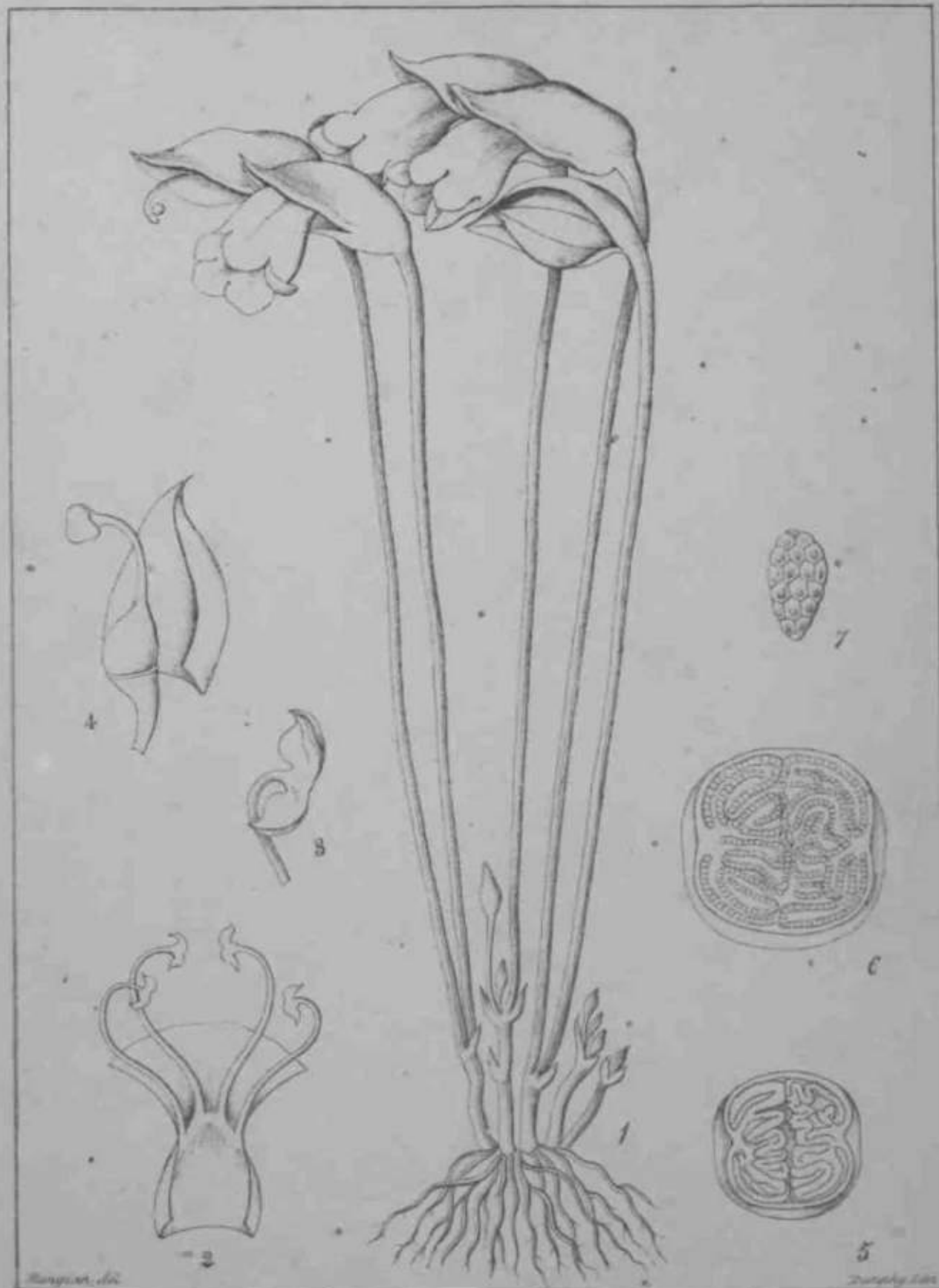
Autogr. Jt Mi

Handwritten signature or mark

Bonnaya minima? (Don)



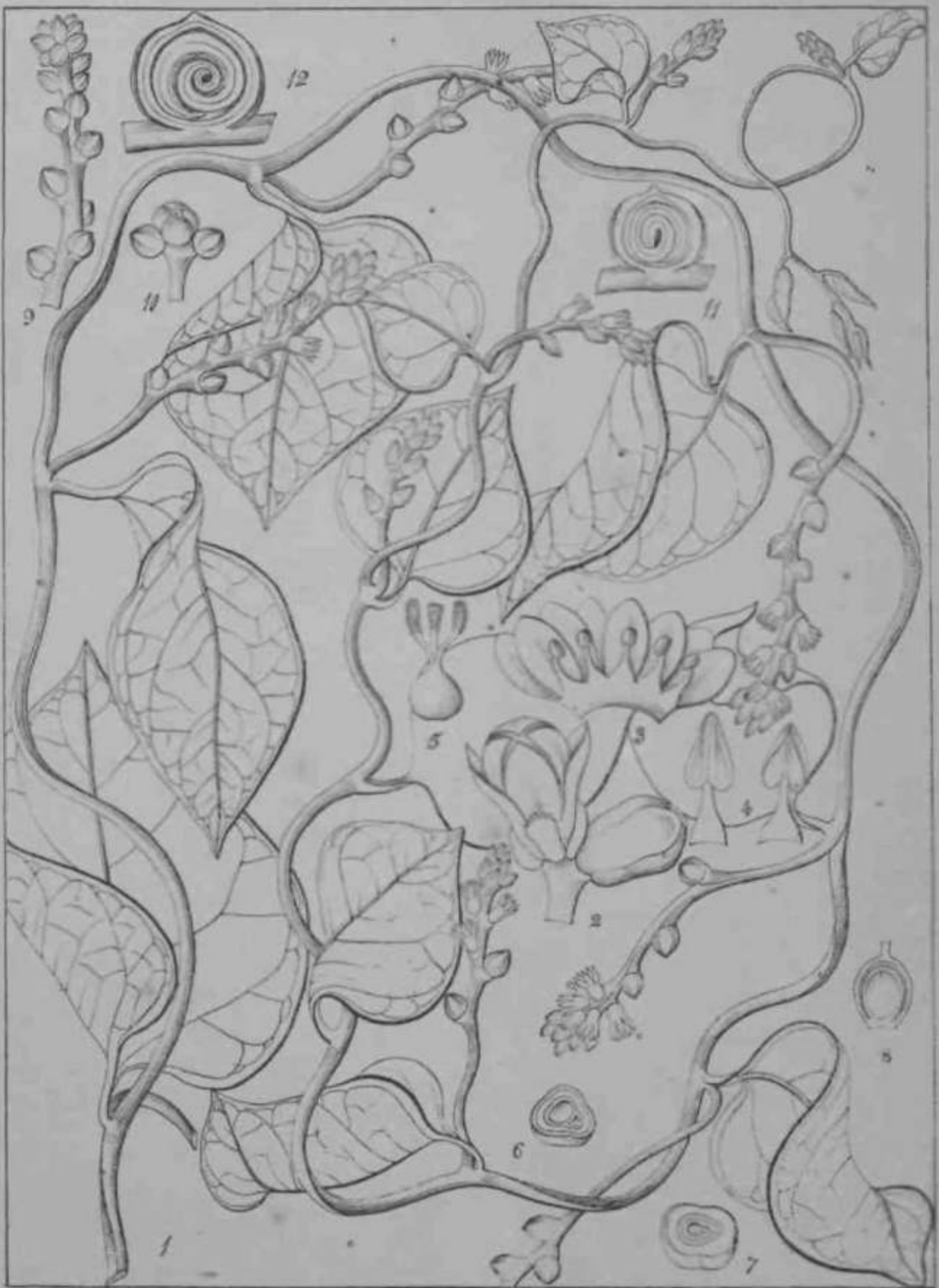
Gratiola lebelioides (Benth.)



Rangpur. det.

Dunlop. det.

Synedrella indica (Roxb.)



Engelm del.

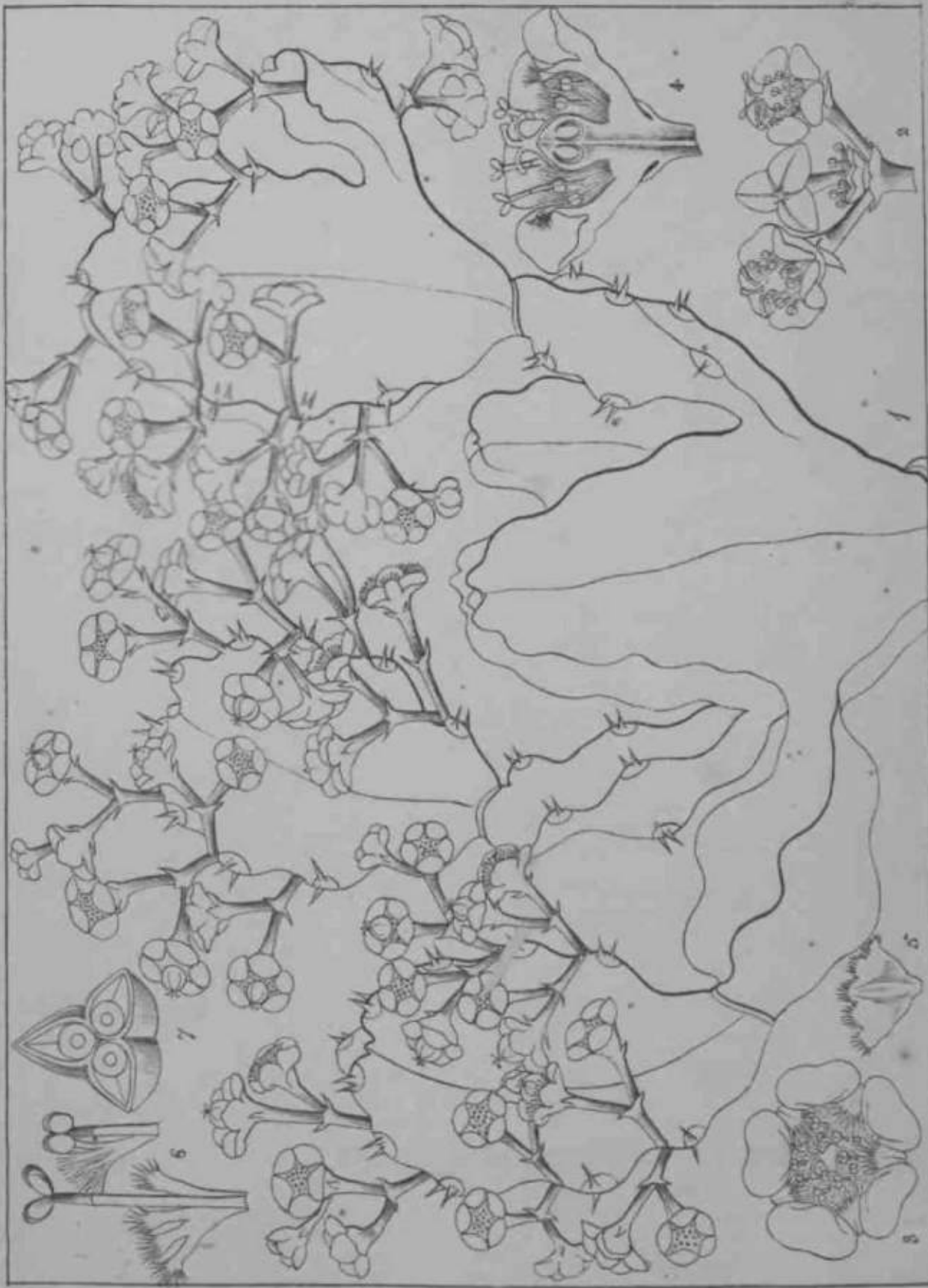
Engelm del.

Basella alba Lin

Euphorbia!

Euphorbiaceae!

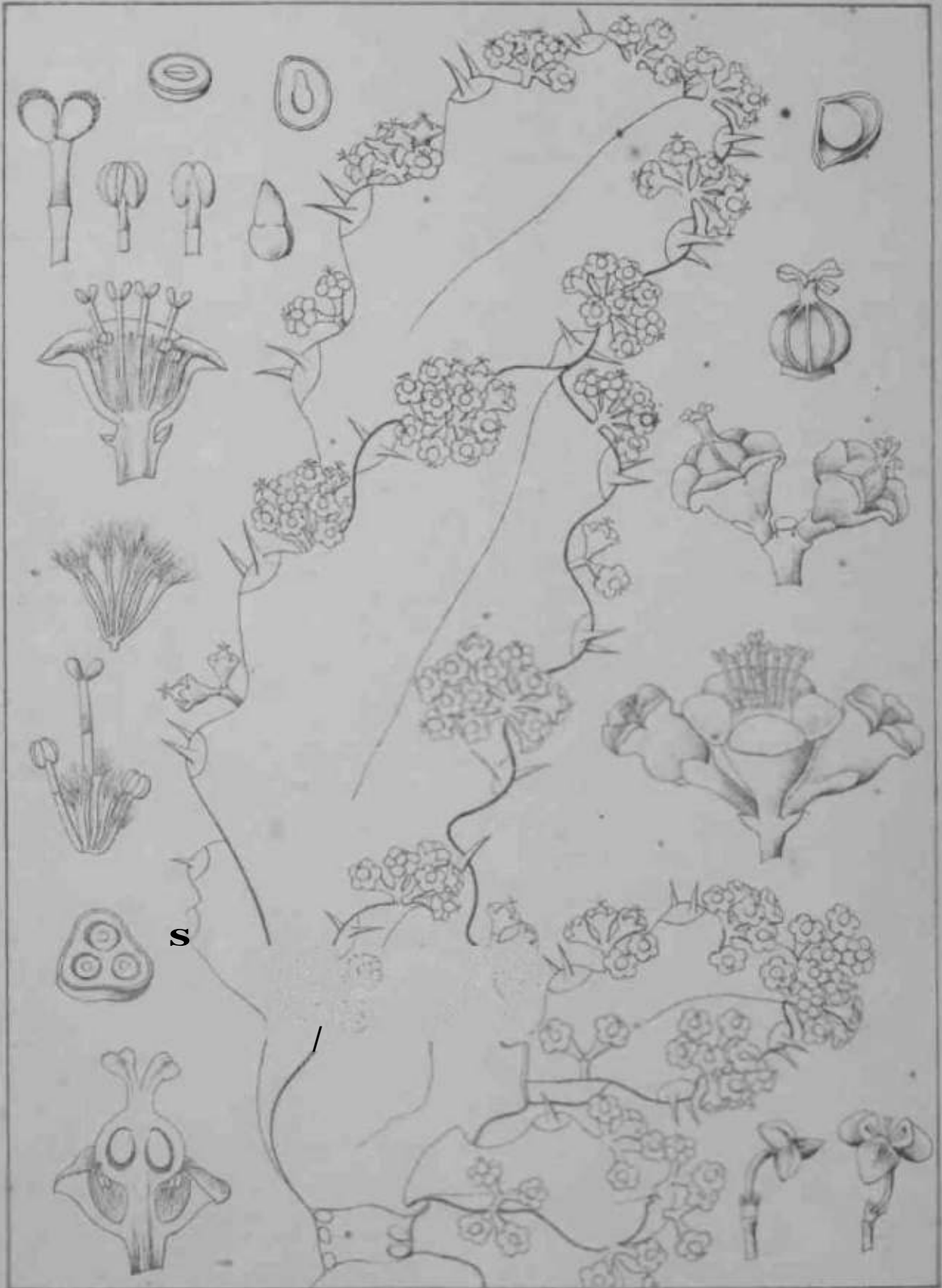
897



W. Engelmann del.

W. Engelmann del.

Euphorbia aptiquorum (Linn.)
var. *polygona*



S

Wiegand, del.

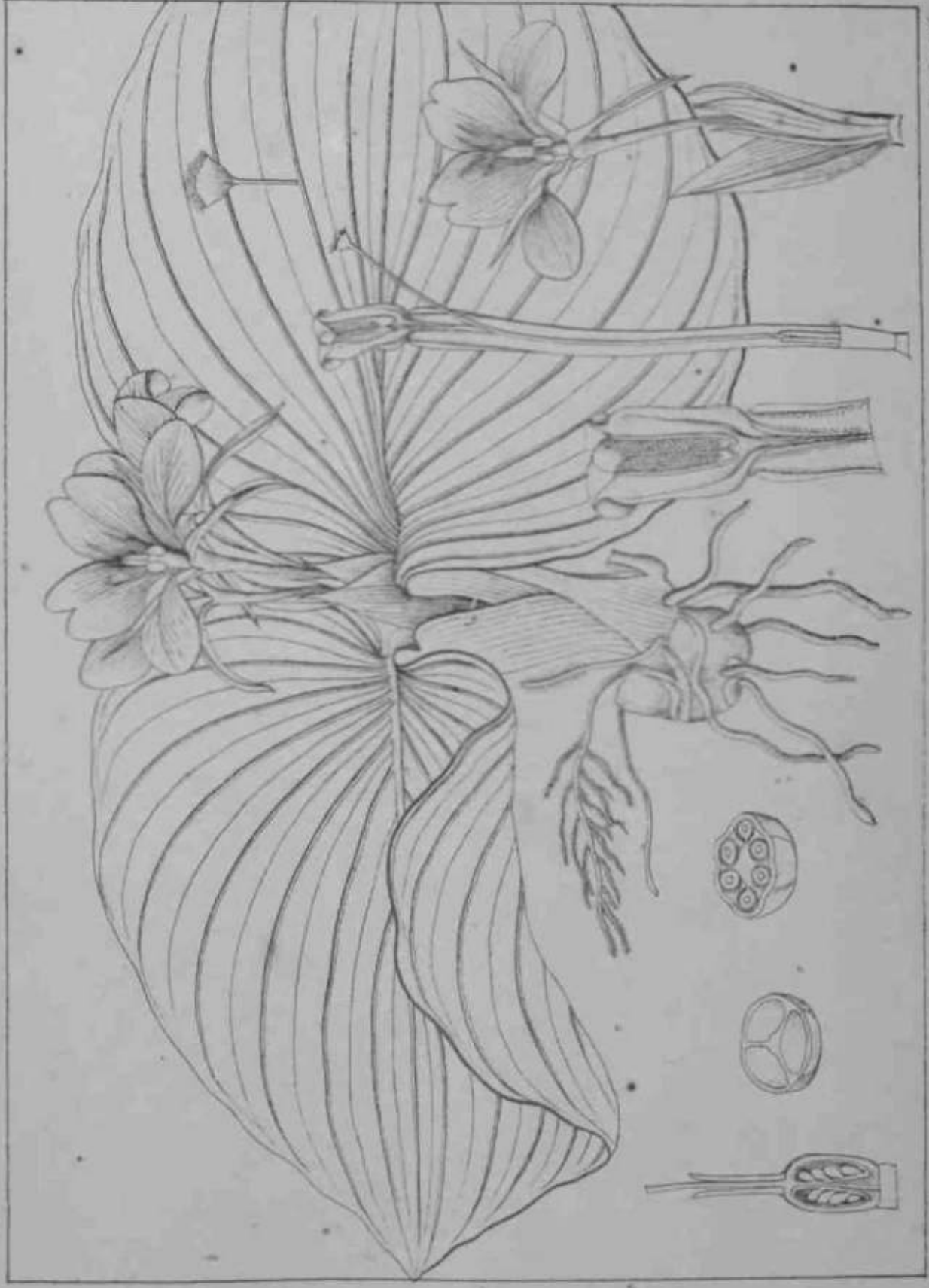
Euphorbia corollata (Rottler)

1845 V. 1. 112

Lingibora

Lingiberata

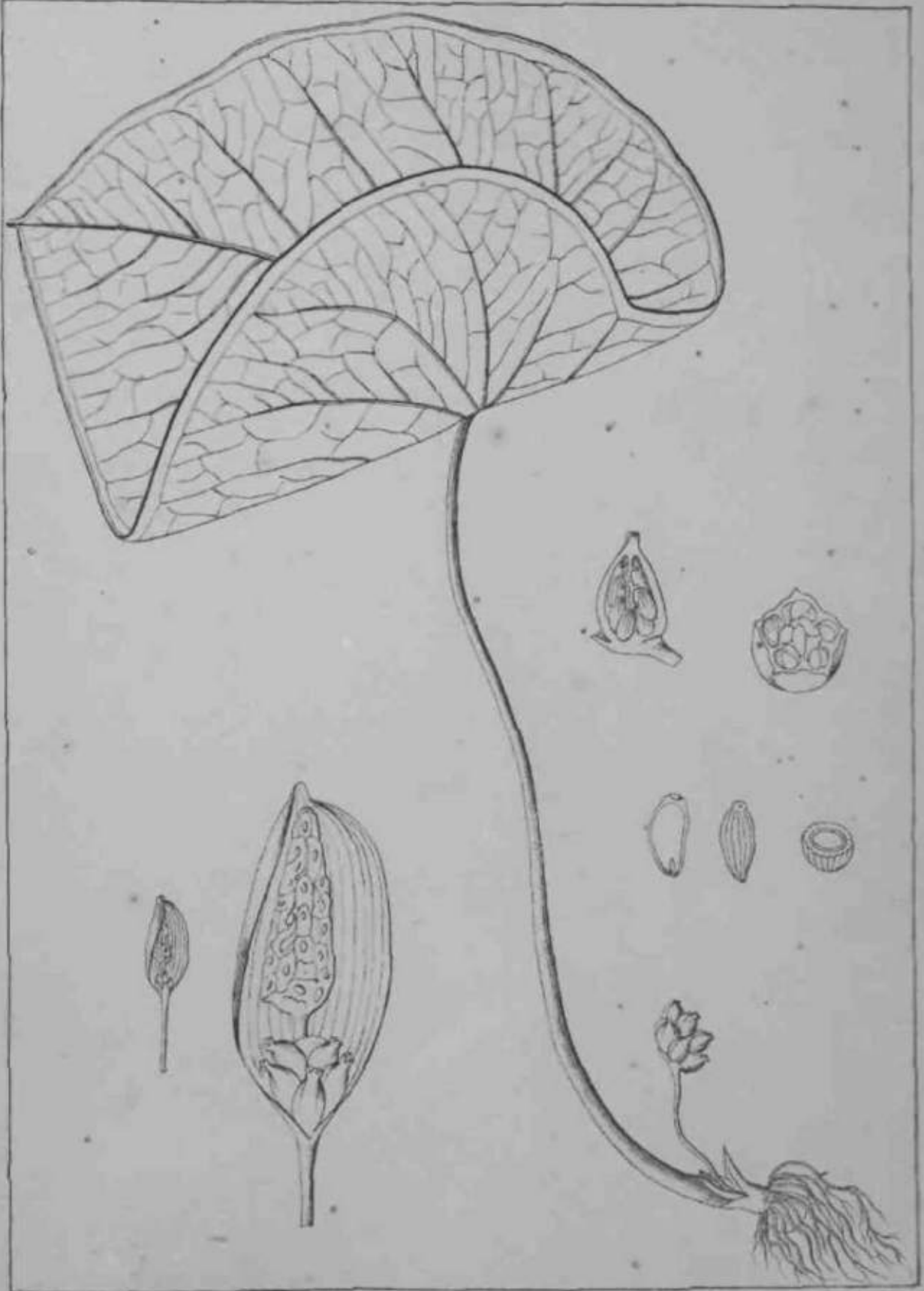
899



Reichenow, del.

Hampe, Ach.

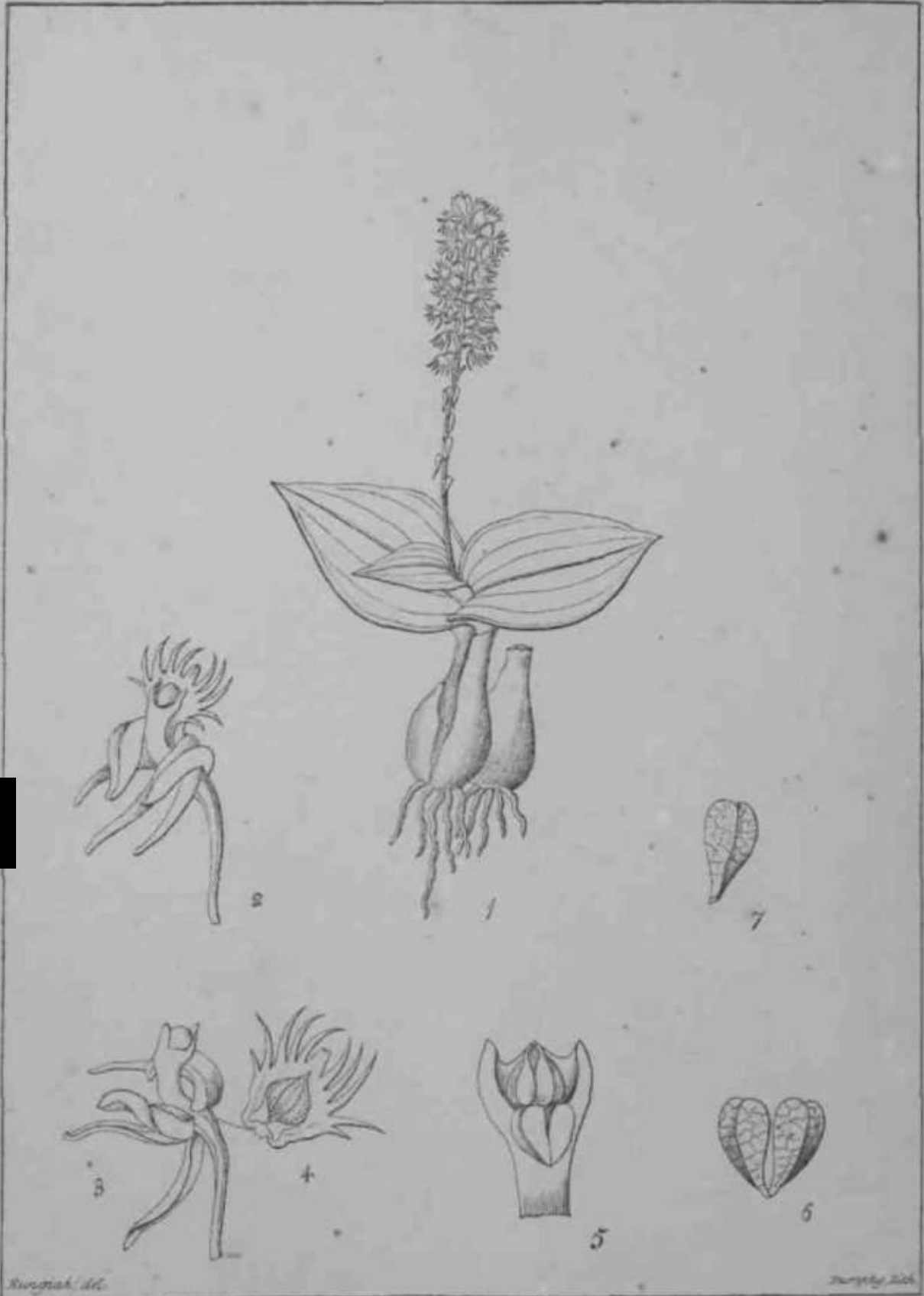
Hemphyse Galanga (Sin. Root)



Kunze del.

Remusatia vivipera Shott

Dunlop sculp.

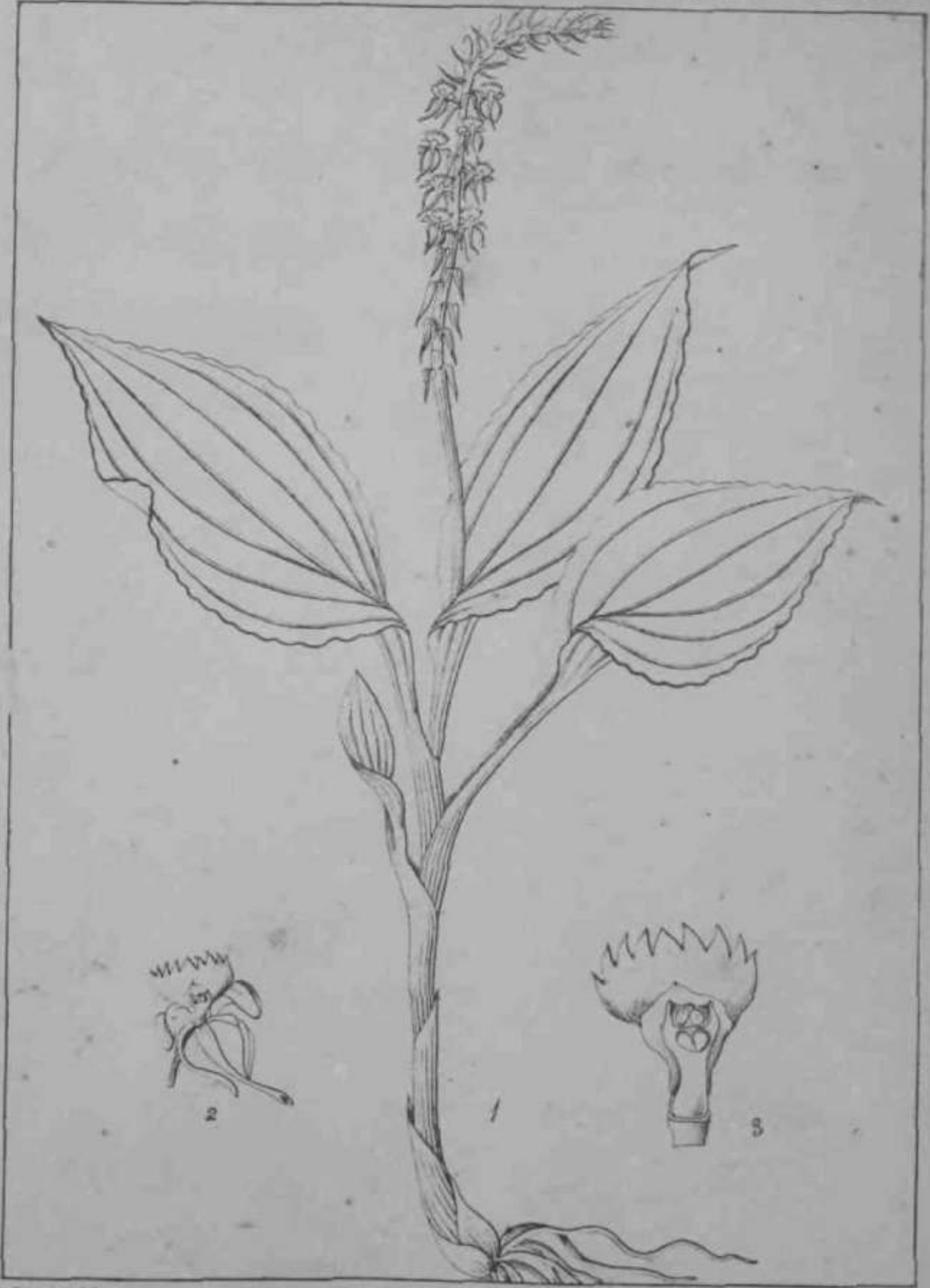


Microstylis wiccolor (Linn.)

Malaxidaceae

Orchidaceae

Pleurothallaceae 902.



Kunze del.

Mu. stylis Rheedii (Lindl.)

Dunphy lith.

Malaxidaceae

Orchidaceae

Neurothalloideae 903.



Rungtuck del.

Liparis oleovaca (Lindl.)

Dunlop & Esch.



Lurynski sc.

Dumphy Lith.

„1; *Pharisia J. ft M'yruca (Lind.)*



Reynolds del.

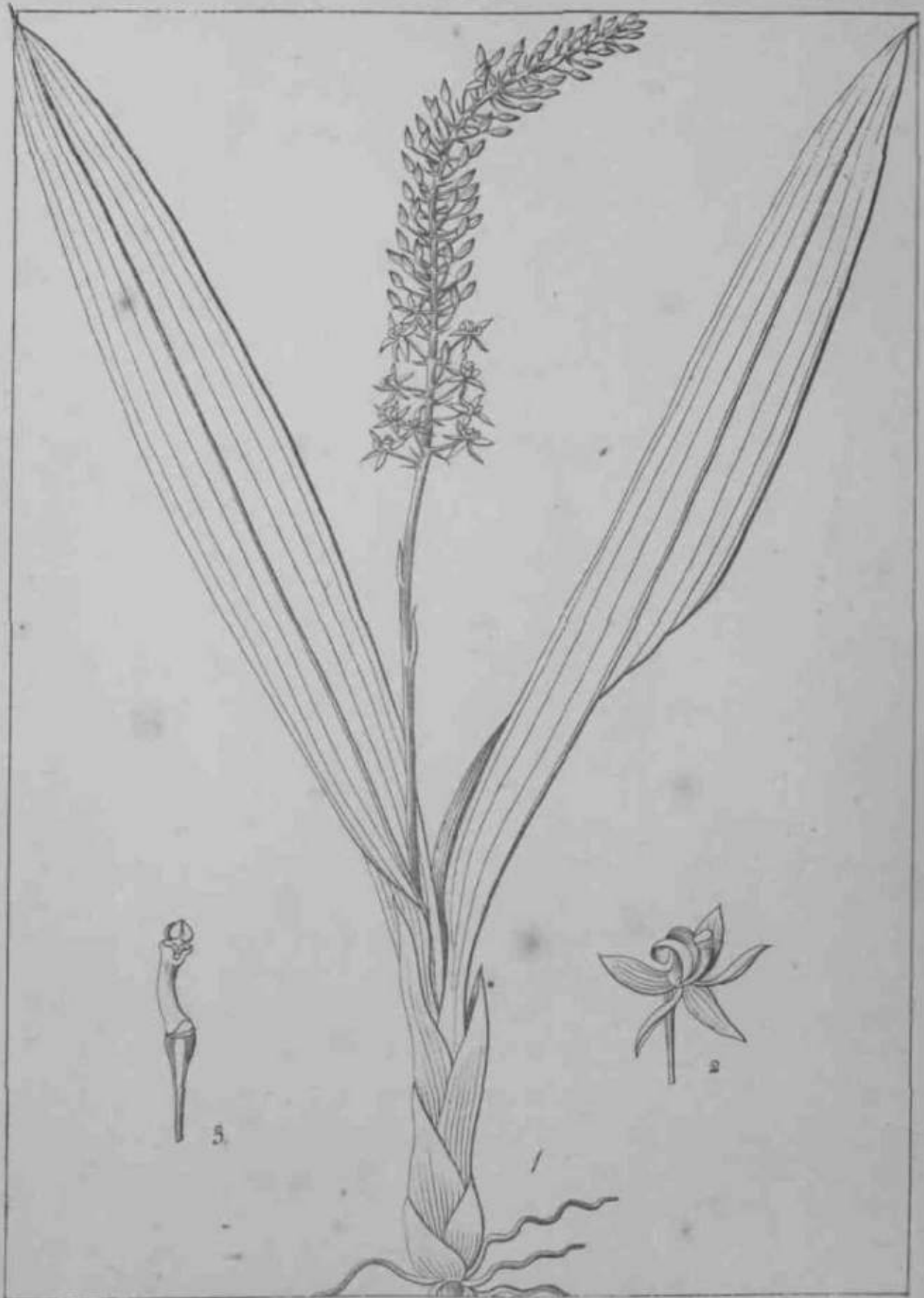
Spuris Walkerii (Graham)

Young & Lobb.

Malacoidae

Orchideae

Pleurothallea 906.

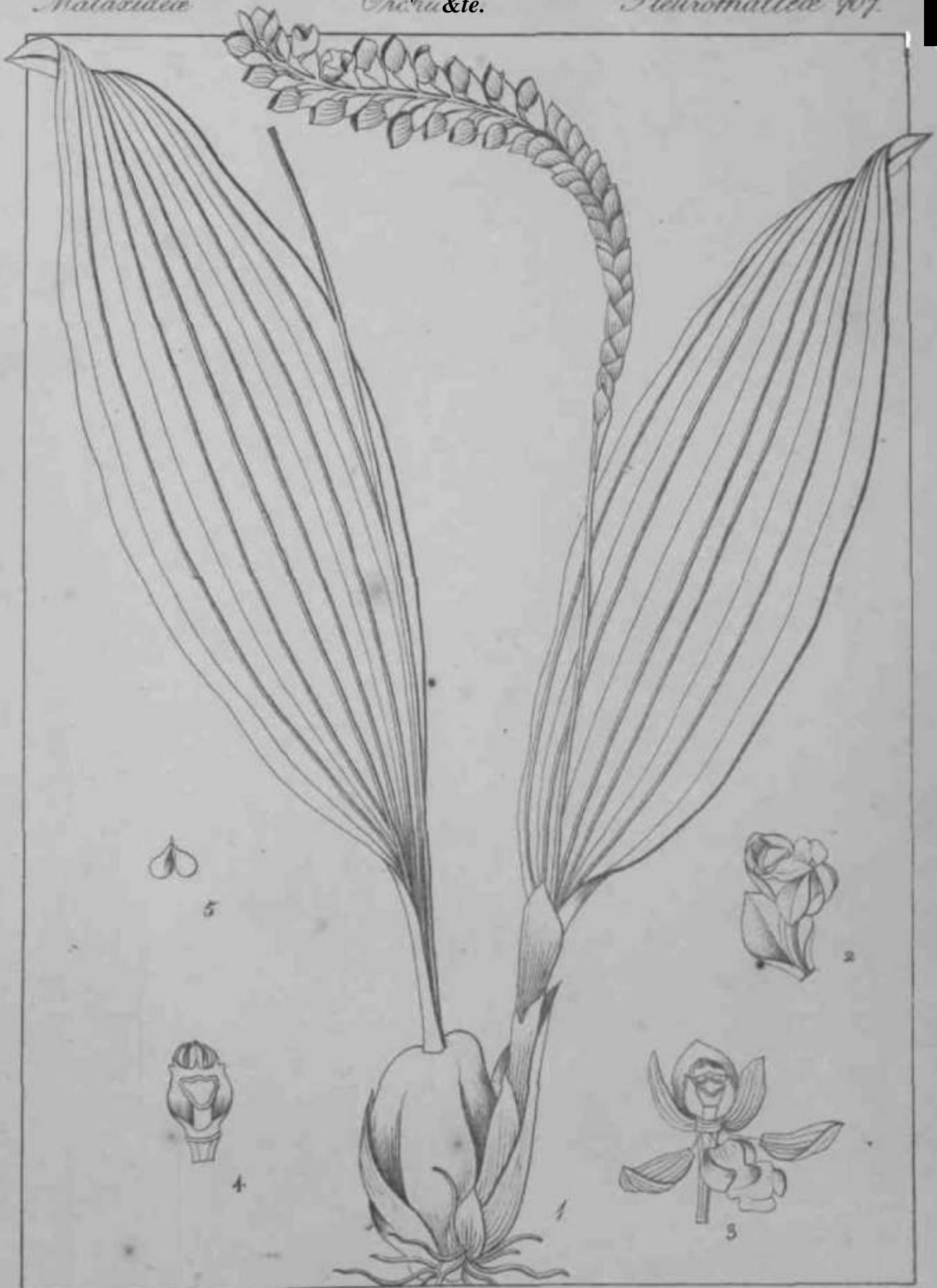


Kunze del.

Liparis longipes (Lour.)

Bumby Lith.

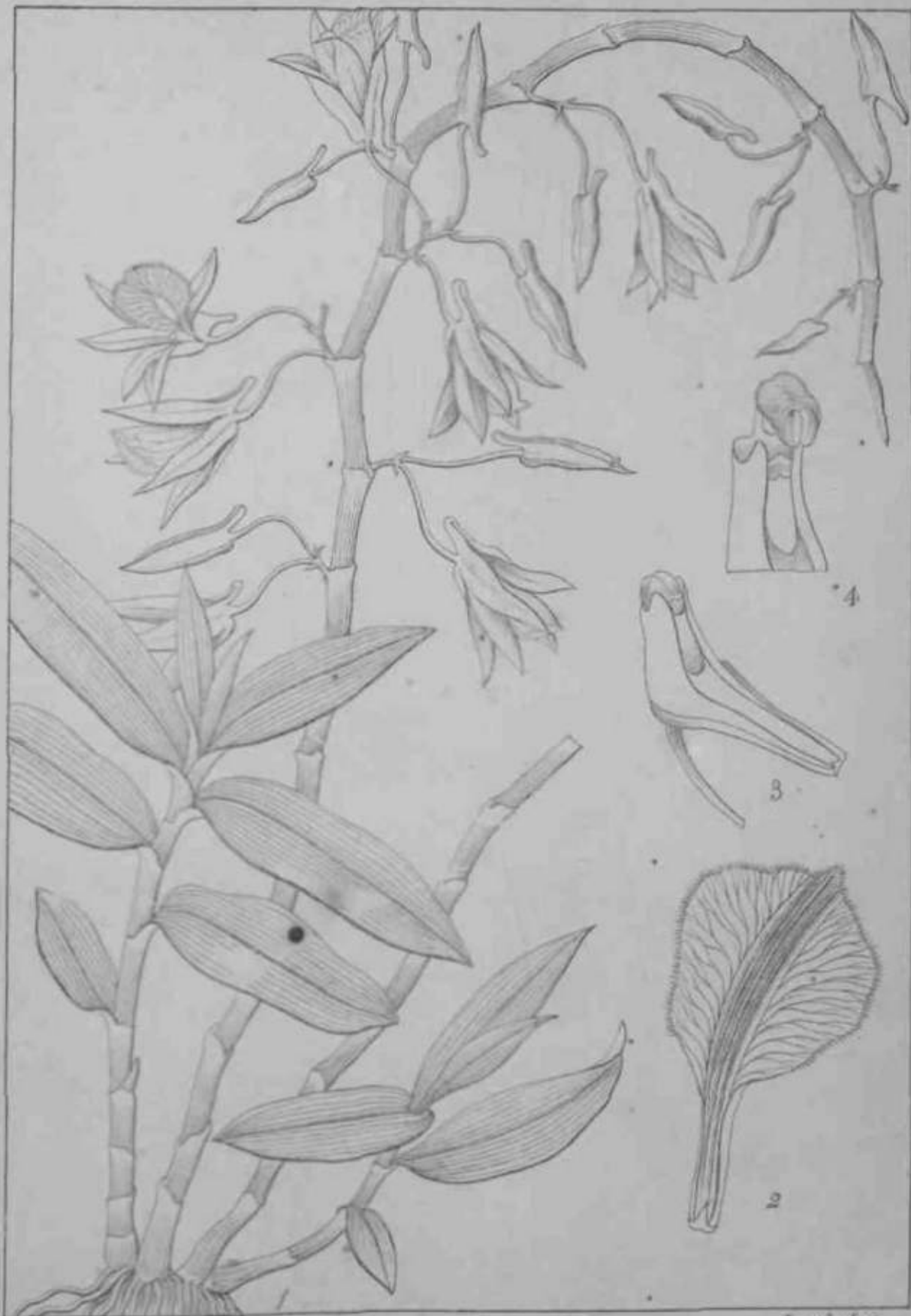
rut



Rungiah del.

Pholidota imbricata (Lindl.)

Dumort. Lith.



Reichenow del.

Dr. G. H. Guss.

Dendrobium Pierardii (Kozl.)

Malaxidæ

Orchidæ

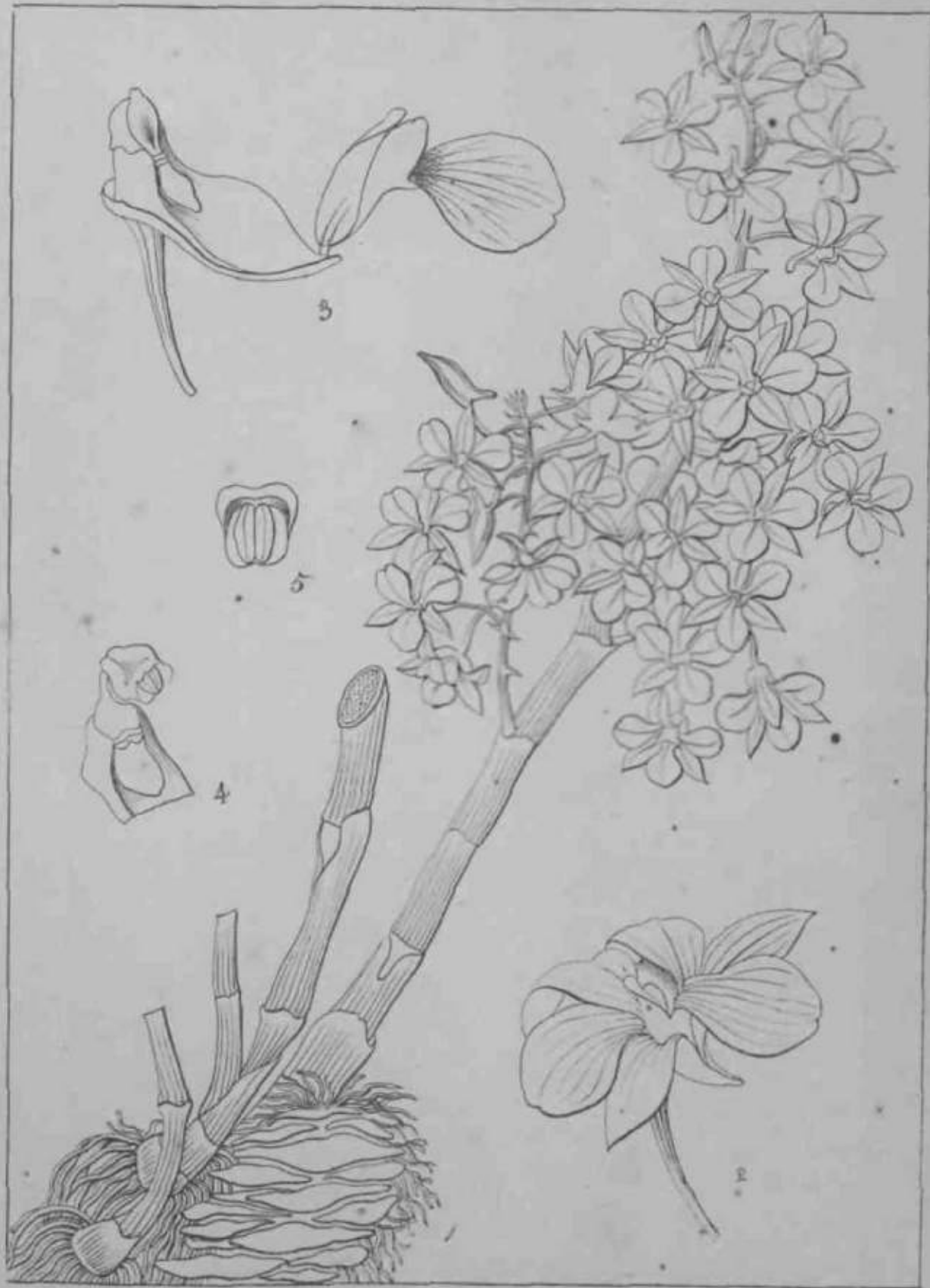
Dendrobicæ 909.



Kunze del.

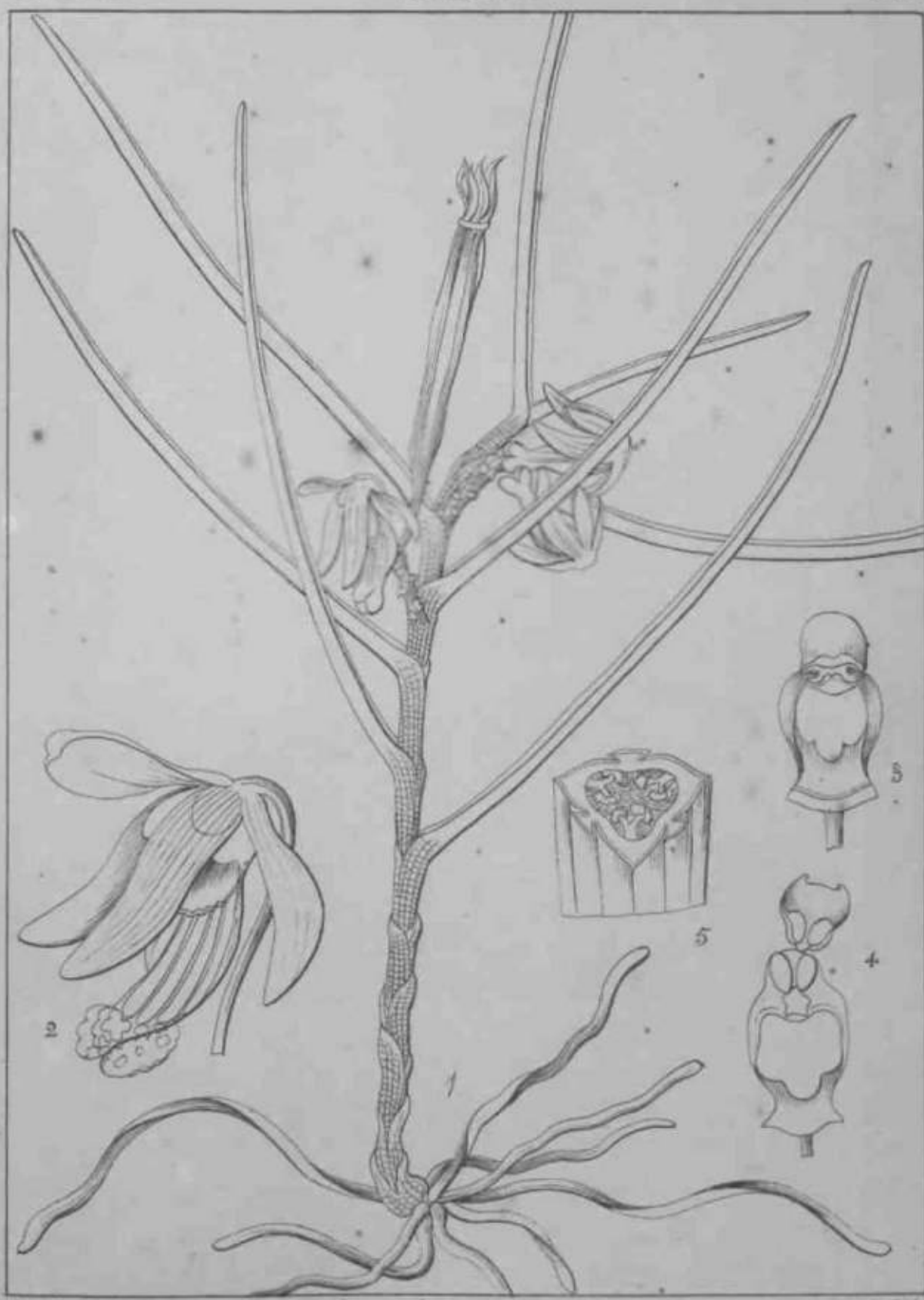
Dendrobium Heyneanum (Lind.)

Barthol. lith.



Dendrobium barbatulum (Lindl.) mwm

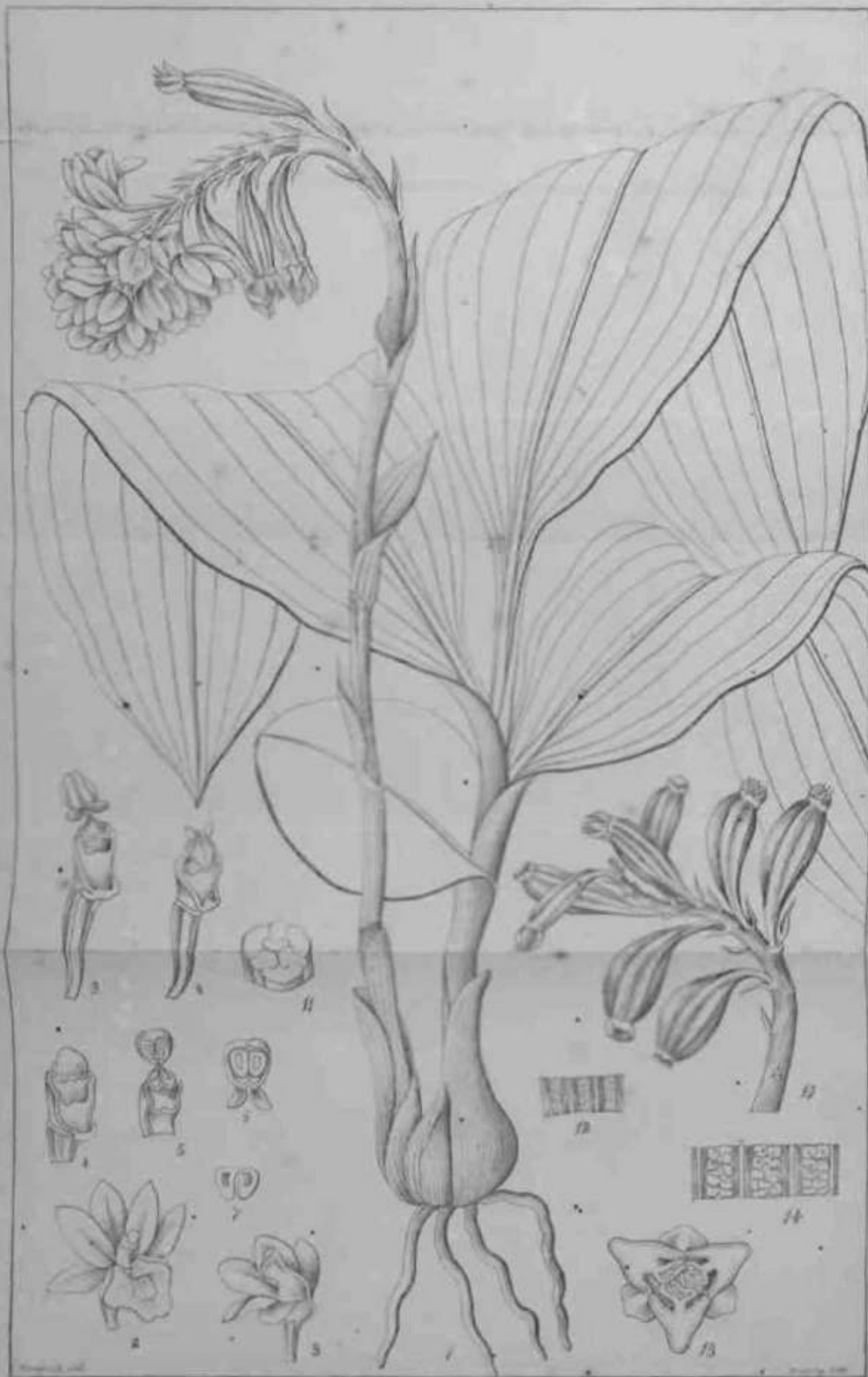
J. Smith del.



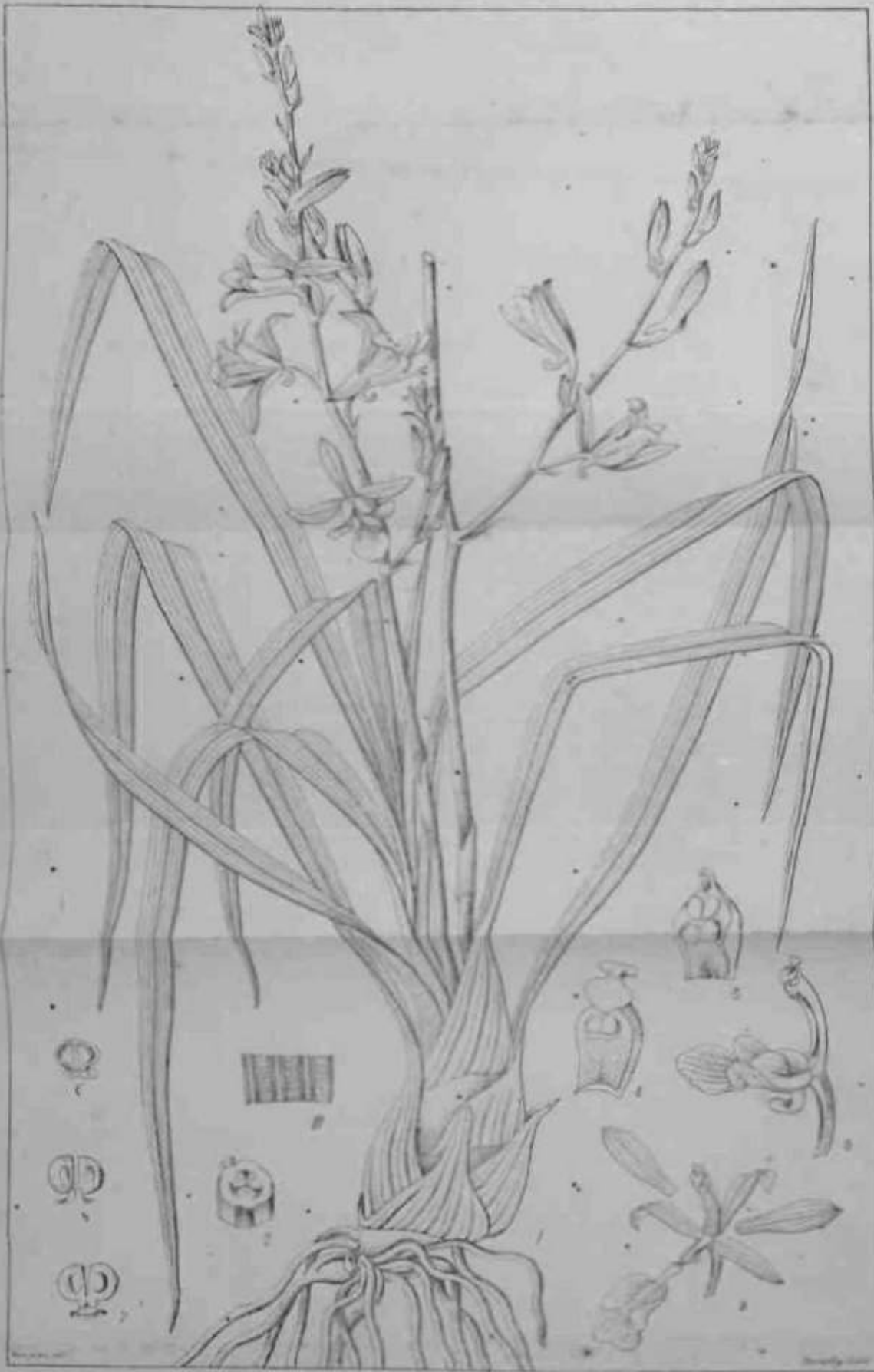
Bergsch. del.

Cymbidium triste (Willd.)

fo. 1. 2. 3. 4. 5.



Gundermannia salsoliformis (R. Br.)



Entolipia caracas, L. B.



Ania latifolia (Lindl.)



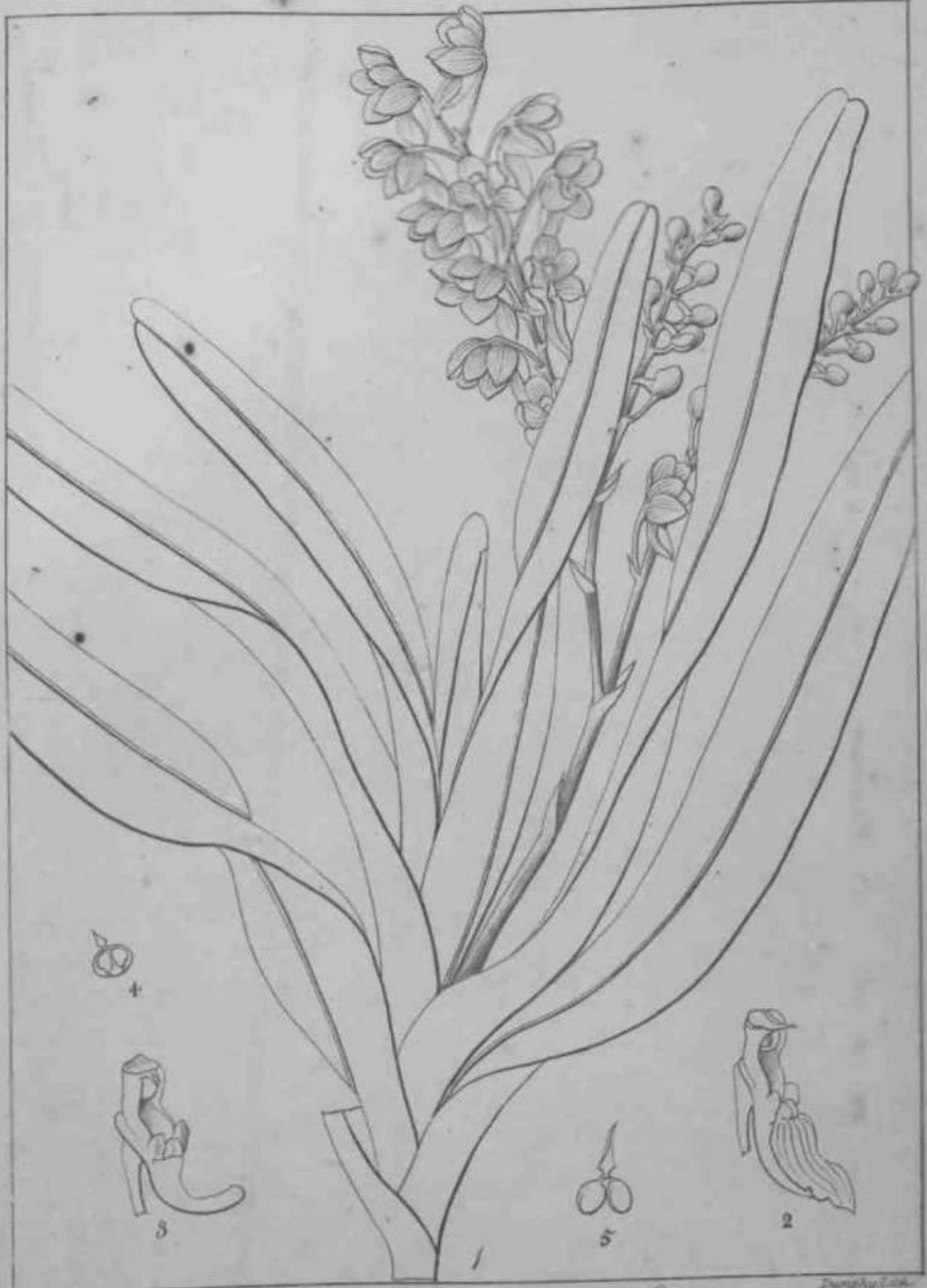
Hornem. det.

Dumphy. del.

Vandea thulata (Sprong!)



Vanda acultrata L. B.



Burgin 26

Saccolobium Wightianum (Lindl.)

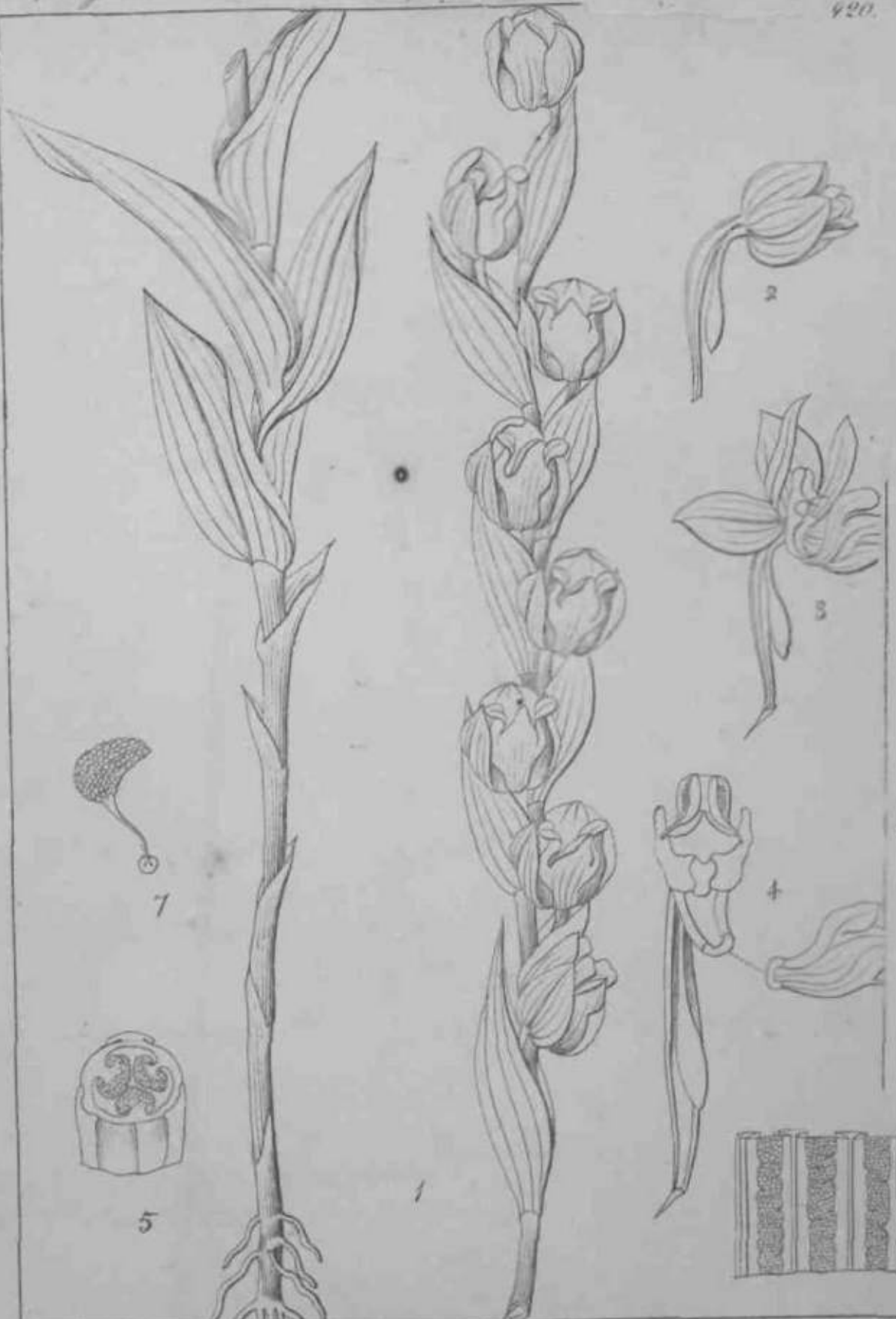
Dunphy Lith.



Kunze del.

Calanthe emarginata (Lindl.)

Dumphy Lith.



Seeger del.

Plantanthera lutea (R. W.)

Seeger.



11,

;

Dunlop del.

Plantanthera Susanna (Lindl.)

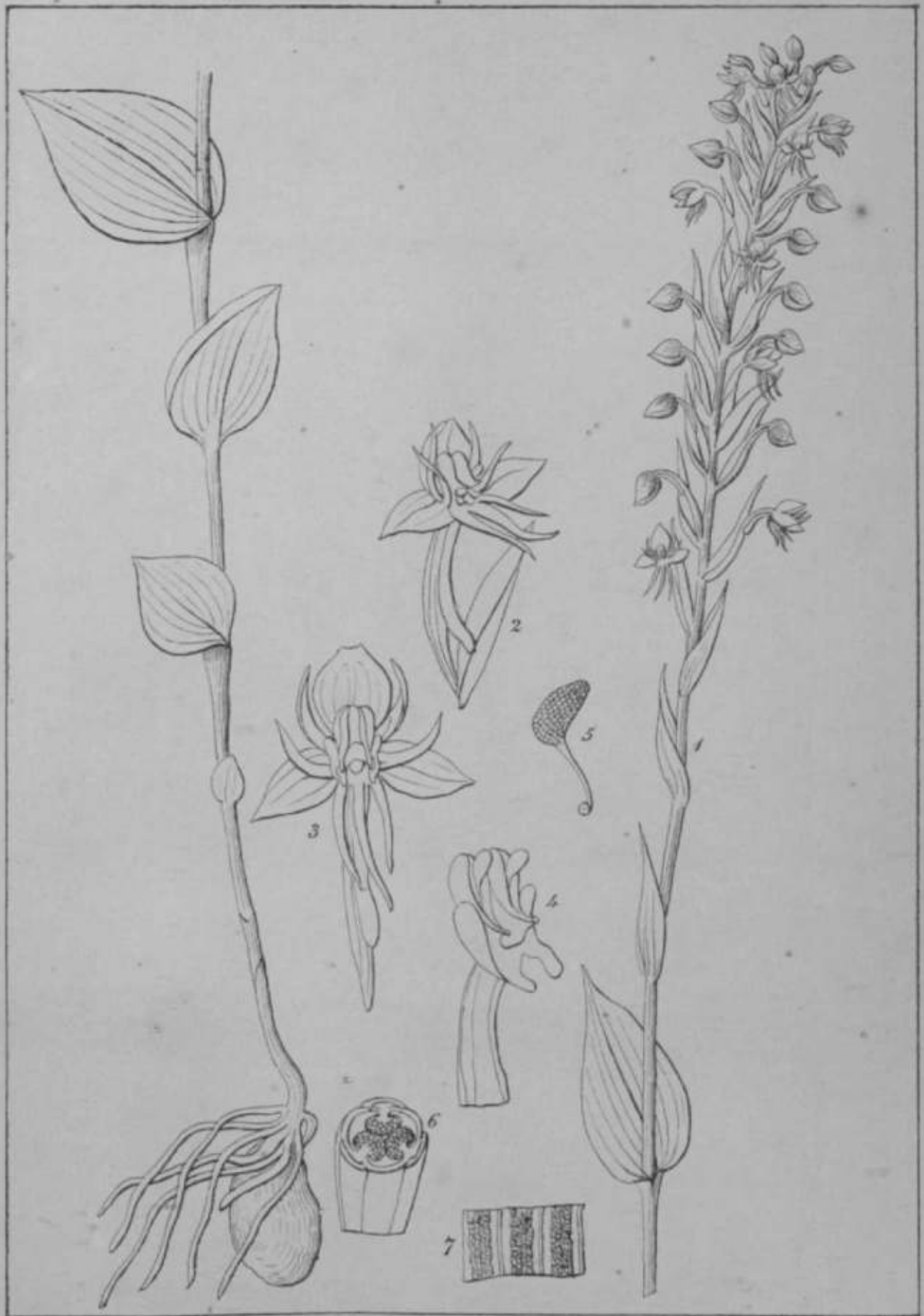
Dunlop del.



J.S

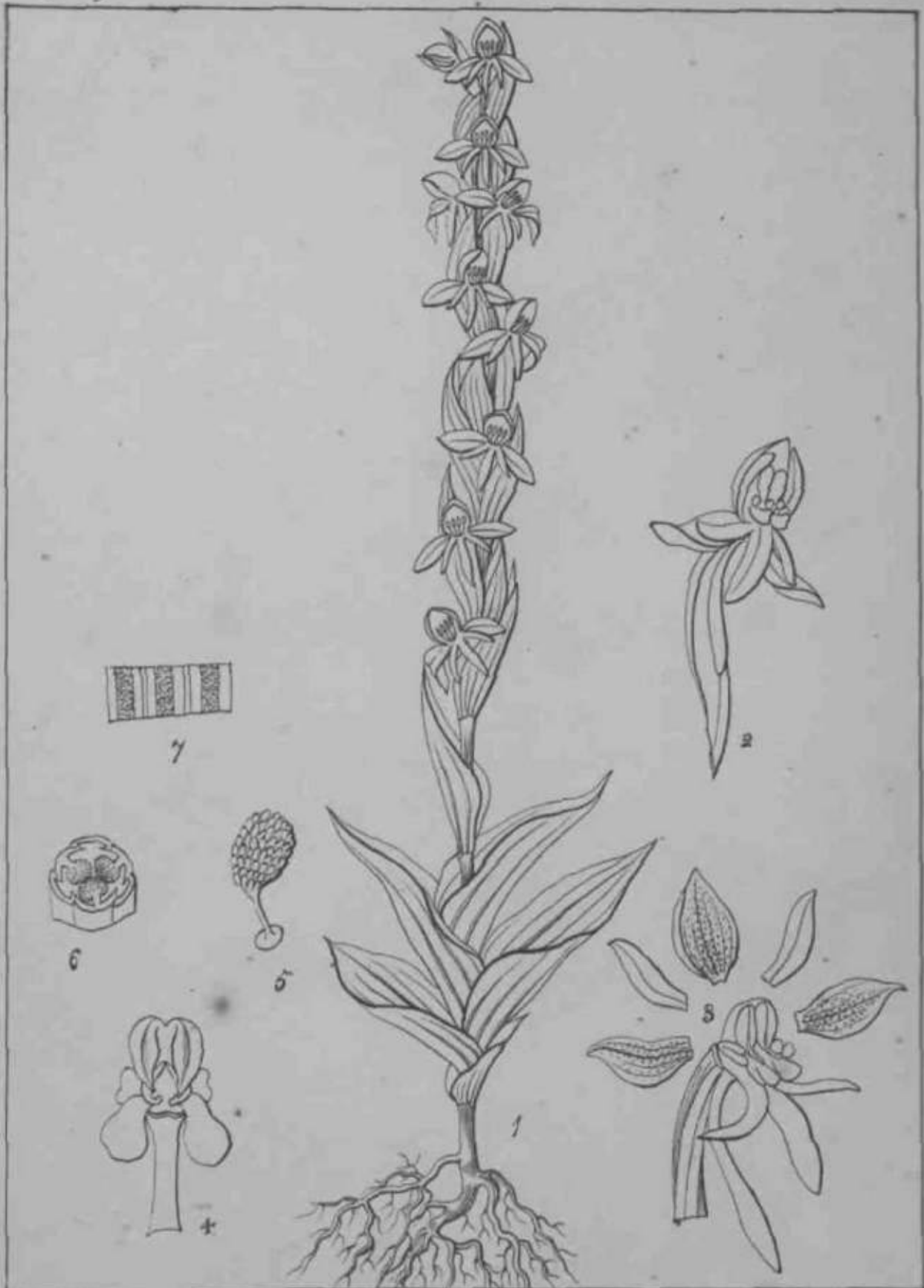
Peristylus plantagineus

Dumphy Liche



Habenaria Lindleyana (R. W.)

Drummond, Lith.



Rangiah del.

Habenaria Hecyniana (Lind.)

Dumphy Lith.



Rungia del.

Habenaria rariflora (A. Rich.)

J.umphrey sculp.



Habenaria neglecta (Rich.)

2000/10/20



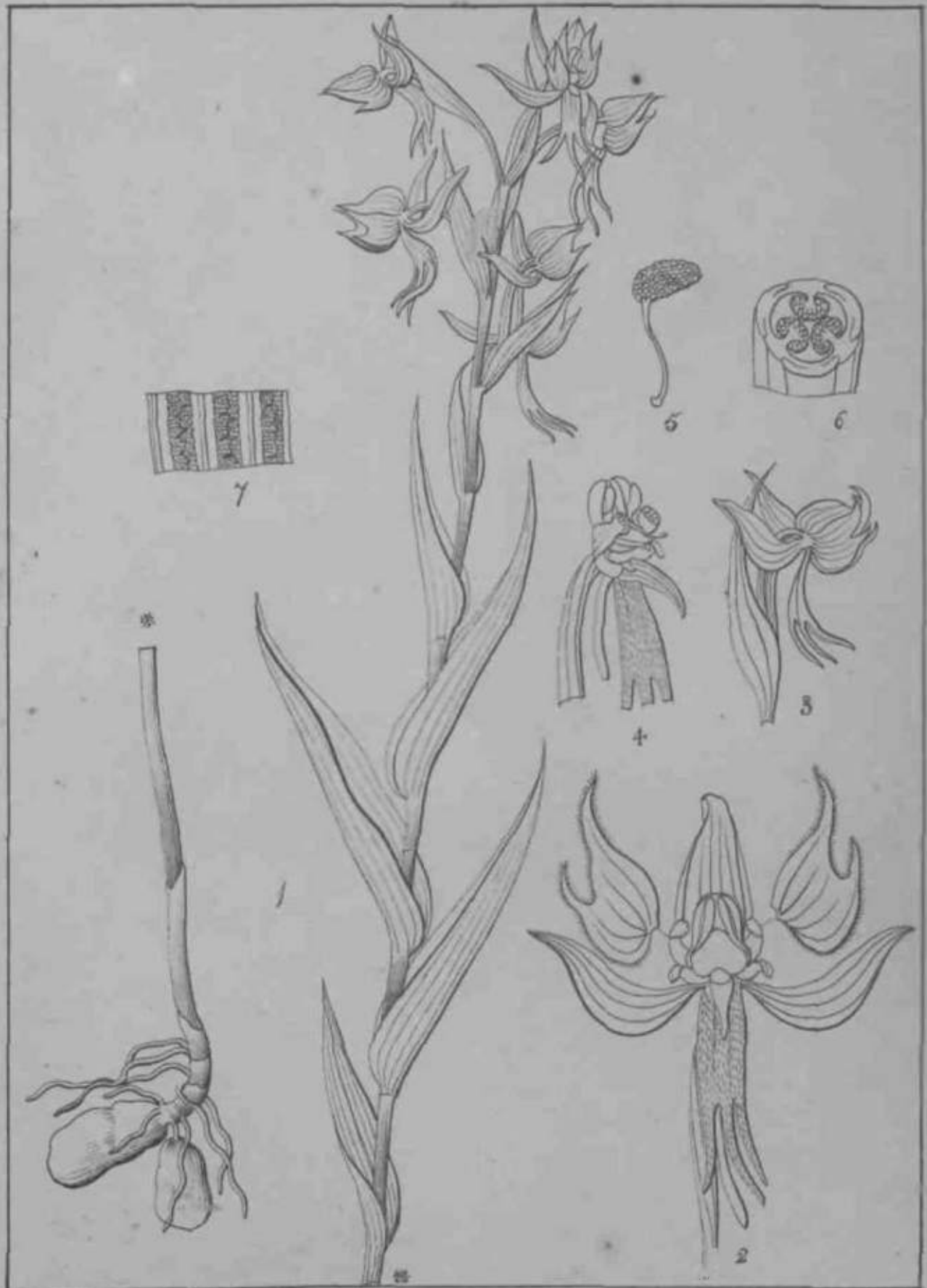
Swartz del.

Hal 484/U. (*crinita* Lindl.)

Swartz del.



Spiranaria montana. (A. Rich.)



Hegi del.

Ophrys virens (Lindl.)

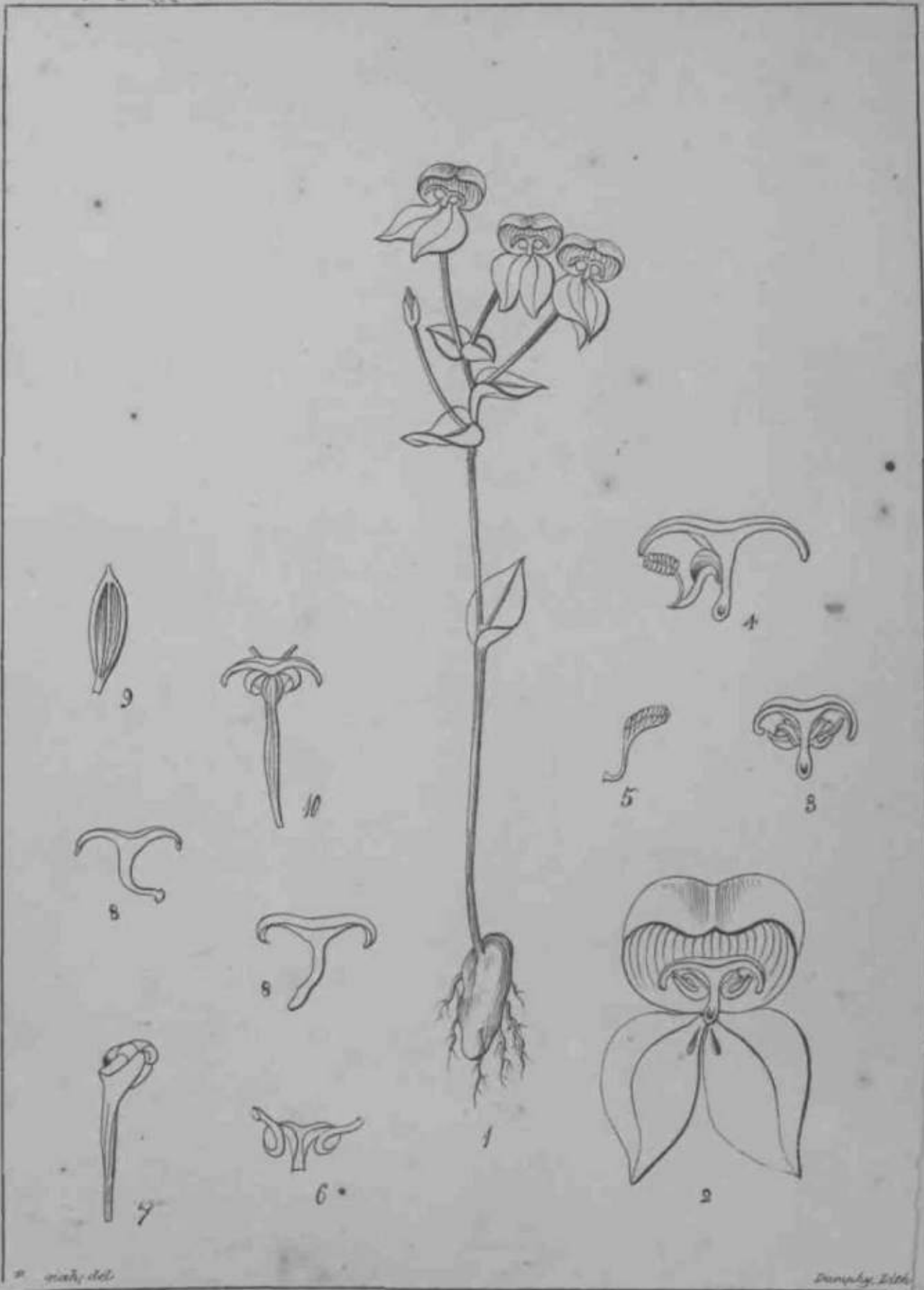
Dumphy Lith.



Satyrium, Willd.

Satyrium, L.

Satyrium **ttm** **nepalense*



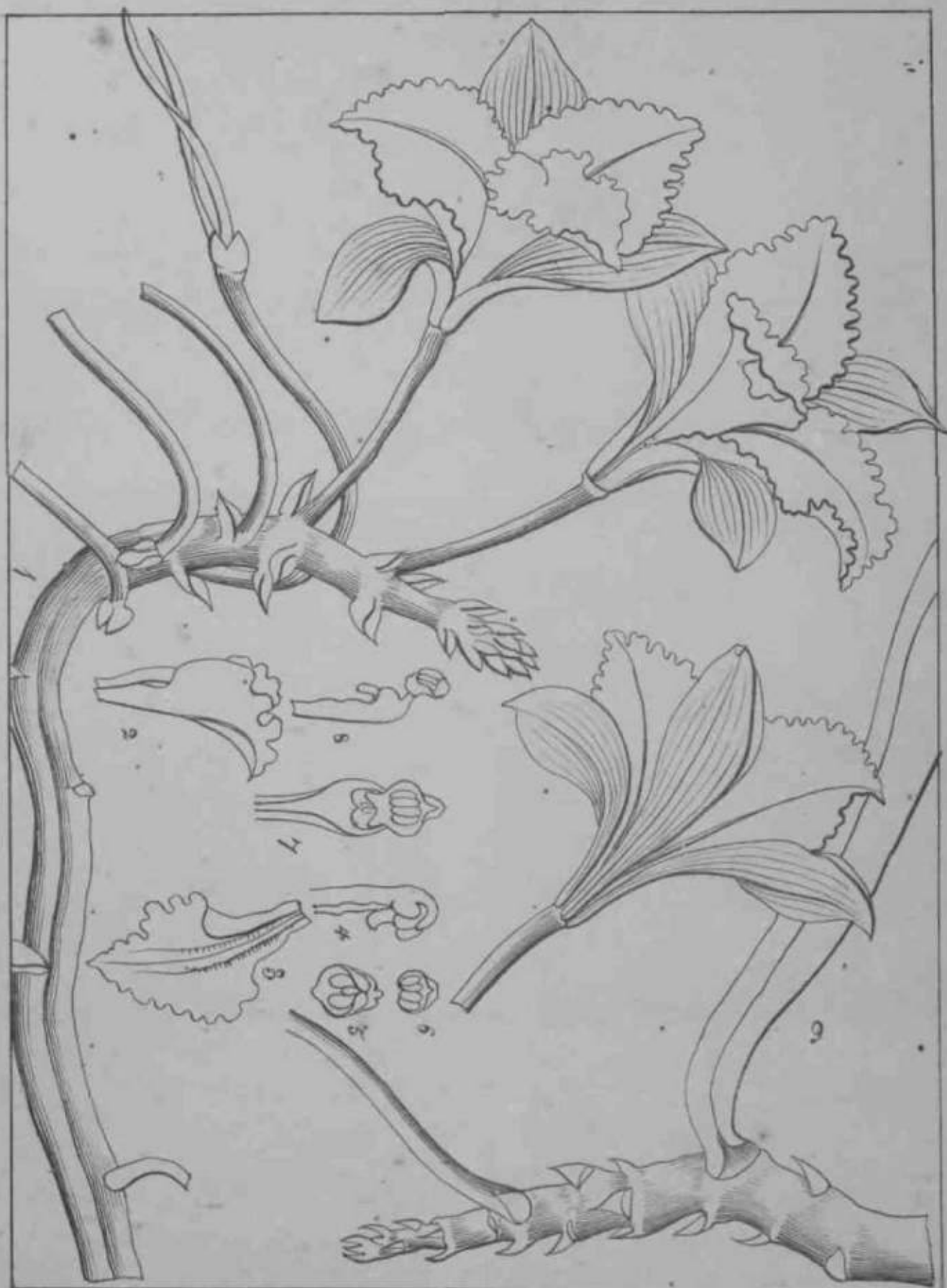
* *mañ. del*

Dumphy. Lith.

Dispiris tripetaloides



Aethusa (Blume Lindl.)





Knapsh. del.

Engelm. y. Lil.

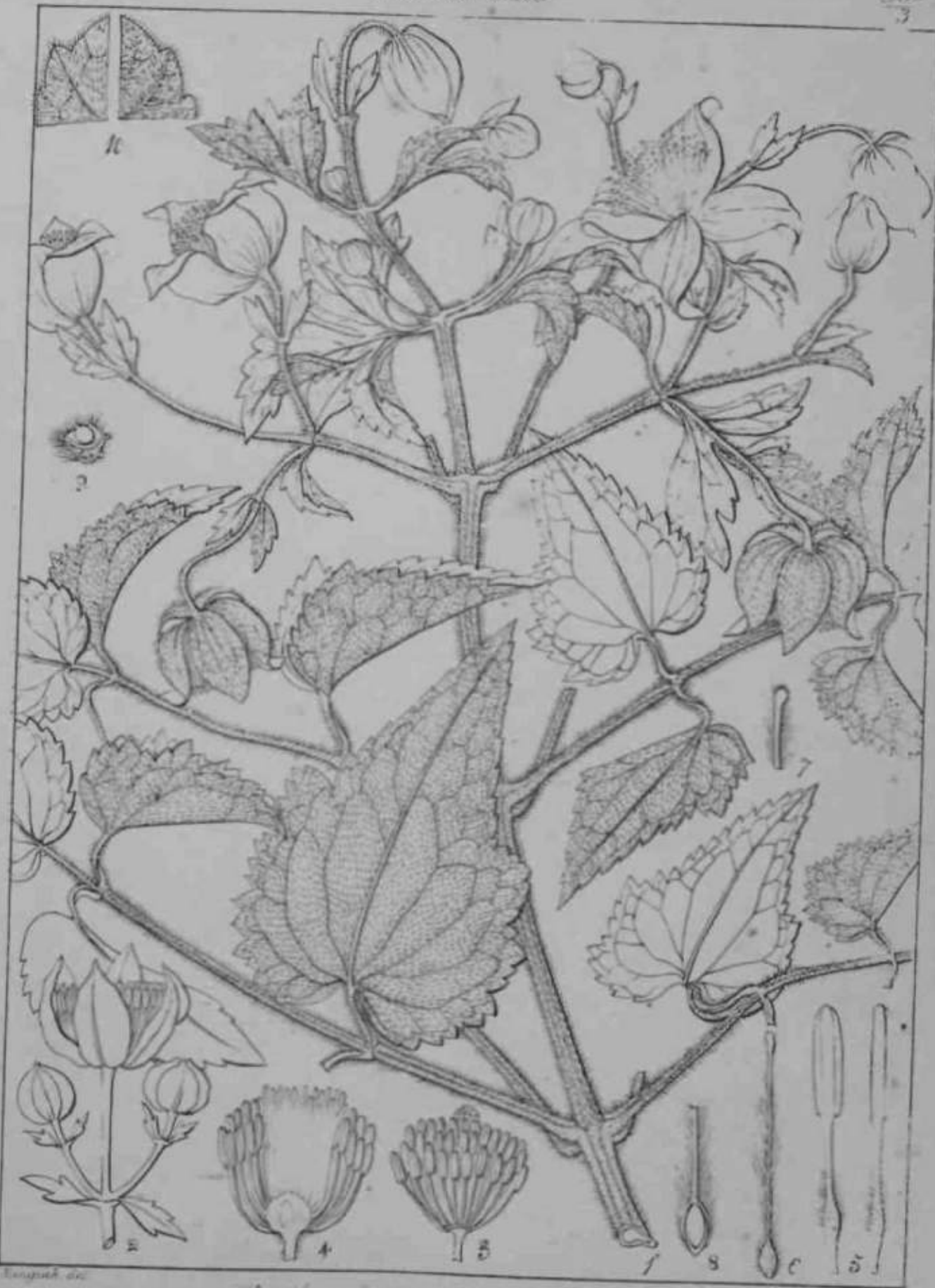
Clematis; > *vitalba* (Roxb.)



Lingnan del.

Clematis turanica (Roxb.)

Zurbriggen. Sculp.



Thompson del.

Clematis Wightiana (Wall.)

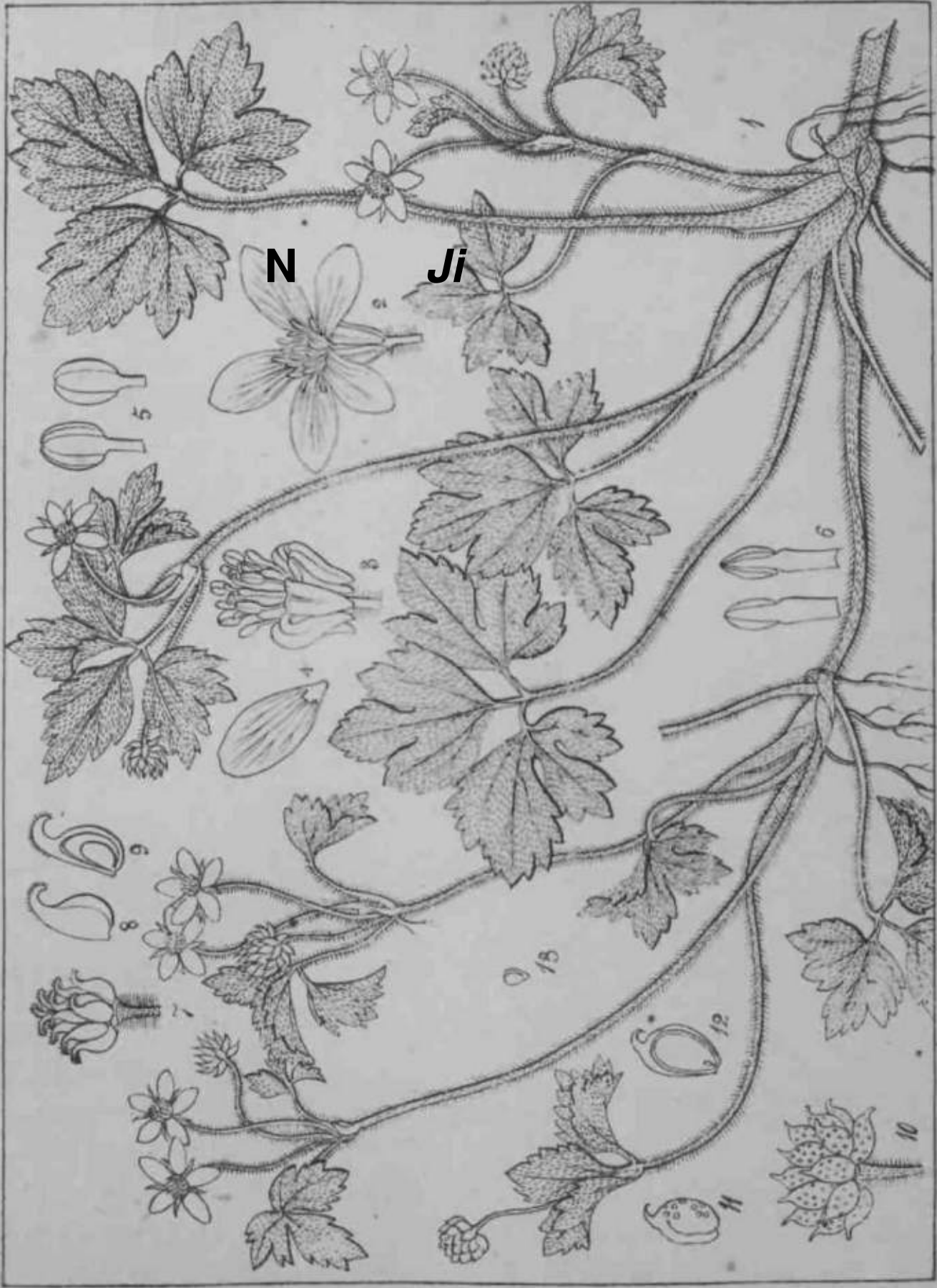
Thompson del.



Comp. Bot.

Anemone hepatica (Wall.)

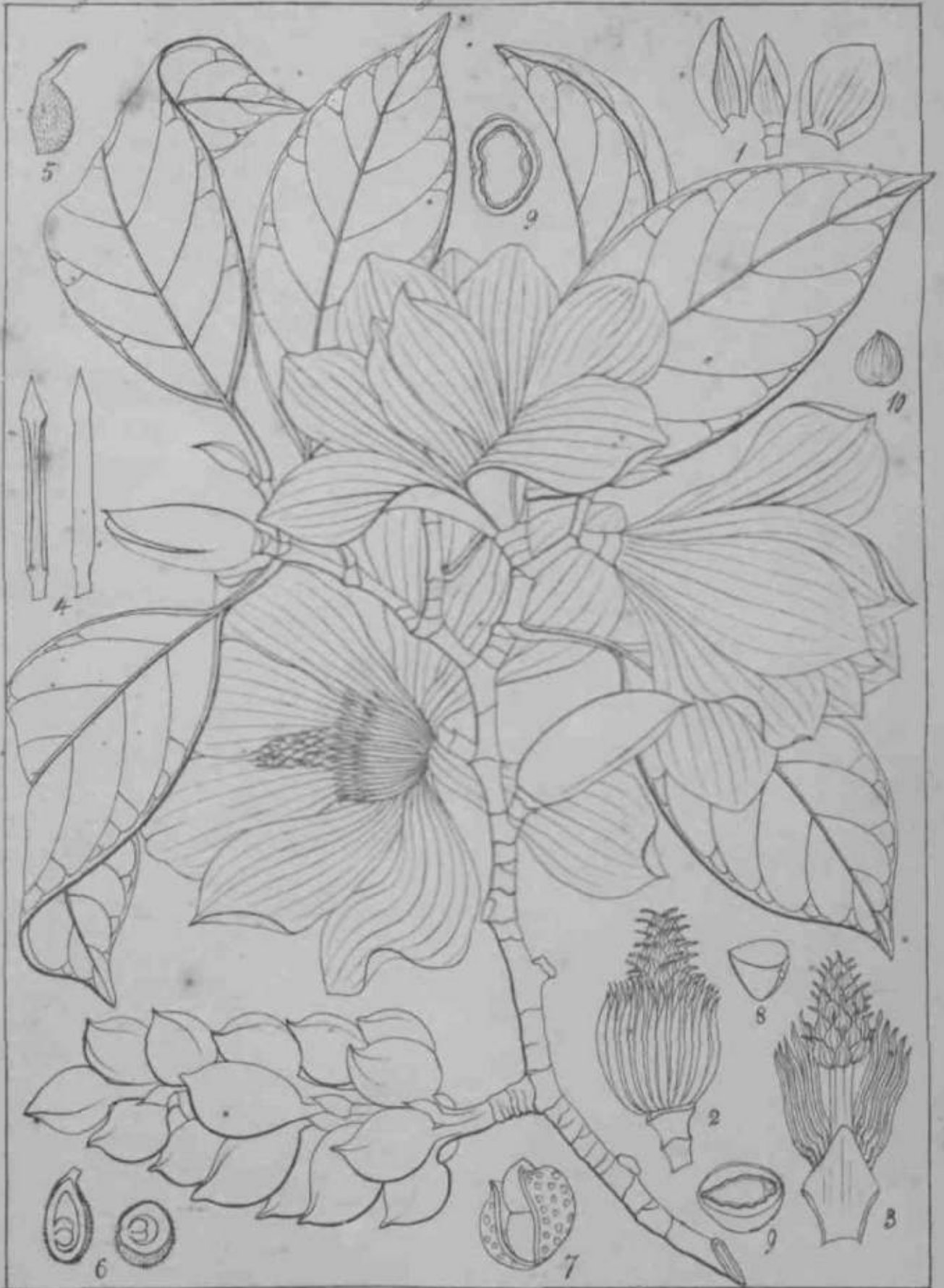
Bartholomae



Ranunculus flammula (W & A)

Ziegler del.

Ziegler del.



Rangia del

Dumphy Lith.

Micho f^f f < / , ! , } * is , ; i / - ^st / fy ,)



1109 - * * E

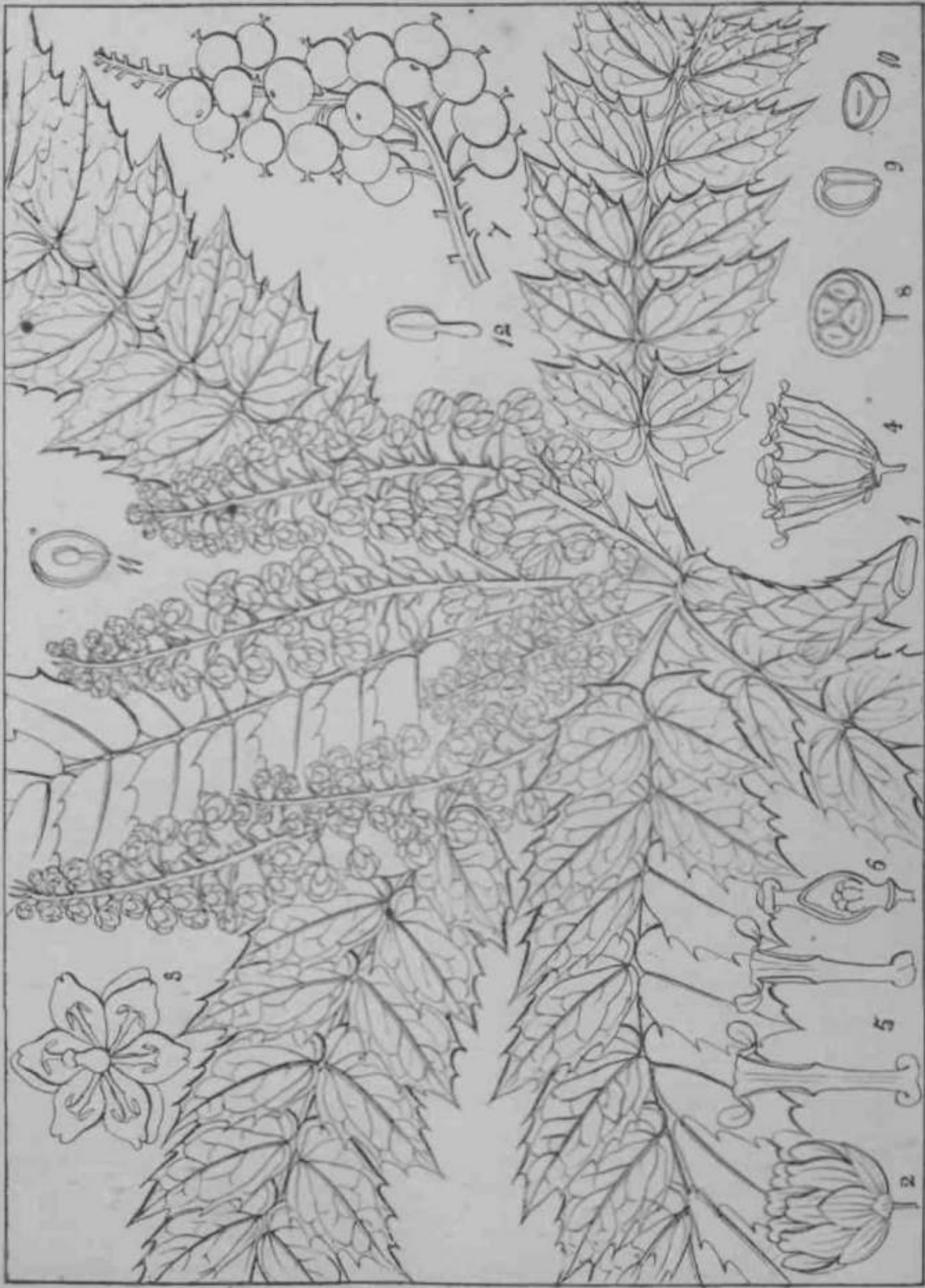
Clypea hernandiifolia (W & A)

Stephania — *hernandiifolia*

W & A 2004

Berberis

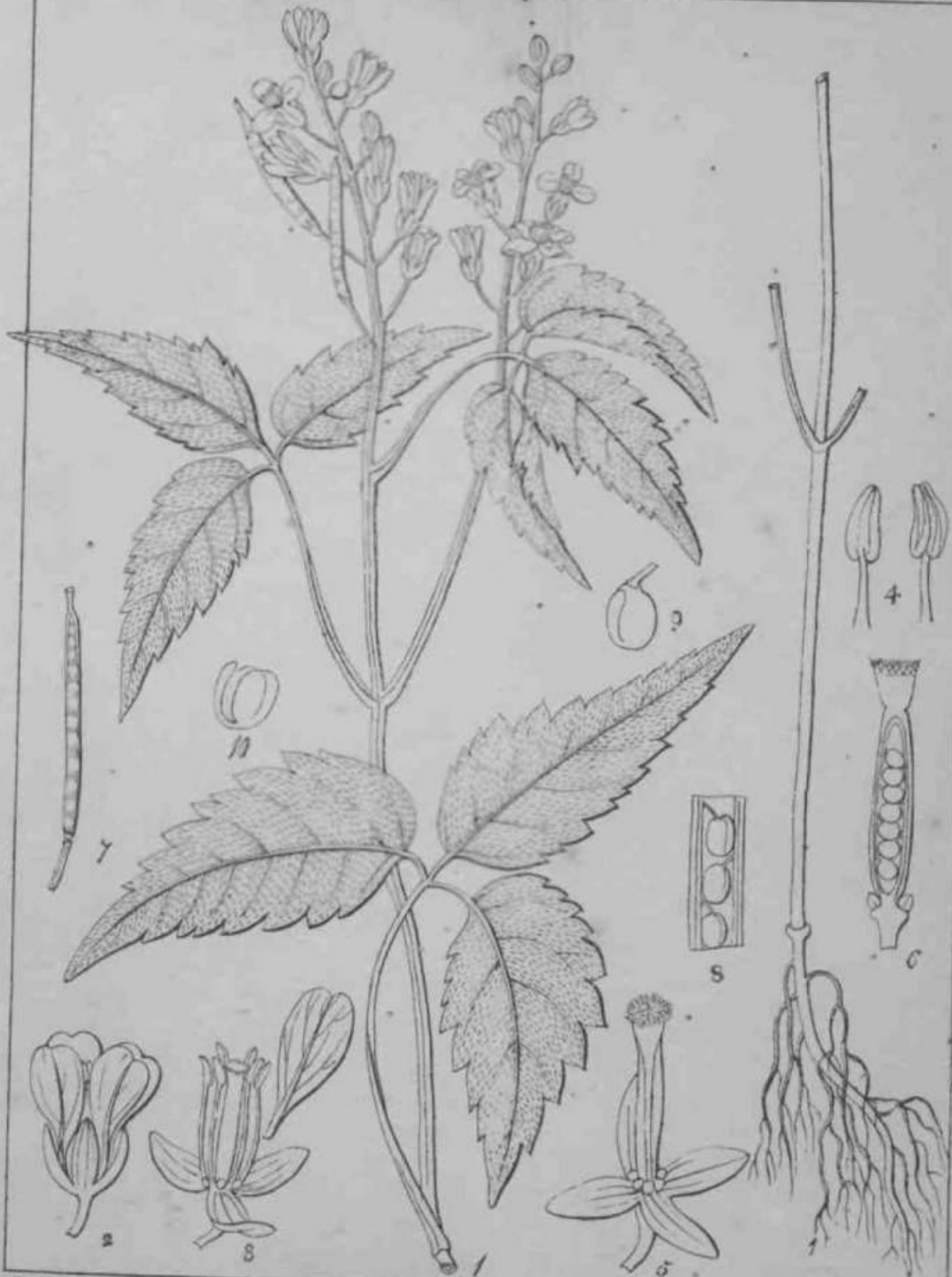
210
33



Berberis aschmannii (D.C.)

Aschmann, s. n.

Boissier, s. n.



Barbier de

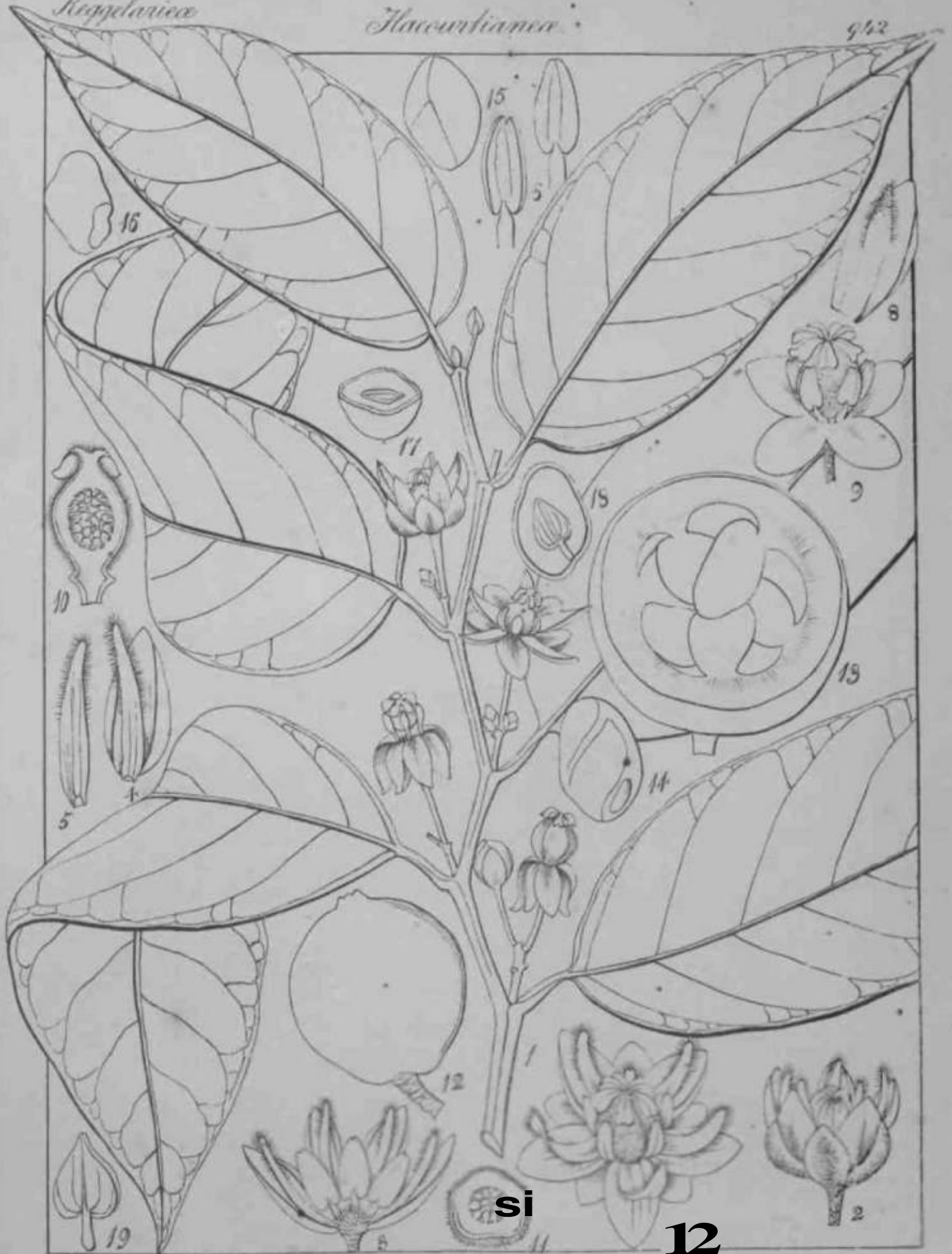
Cardamine Borbonica

Scarpia del

Hydrocaricæ

Flaccurtianæ

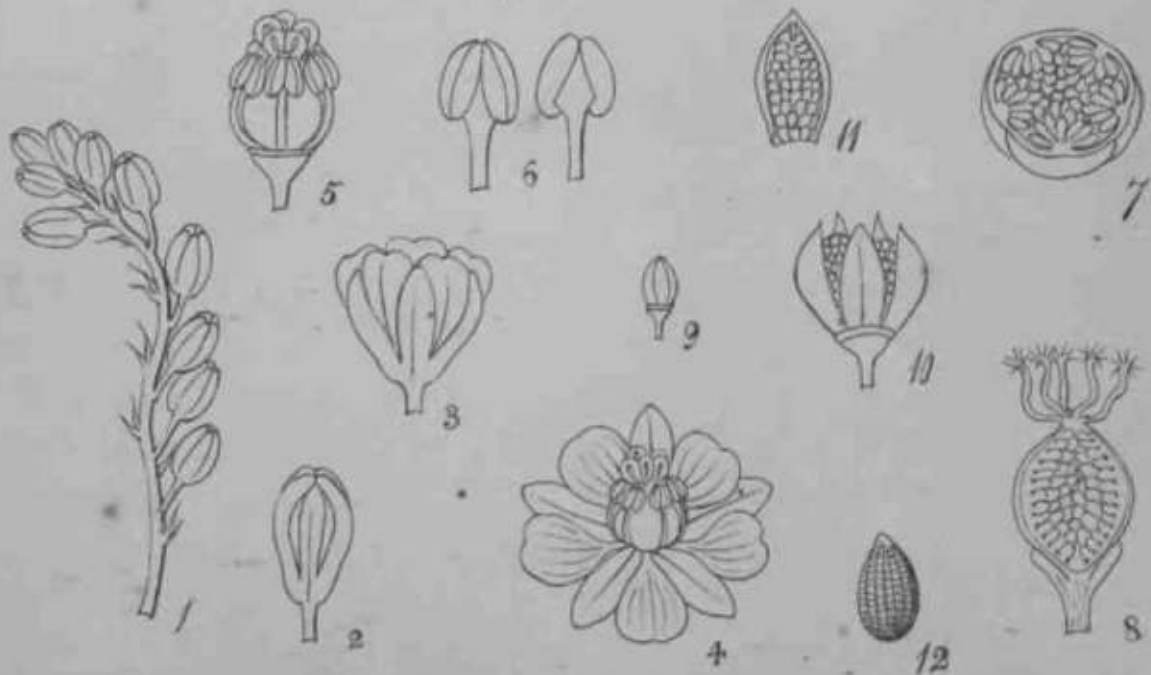
942

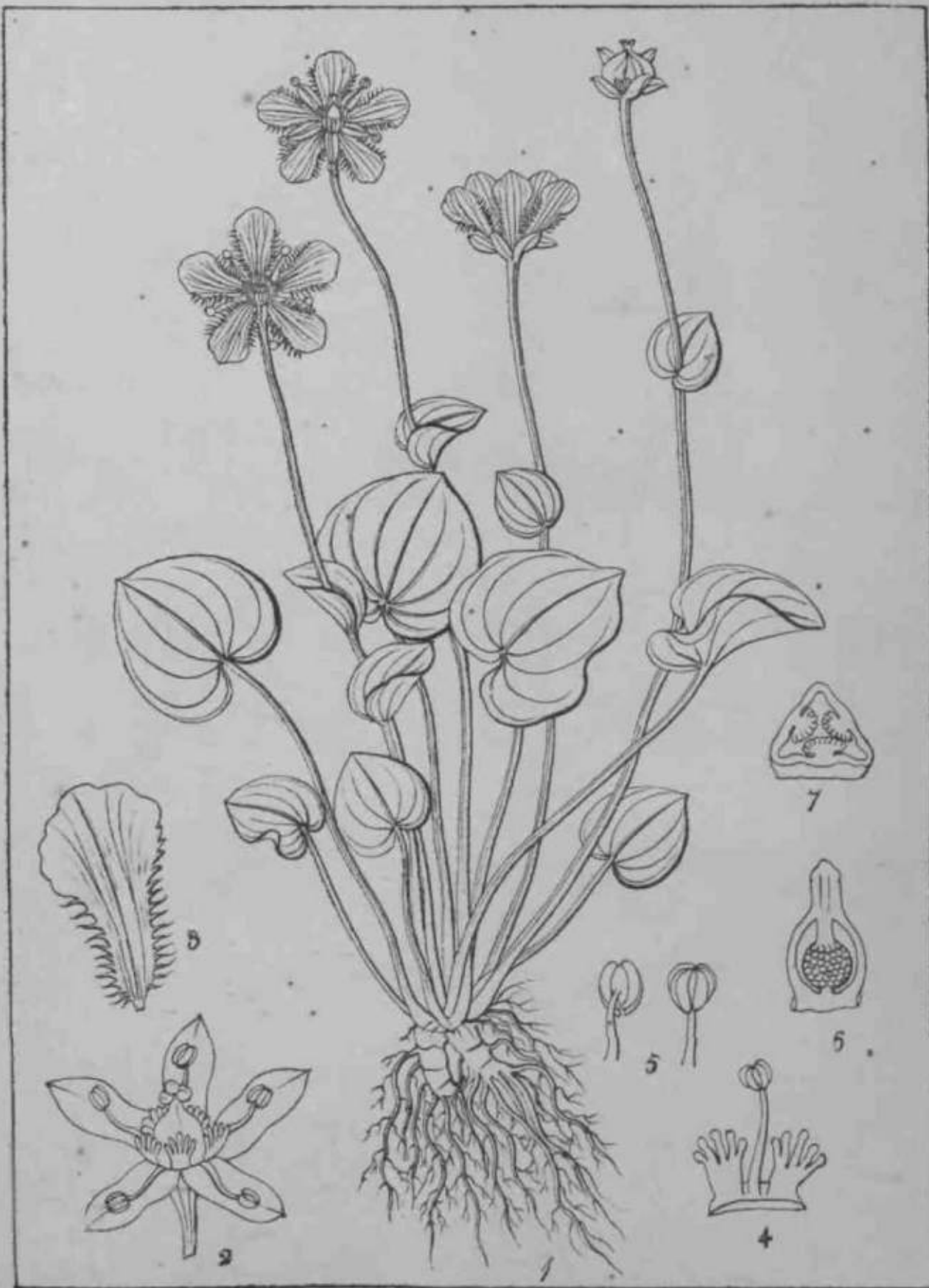


Hydrocarpus affinis R. W.

Dumort. det.



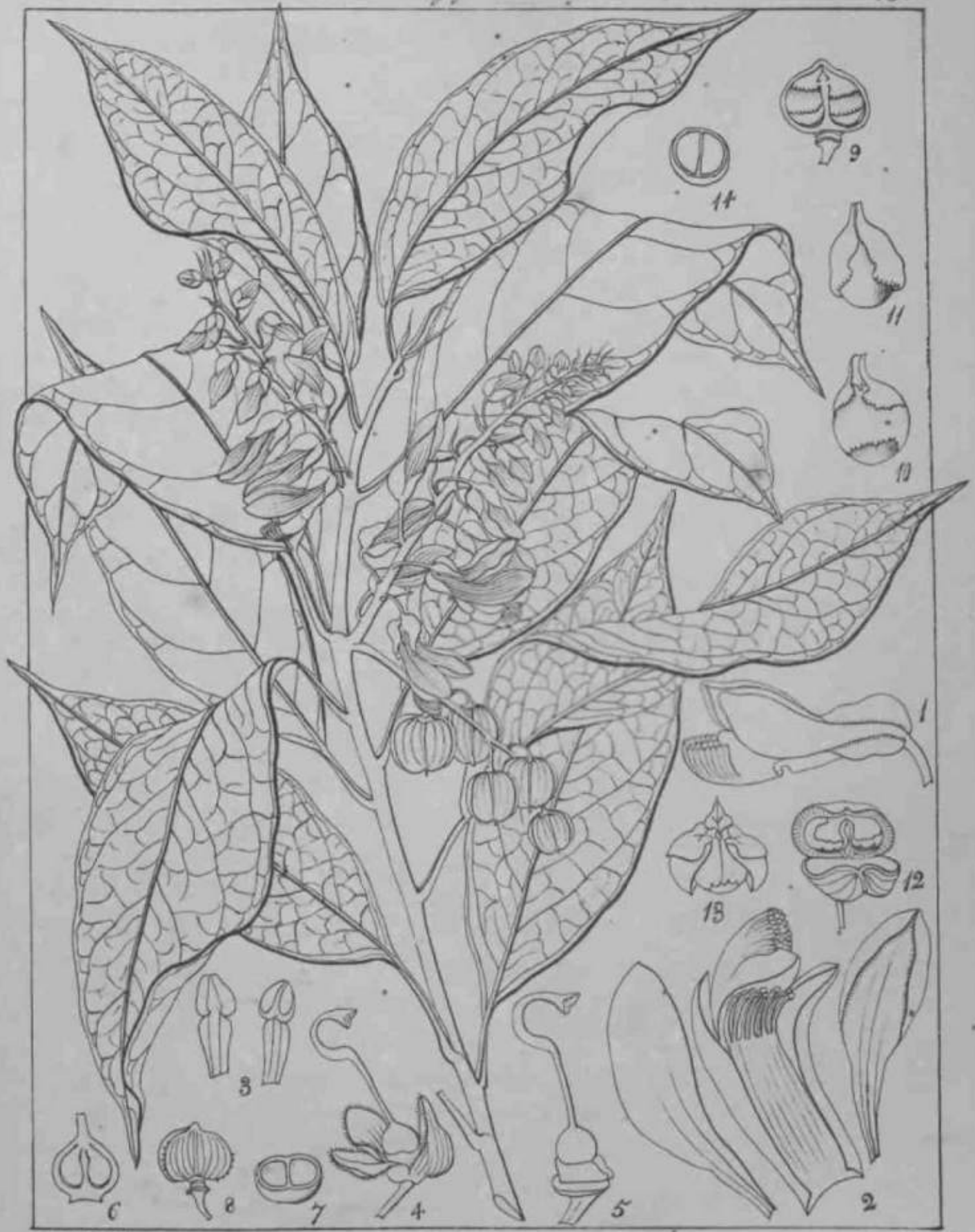




Reynolds del.

Reynolds del.

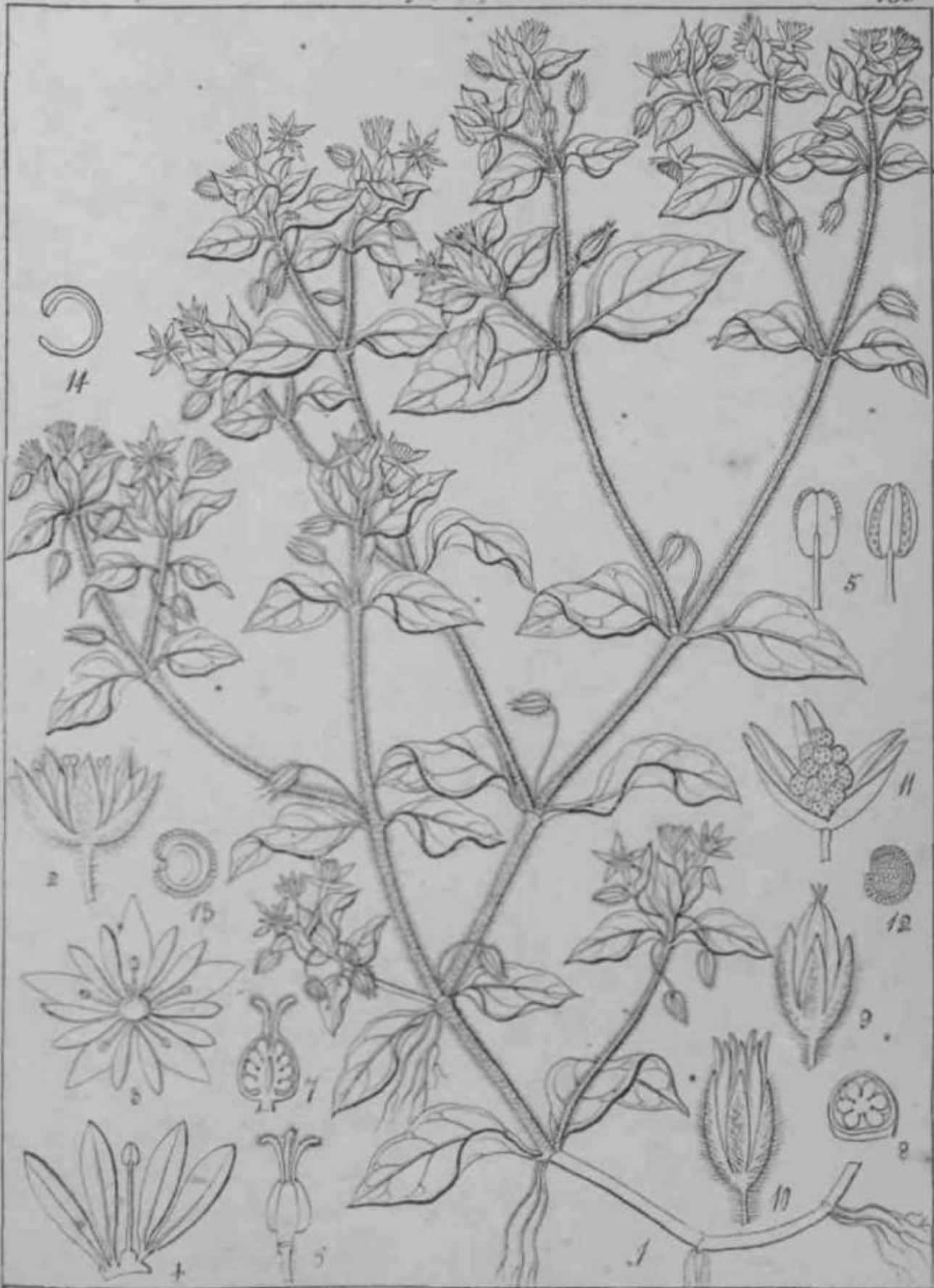
Parnassia Wightiana (Wall.)



Kunze, del.

Polygala arillata (Ham.)

Donner, 1824.



Helleborus media (Smith.)



Engelm. del.

Cerastium vulgatum (Linn.)

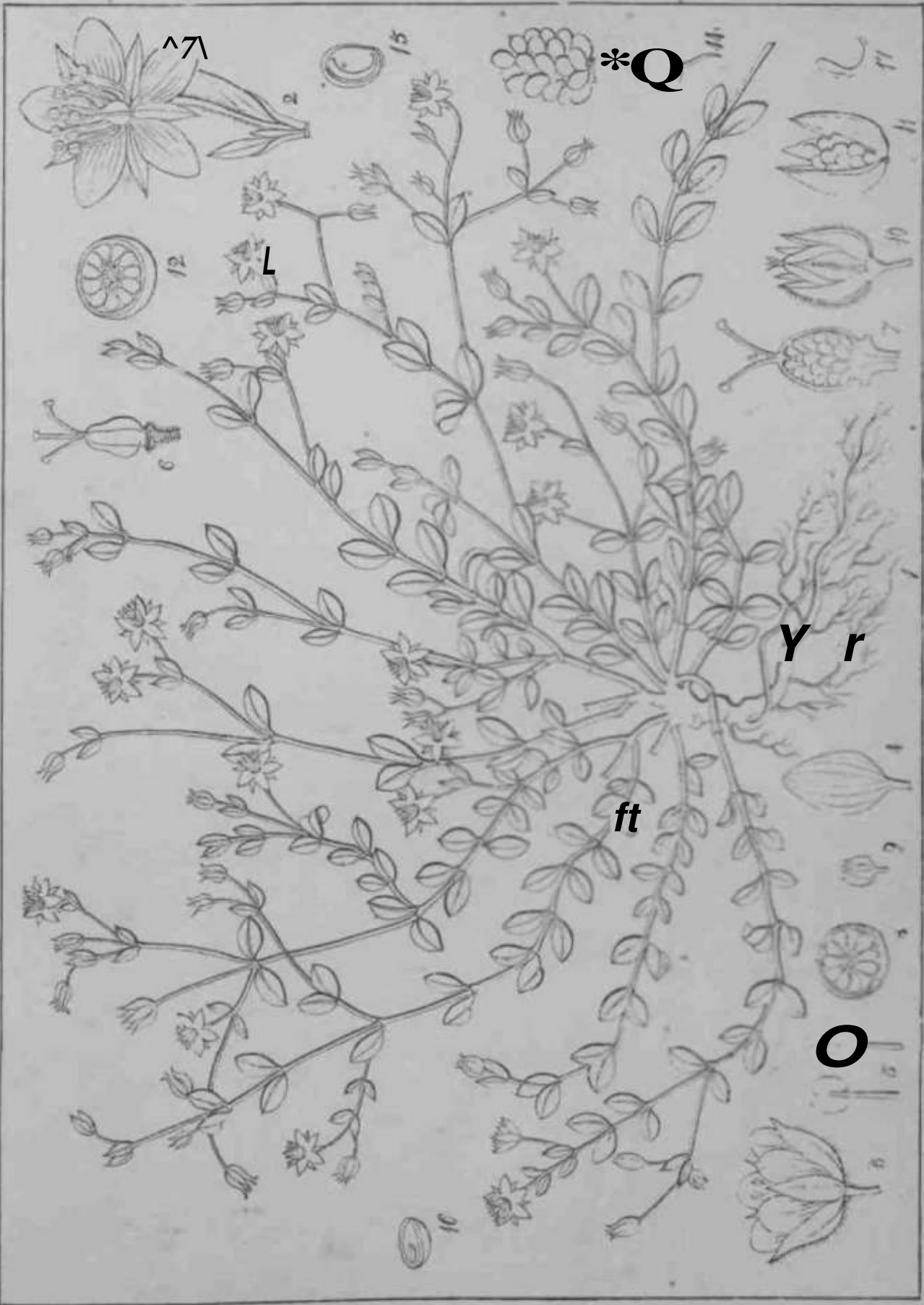
Barthol. sculp.

969
136

Caryophyllaceae

Is

Caryophylla

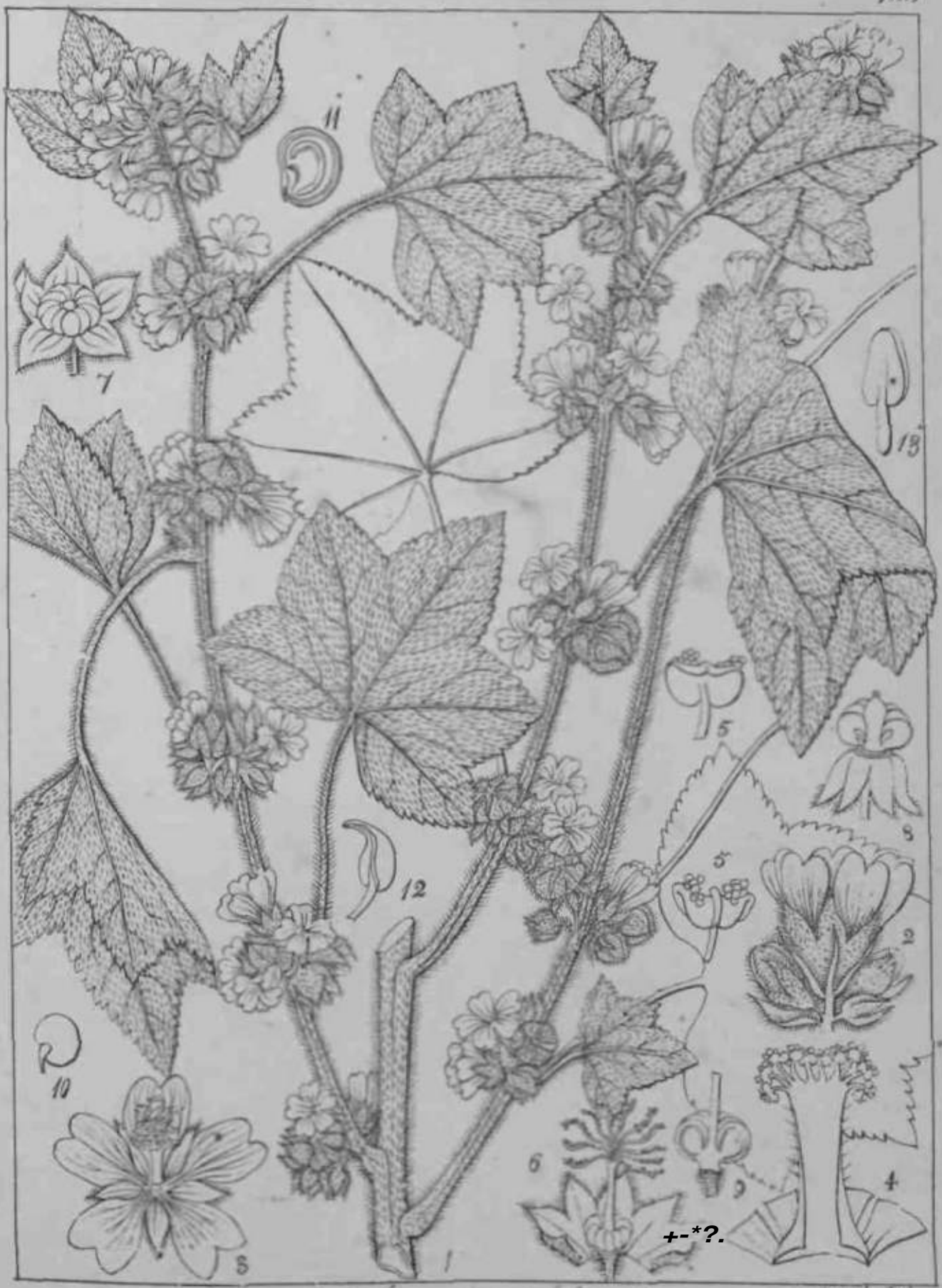


Arenaria nesiophorensis, W.L.H.

Malva

Malvaceae

950
163



Malva rotundifolia (Linn.)

Wm. H. Linn.



Helimioschus angulosus (Walt.)



AML I (i!HM/ <

Monocera Munronii (R.H.)

Monocera, 1888

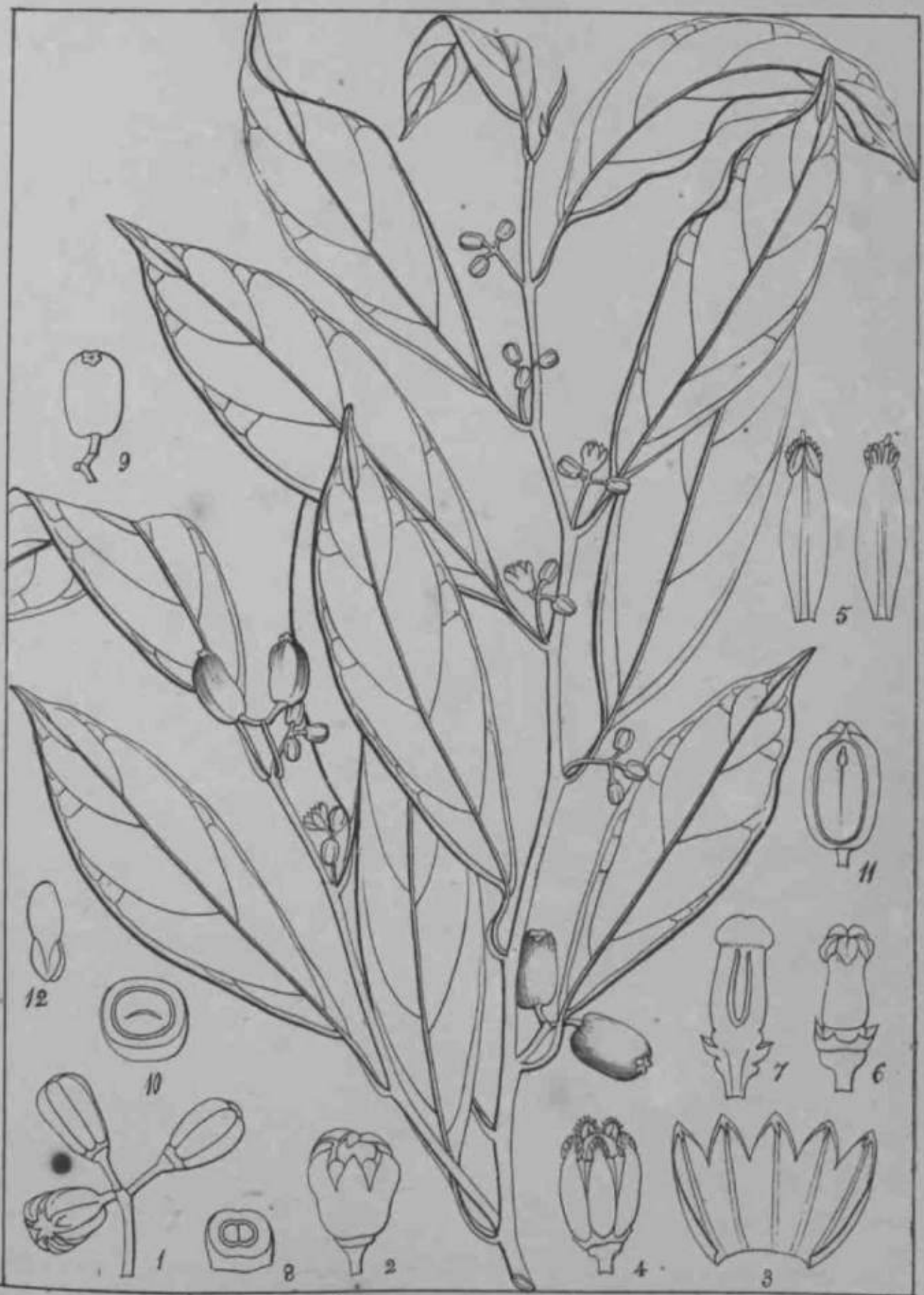
Monocera, 1888



Kunigah del

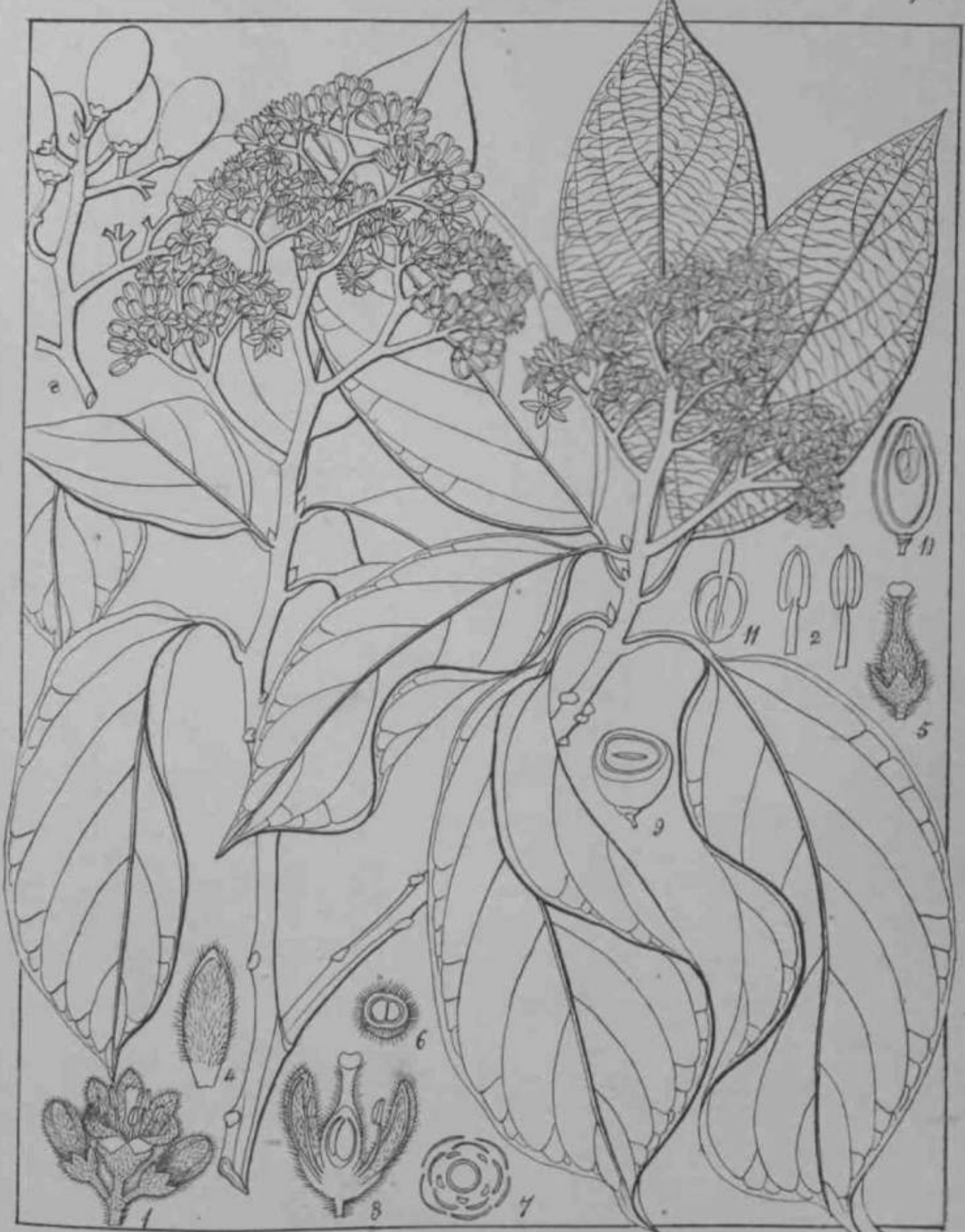
Gomphandra polymorpha S. & W.

Engelm. & Griseb.

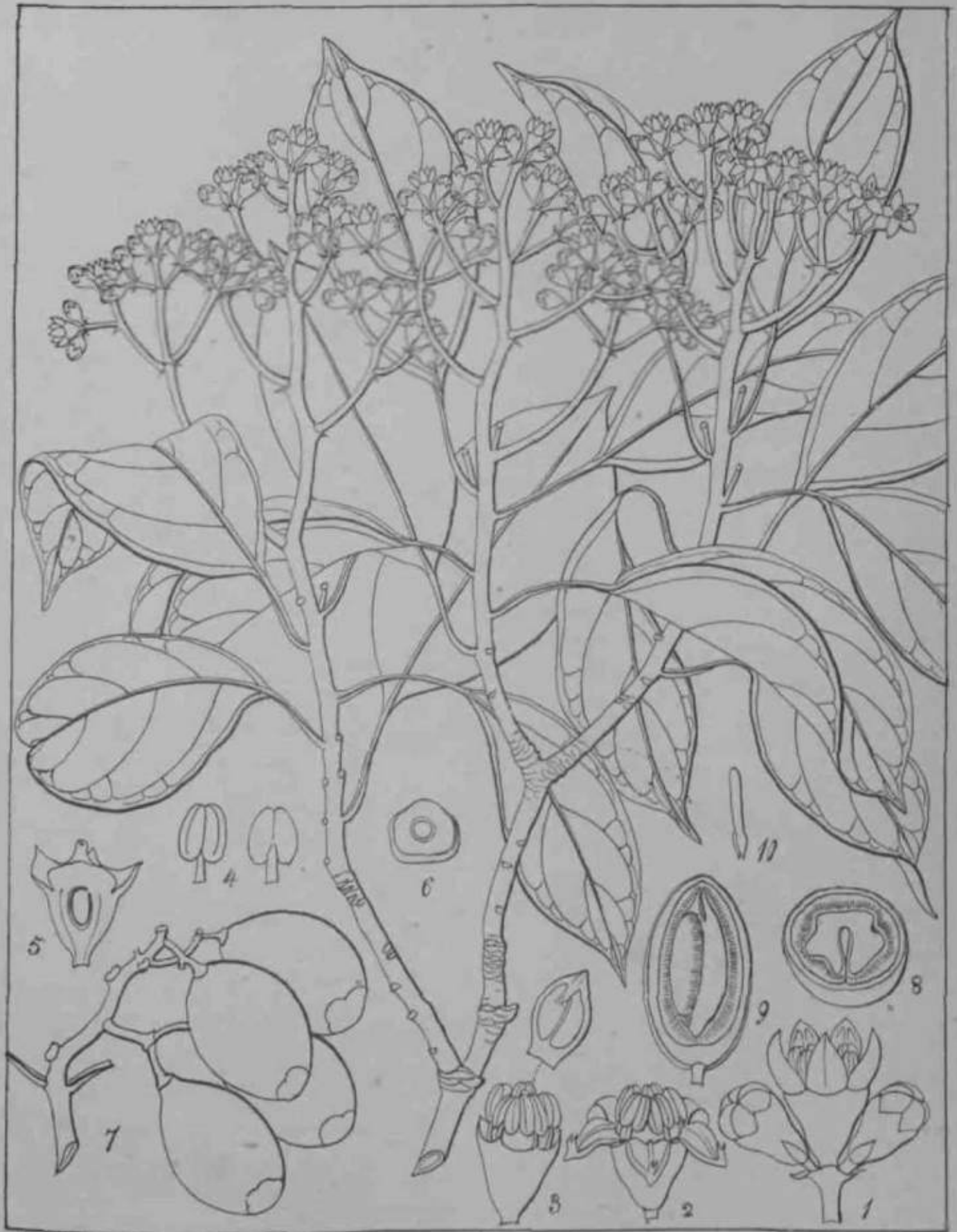


Gomphandra polymorpha ♀ (R. W.)

Samuel S. S. S.



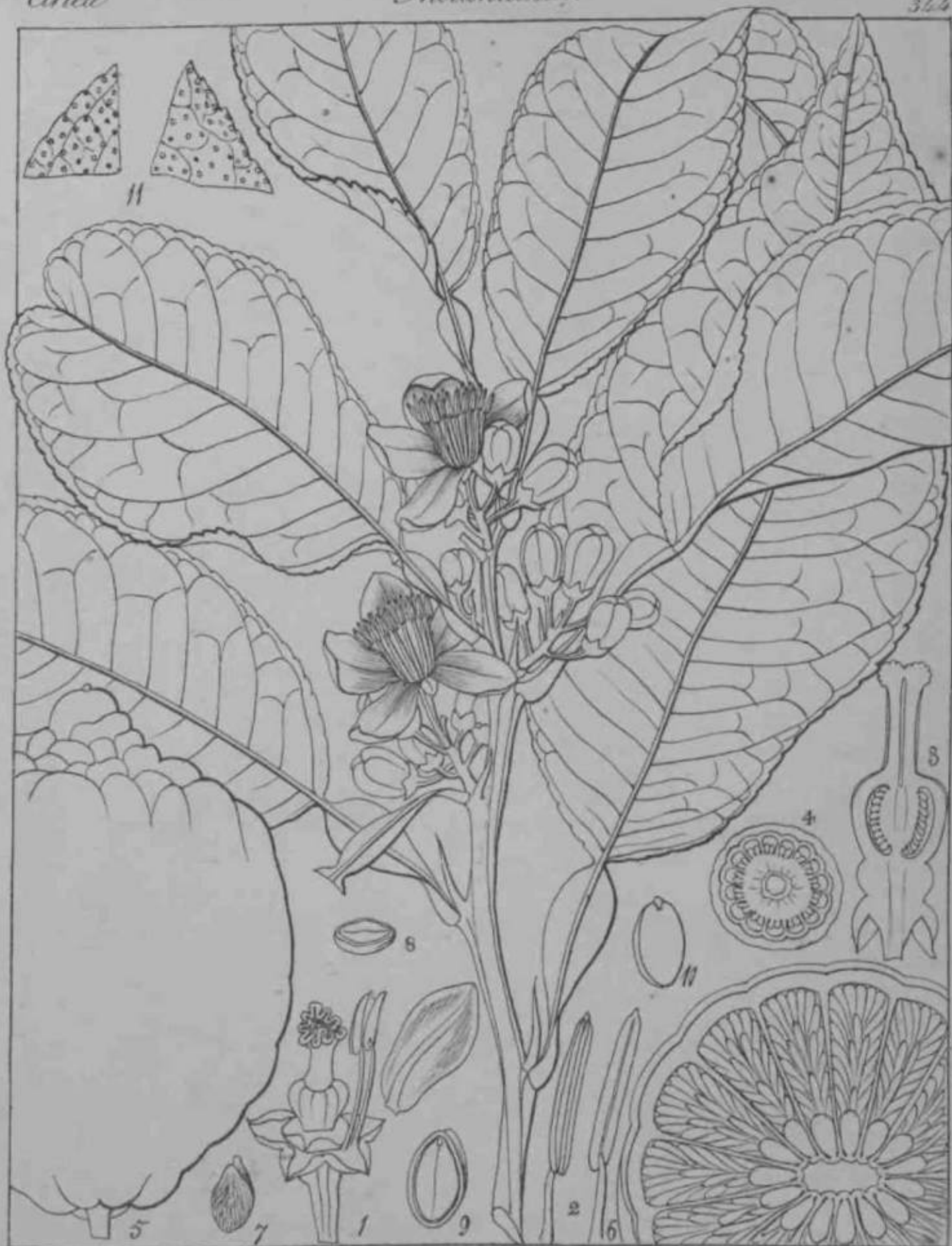
Stem nM&Md?|WBH&UtA (R. W.)



R. W. Sch. det.

Bursinopetalum arboreum (R.W.)

Drumby, det.



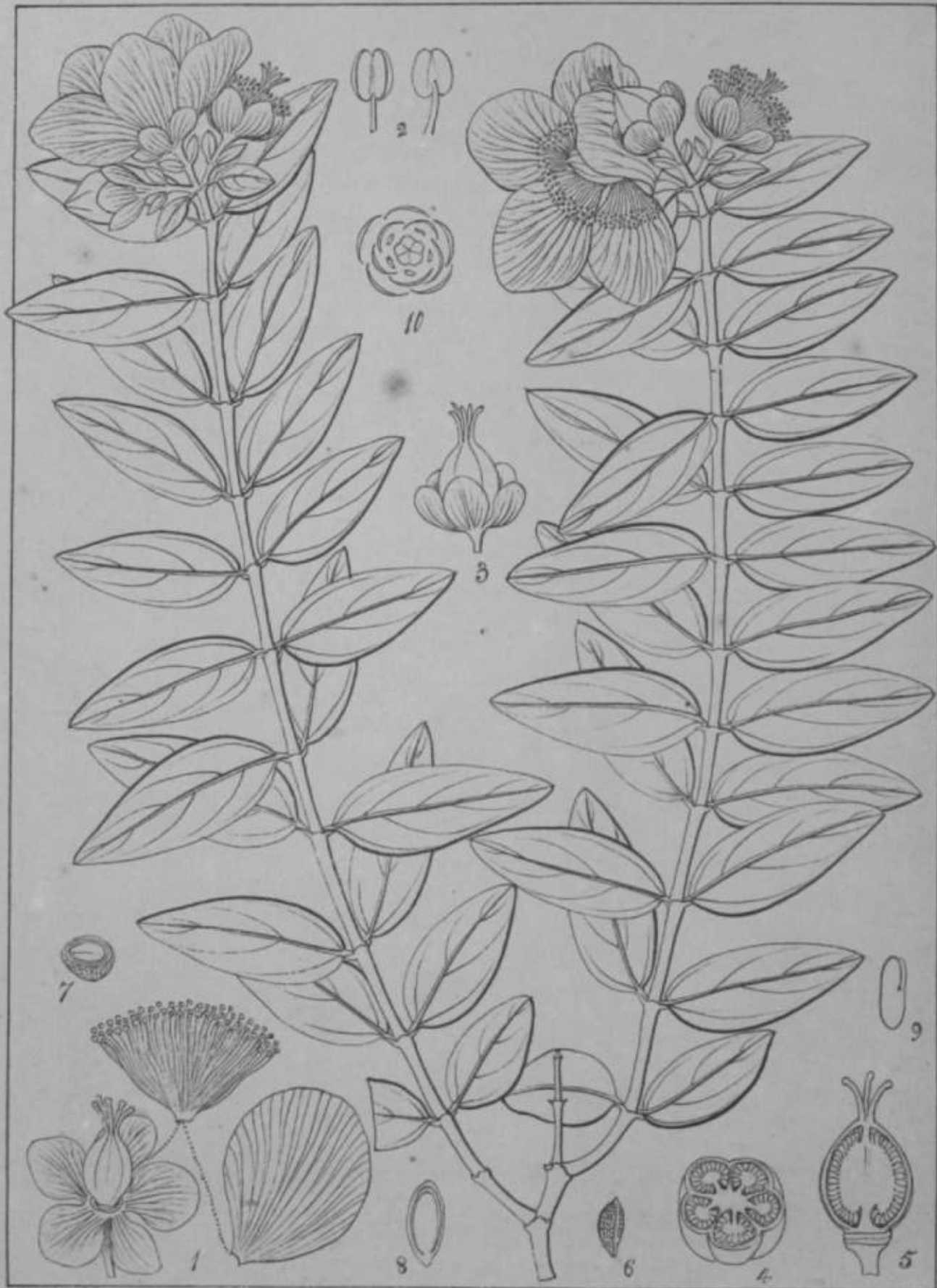
Citrus (A.) vulgaris (Repos)



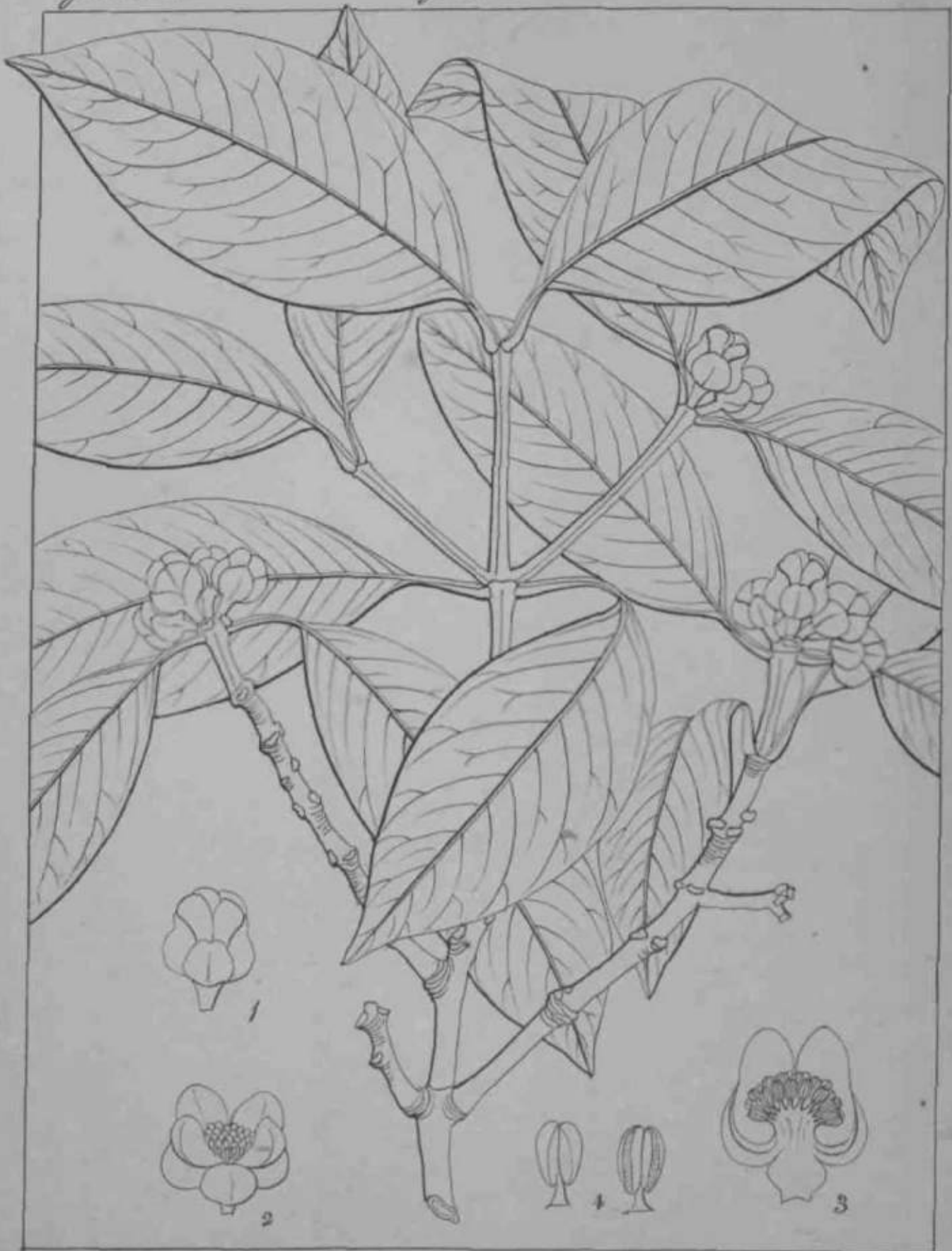
Kunze, del.

Citrus (a) Limonum (Risso)

Dumort. del.



Hypericum hookerianum (W & A)
Noisyca (Spach)



Rampisch del.

Zangheri Lith.

Garcinia papillosa ♂ (R. W.)

Garcinia

Guttifera

960/2



Garcinia populifolia ♀ (B. W.)

Harvey & S. G. G.

Harvey & S. G. G.

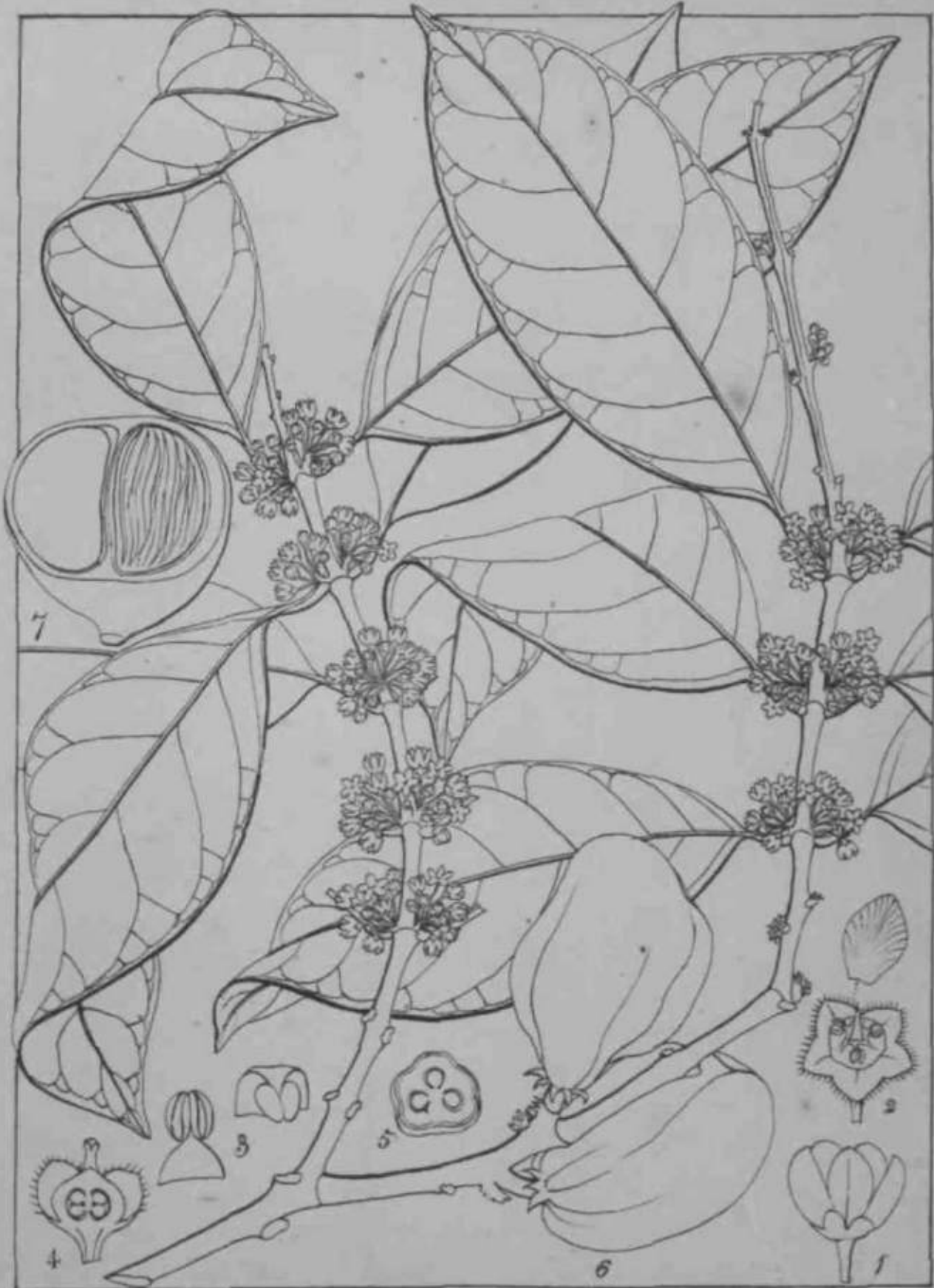
Callophylla

Guttifera

461



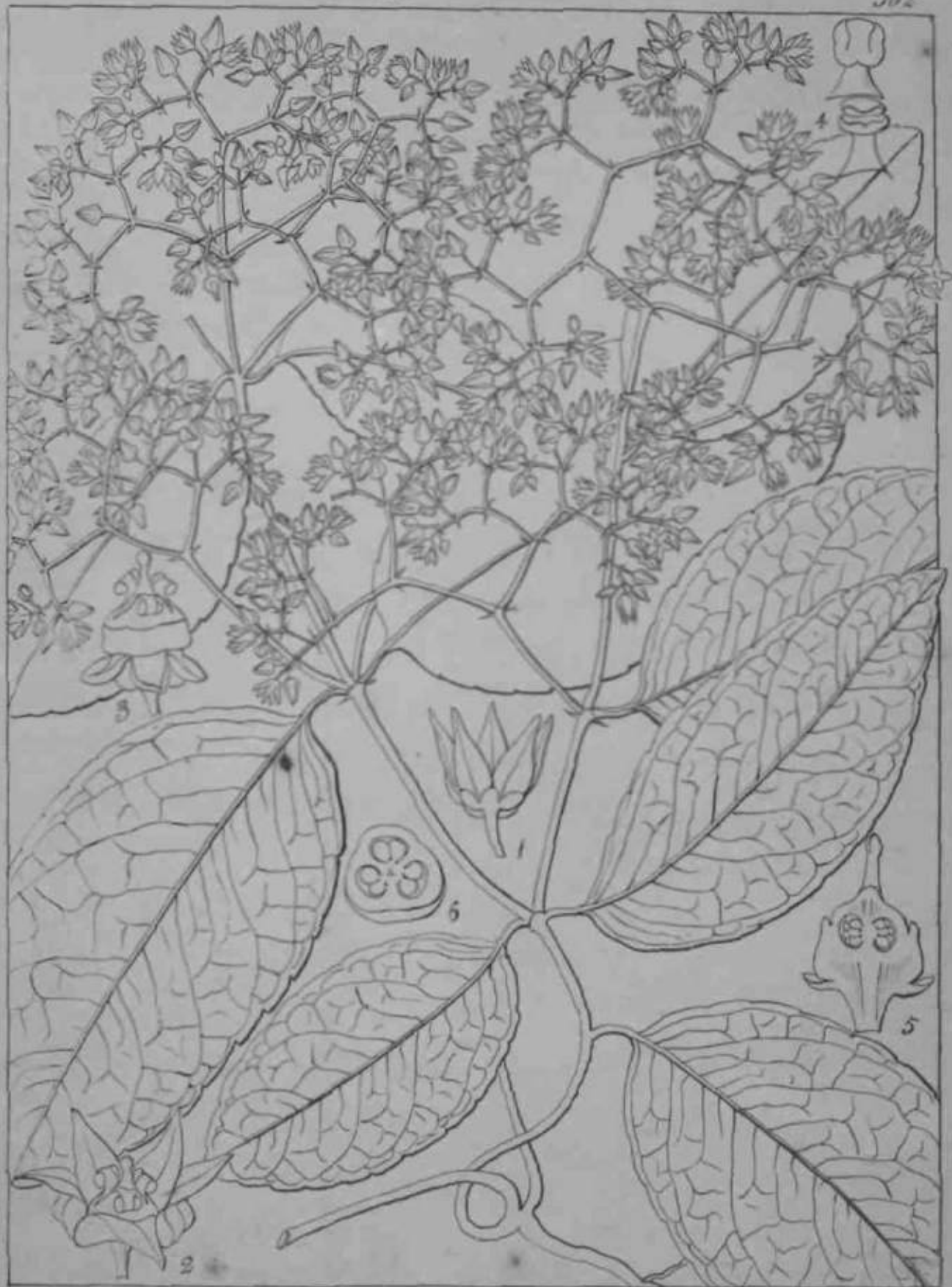
Mussa speciosa (Thunb.)



Bergius del.

Salacia macrosperrut

Thunberg 2288



Reel, det.

Hippocratea obtusifolia (Reel)

Reel, det.



Schmidl. Bot.

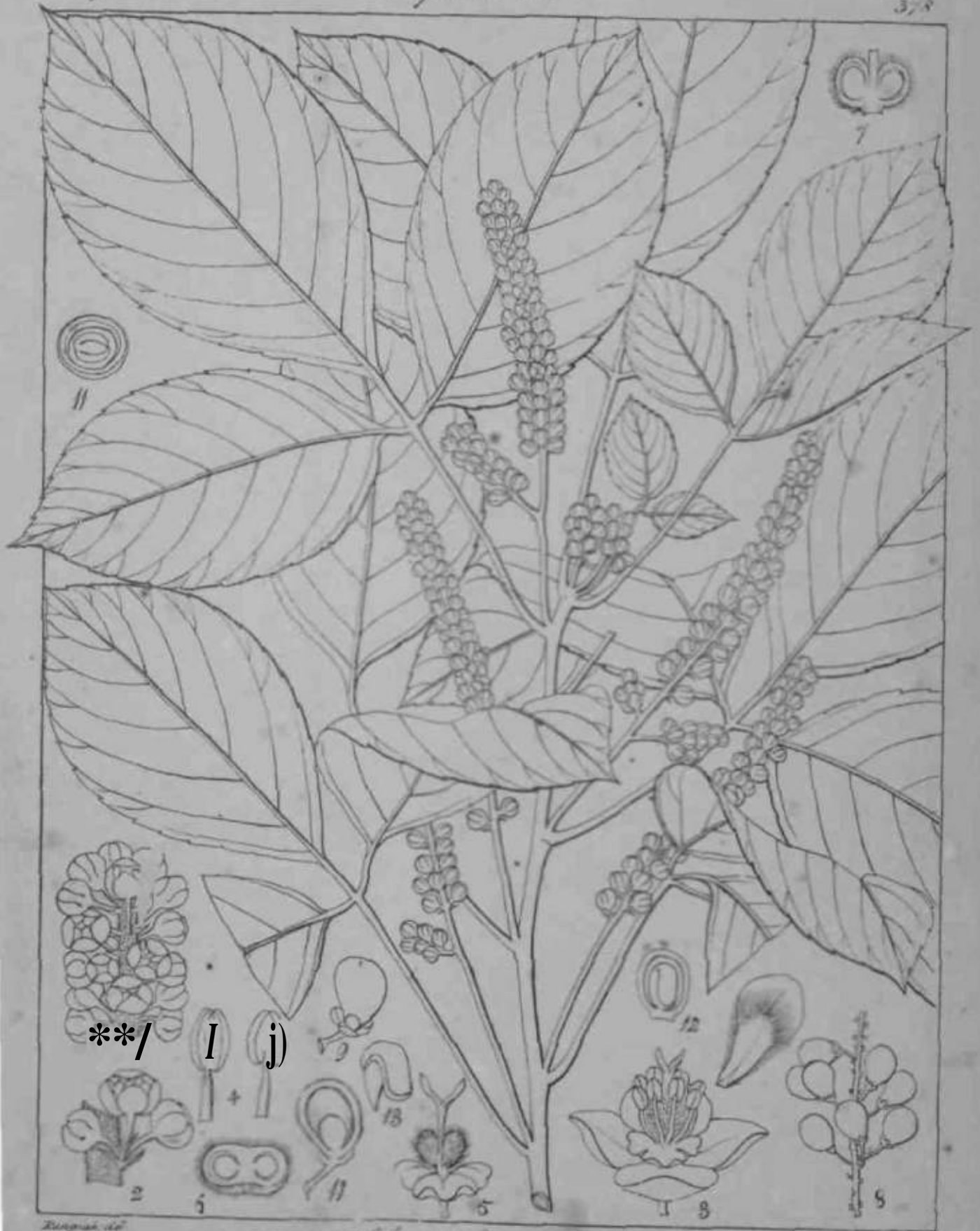
Schmidl. Bot.

Schmidl. Bot. (N)
Molaga murum (Rheede)

Sapindea

Sapindaceae

6652
378



Engelm. det.

Schmiddia Colbe (D.C.)

Engelm. det.



Hillingtonia

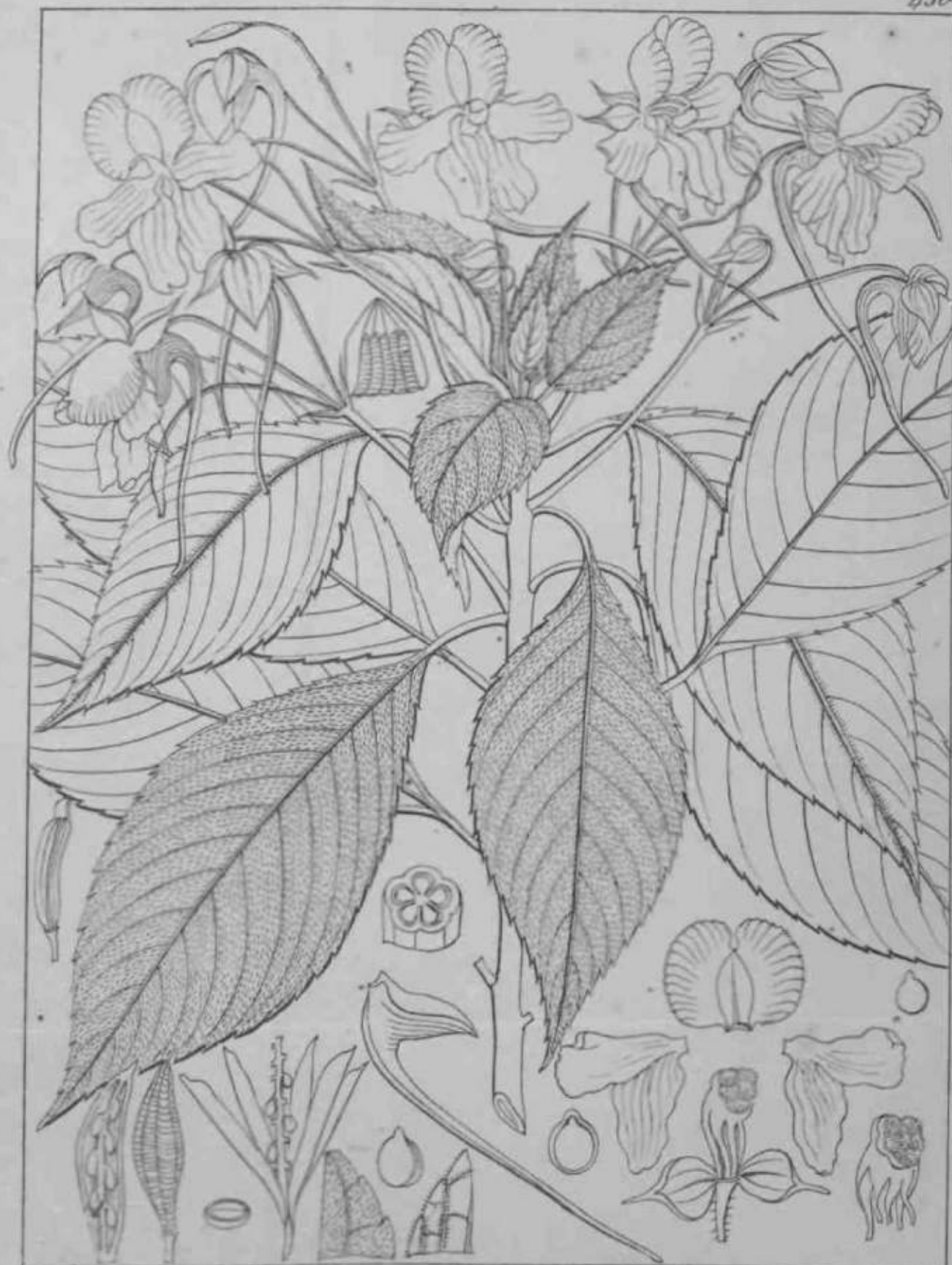
ut frangens Hall



Thunberg del.

Vitis (ampelopsis) Neulgherriensis (R. W.)

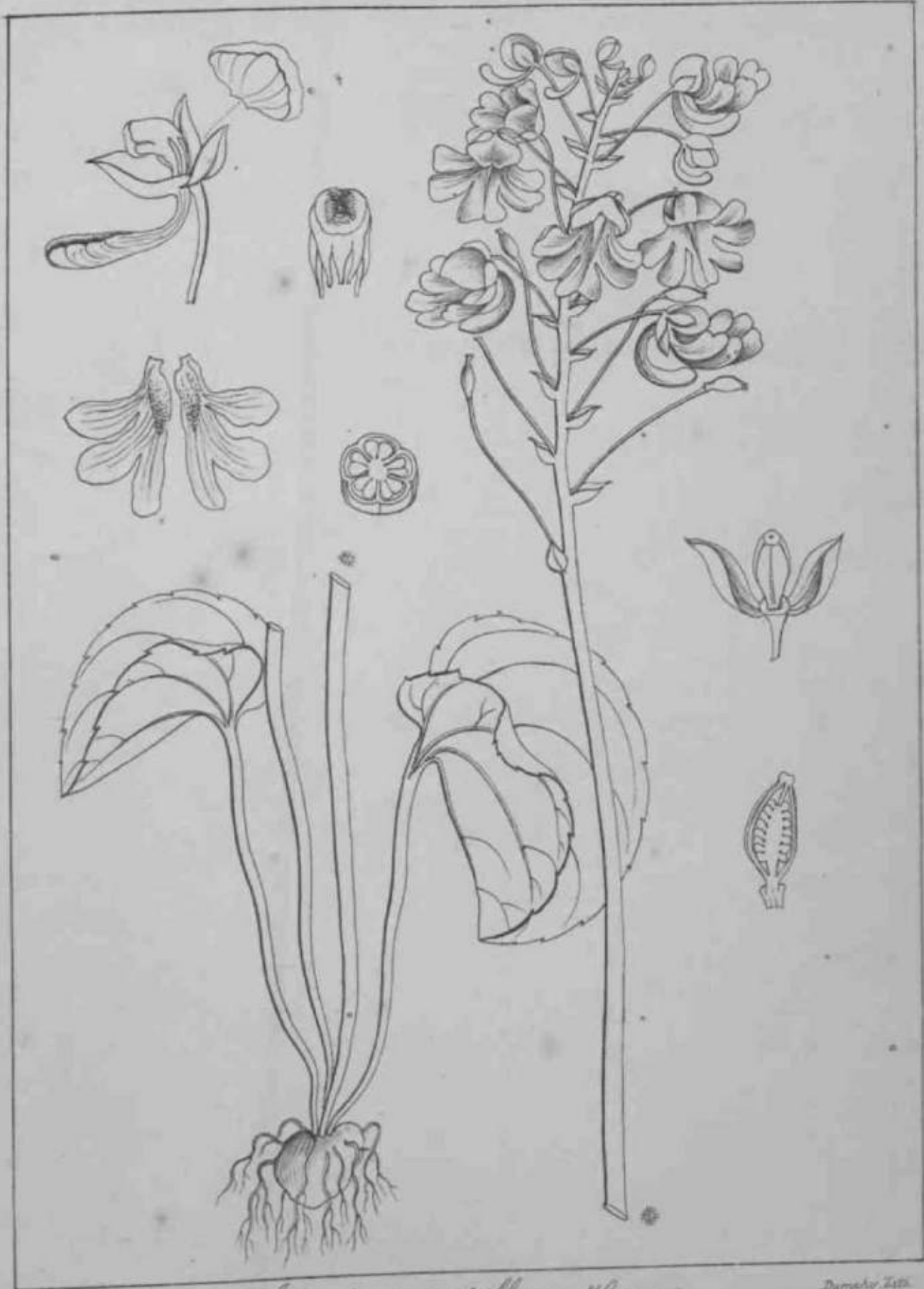
Thunberg del.



W. G. Smith, del.

Impatiens fruticosa (D. C.)

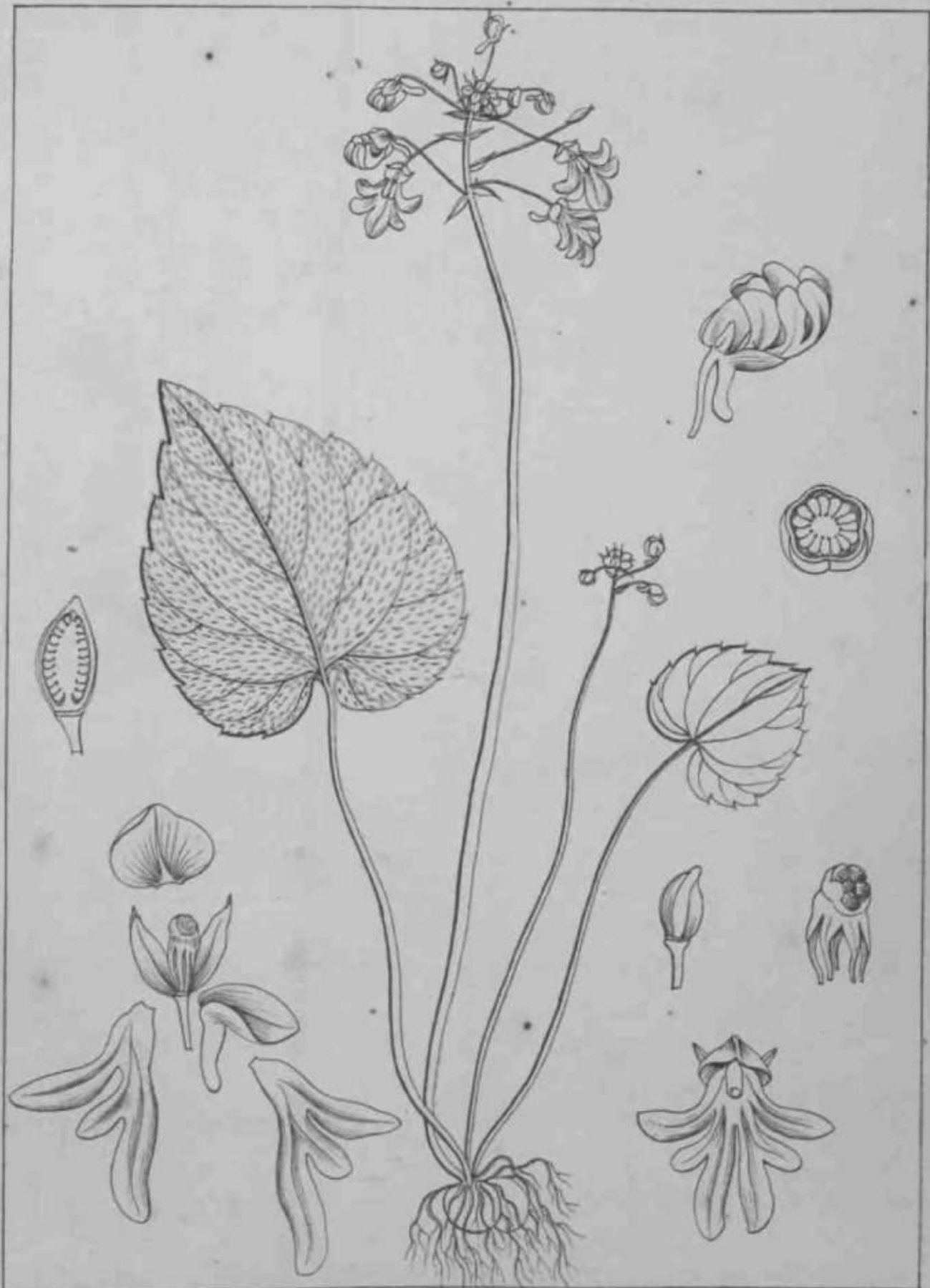
W. G. Smith, del.



Rungtsh, del.

Impatiens scapiflora (Hoynes)

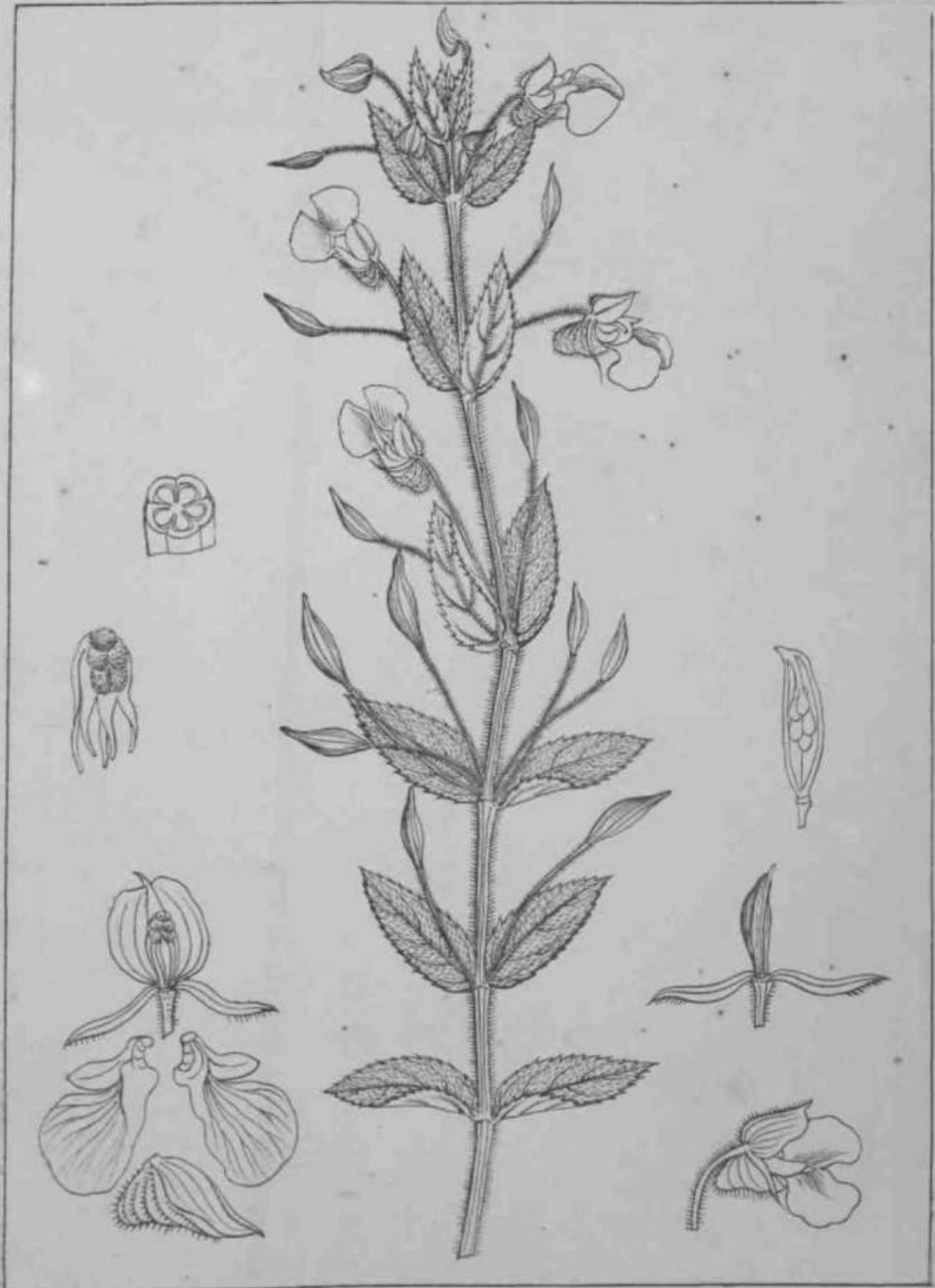
Dunphy, del.



Macgregor, del.

Impatiens modesta (R. W.)

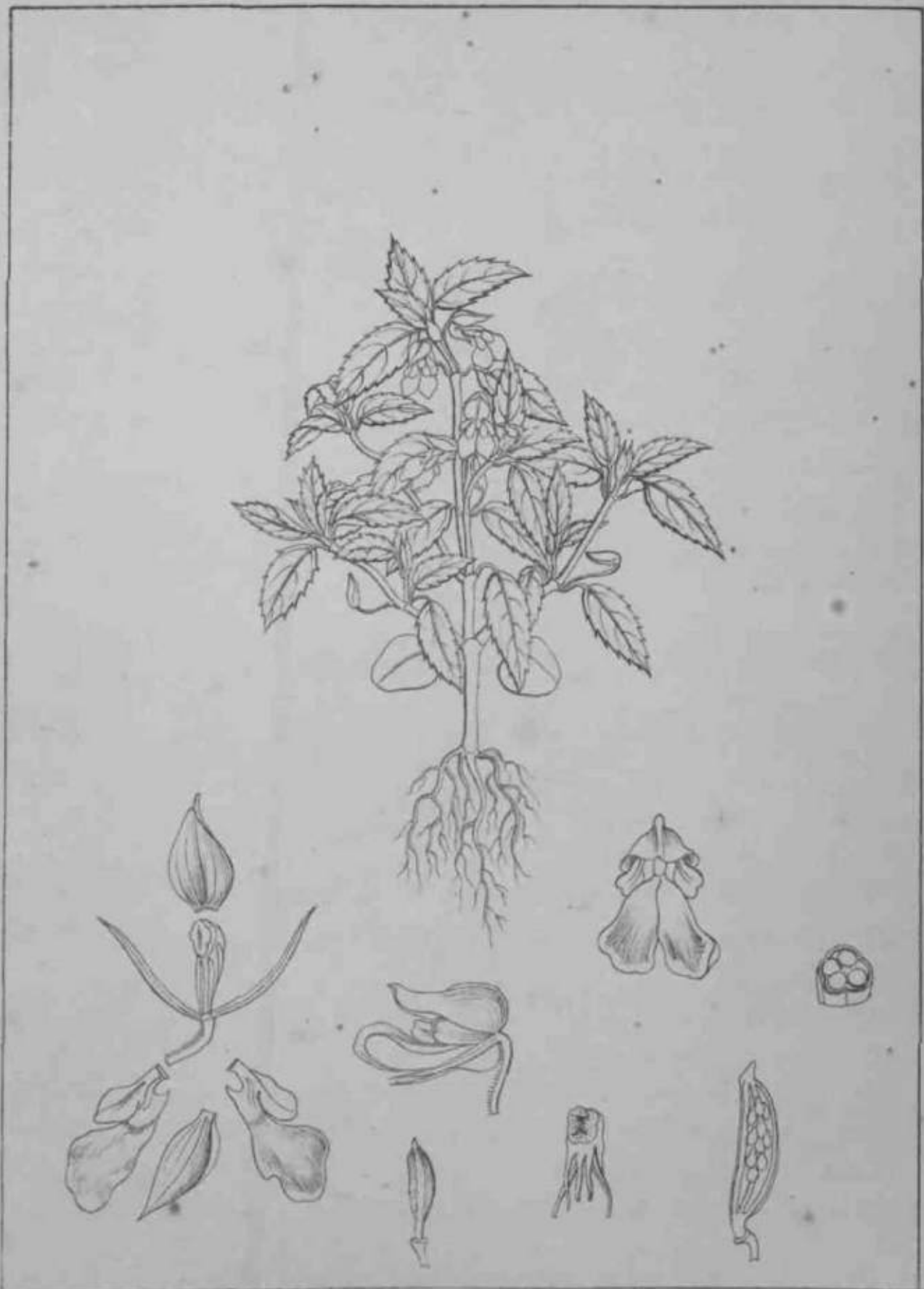
Boydell, sculp.



Reynard, del.

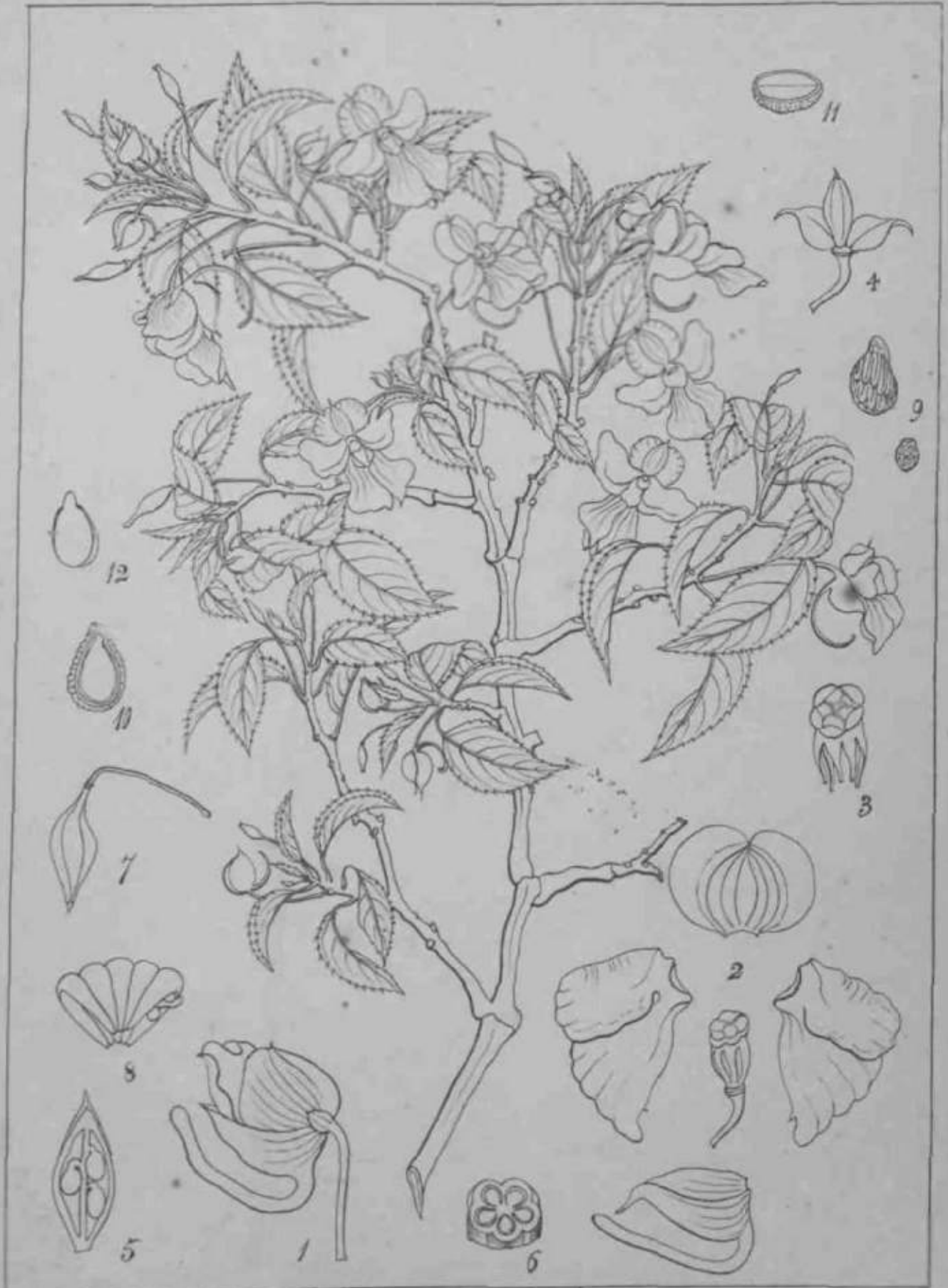
Impatiens rufens (Penth.)

Dumortier, 2006



Impatiens inornata (Benth.)

W. Purdy, del.





Leopold, del.

Pittosporum tetraspermum (W & A.)

Thompson, del.



Surpinia nepalensis (Walt.)

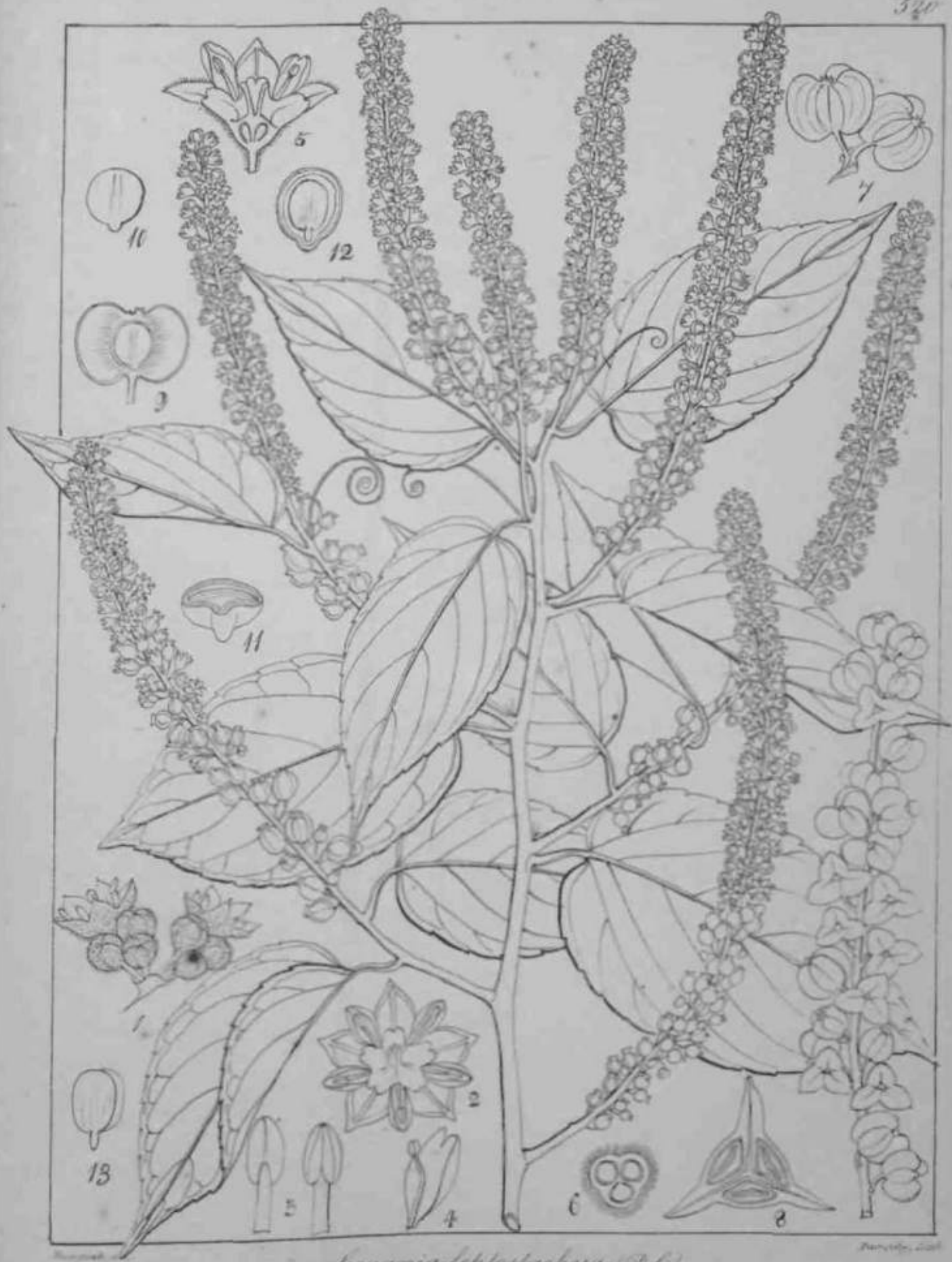
Dumortier, Leach



W. G. D. 1841

Euonymus crenulatus (Wall. & G. Don)

2000000. 11261



Guaiacum leptostachya (D.C.)

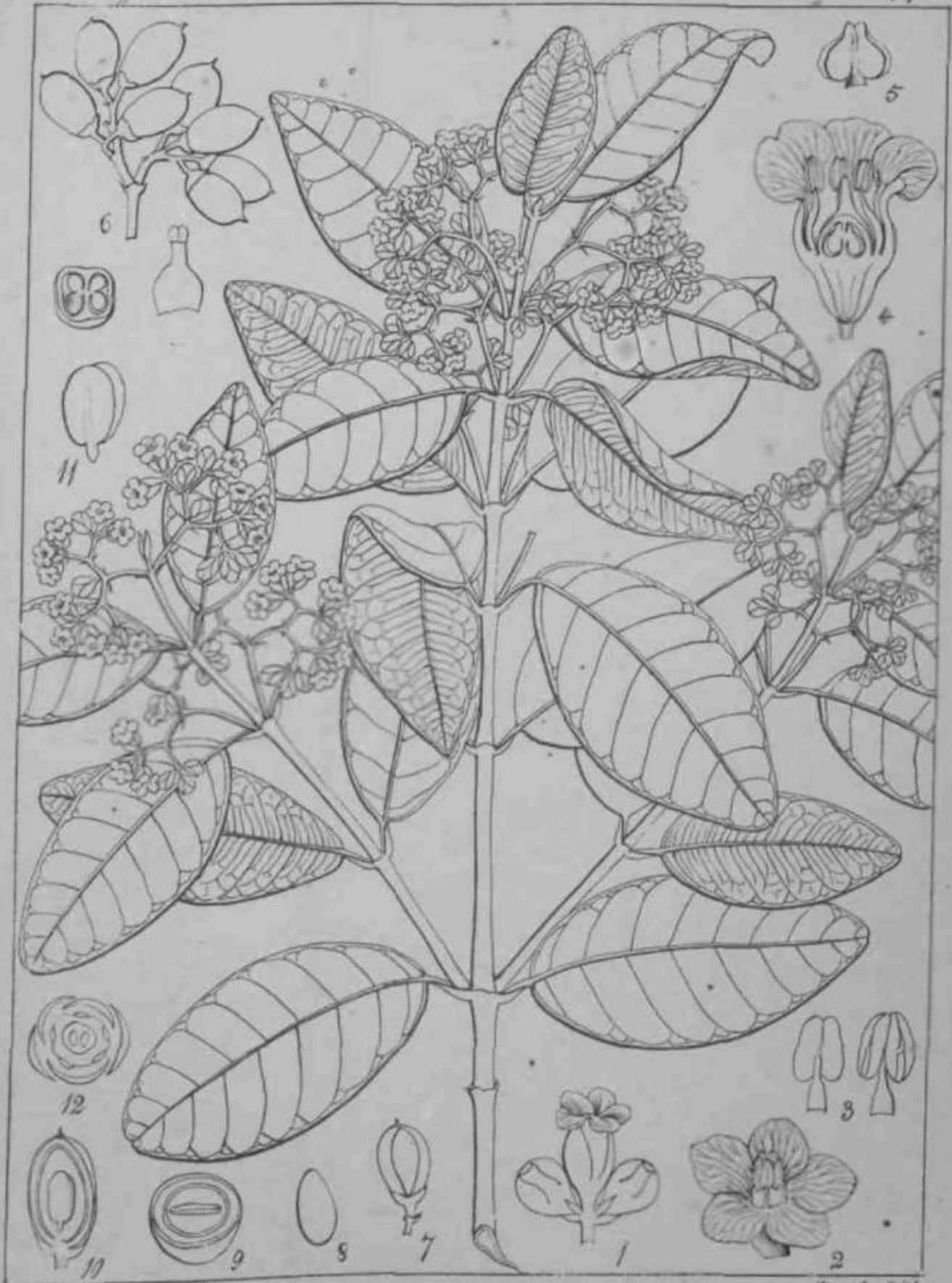
Harms, Bot. Zeit.



Rungtuck del.

Microtropis microcarpa (R.W.)

Dumphy Lith.



Burgink del.

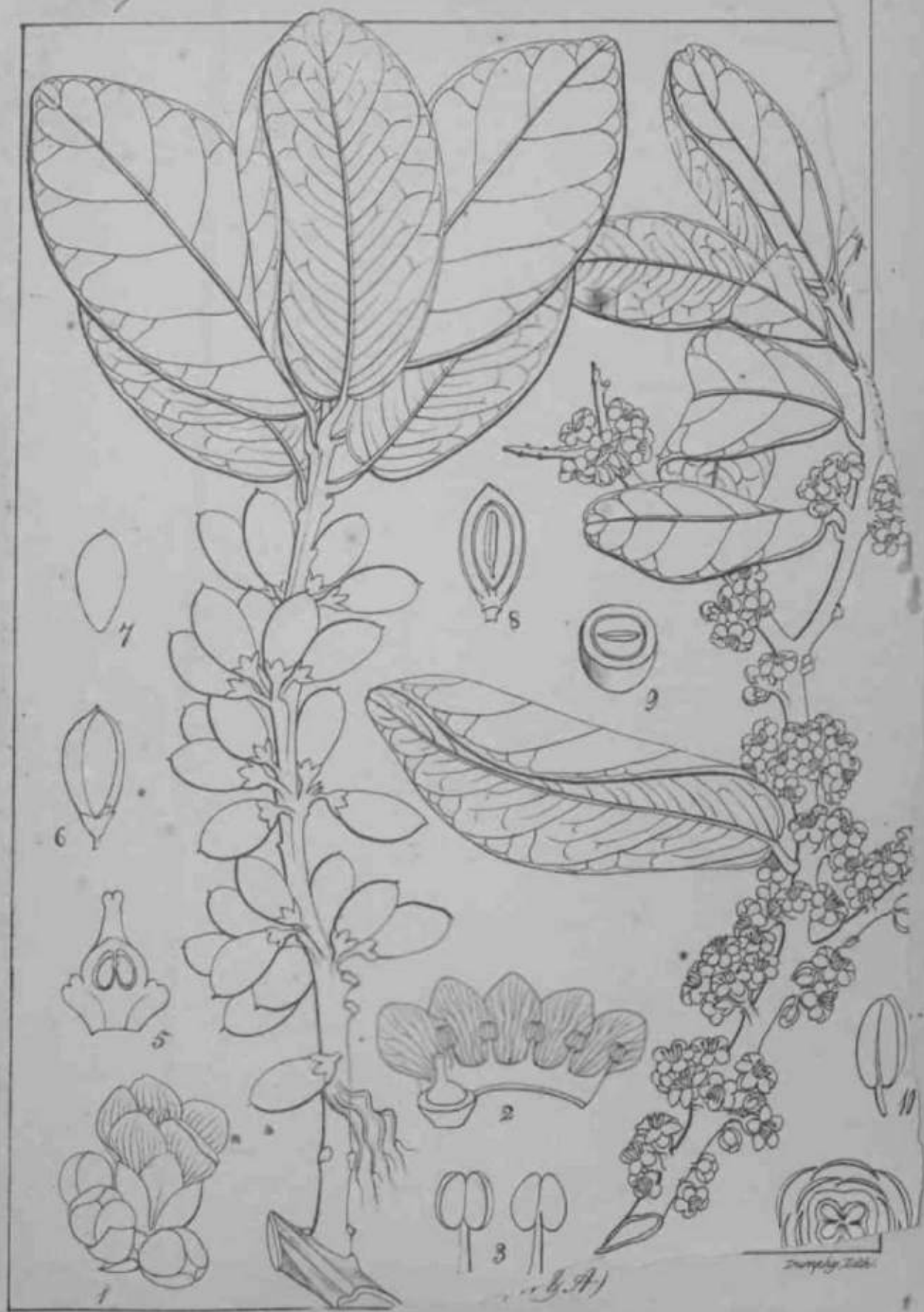
Dumphy Lith.

Myrsine ovalifolia (R. W.)

Eucnymia

Calastriaceae

978
316



Rhamnus

978
316



Barneby det.

Rhamnus & *Sida* (W & A)

Barneby det.



Sophora glauca

Sophora glauca / Lesch.

Sophora glauca



Bergius, del.

Crotalaria barbata (Graham)

Zurbriggen, sculp.



Crotalaria formosa (Graham)

Papilionacea

Leguminosa

Lotea $\frac{982}{579}$



Burmah del.

Crotalaria Wallichiana (W & A)

Dumphy Lith.

Papilionaceae

Leguminosae

*Lobelia 283
627*



Illustrat. del

Indigoferu pedicellata

W. P. P.



Engelm. del.

Desmodium rufescens (D.C.)

Murphy, Lith.



Bongiovi del.

Desmodium strangulatum (W. & A.)

Dumphy Lith.



L. Koch, del.

Smithia blanda Yu

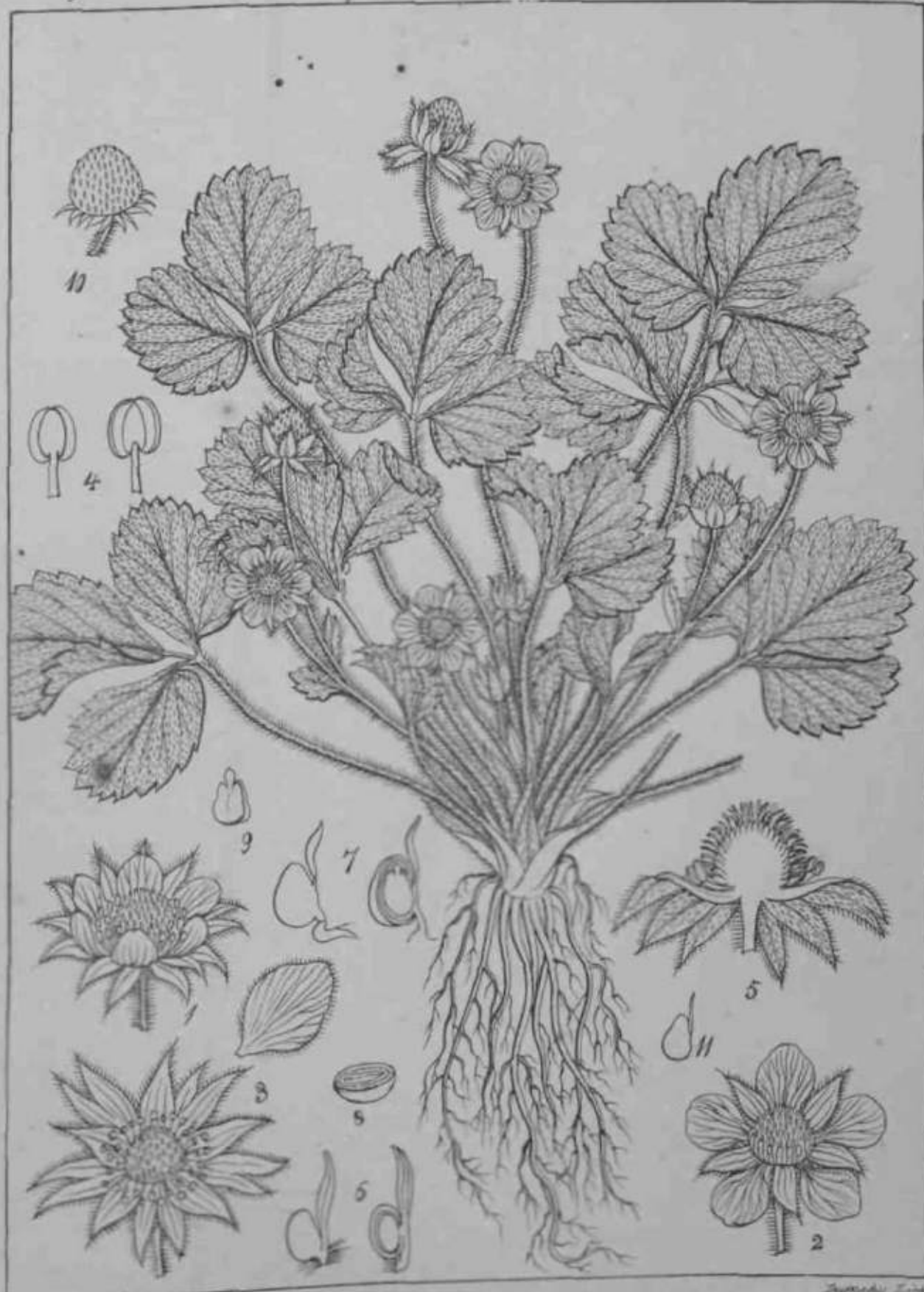
L. Koch, sculp.



Hemingia, det.

Hemingia procumbens (R. W.)

1844-1845, 1848



Engelm. del.

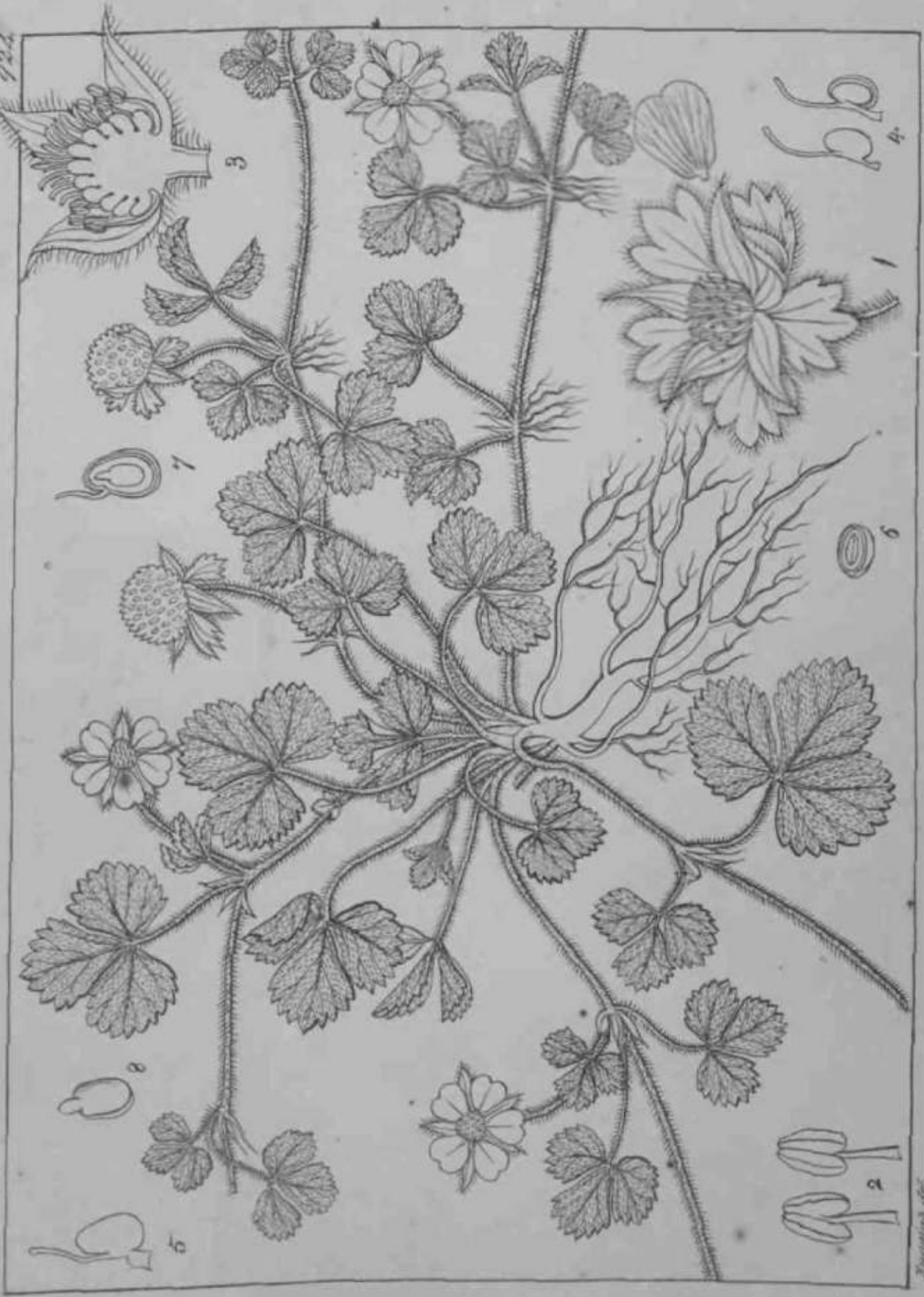
Fragaria dattior (Ehrh.)

Swartz del.

Dryadeae

Rosaceae

989
924



Wurphy, 1866

Fragaria indica (Andr.)

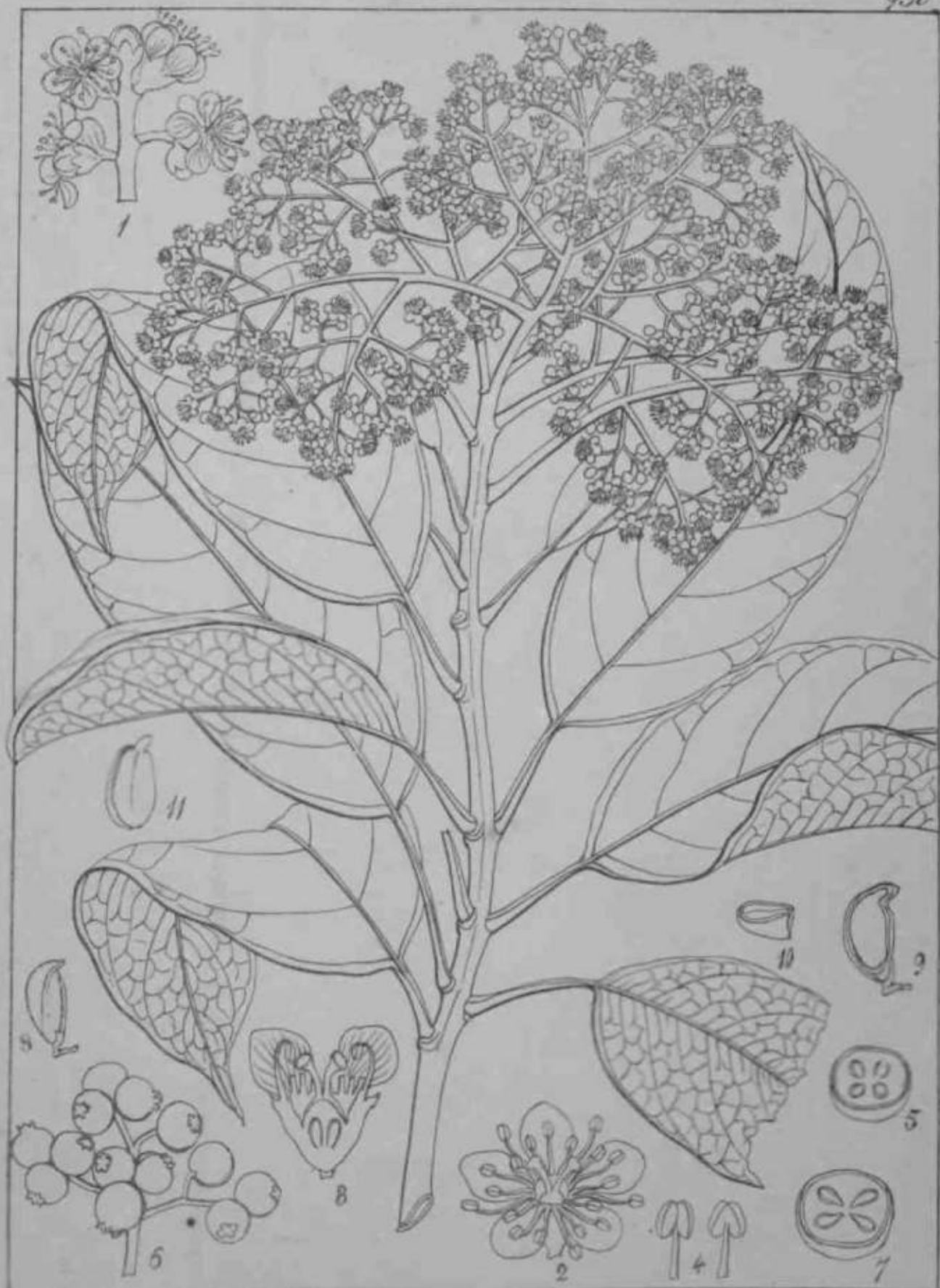
Wurphy, 1866



Engelm. & Griseb.

Potentilla Leschenaultii (Lam.) Griseb.

Drummond, 2000



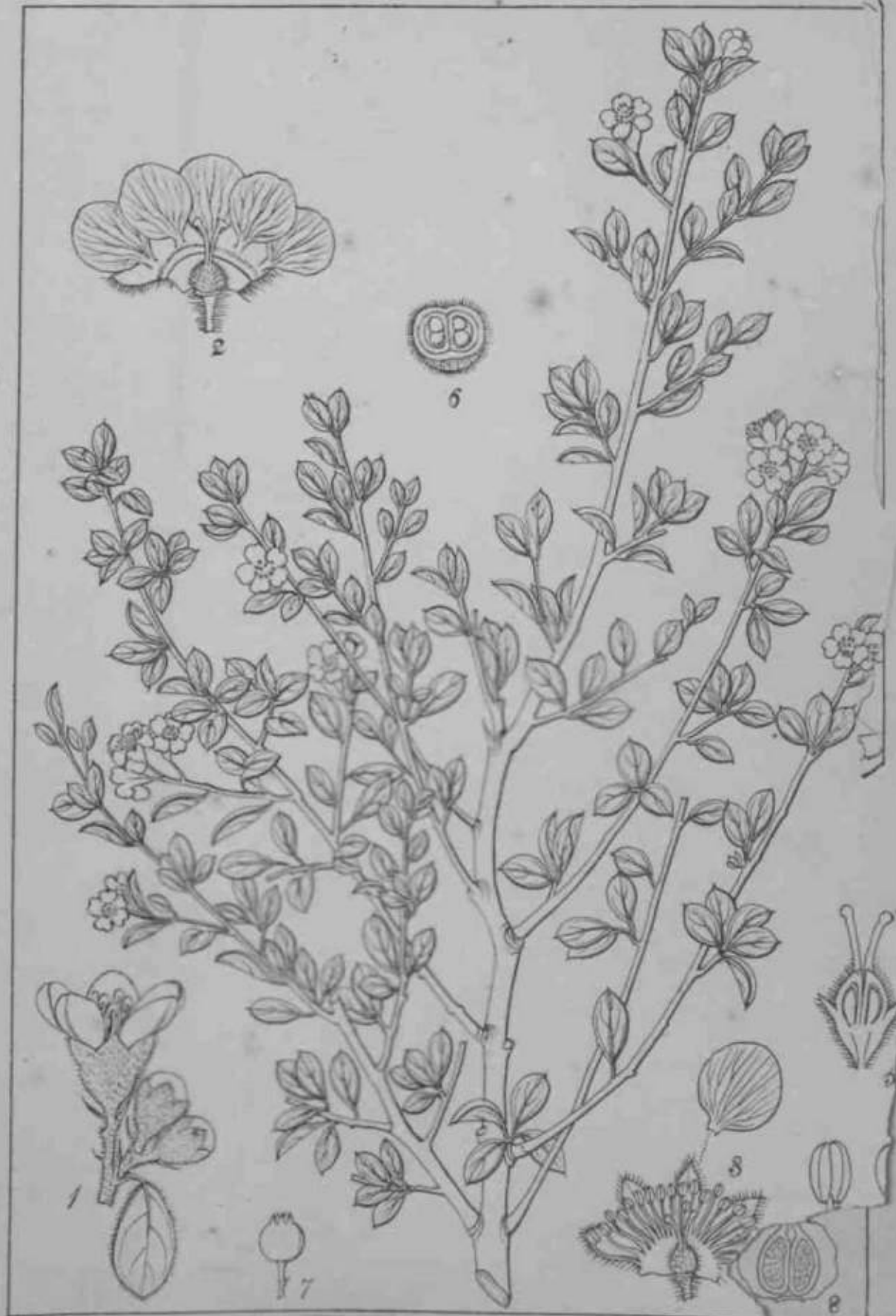
Engelm., det.

Phloxia Nelsoniana

Dumphy, det.

Pomea

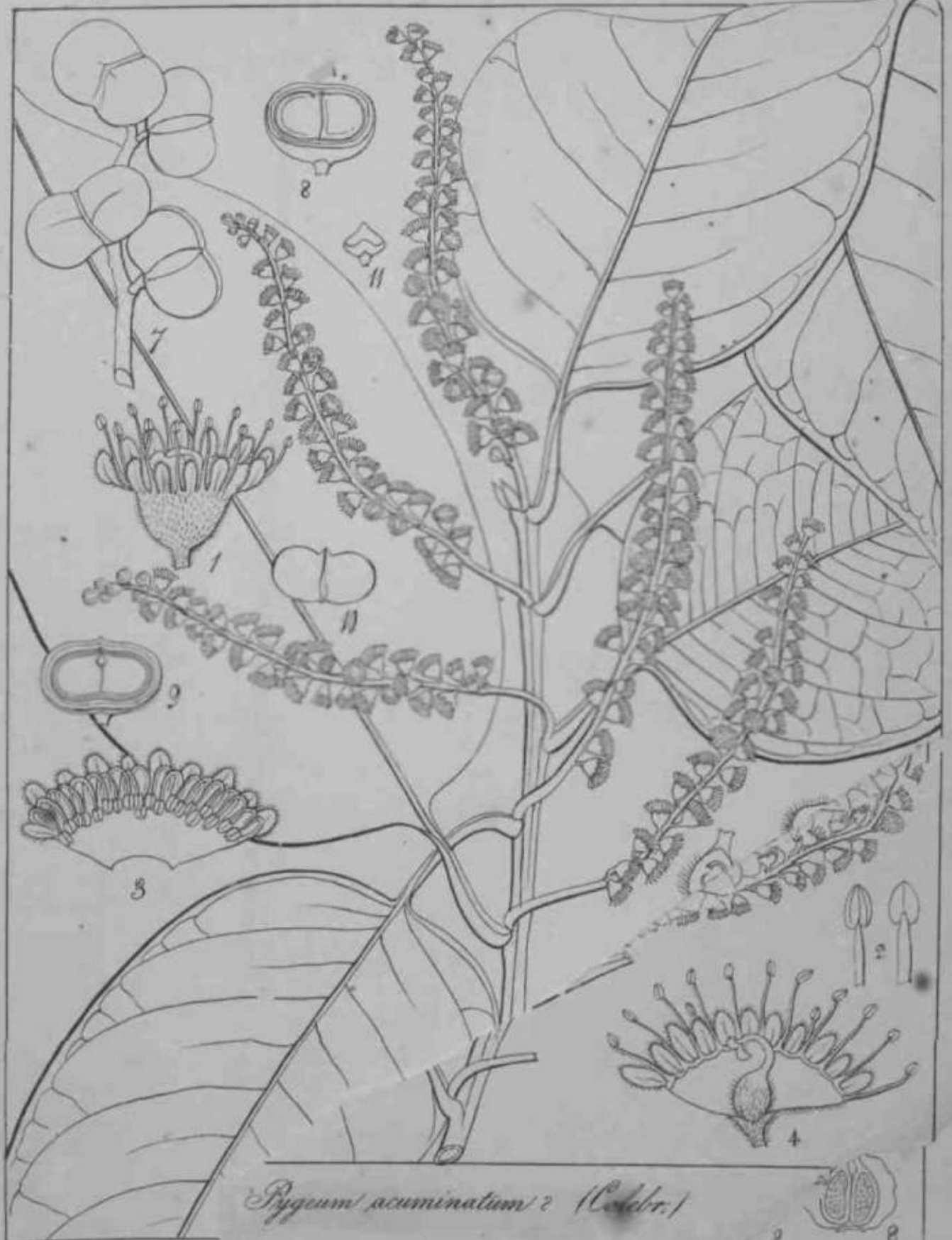
Rosacea



Kuhnert del.

Coloniaster laxifolia Wall.

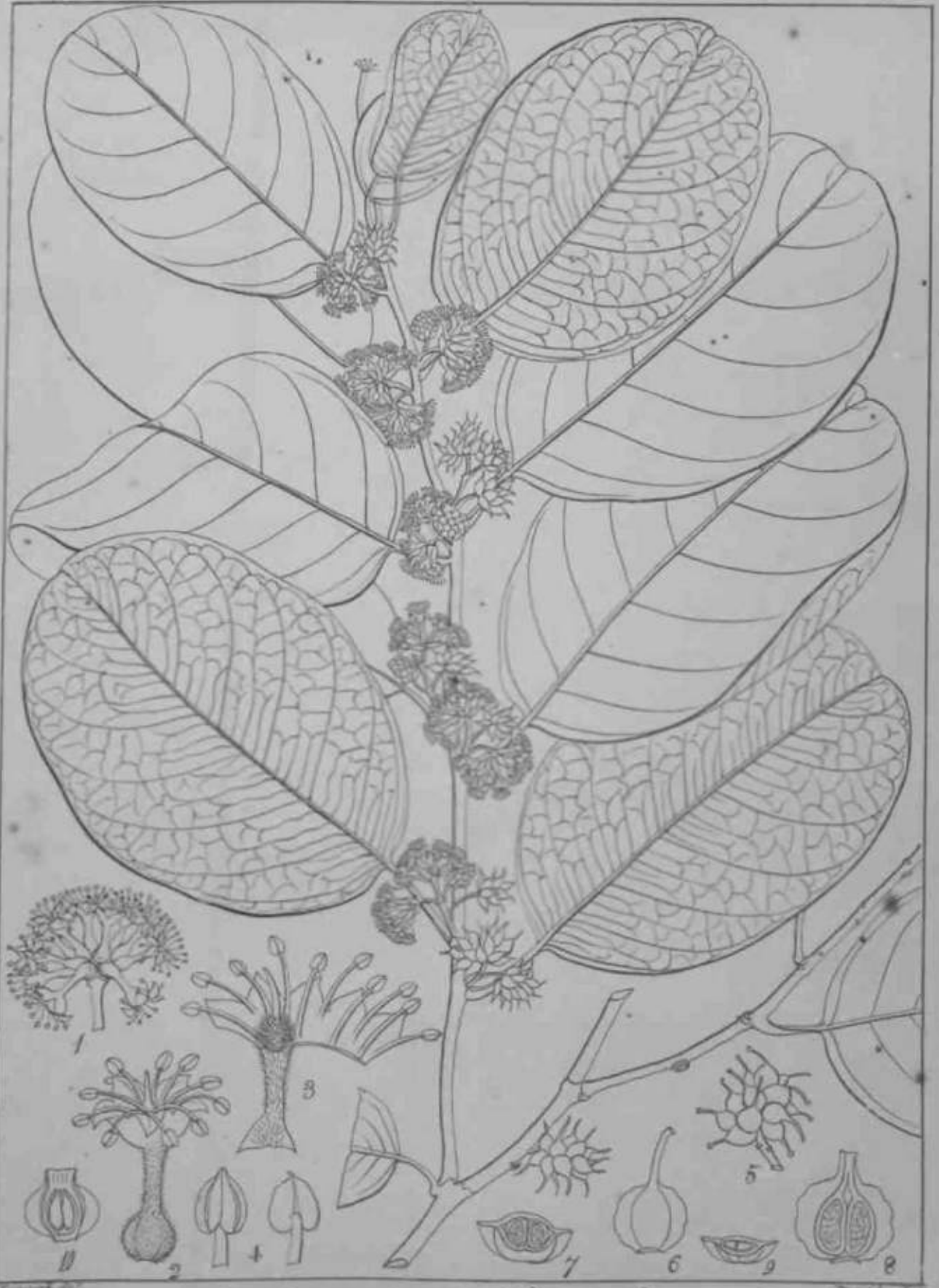
Engelm. del.



Pygeum acuminatum (Cedbr.)

Kunze del.

Kunze del.

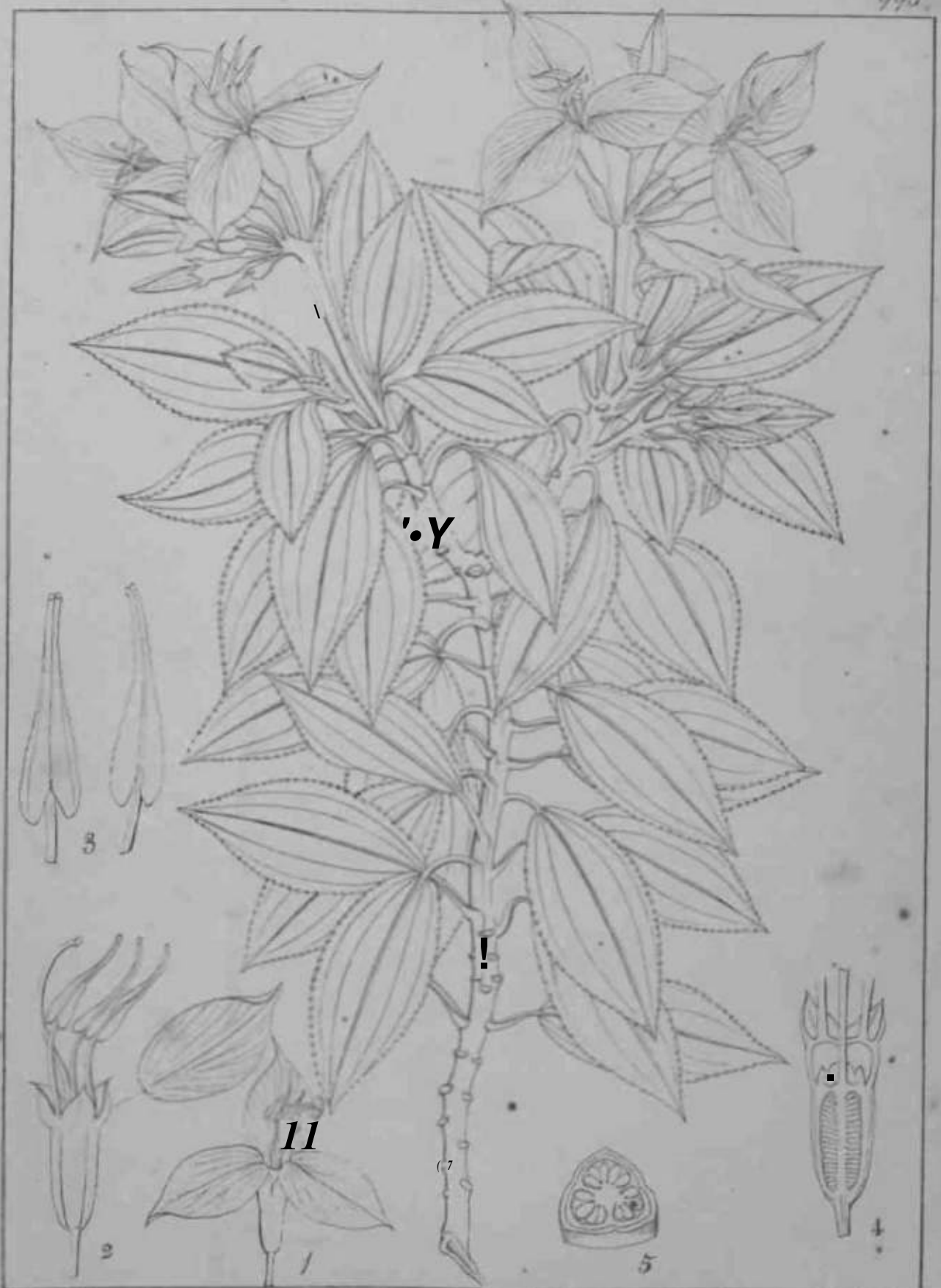


Conocarpus latifolia (Roos)

Melastomaceae

Melastomaceae

995
993



11

(7)

Sonchella 7UMUI flora (R. B.)

Wiegand del.

Wiegand del.

Melastomeae

Melastomaceae

993/2



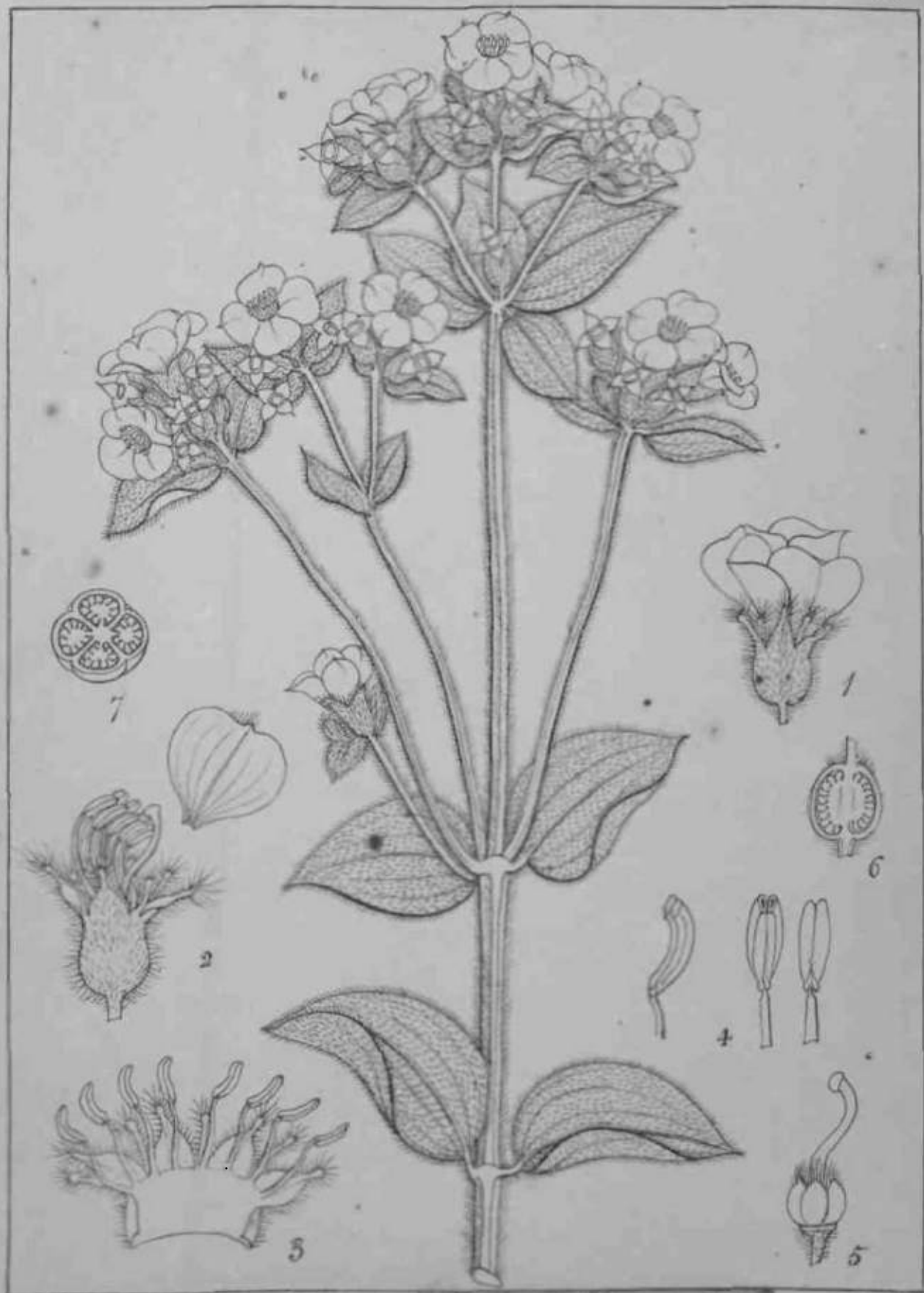
Swartz del.

Swartz del.

Sonchella speciosa (L.) S.A. t



Scaevola sp. (R. W.)



Engelm. & Griseb.

Csbeckia laschenaulhana (D.C.)

Engelm. & Griseb.



Osebeckia meridiana (R. & H.)



Osbeckia Wightii SK (Benth.)

Wightii



Diagnos. det.

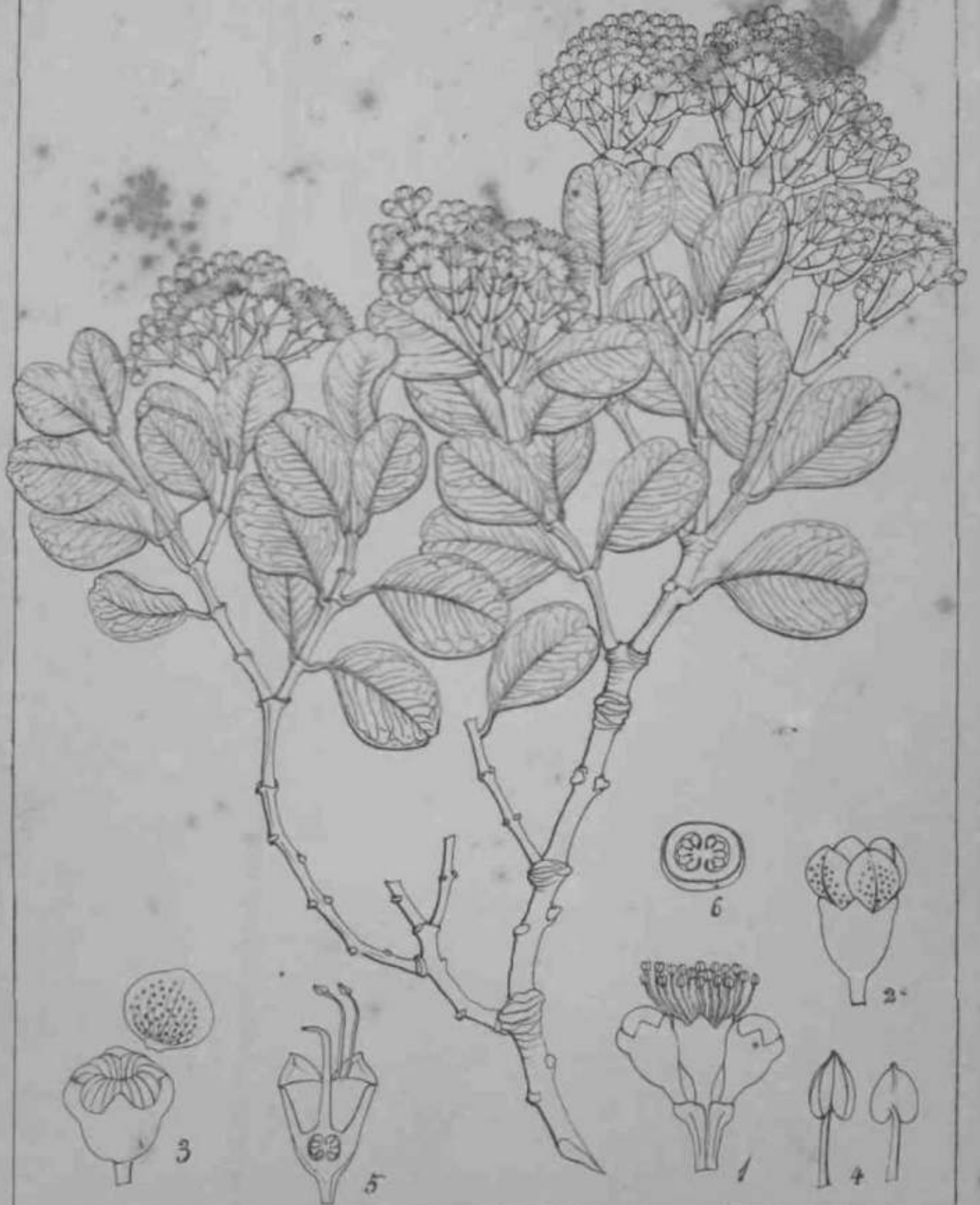
Eugenia (S) Arnottiana (R.W.)

Diagnos. det.

Myrtaceae

Myrtaceae

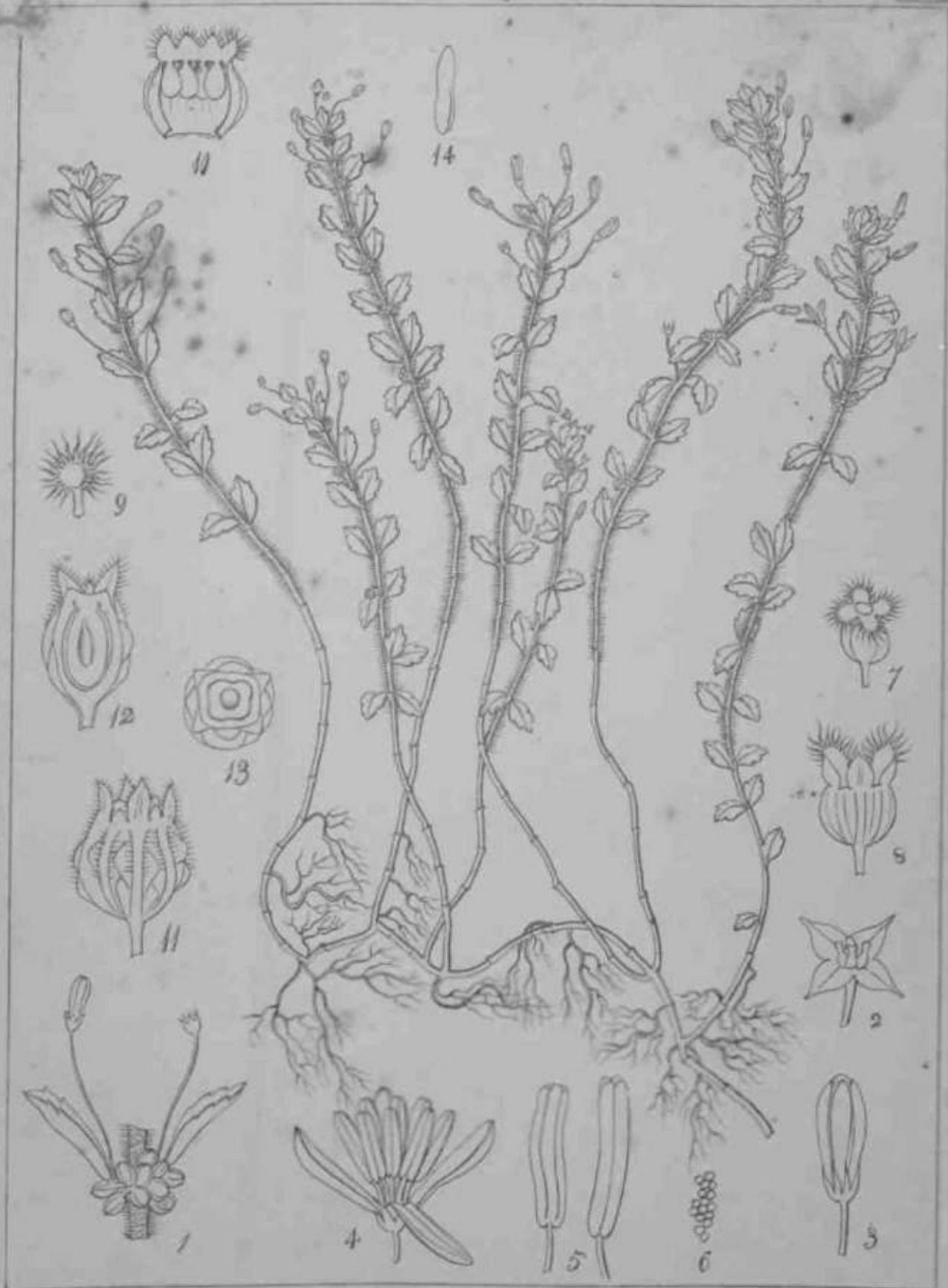
1798



Eugenia (S) caif. Ay//t/< &<< £#2

Eugenia (S) caif. Ay//t/< &<< £#2

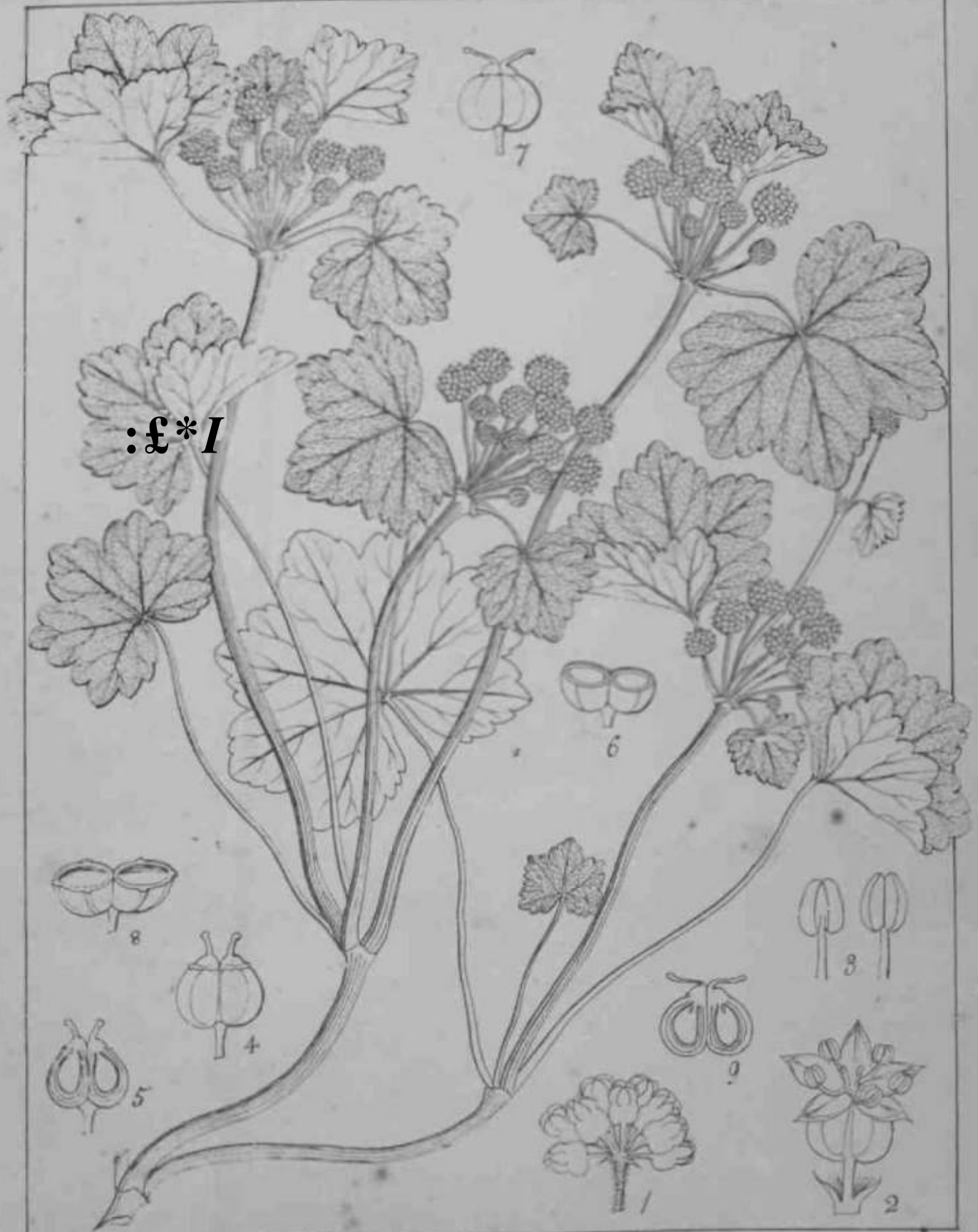
Joseph Zinn



Kunze del.

Halimolobos hirsuta (W. & A.)

Zampsky del.



:£*I

Hydrocotyle polycophala (W & A)

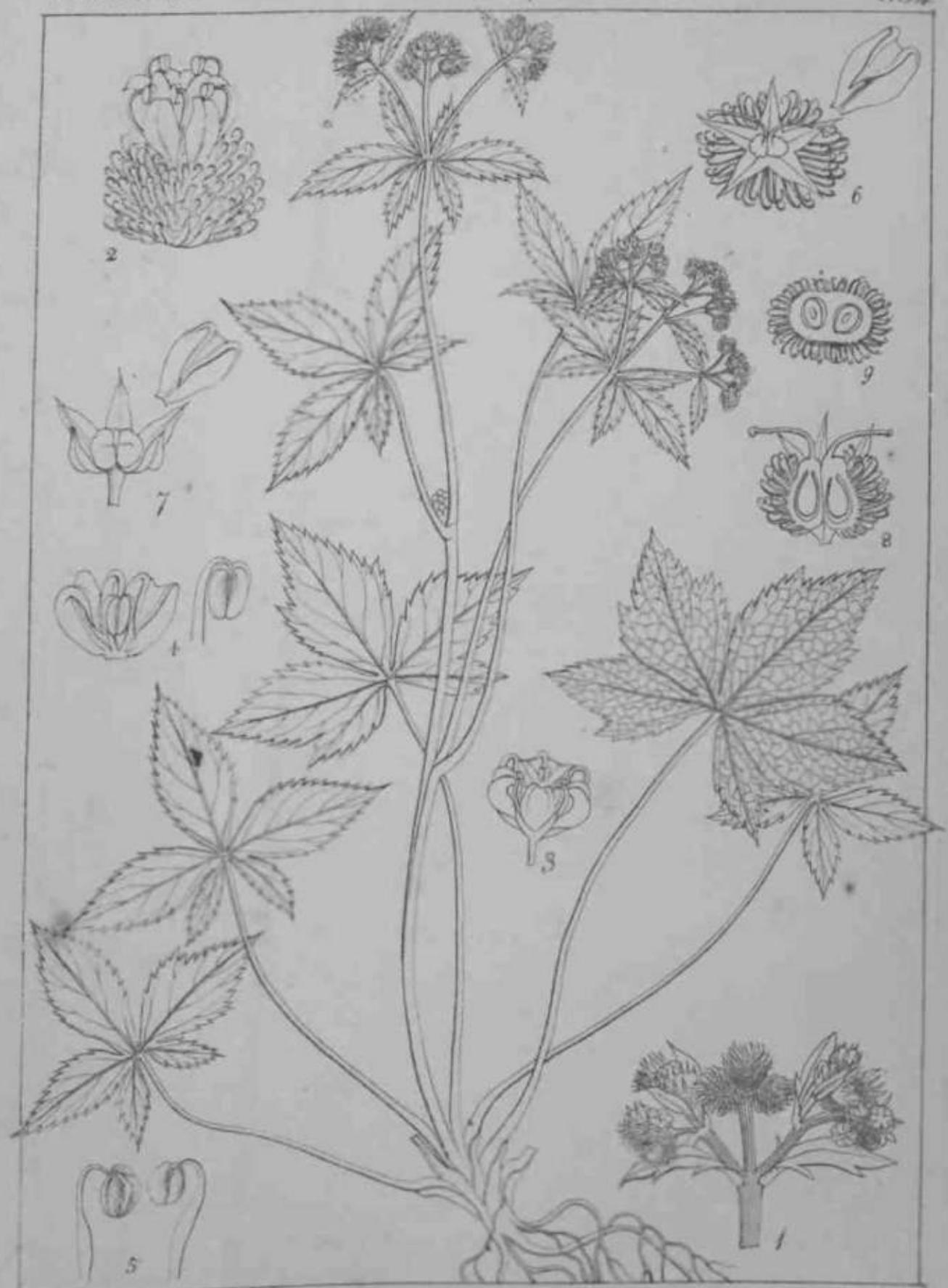
London 46

W & A del.

Sanicula

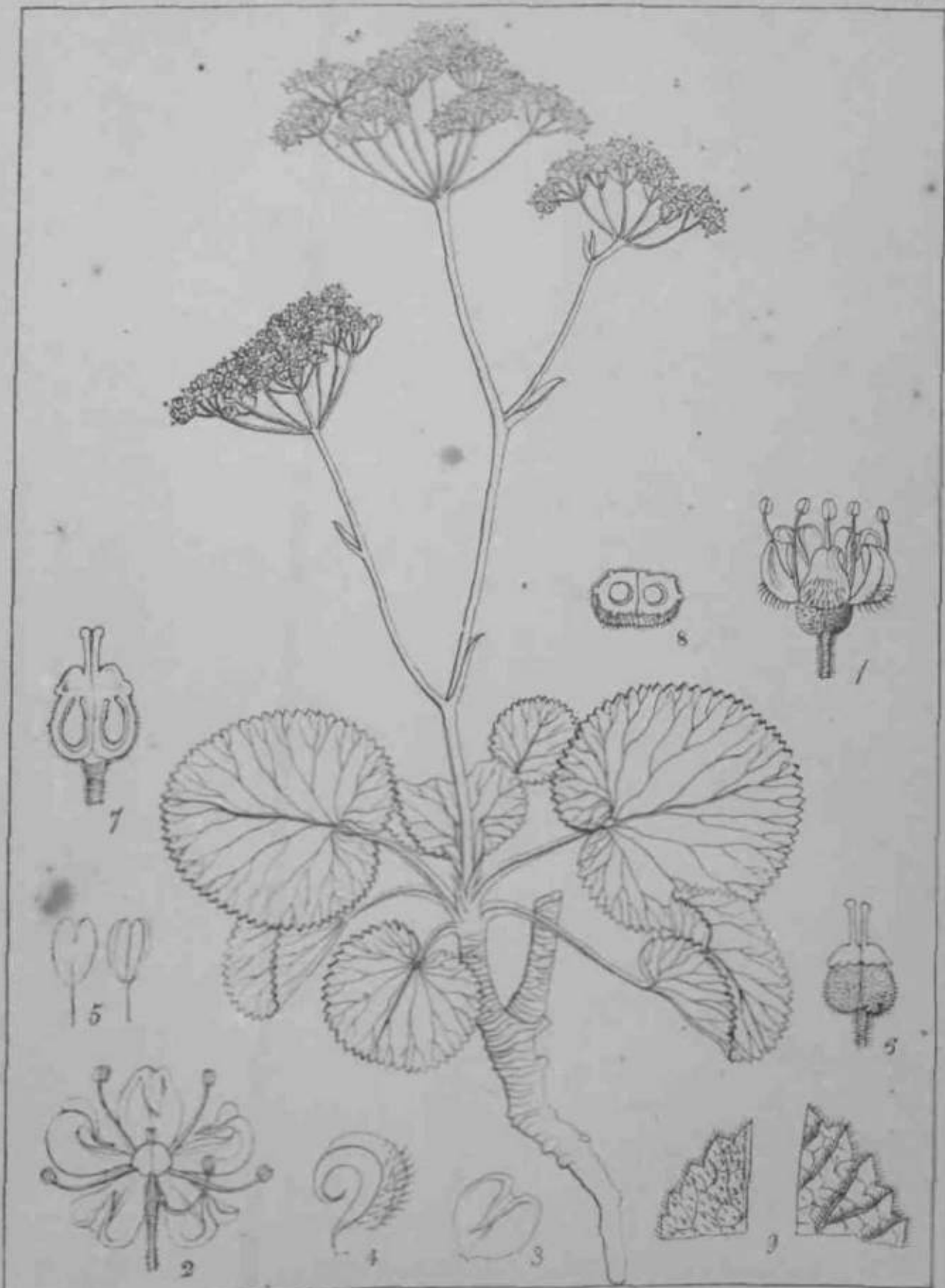
Umbelliferae

1005
1136



Sanicula elata (Wam)

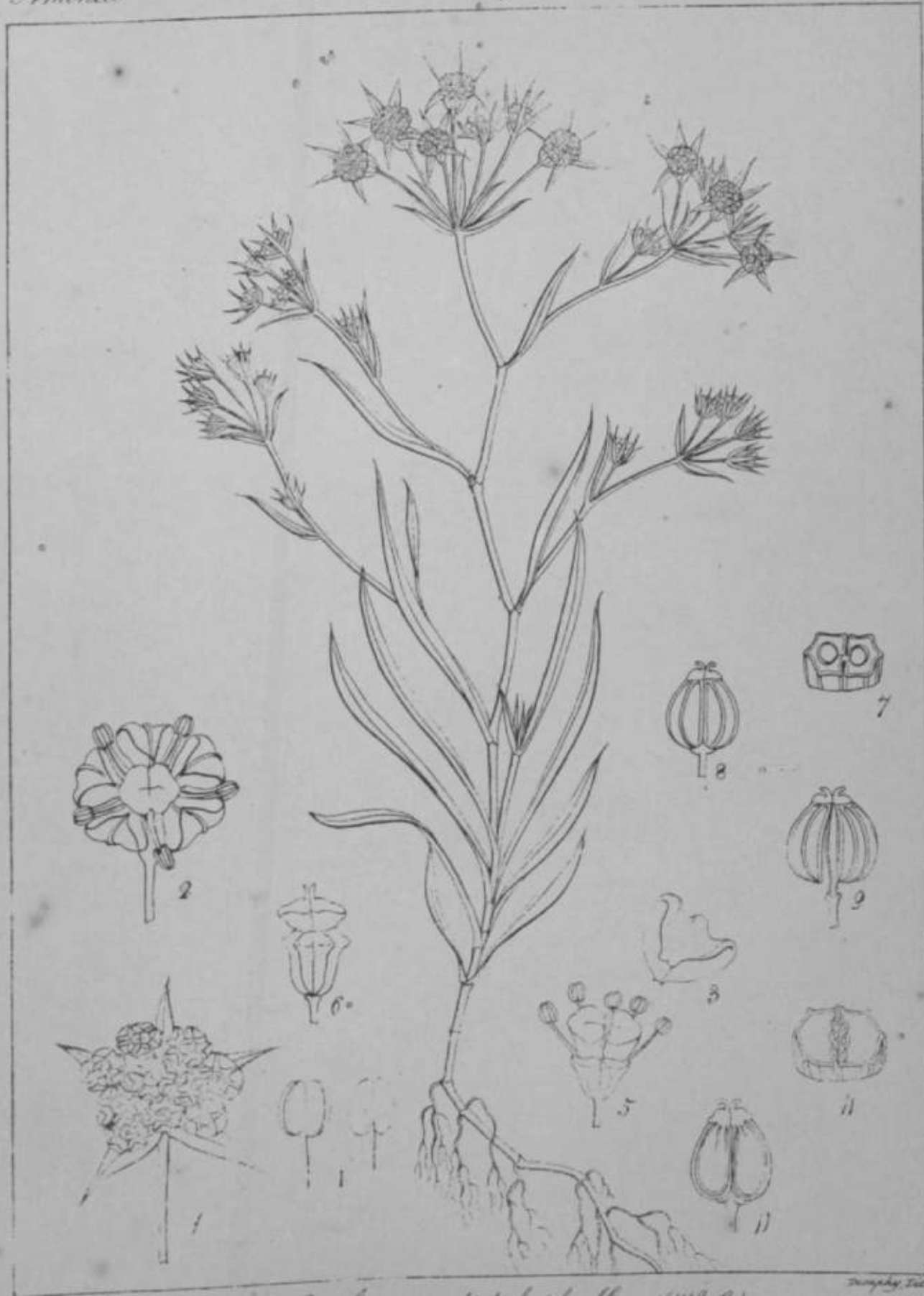
Boissier, 1848



K. Schum. del.

Pimpinella Leschenaultii (D. C.)

Herzog del.



Koenig, 1826

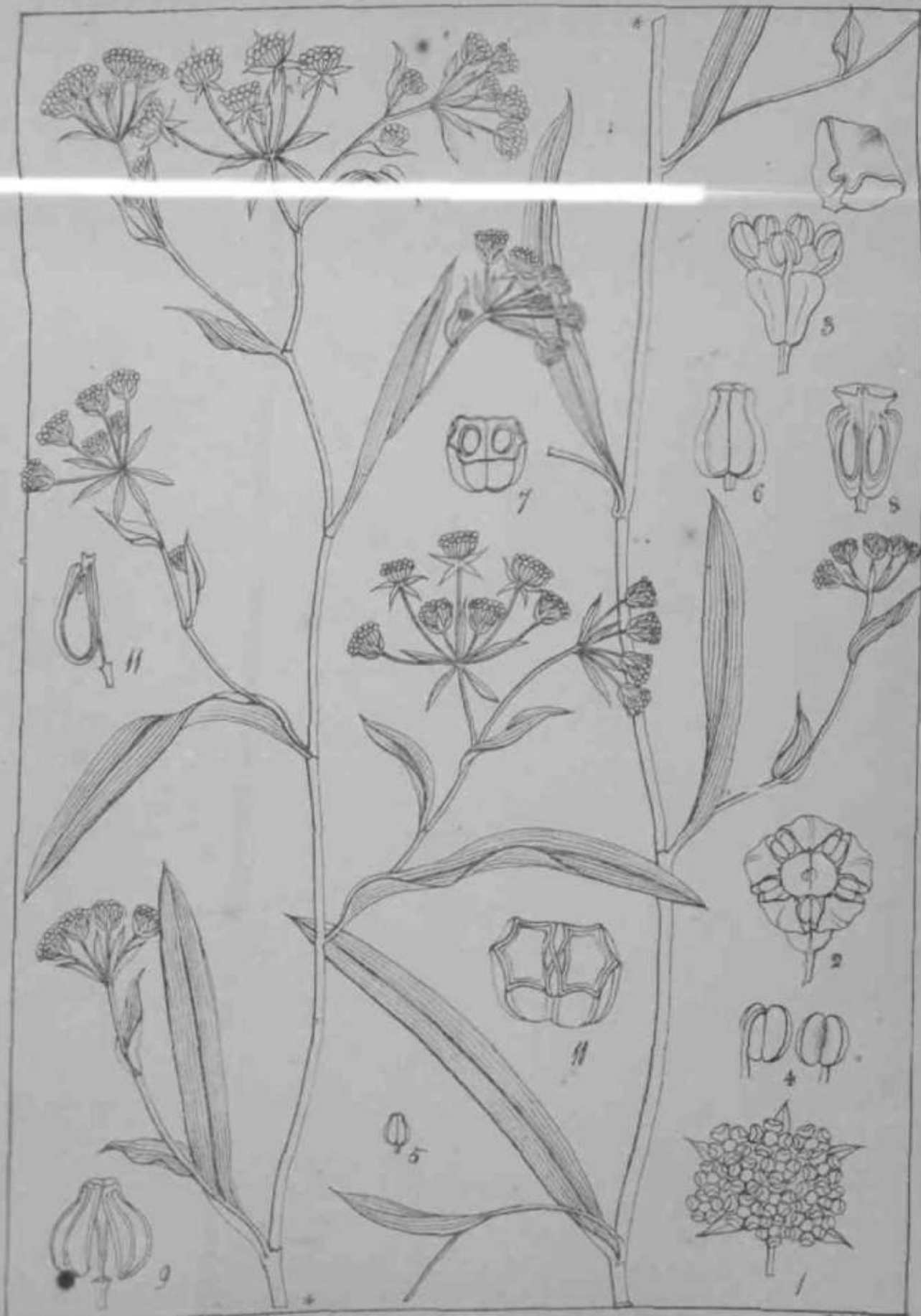
Bupleurum distichophyllum (W.B.A.)

Thunberg, 1826

Ammineae

Umbelliferae

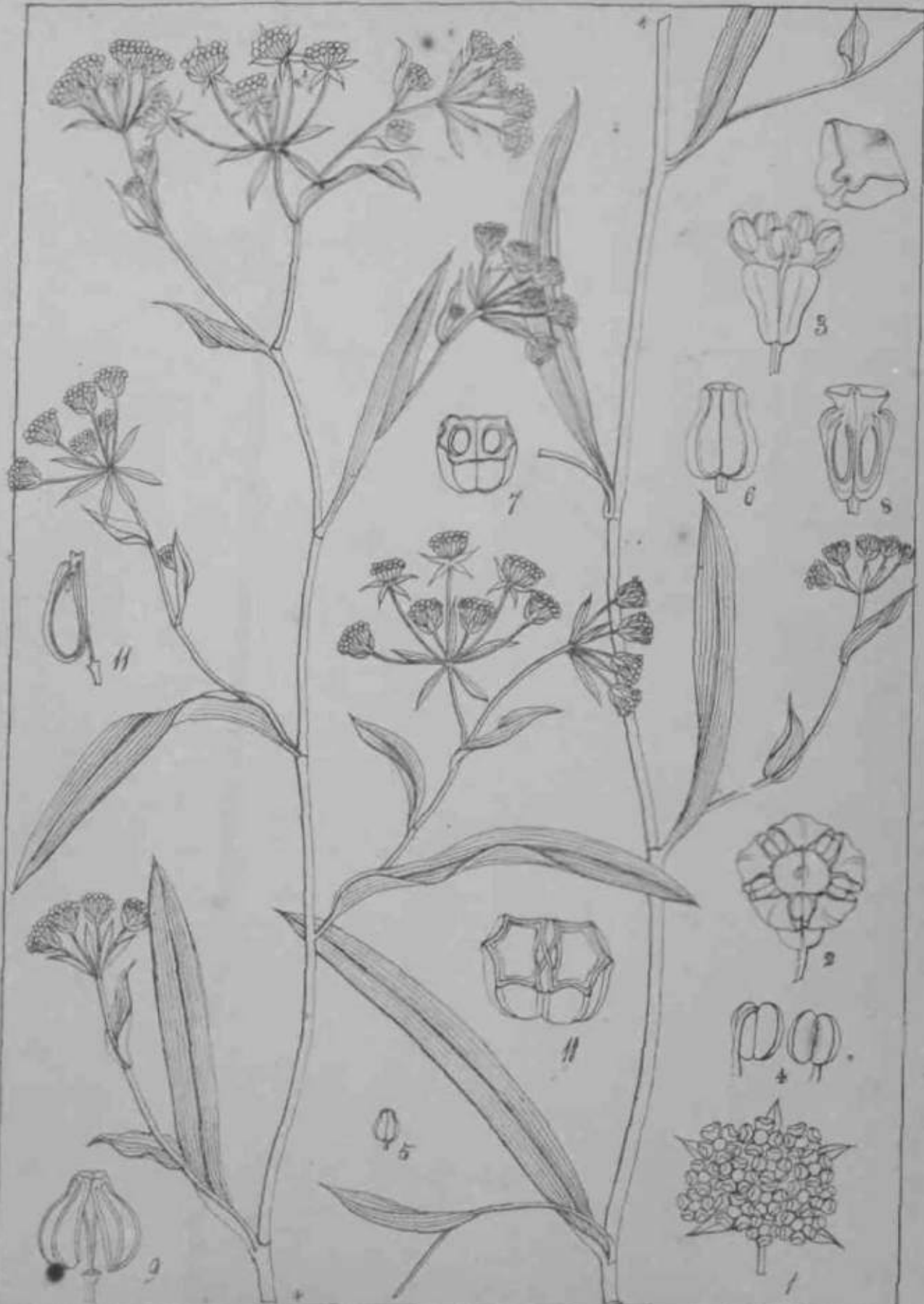
1007
1154



Engelm. det.

Bupleurum ramosissimum (W. A.)

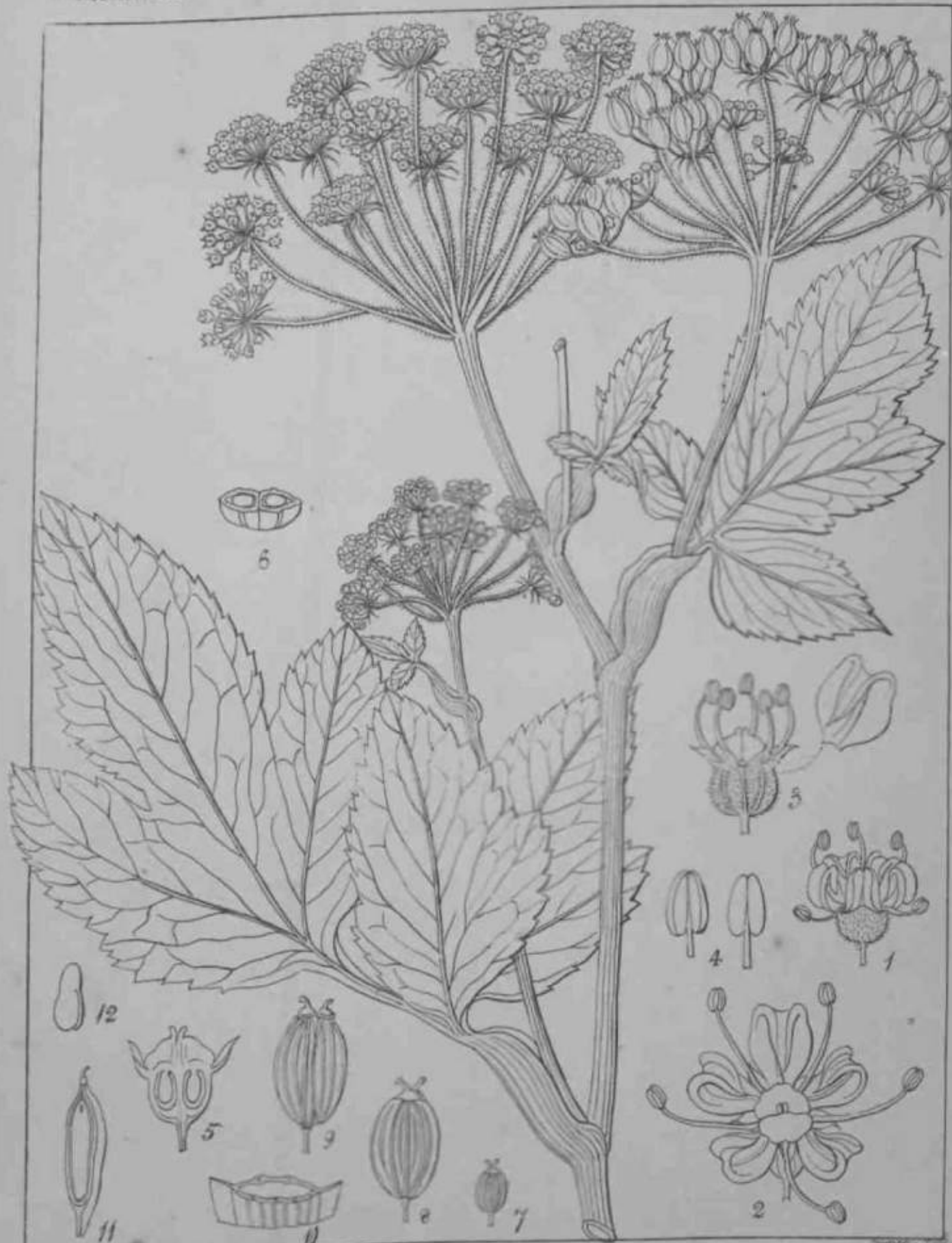
Engelm. det.



Bupleurum ramosissimum (W. A.)

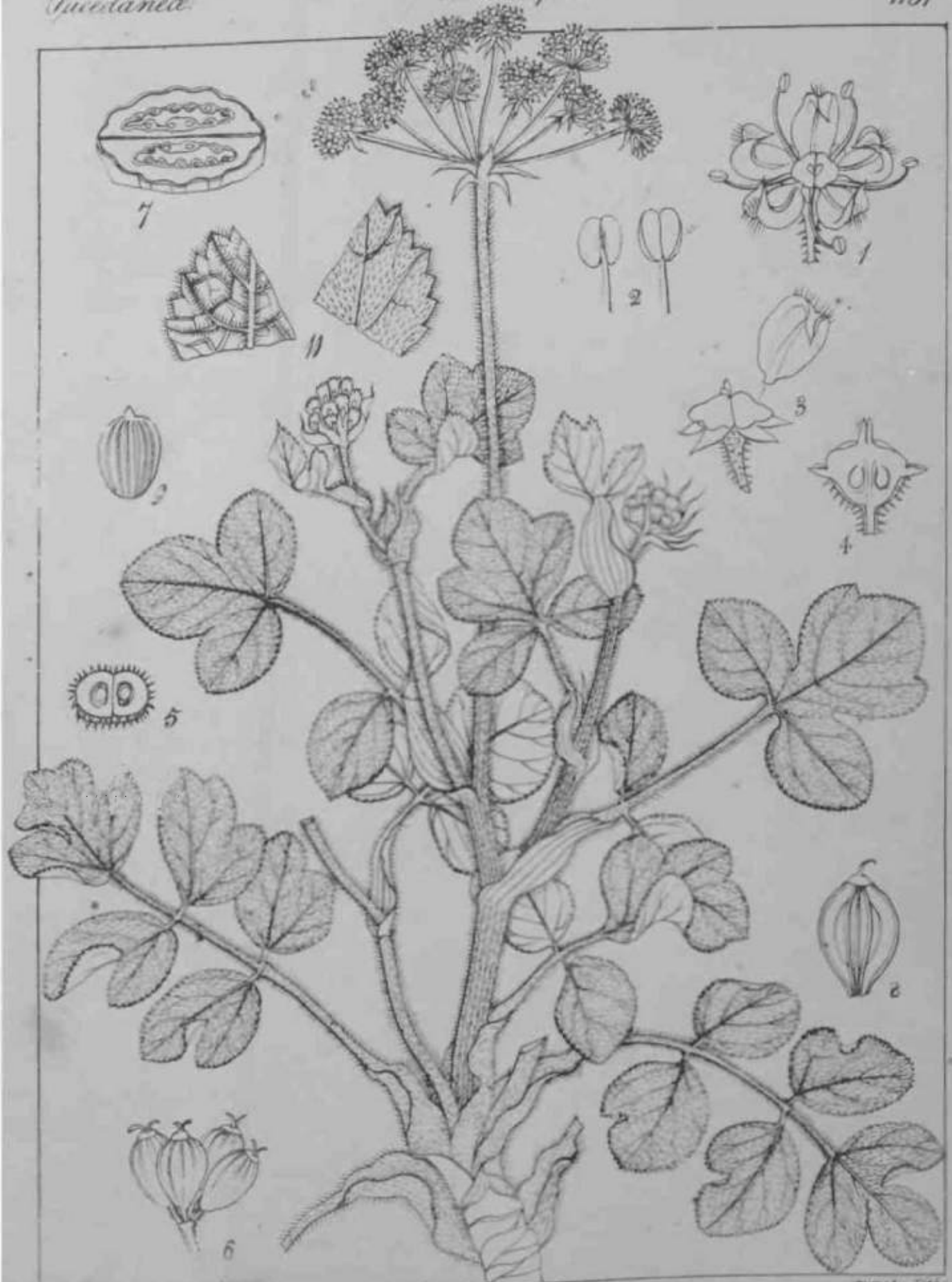
Engelm. del.

W. A. sculp.



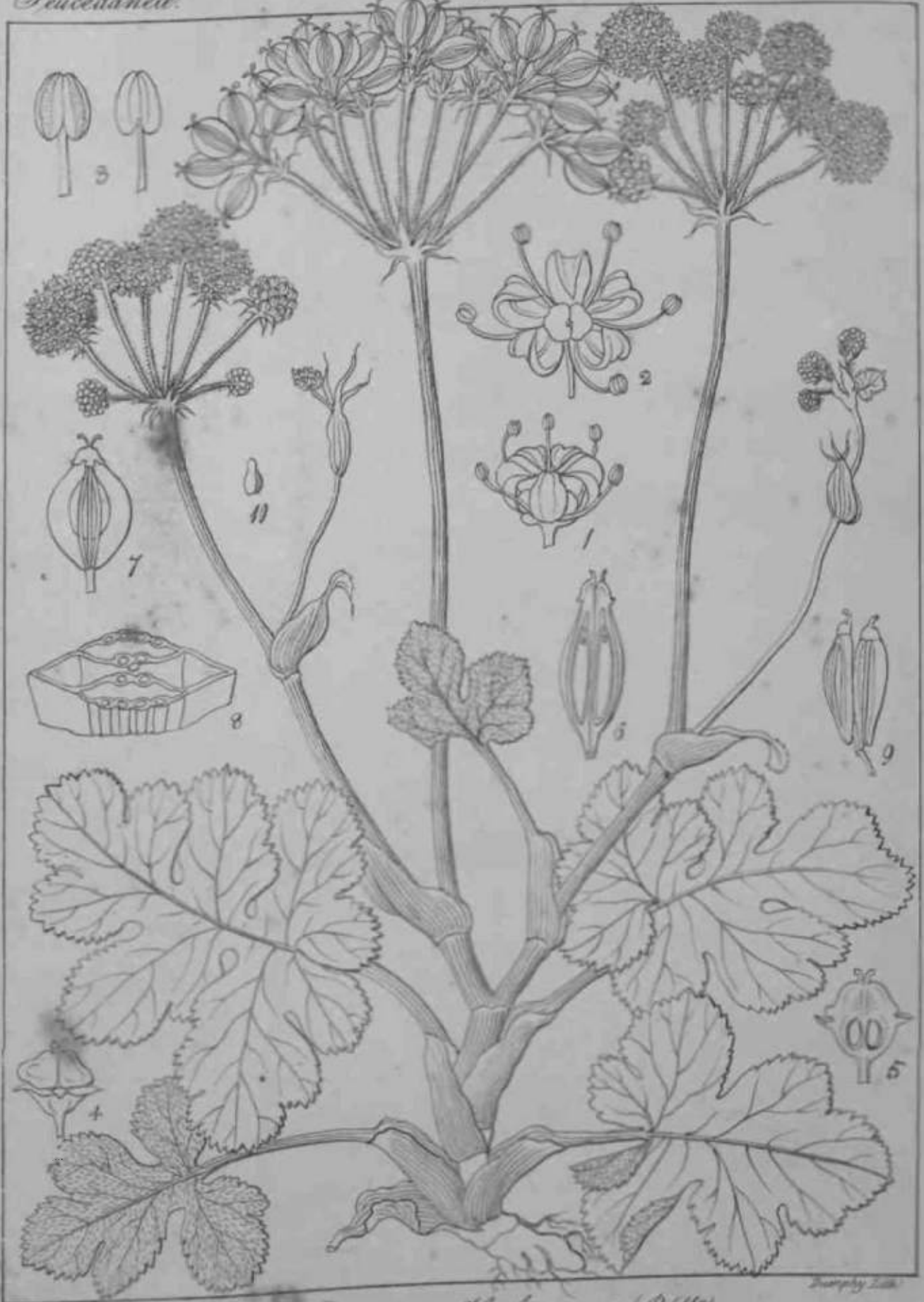
Engelm., del.

Pastinaca spungeliana (R. W.)
Heracle spungelianum (W. & A.)



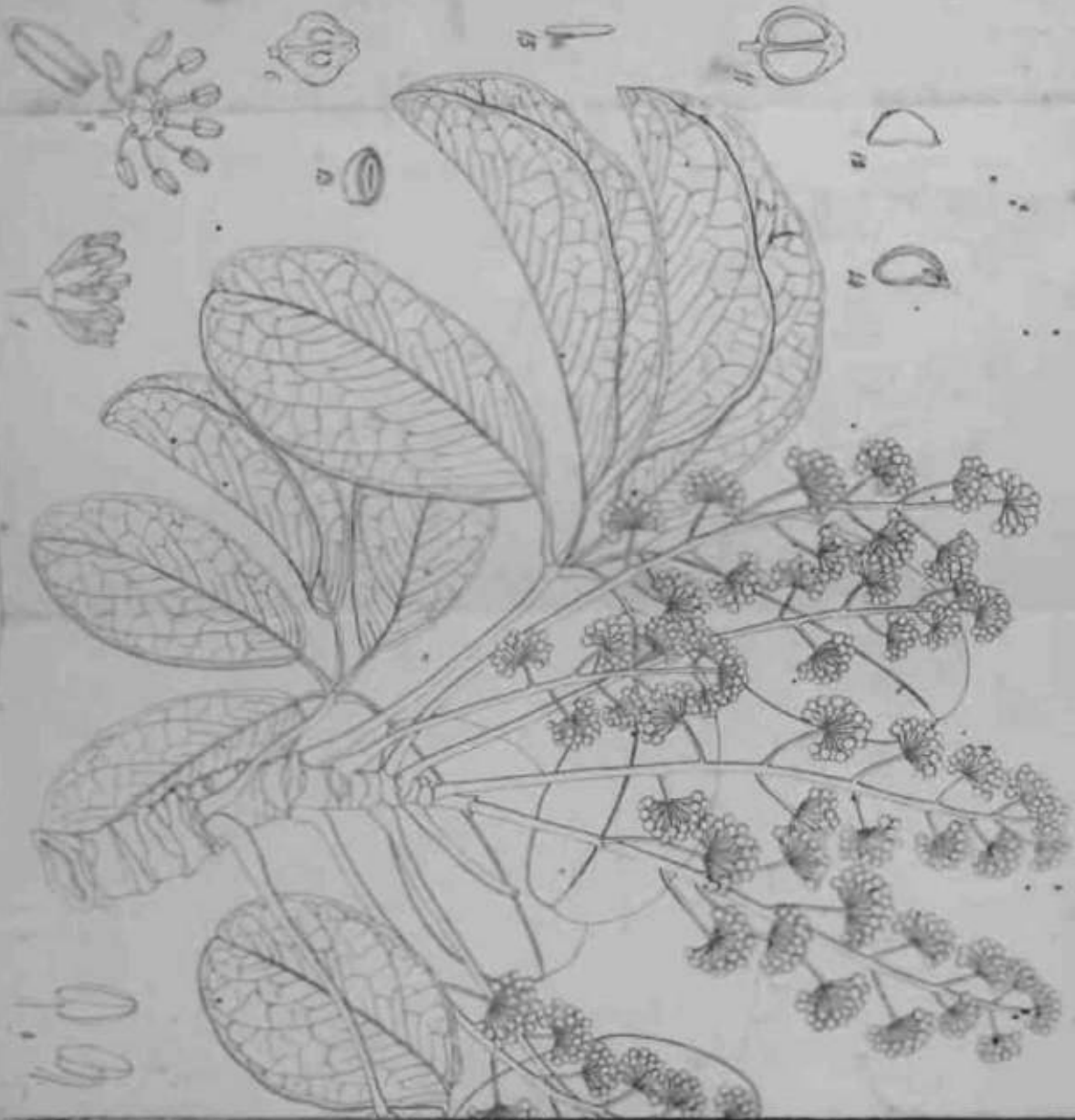
Pastinaca nigra (R.W.)
Geracleum nigra (Wall. W. & A.)

Jungius del.



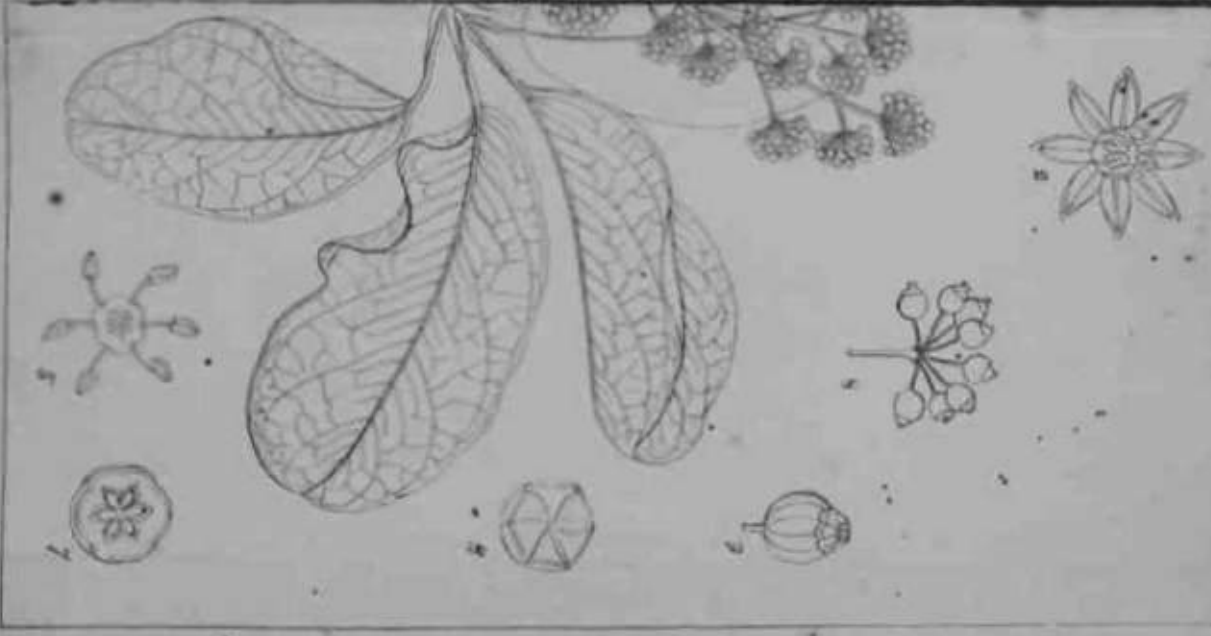
Pastinaca Hookeriana! (R. W.)

Heracleum Hookerianum! (W. & A.)



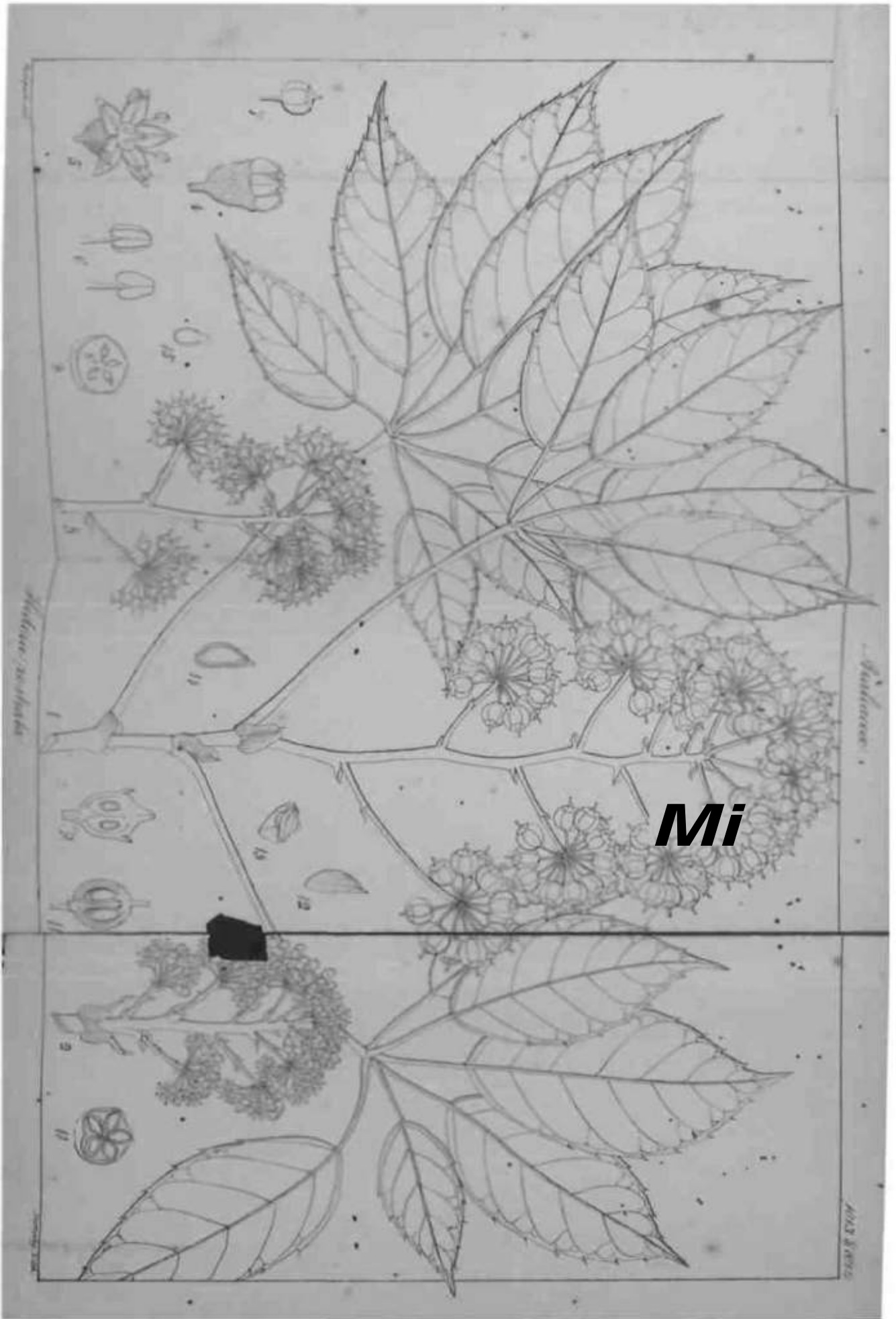
Hydnora odorata L. f.

Hydnora



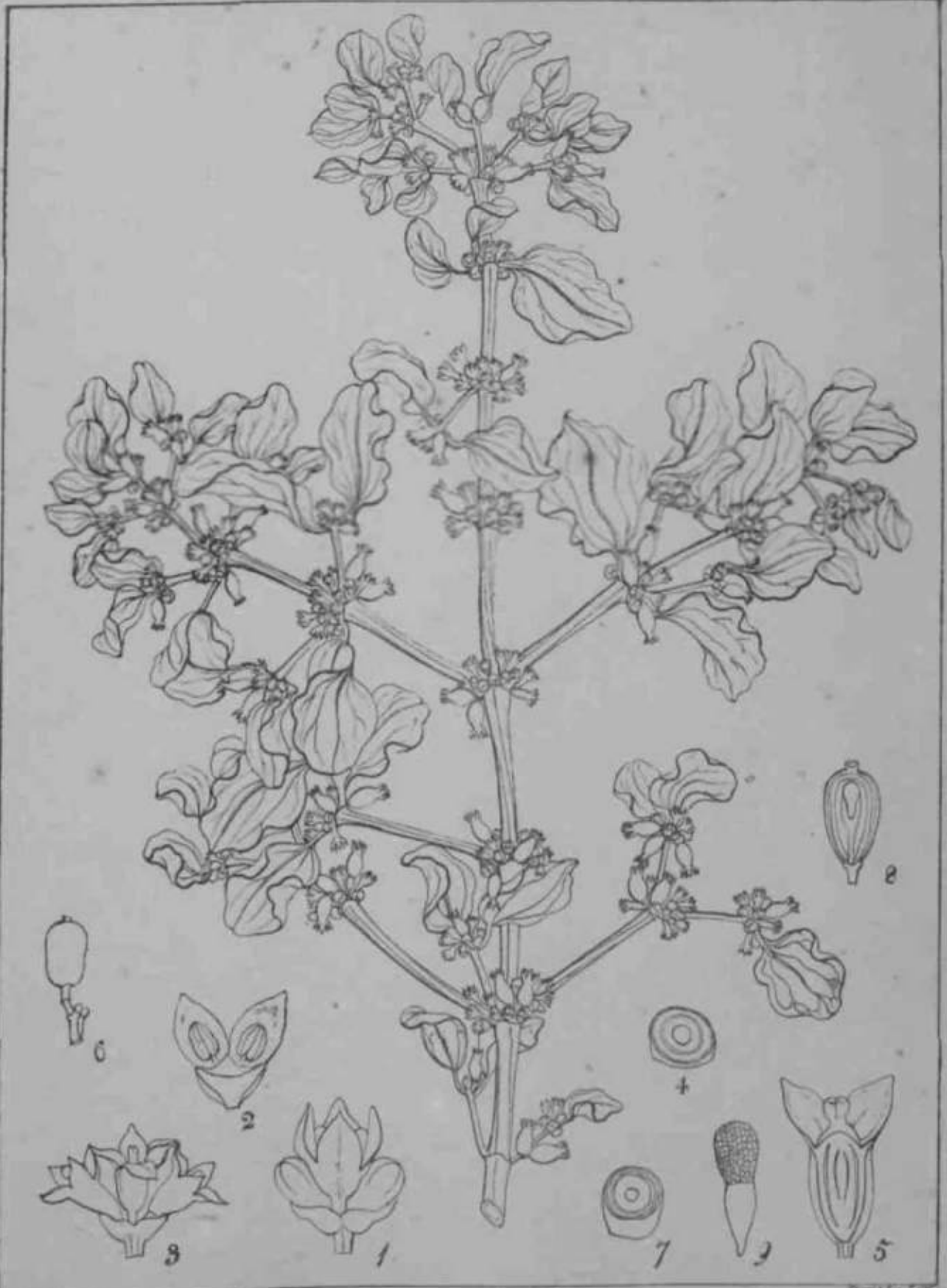
Hydnora

Hydnora





Hedera racemosa (R. W.)



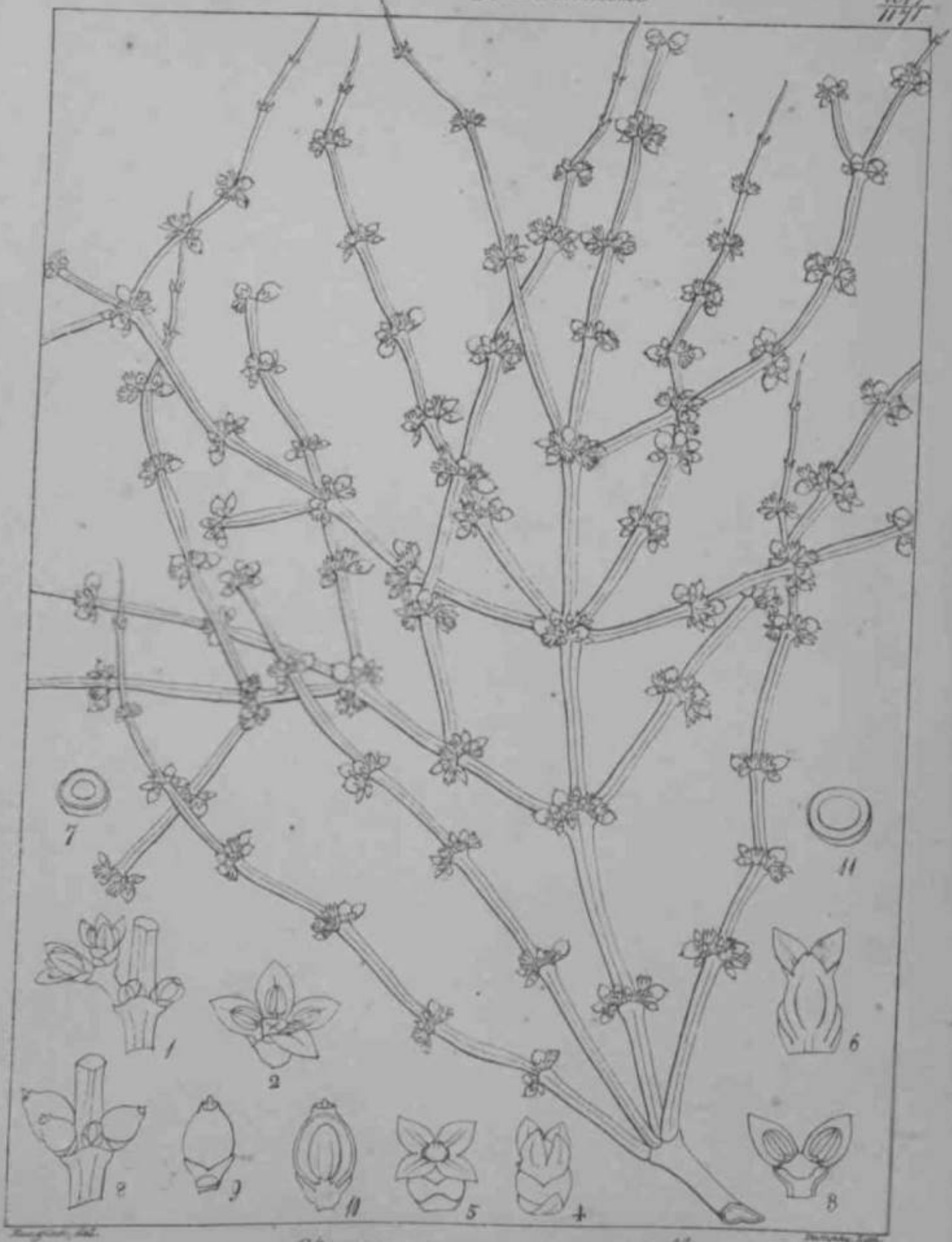
Engelm. det.

Thompson, J. 1888

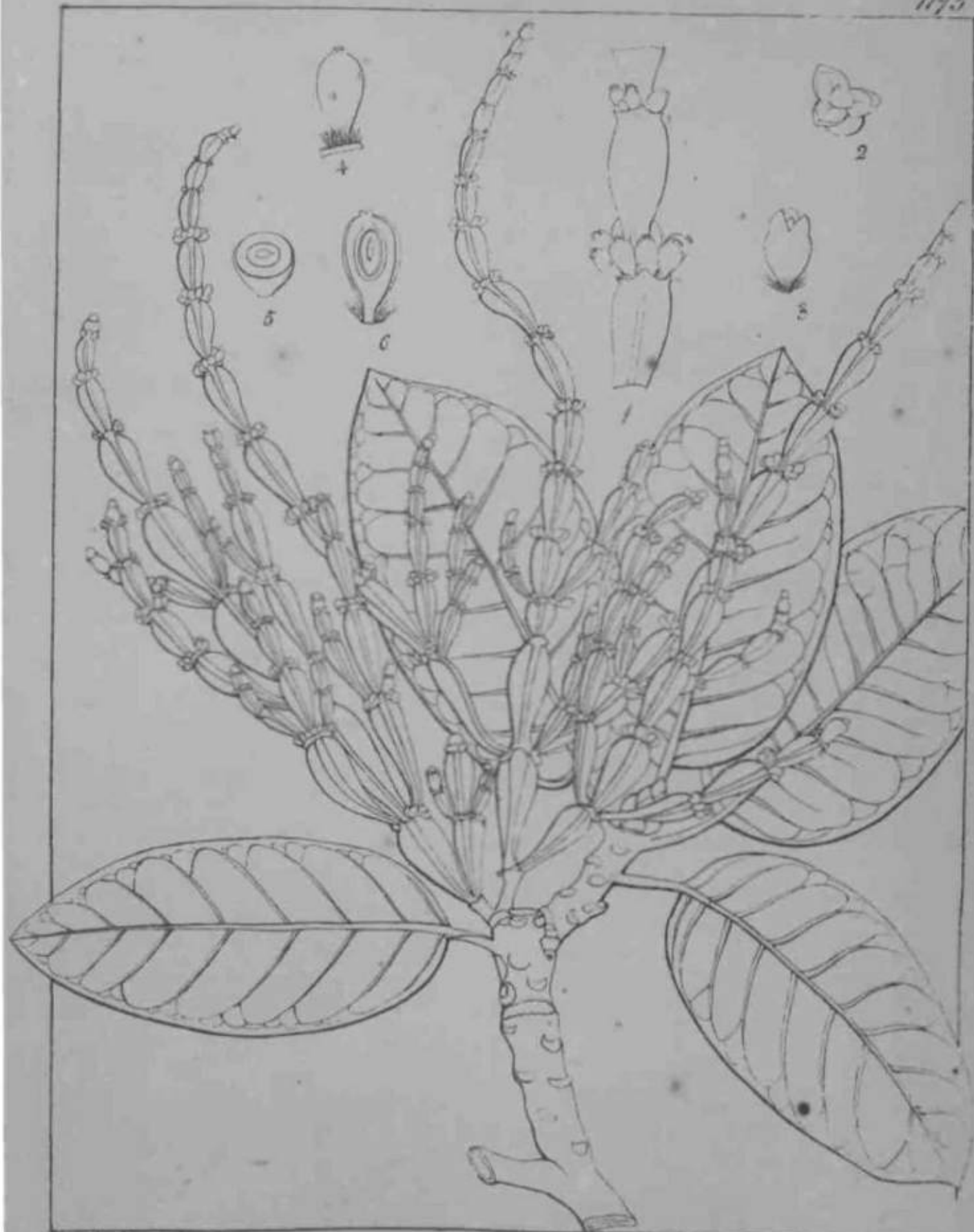
fsZsa&m *orbiculatum*

Loraniscus

1017
1171



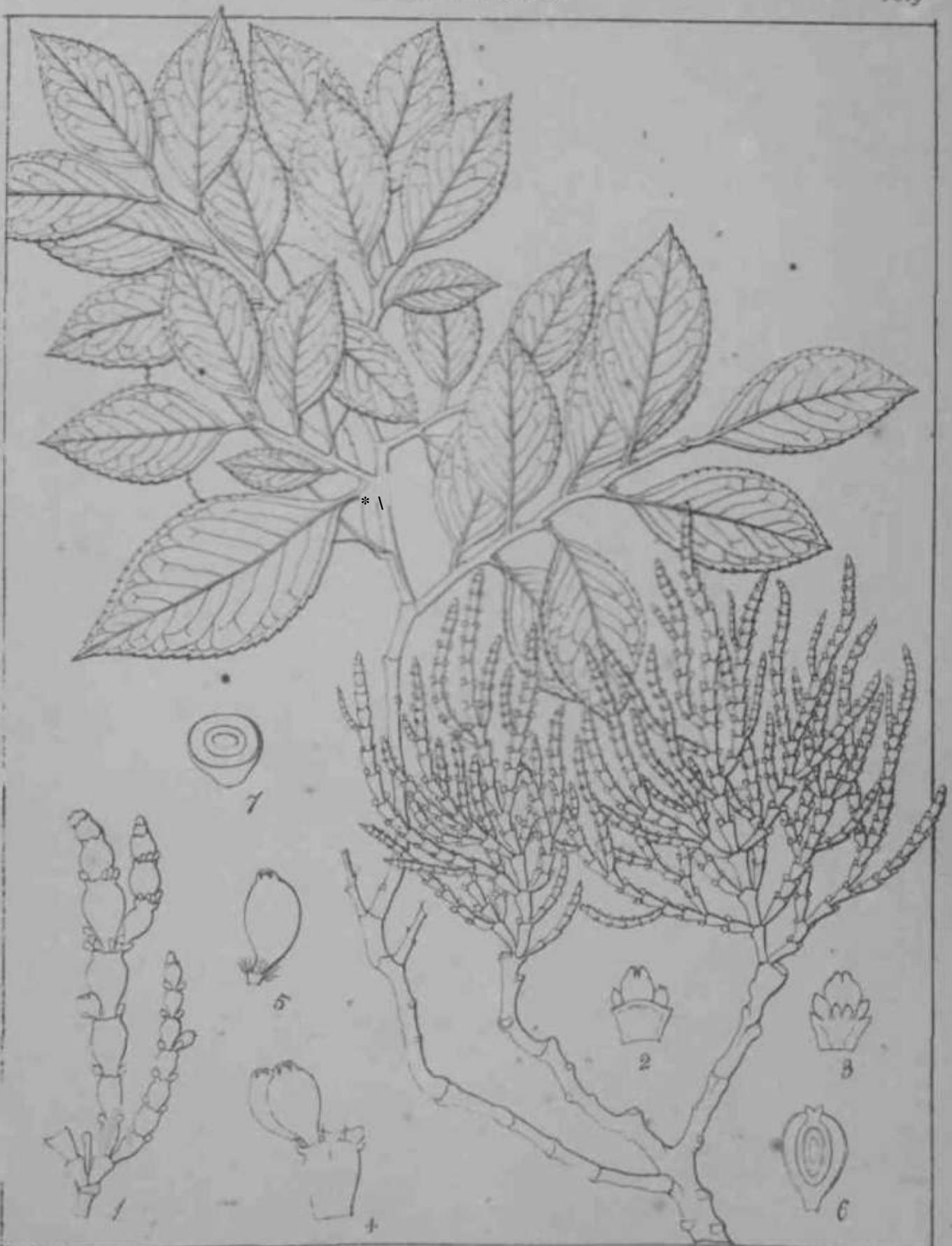
Viscum want Mt&timant (Wall)



Engelm. del.

Viscum moniliforme (B.C.)

Engelm. del.



Kunze del.

Viscum moriliforme (B. G.)
coraloides (R. W.)

Sampl. Eich.



Soranthus pyranthus

Engelm. 1120

Gray 1120

Sambucaceae

Caprifoliaceae

1021
1019



Dumphy, del.

Viburnum acuminatum (Wall.)

Dumphy, del.



Viburnum capitellatum (W & A)



Engelm. det.

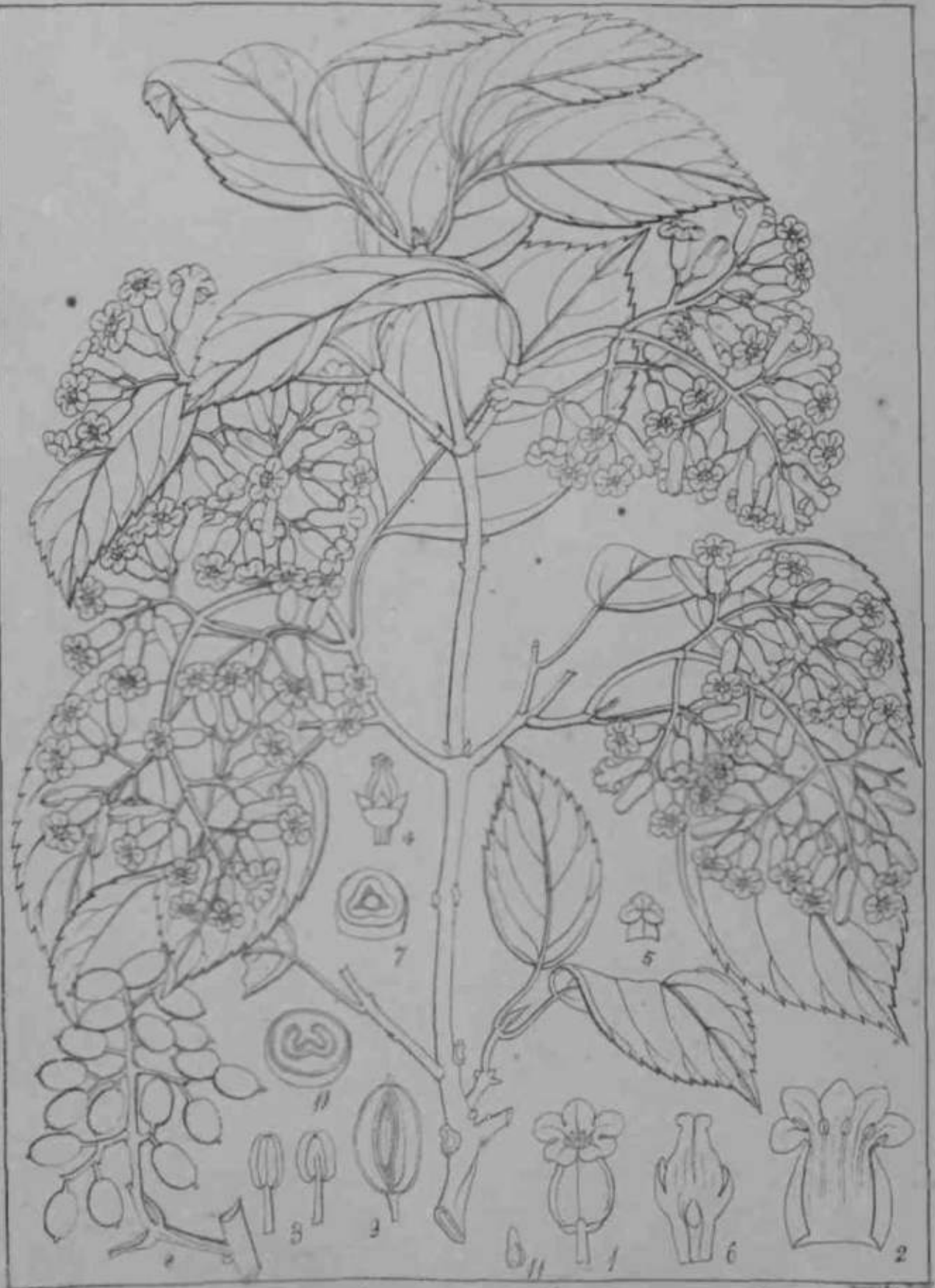
Viburnum hebanthum (W & A)

Drayton, Calif.

Sambuceae

Caprifoliaceae

1124
1203



Viburnum Nighianum (H. iff)

Lonicera

Caprifoliaceae

1025
1206



Lonicera (x) ligustrina (W. & A.)

W. & A.

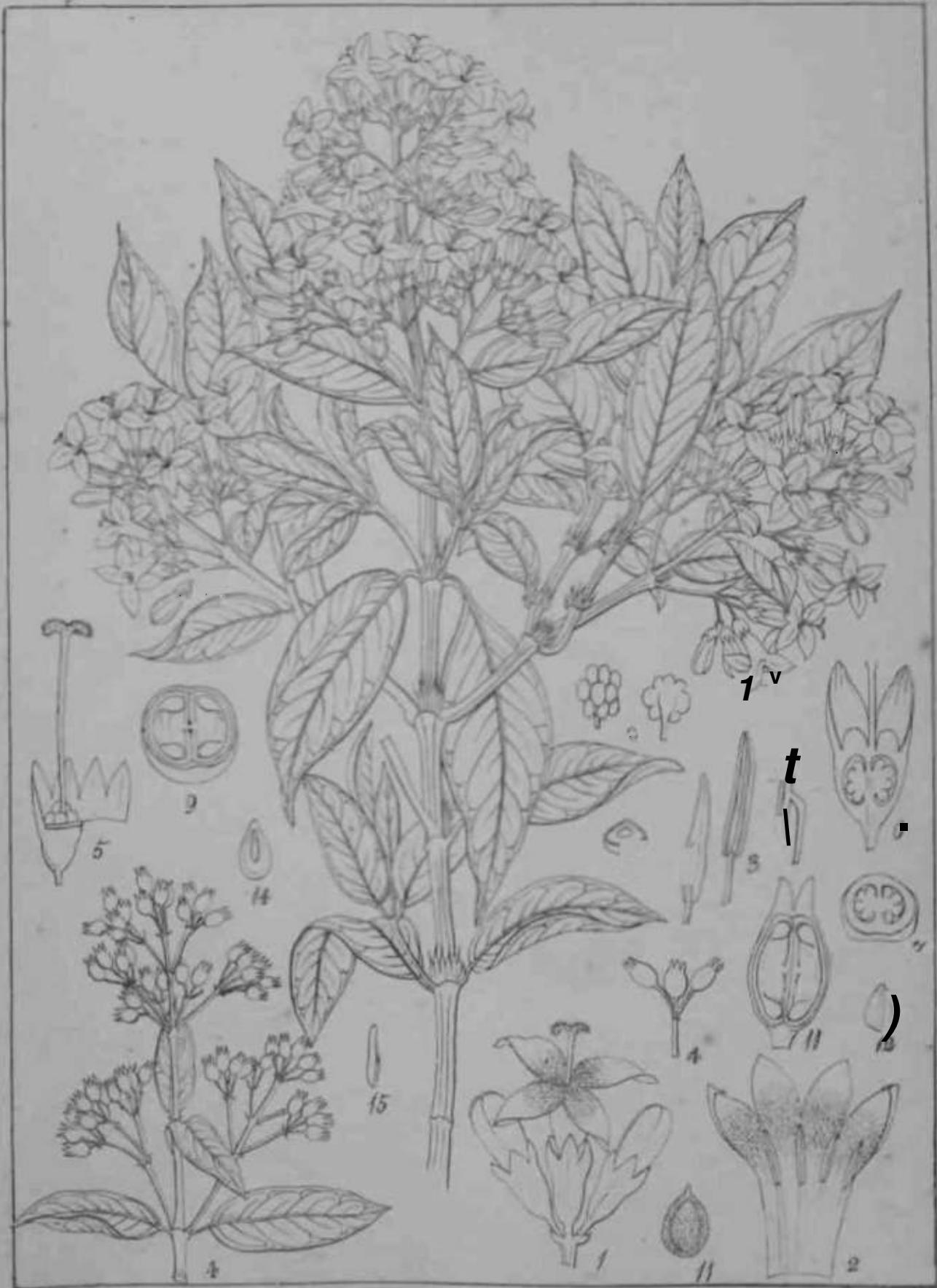
Hedyotideae

Rubiaceae

1026
1267



Hedyotis (D) *Lawsonia* (W & A)



Hedyotis (D) stylosa (Brown)



Hedyotis aricularis (R. B.)

W. G. S. 1884

W. G. S. 1884

Trigonostemon

Rubiaceae

1029
12.53

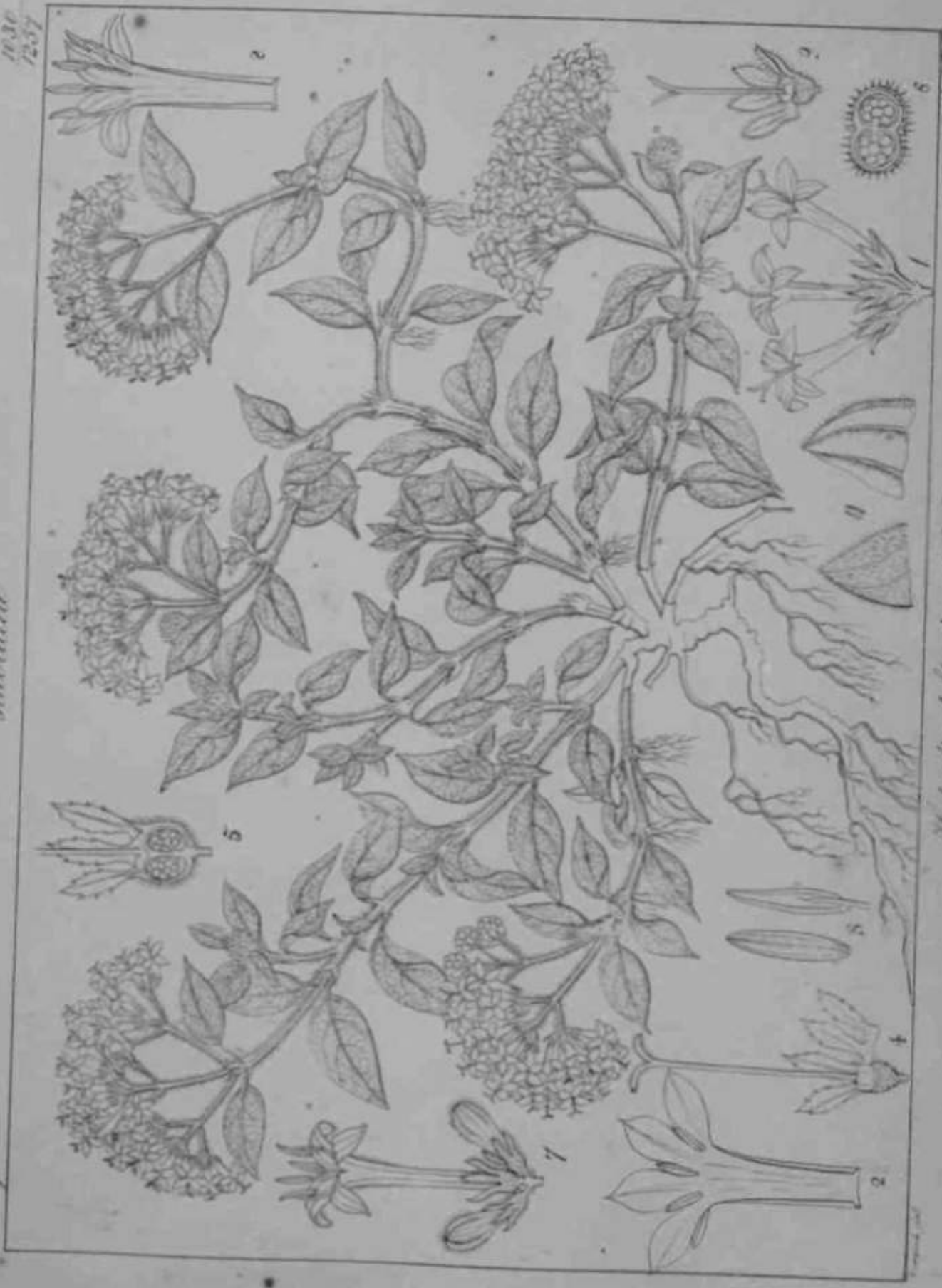


Trigonostemon verticillatus (Waldl.)

1930
1257

Hedyotis

Rubiaceae

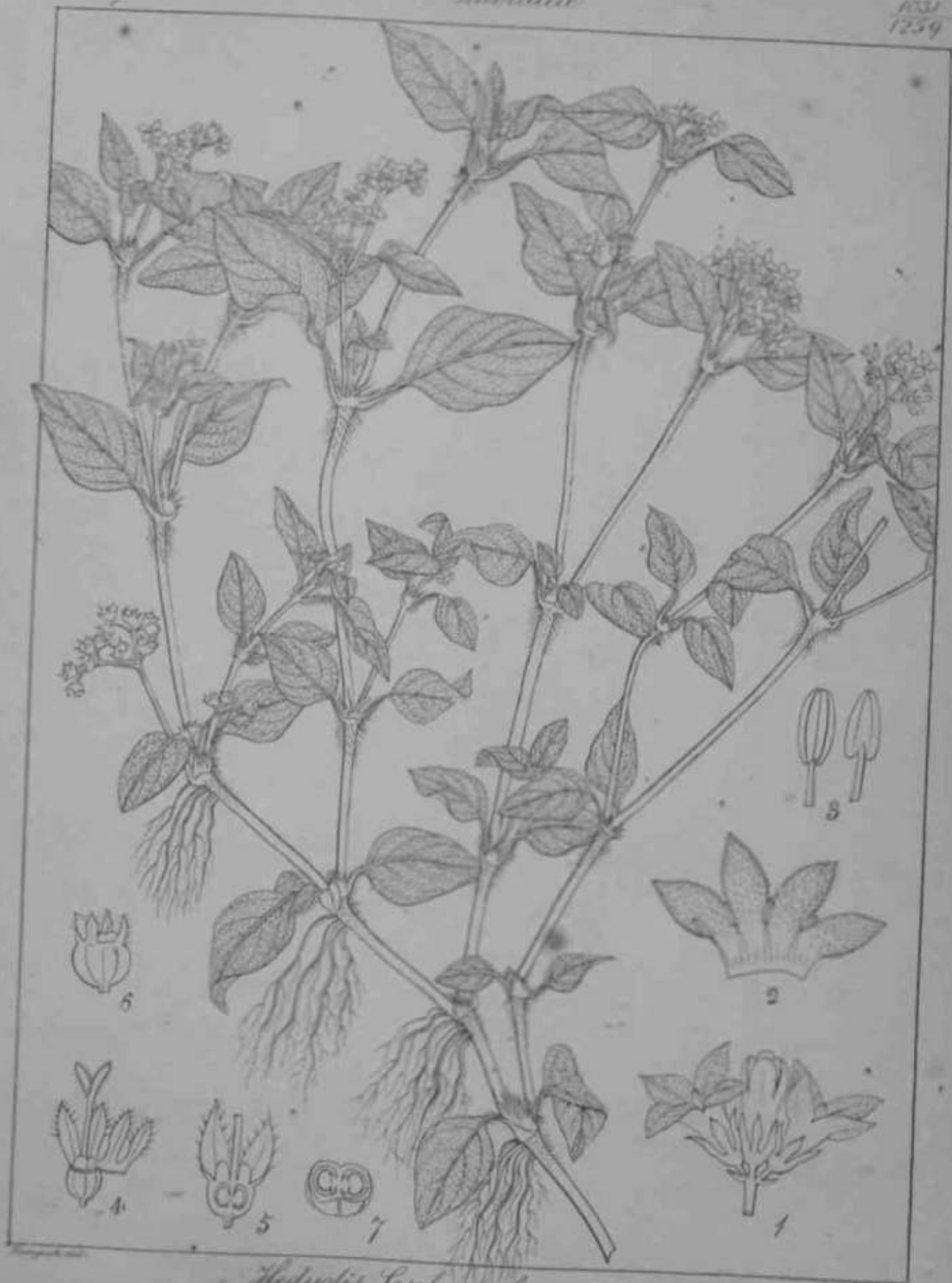


Hedyotis chelonoides (Wherry)

Hedyotideae

Rubiaceae

1831
1259



Hedyotis Leschenaultiana (W & A)

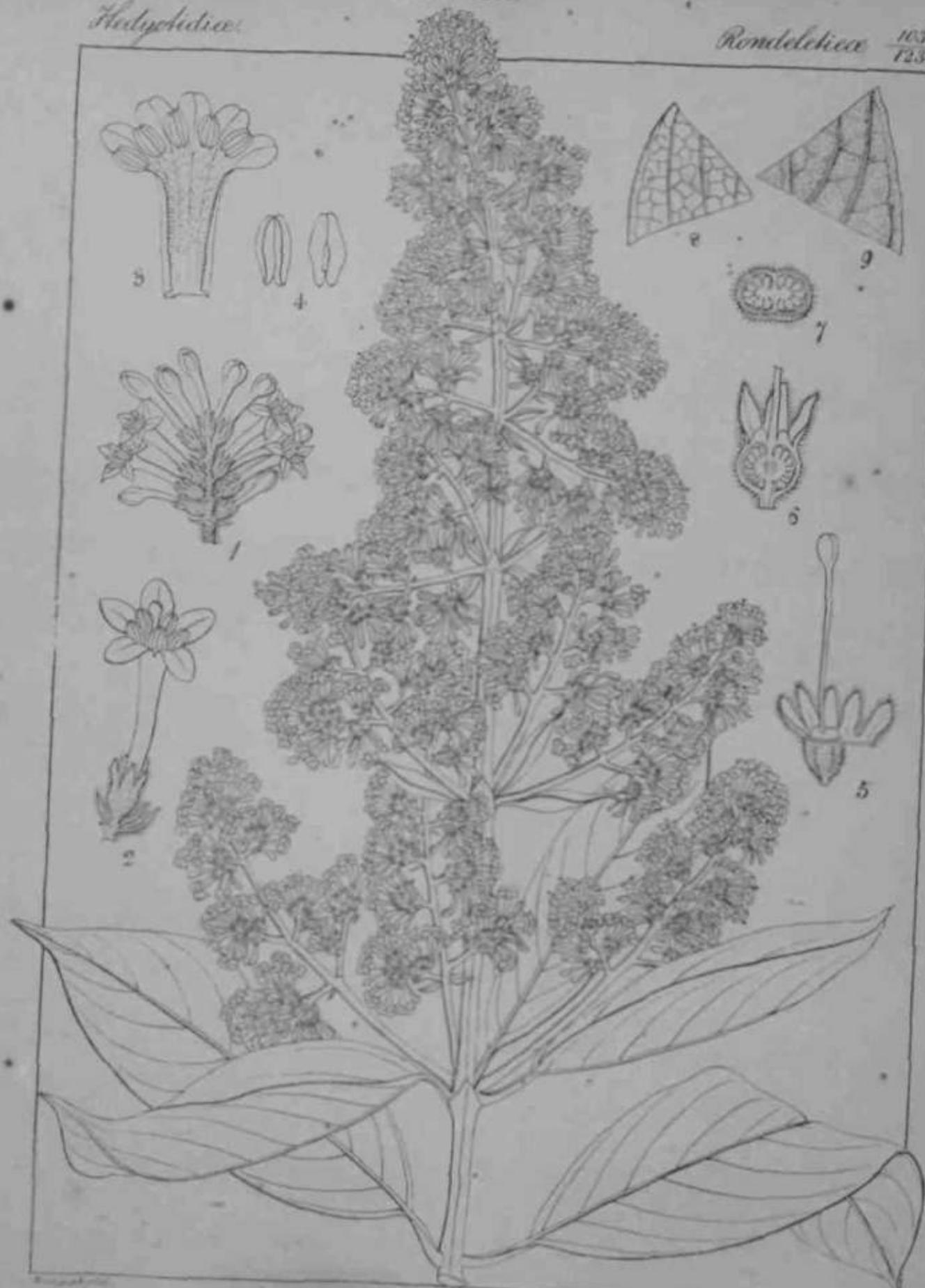


Lasiacanthus conulosus (R. & W.)
Santia conulosa (W. & A.)

Hydrochloa

Rubiaceae

Rondeletia 1033
1239



Rondletia Nelsoniana (Mull.)

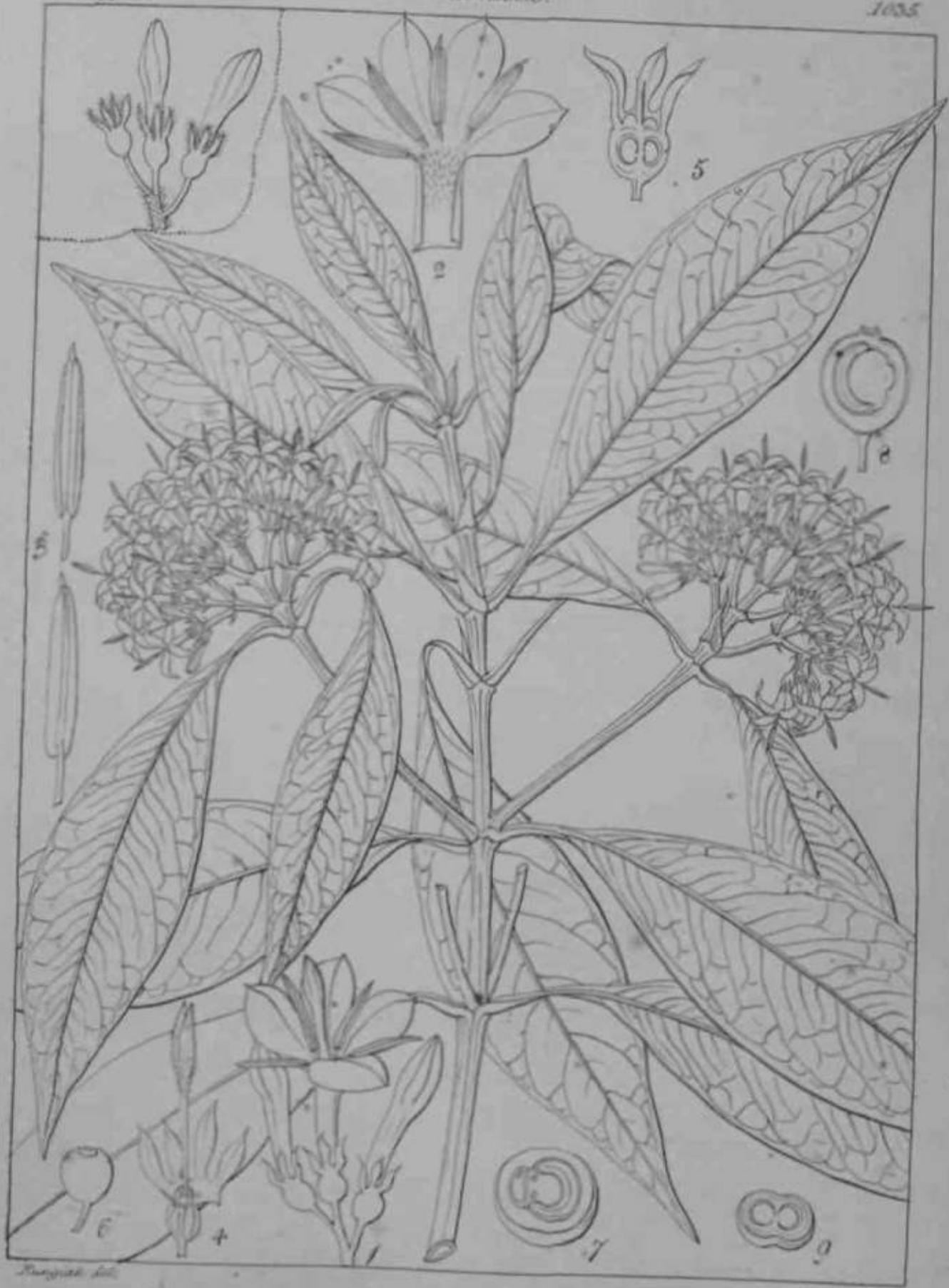


Canthium umbellatum (R.W.)

Coffeaceae.

Rubiaceae.

1035



Samuel Lee

Pavetta breviflora. (D.C.)

Samuel Lee



Guanchia elongata (R. H.)

Coffeaceae

Rubiaceae

1037
1330



Coffea congesta W. G.

^



Kunze, del.

Drumh., det.

Psychotria sarmantosa ffltmz.

Coffeacea

Rubiaceae

1039
1336



Psychotria bisulcata (W & A)



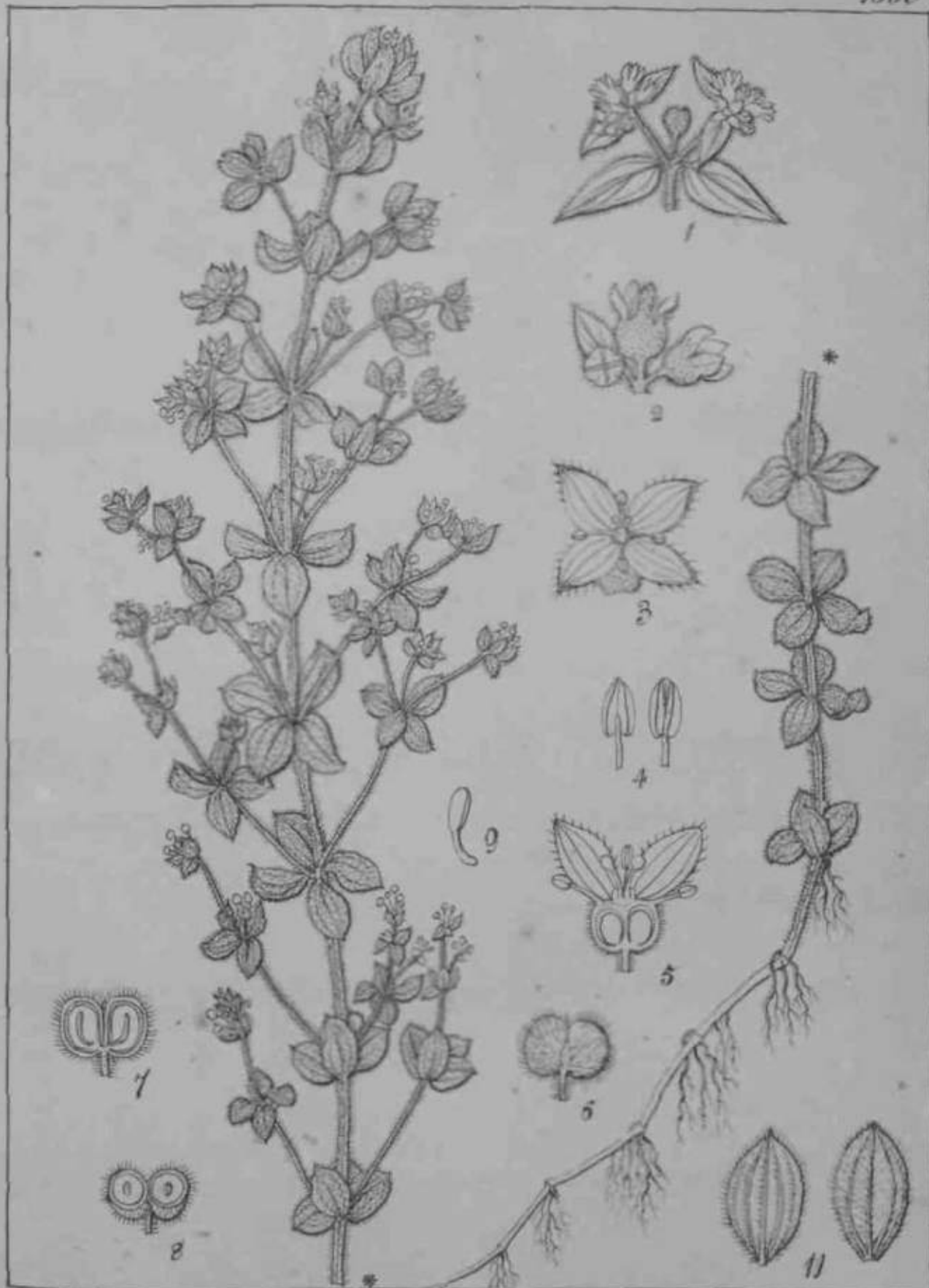
Coffea alpestris (R. W.)

Thunberg, Bot.

Thunberg, Bot.



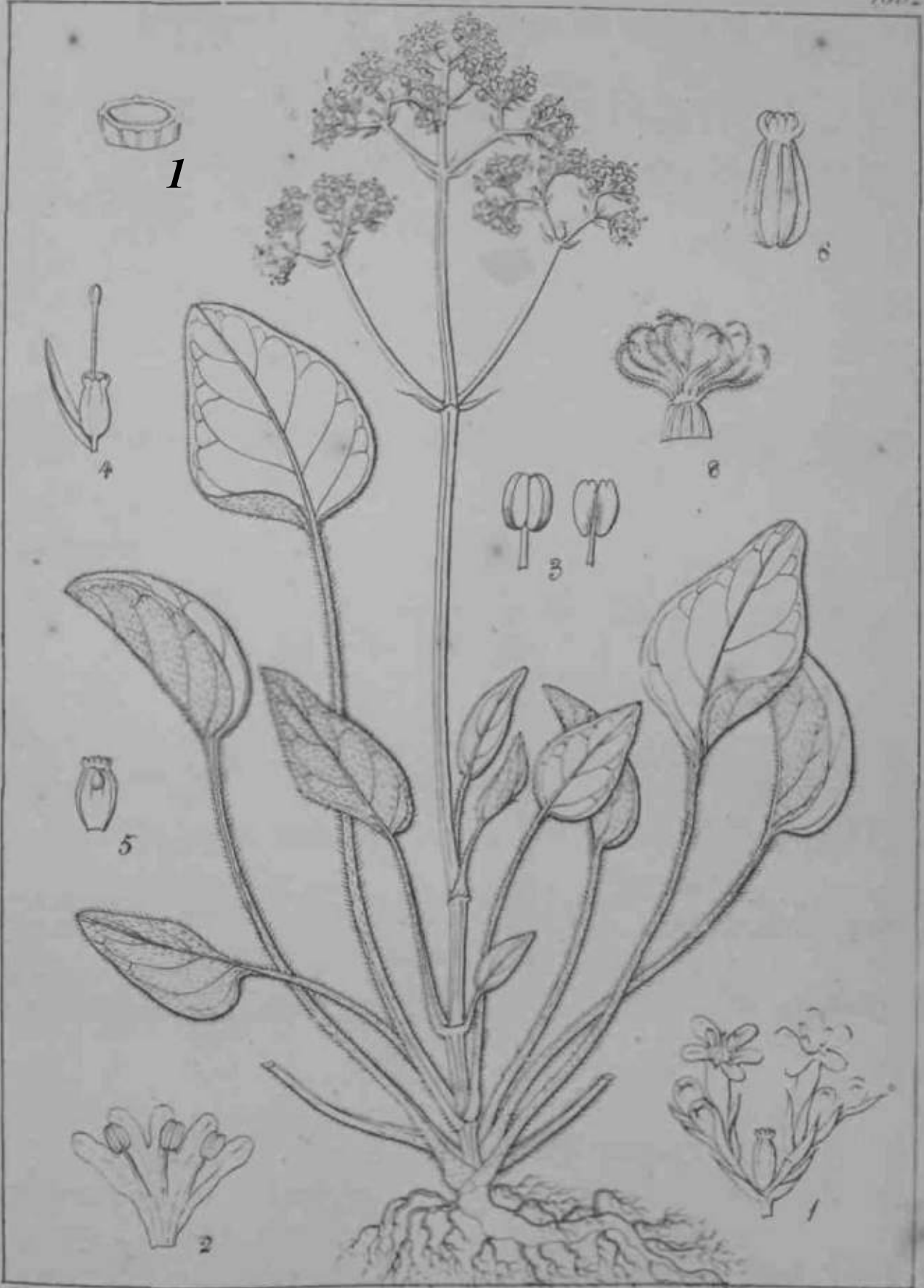
Coffea guinealensis (R. W.)



Koenig, del.

Galium Requienianum (W & A)

Wiegand, Fidei.



Kingich, del.

Valeriana Brunoniiana (W & A)

Kingich, del.

Valeriana?

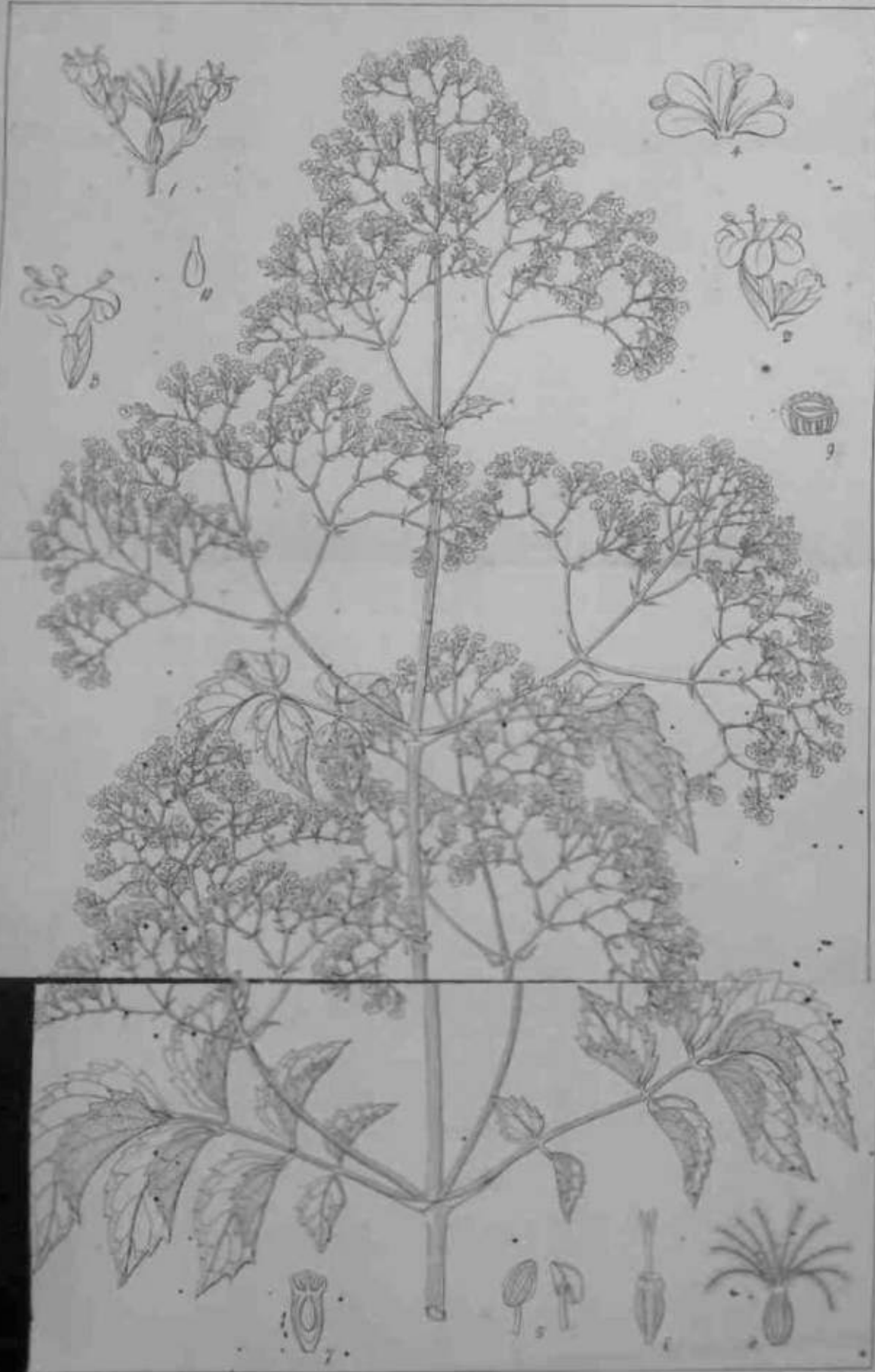
1044
1363

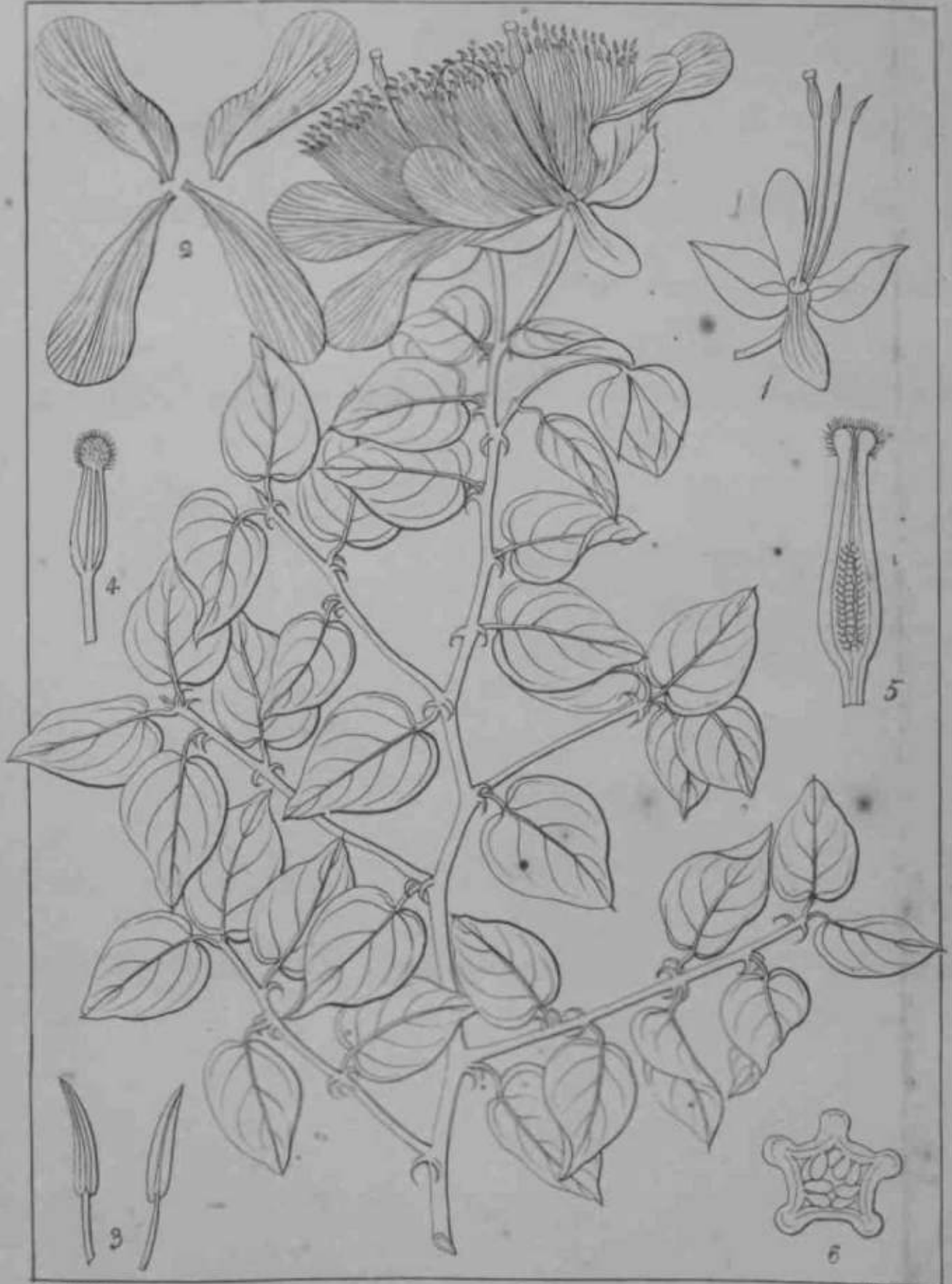


W. G. S. del.

Valeriana Leschenaultii (DC)

Drummond del.

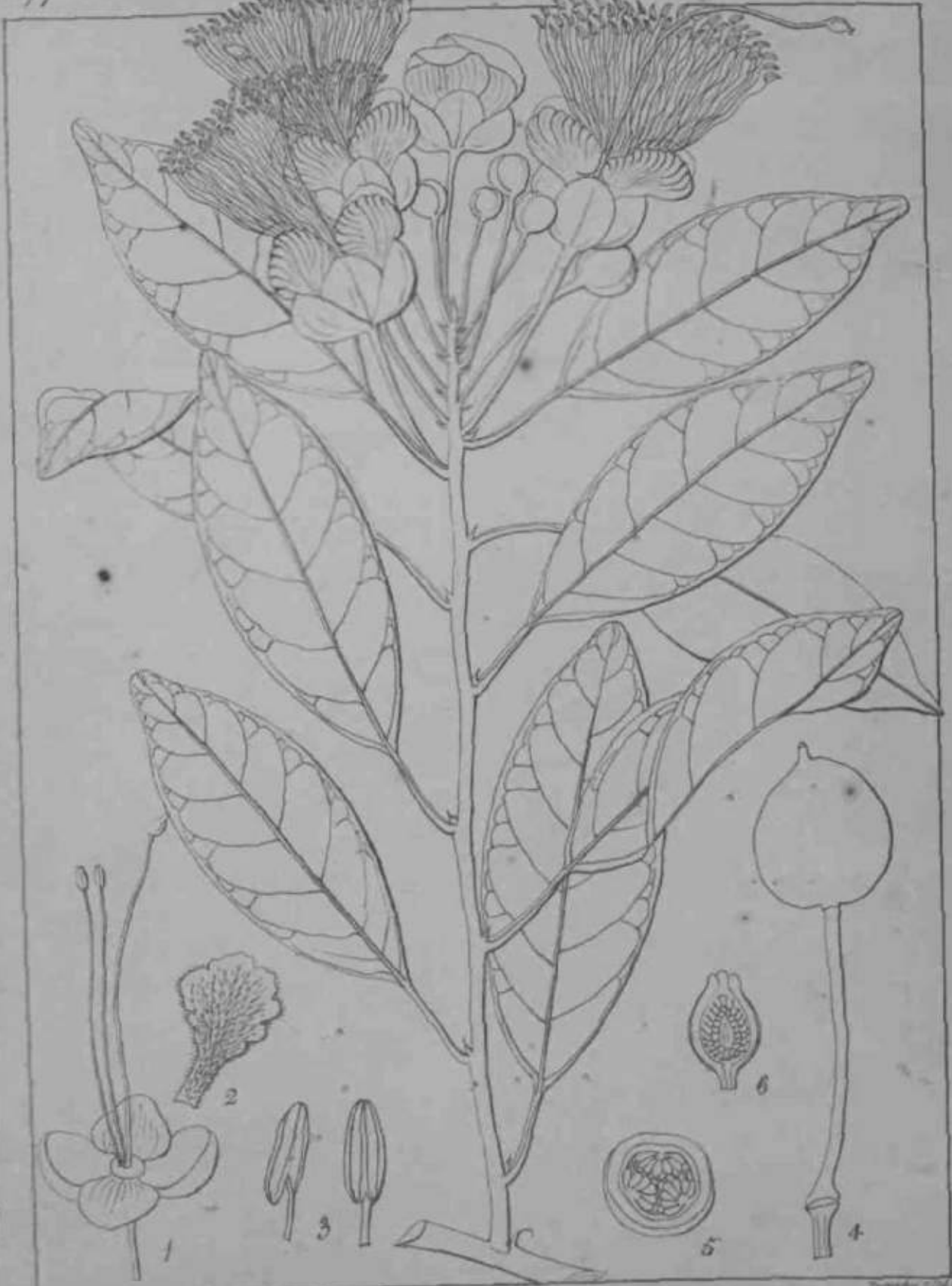




Thompson, det.

Capparis UA/urifolia (Lam.)

Thompson, det.



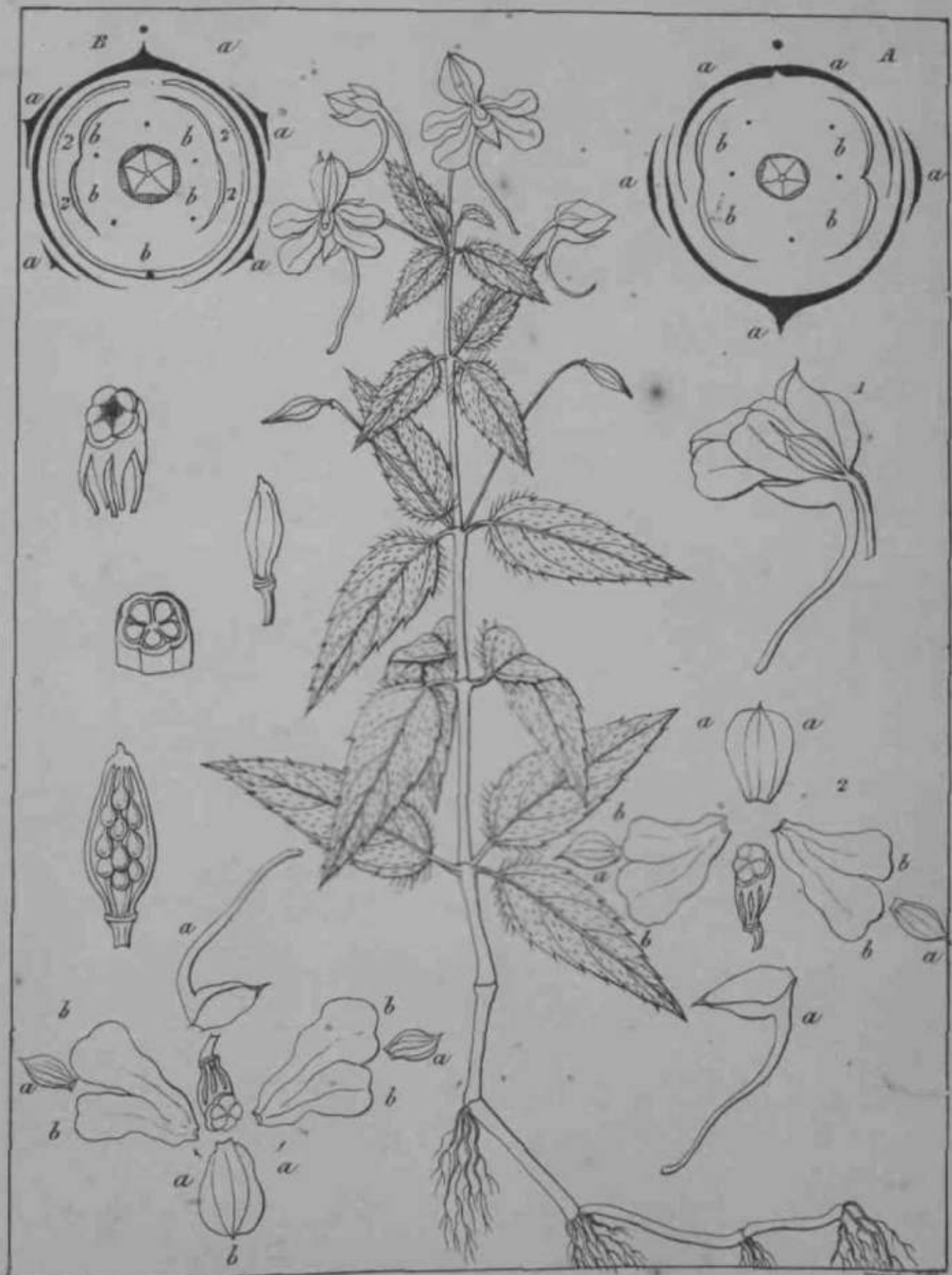
Capparis Redouardii F. G.

Engelm. det.

Drumh. 2. 1841



Impatiens Munronii (R. W.)



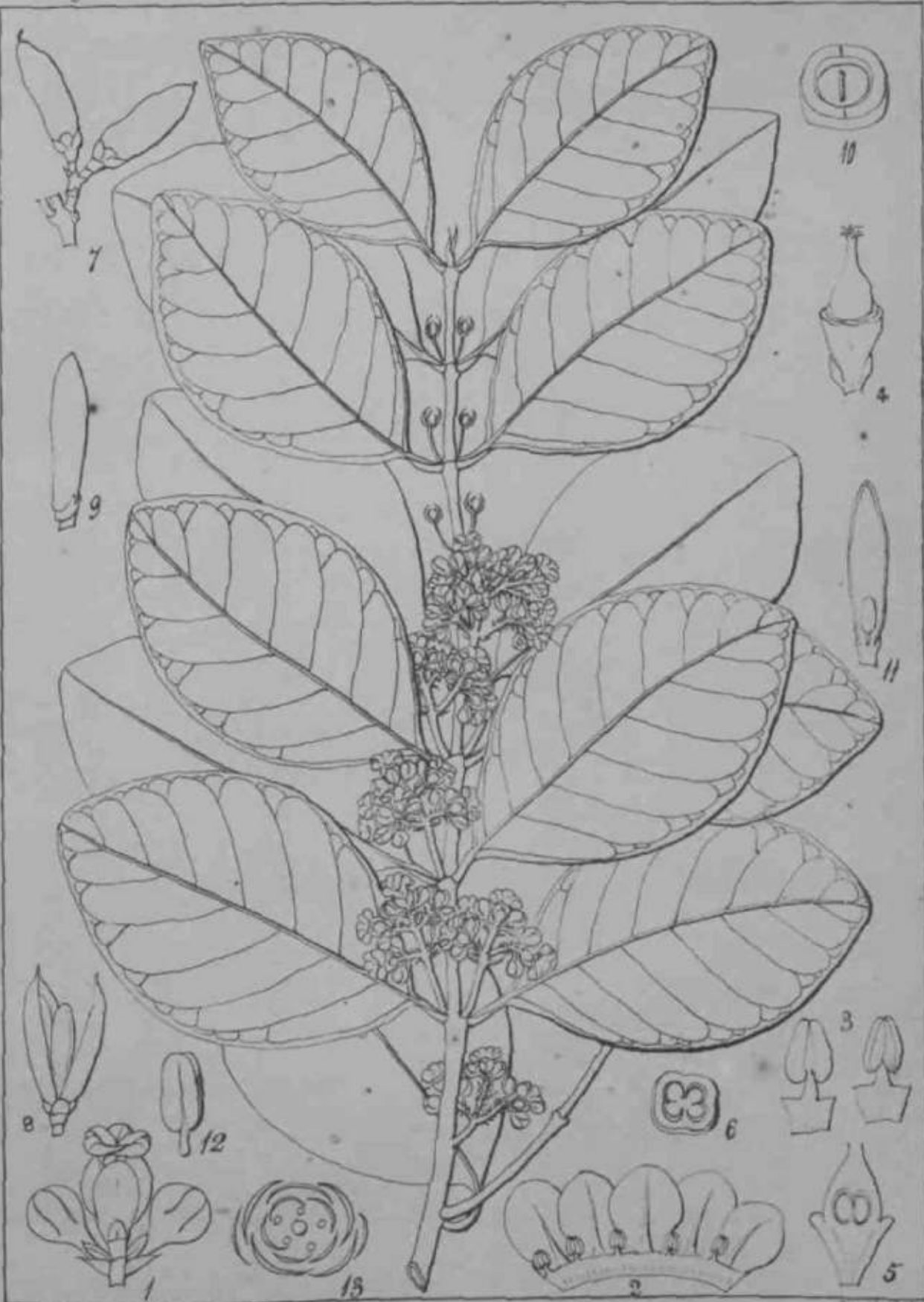
Impatiens Gardneriana K<0?



Engelm. del.

Melicope indica (R.W.)

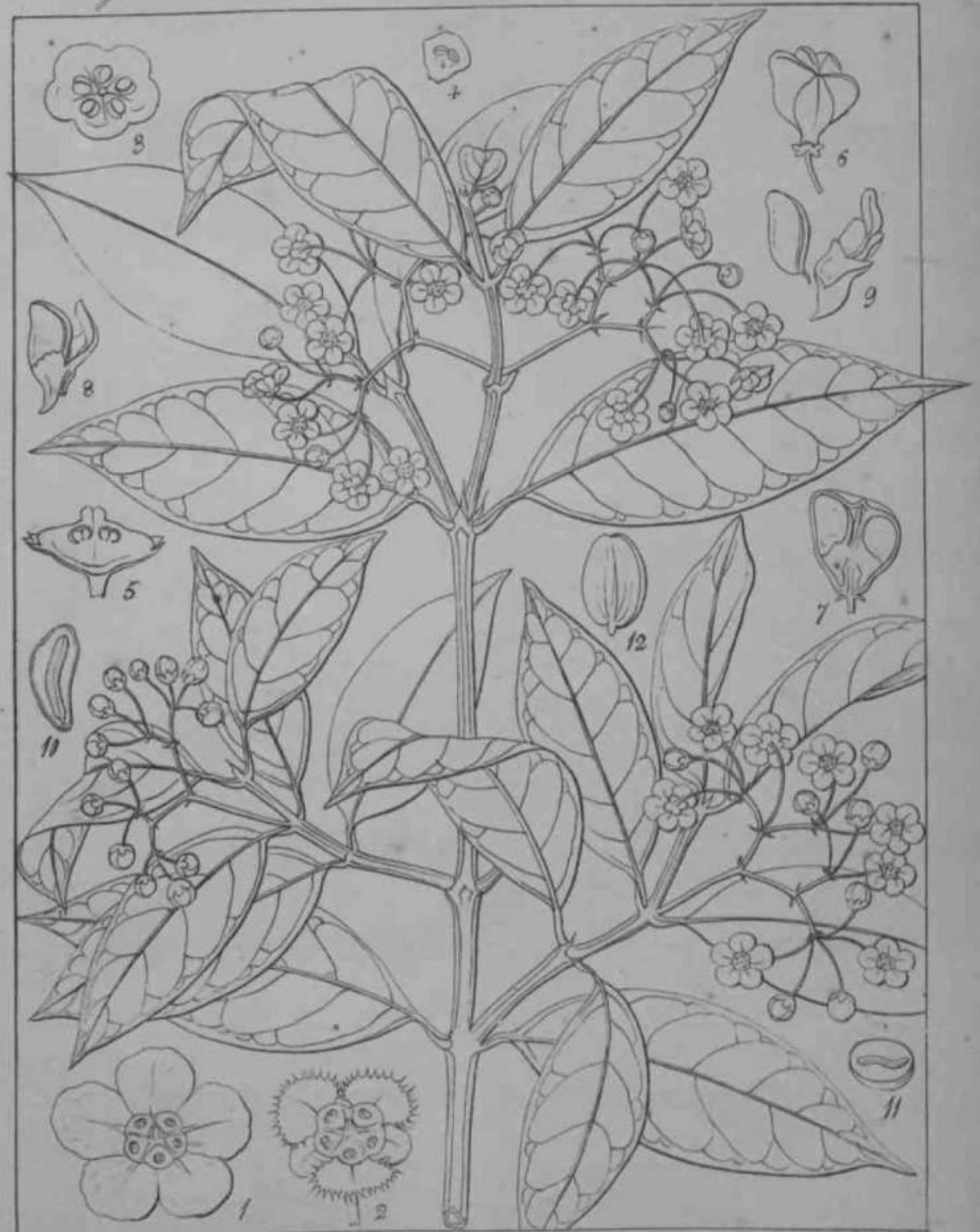
2000/10/10



Rangiah, del.

Microtropis densiflora (R. W.)

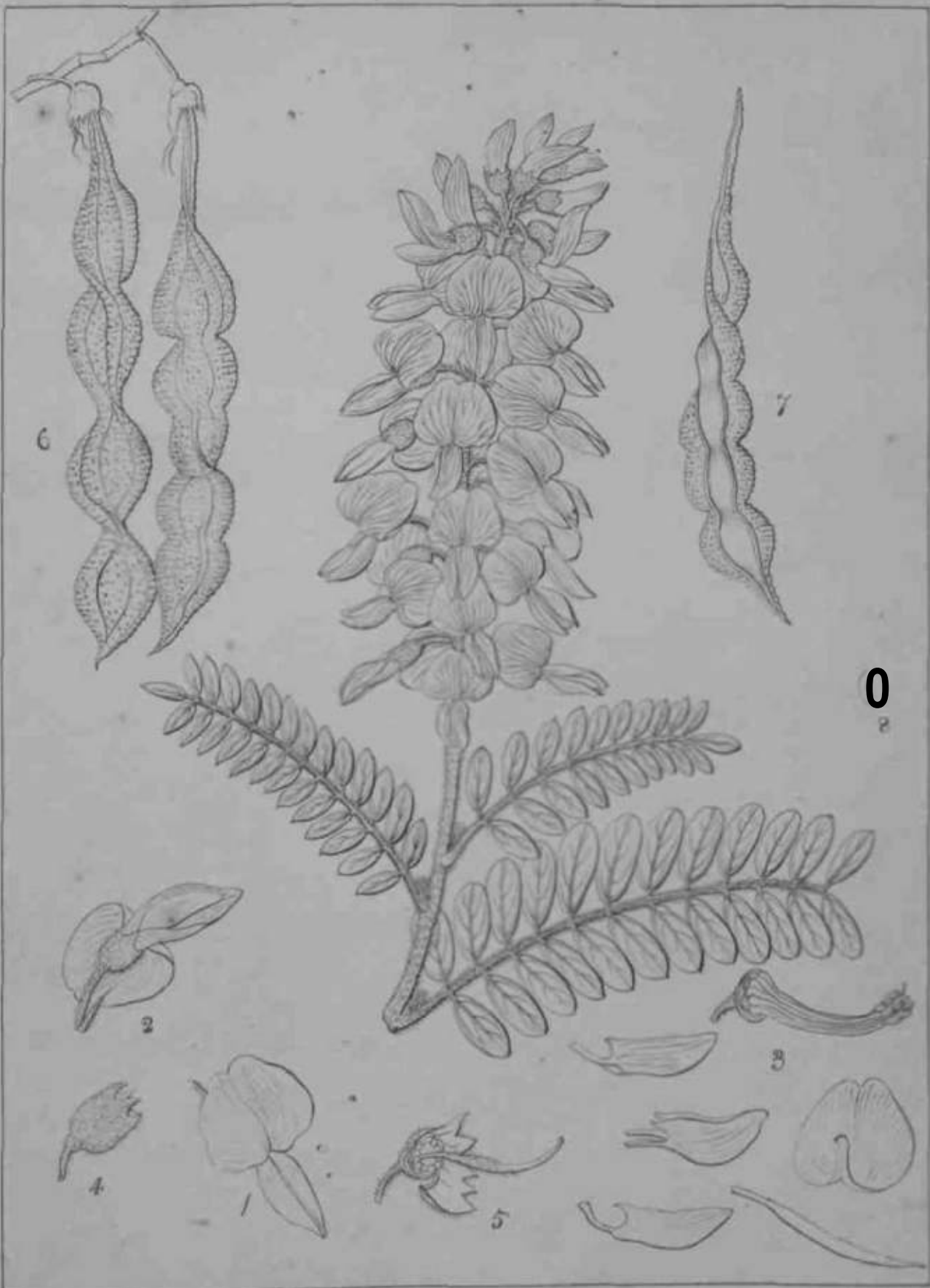
Harvey 2117



W. G. S. 1887

W. G. S. 1887

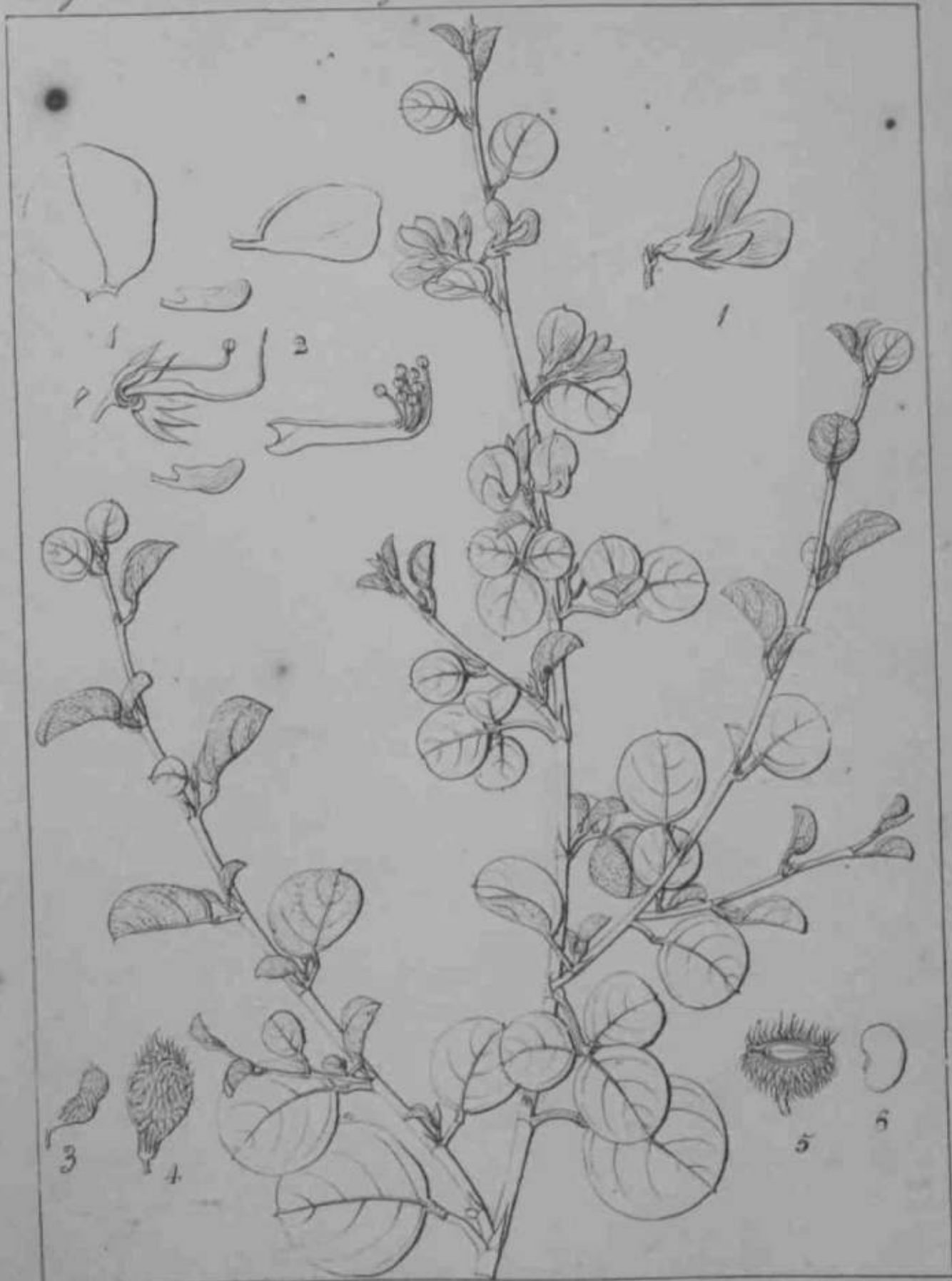
Euonymus angulatus (R. W.)



Edwardsia madraspatana, R. W.

Edwardsia madraspatana (R. W.)

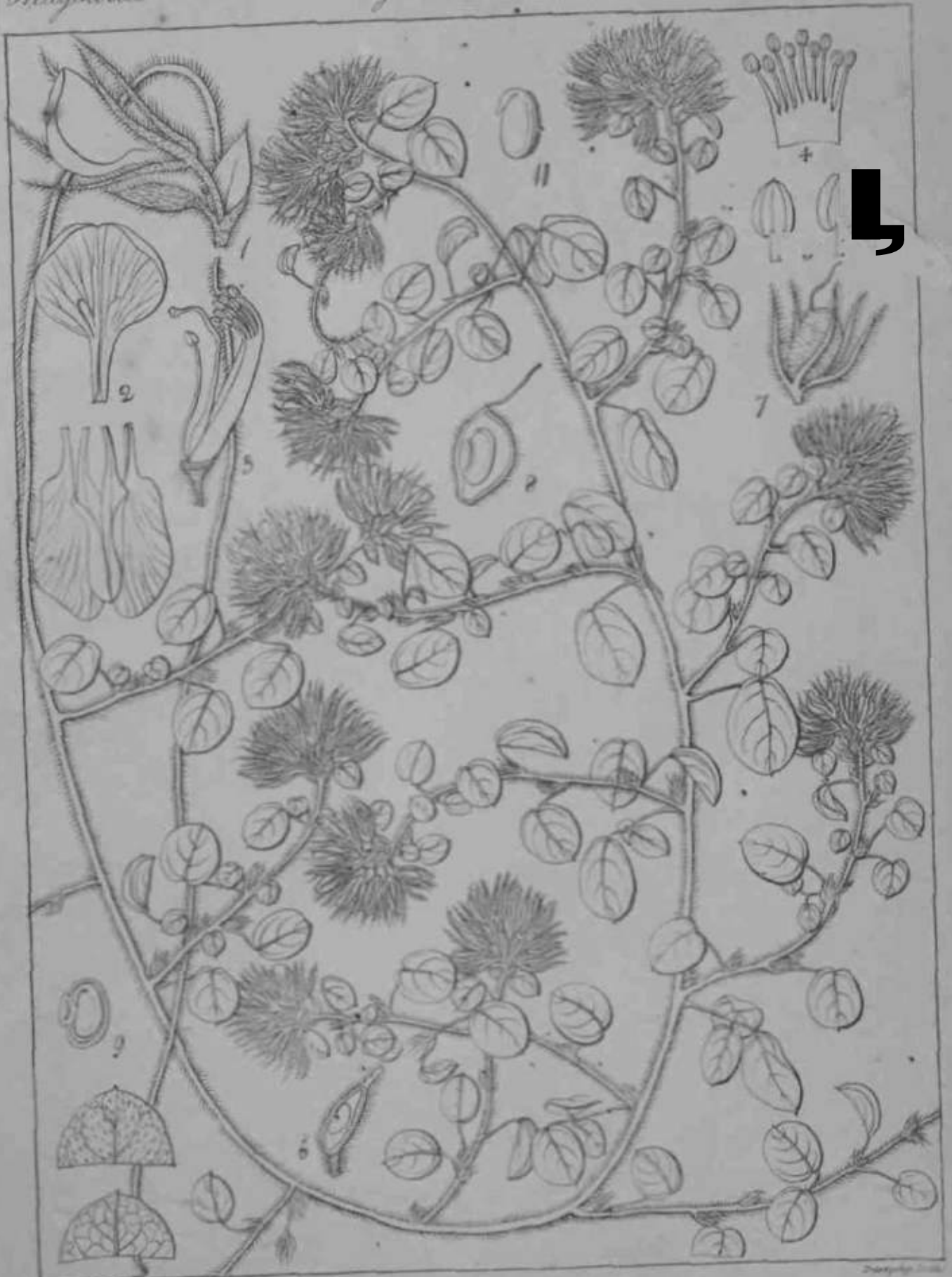
W. & A. G. & Co. Lith.



Callisander - Rogers, det.

Savaniera cuneifolia

Drummond, Zick



Engelm., det.

Nicolsonia congesta (R. W.)

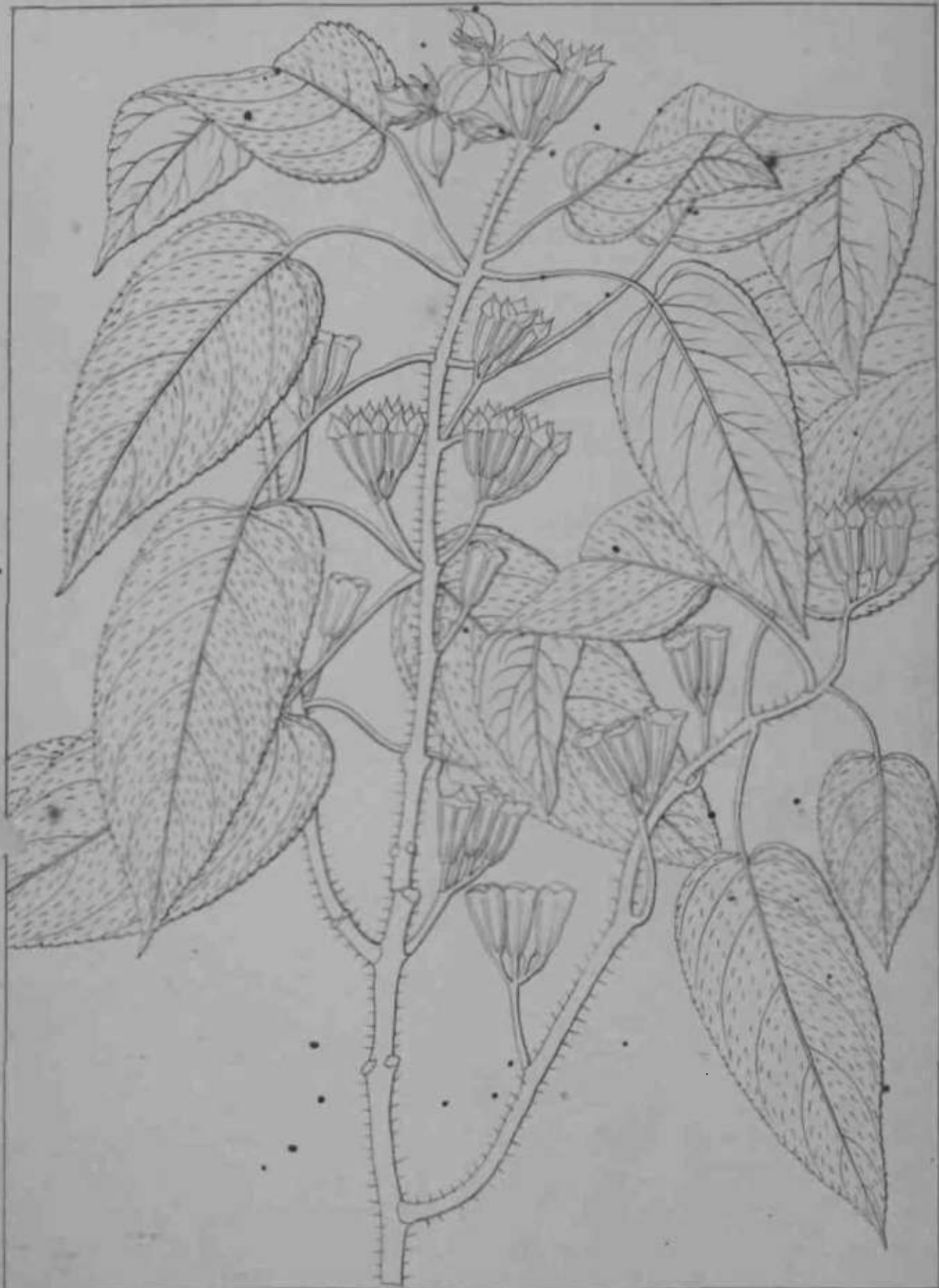
Drayton, det.



Burgess, del.

Sonchila verticillata (R. W.)

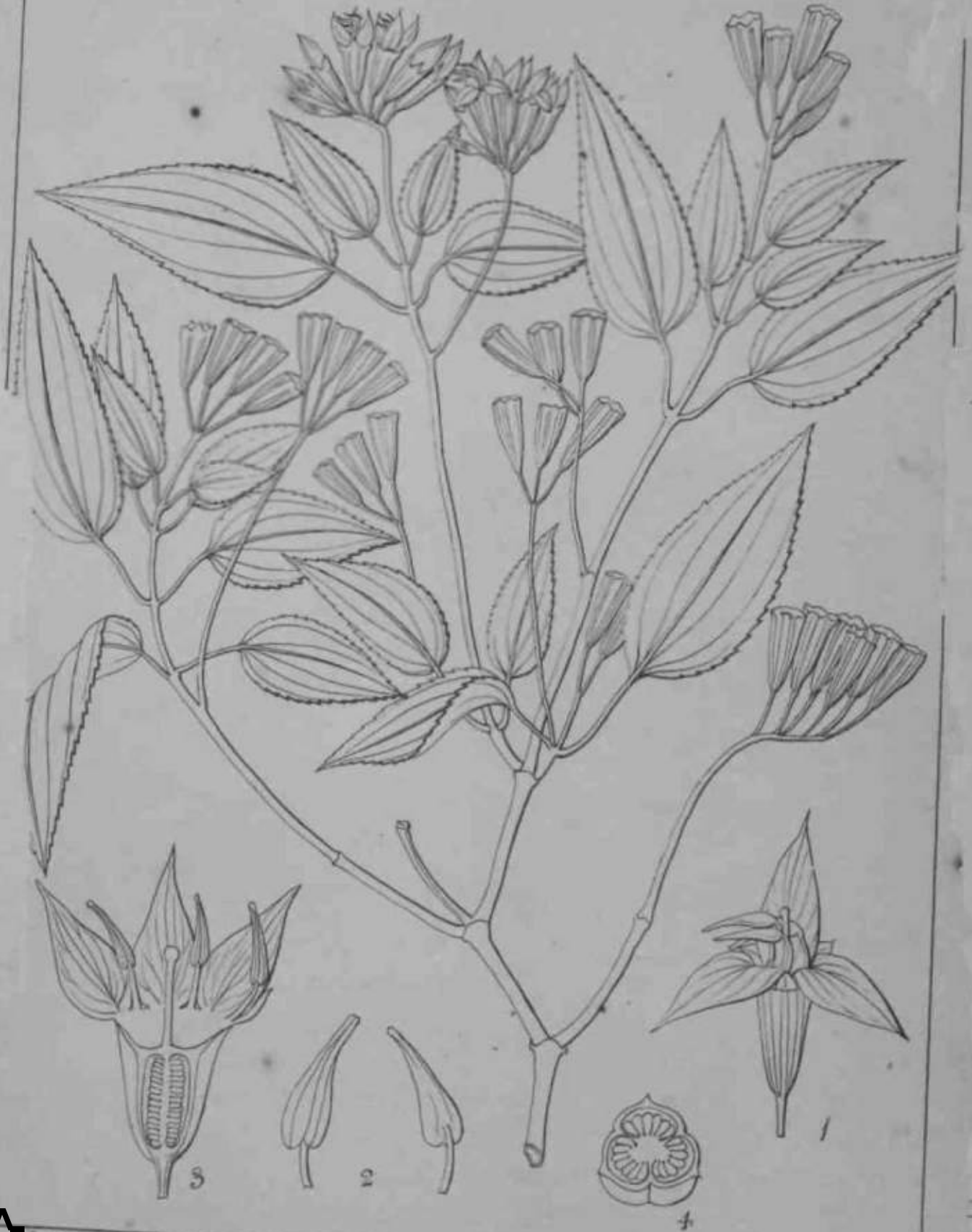
Zugmayer, Lith.



Longman, del.

Sonchibaccharis axillaris (R. W.)

Longman, del.



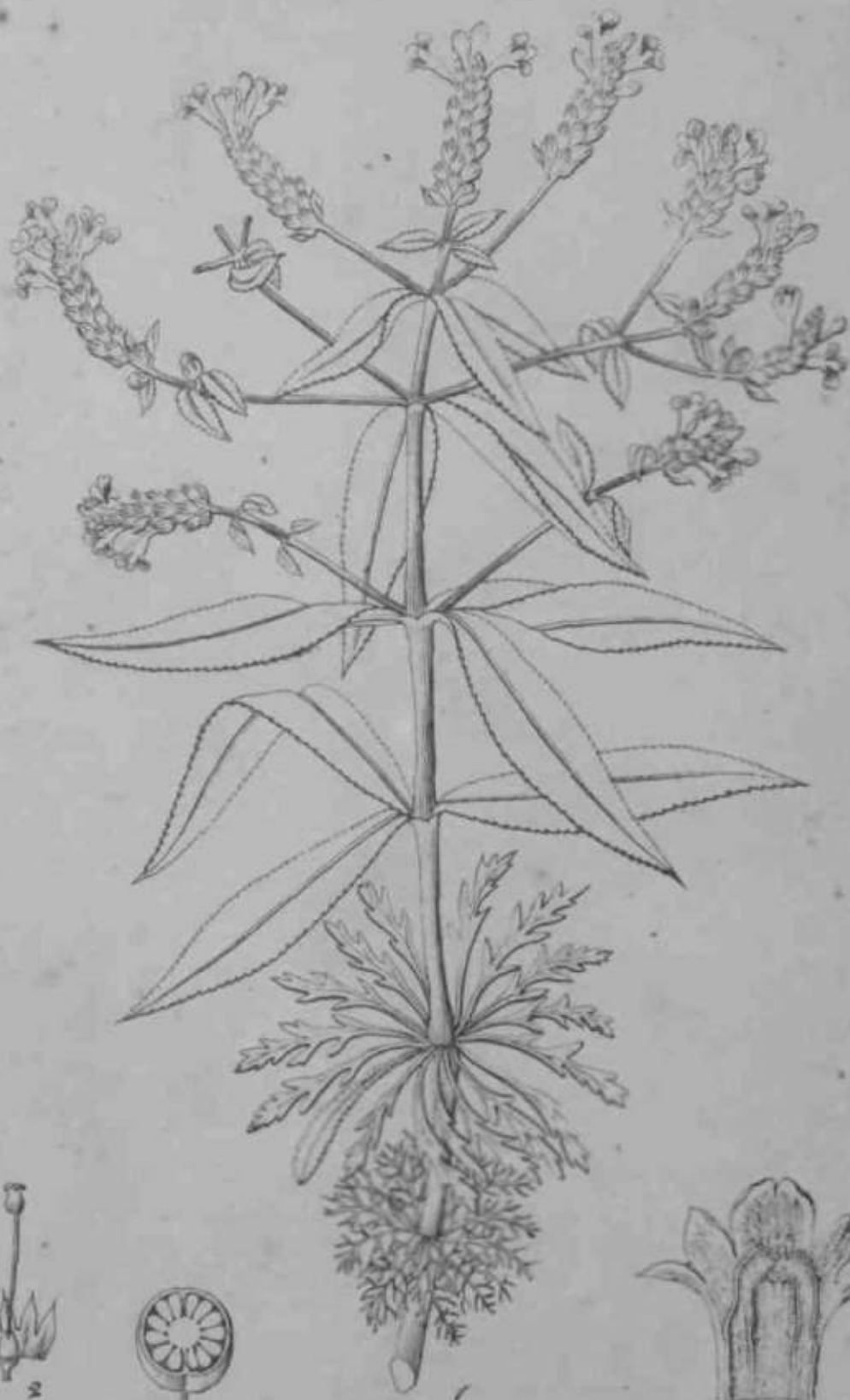
ft)

87

*^

Melastoma *bonis* (W & A)

Drummond, J. S.



Bergiah del.

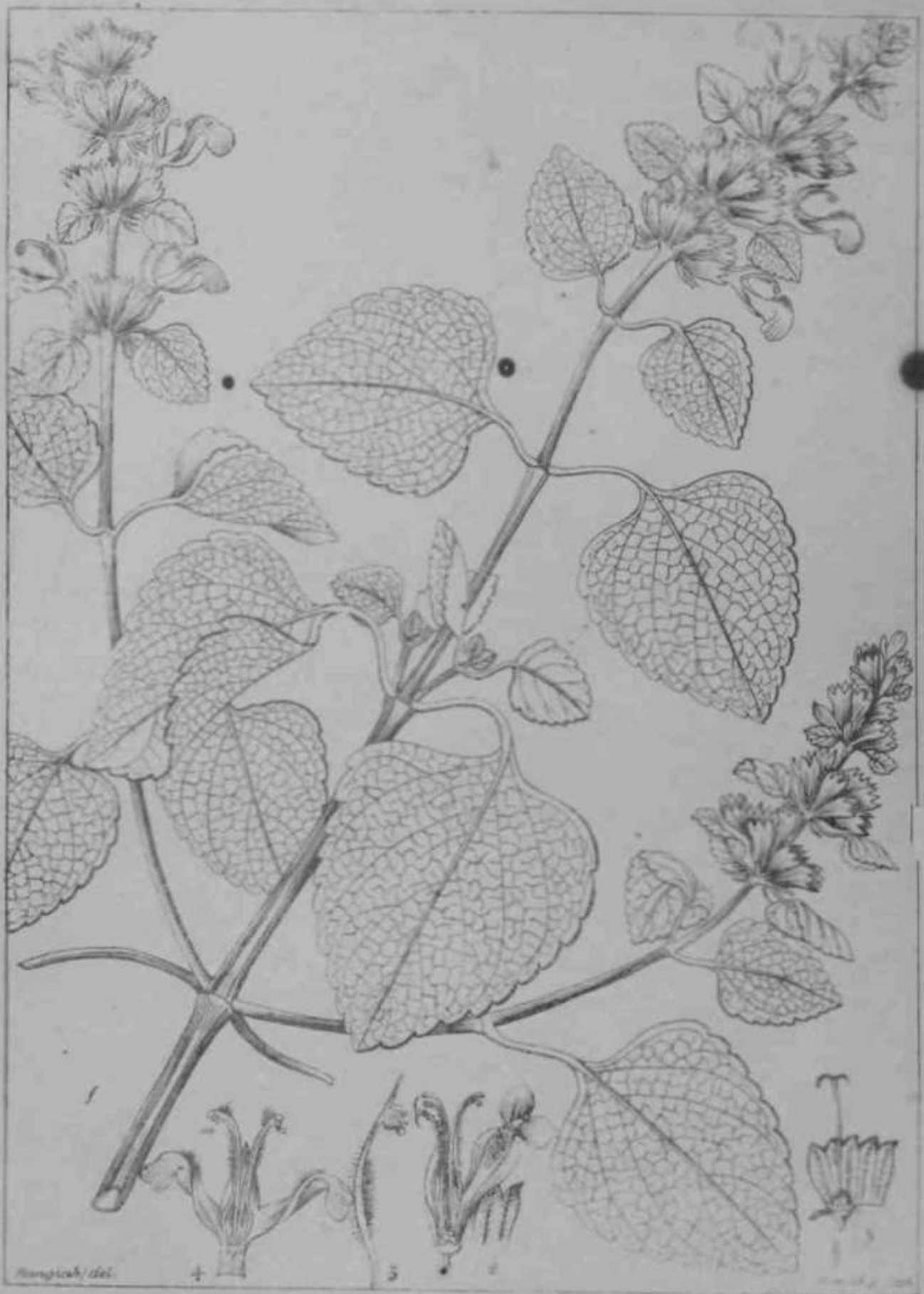
Scudder

Lemnophylla polystachya

Stachydes



Anisomilus malabarica (R Br)



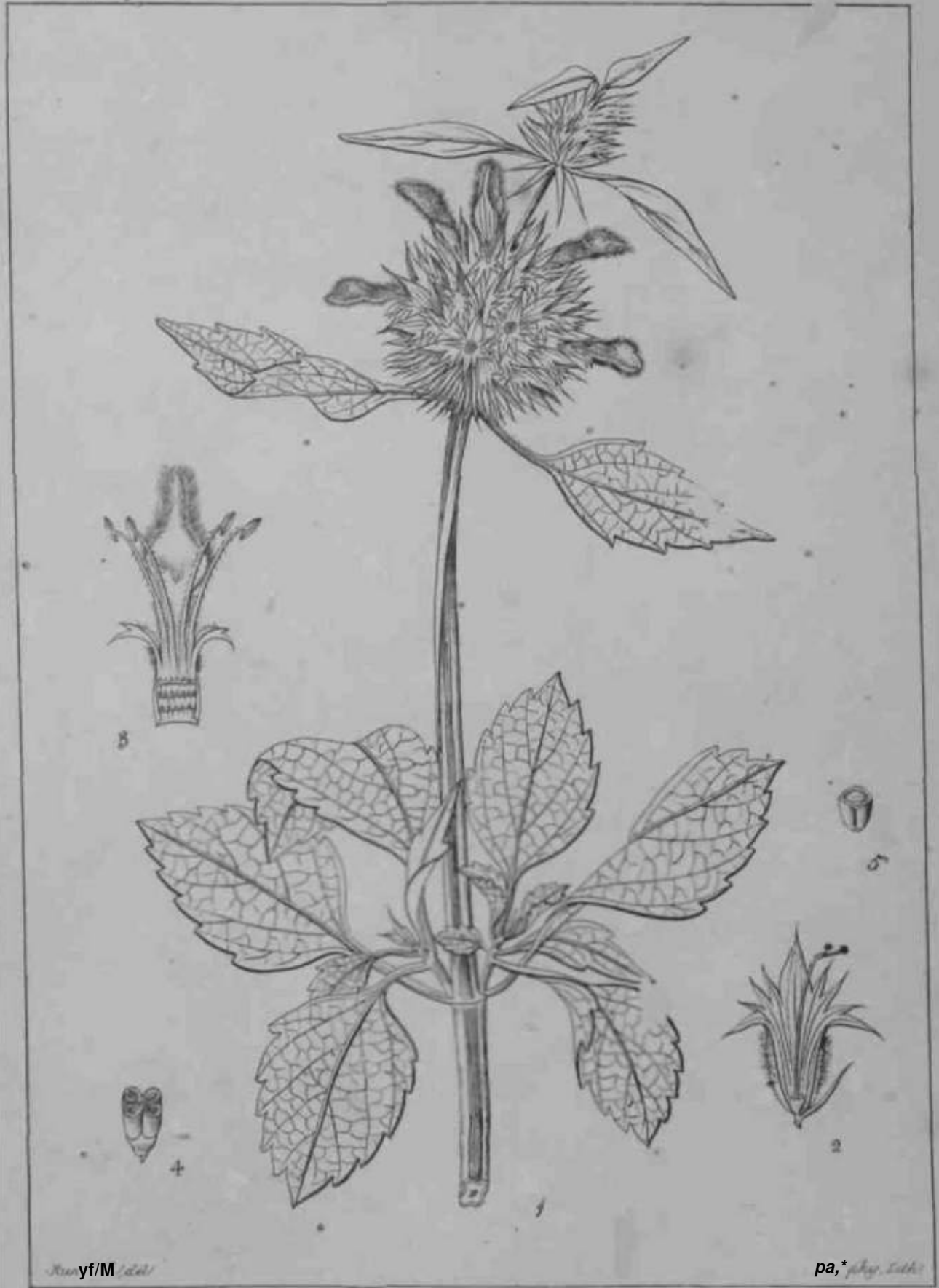
Trichomanes vulgatum L. 57



Reingrah, del.

Hornsch, Lith.

Leucas biflora (R. Br.)



Kun yf/M del

pa,* f. h. g. L. del

Leonotis nepetalifolia (R. Br.)

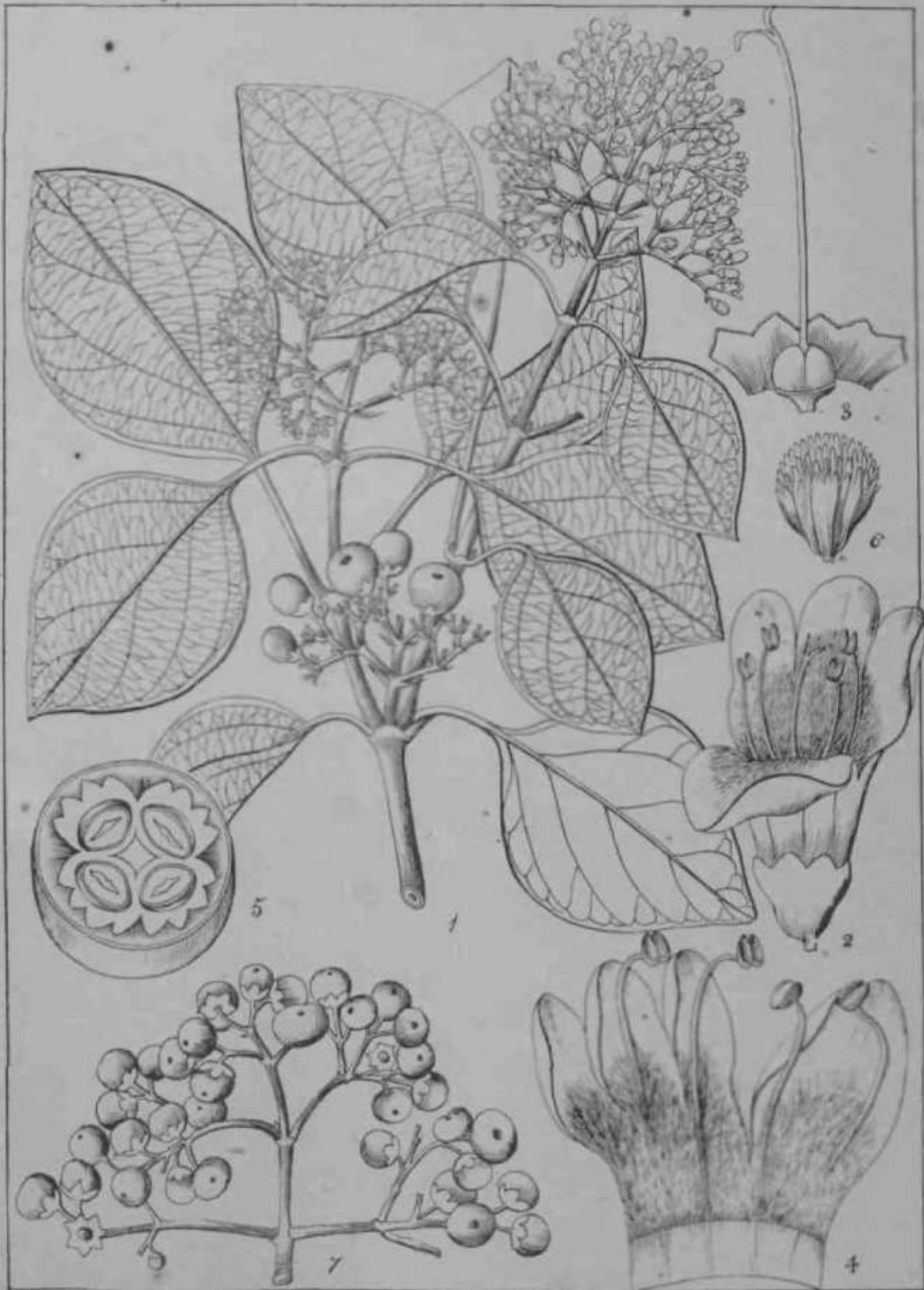


Wiegand, del.

Wiegand, del.

Осциментъ
Трехчленчатый

Ocimum Basilicum Benth
Var. *thrysiflorum*



Kunze del.

Zampieri del.

Premna latifolia (Boea)



Wiegand del.

Barleria (Linn.)

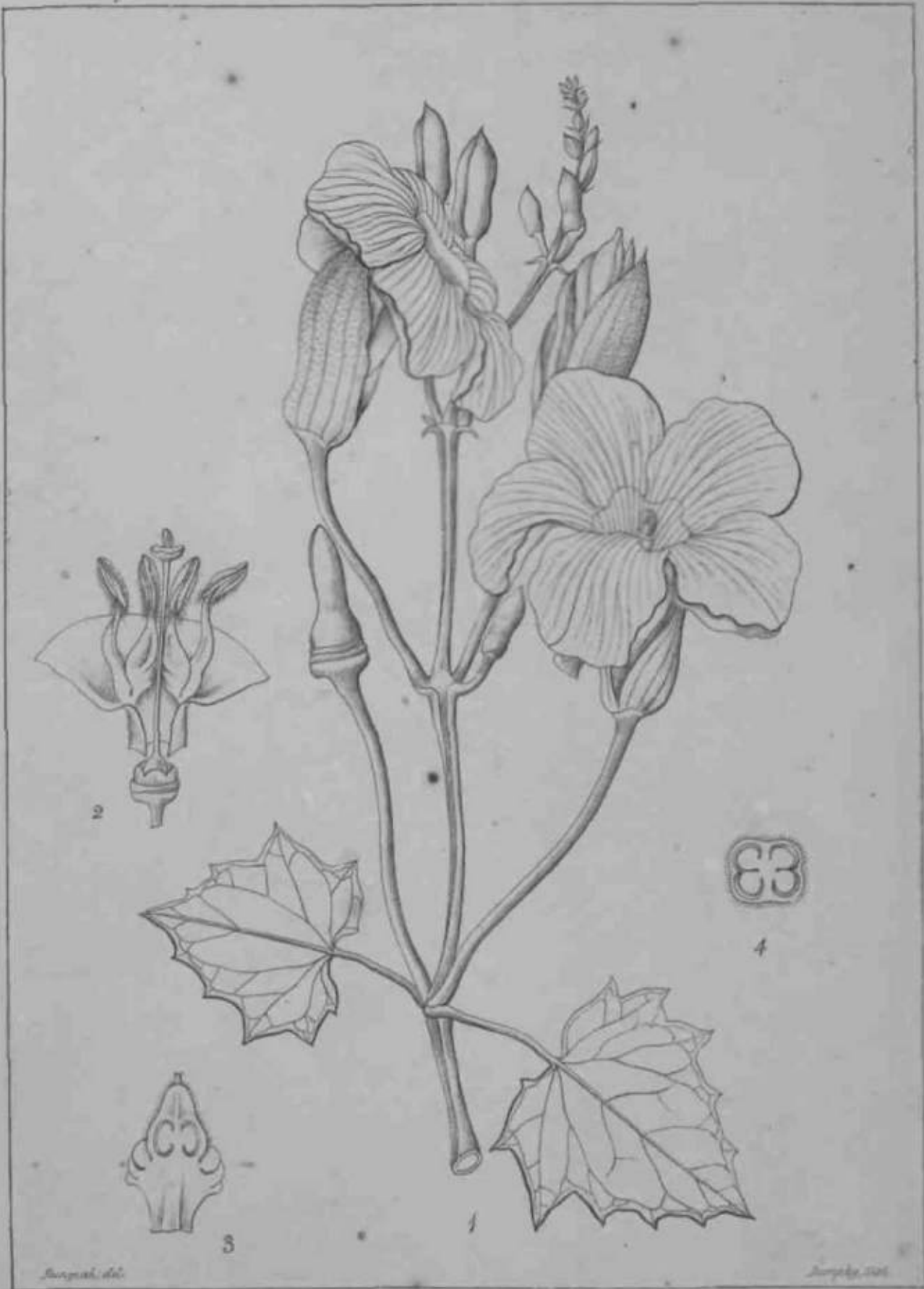
Wiegand del.



Dunlop del.

Dunlop del.

Hexacentis -m-y.k ?/'' ••sis/R f>



Thunbergia grandiflora

A-809



Murphy del.

Murphy del.

Stenosiphonium Russellianum (Nees)



Thunberg del.

Samuel J. Beck

Boerhavia procumbens (Boxb.)
Hochstamm-Gebirge } Java

Boerhavia procumbens (Boxb.)

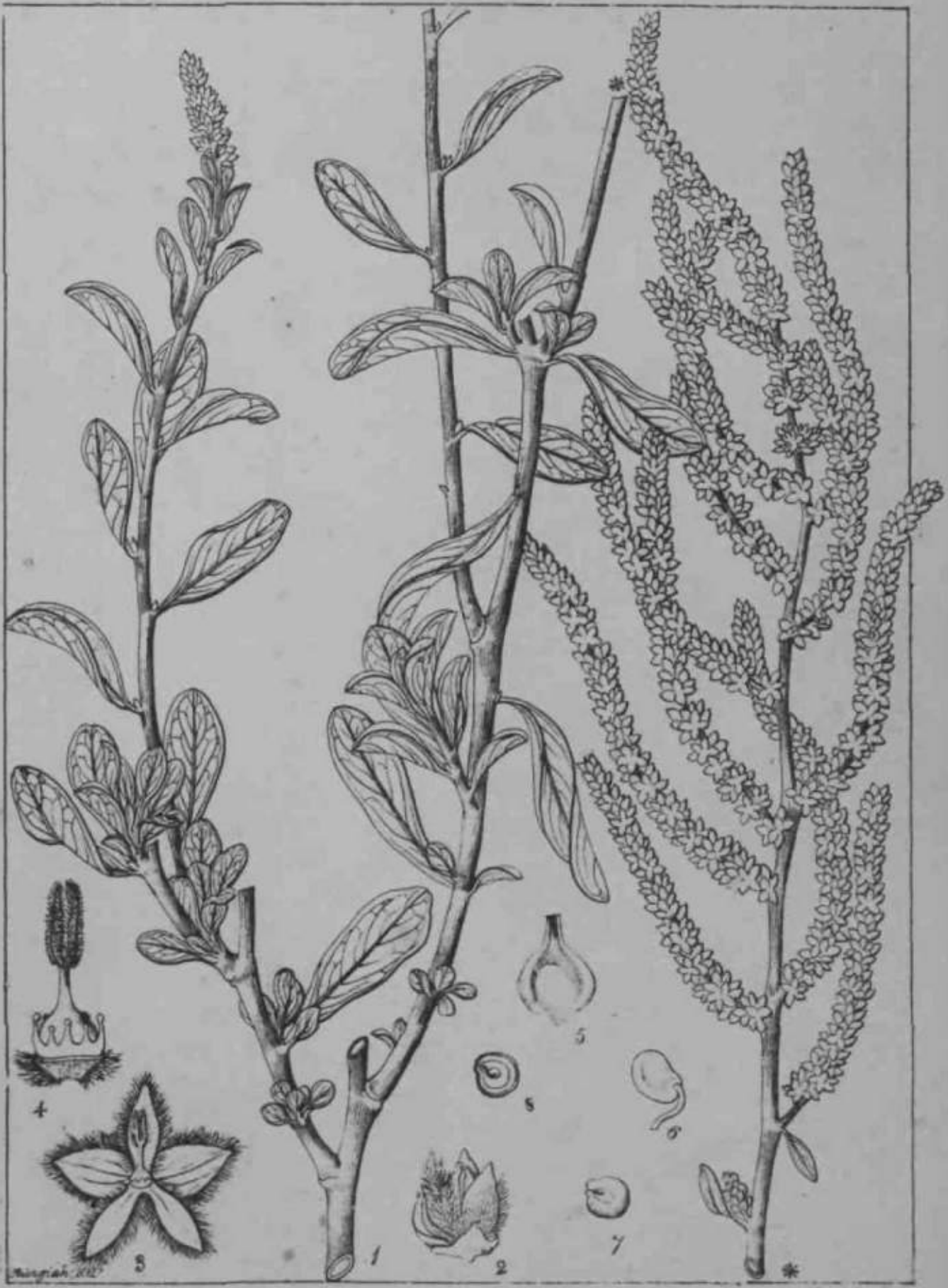
Asclepiadaceae



Thompson, det.

Asclepias speciosa (Mill.) B. W.

King, det.

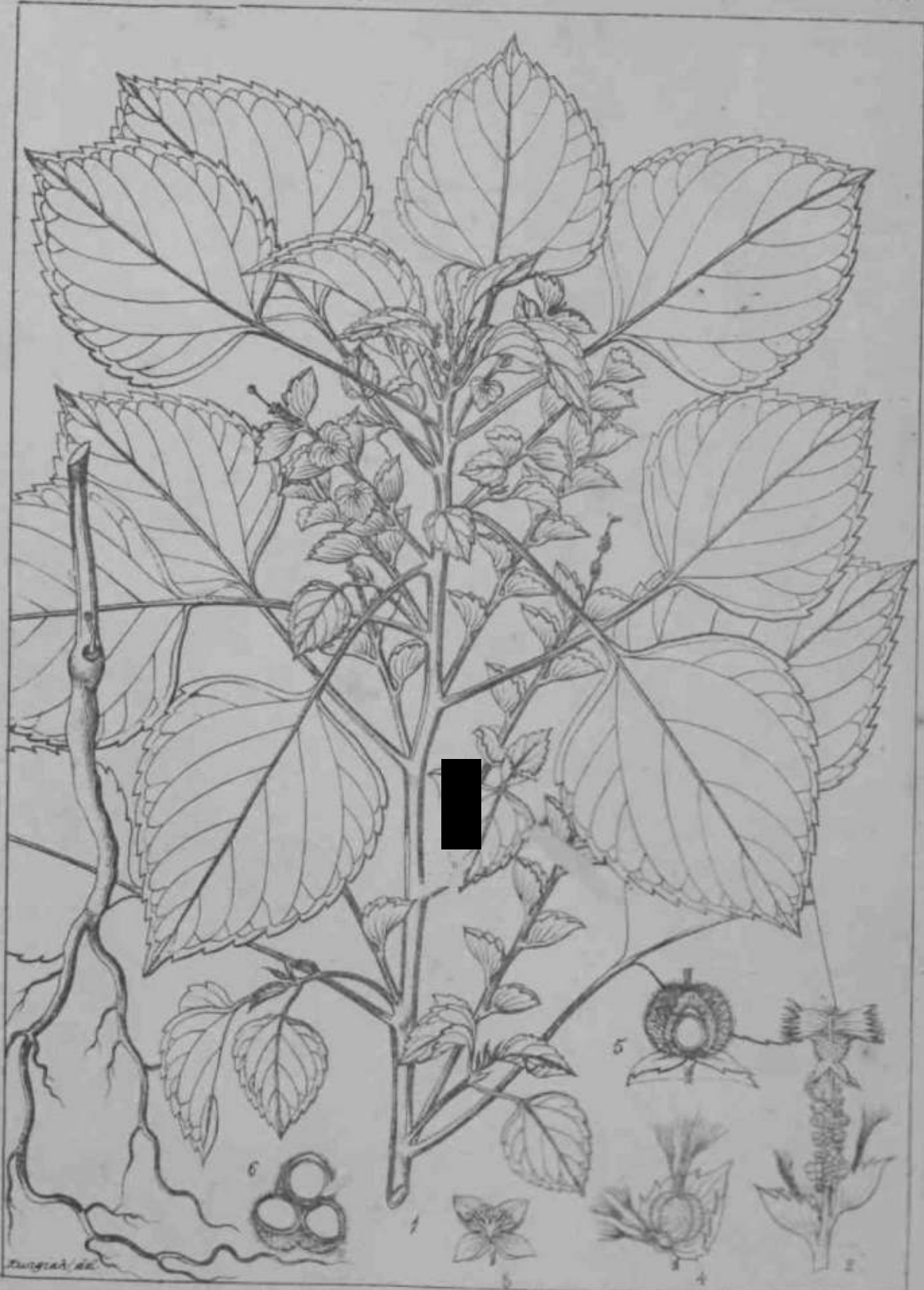


Rumphius del.

Rumphius del.

Acruea javanica } Lam.

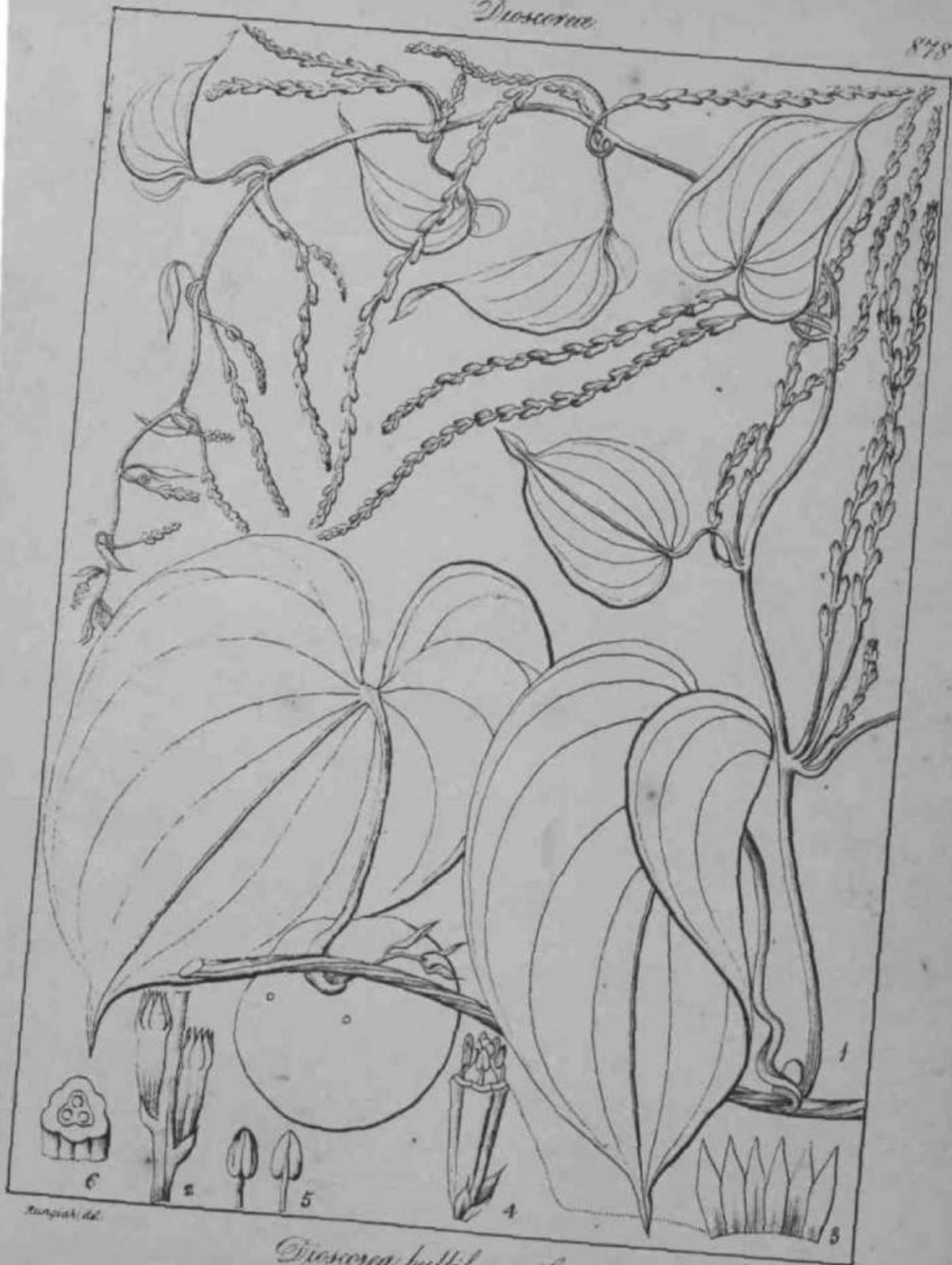
Acruea javanica



குடிநாம்பேன்
Crotophaga

Acalypha indica (Linn.)

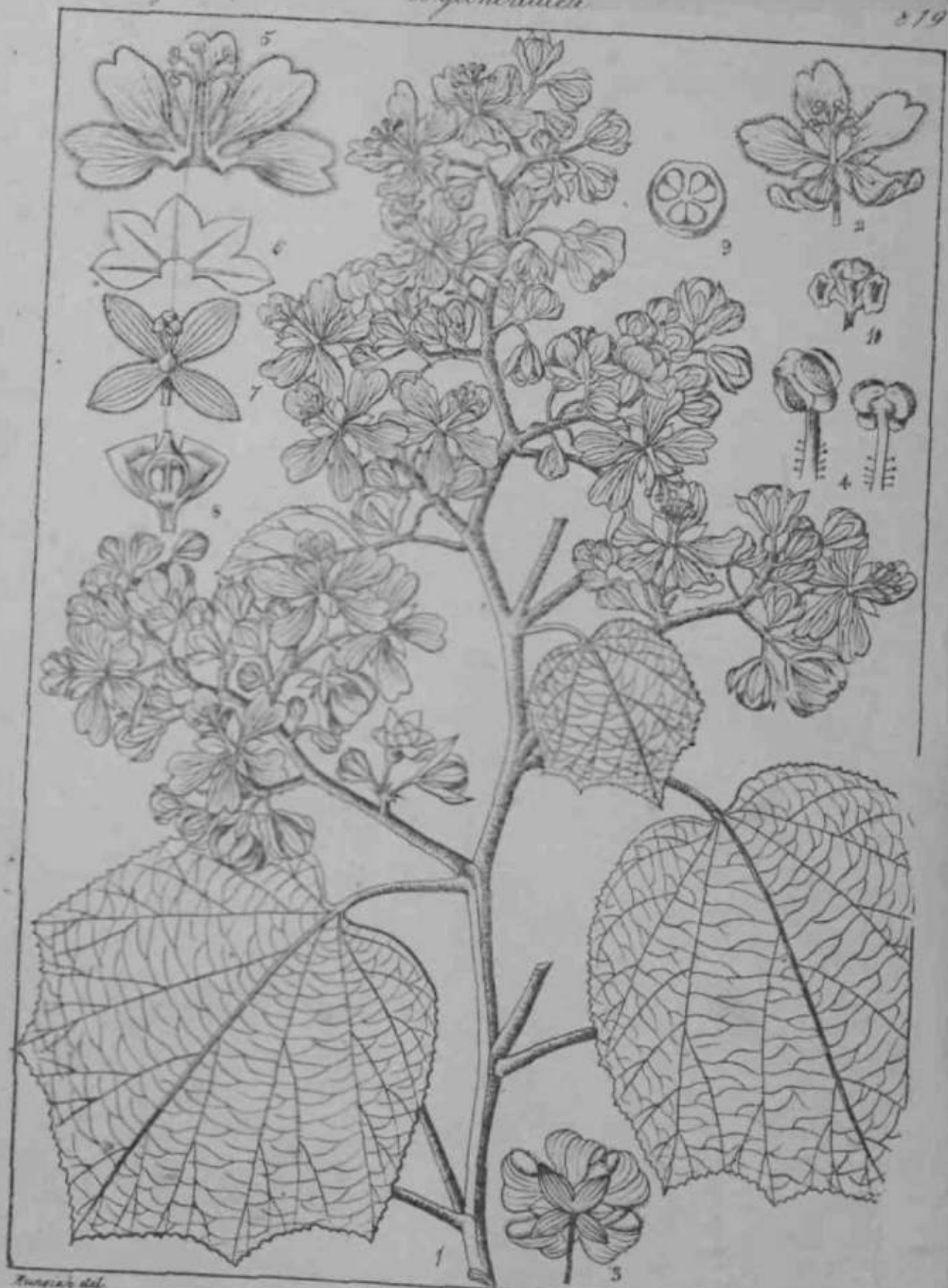
Handwritten signature



Dioscorea bulbifera (Linn.)

Lamour. del.

Lamour. sculp.

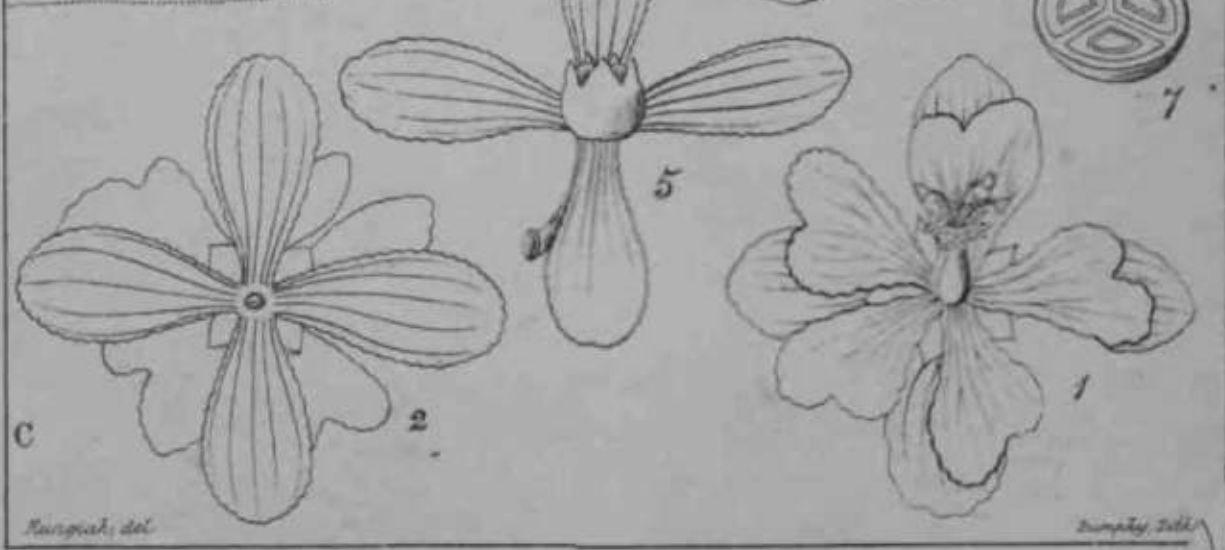
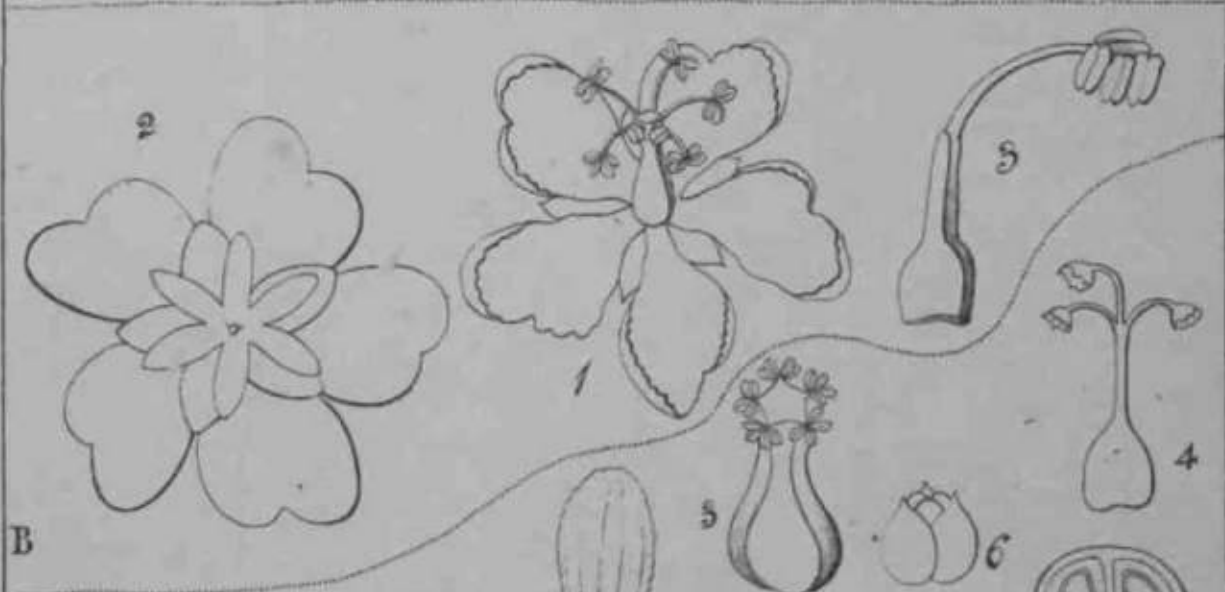
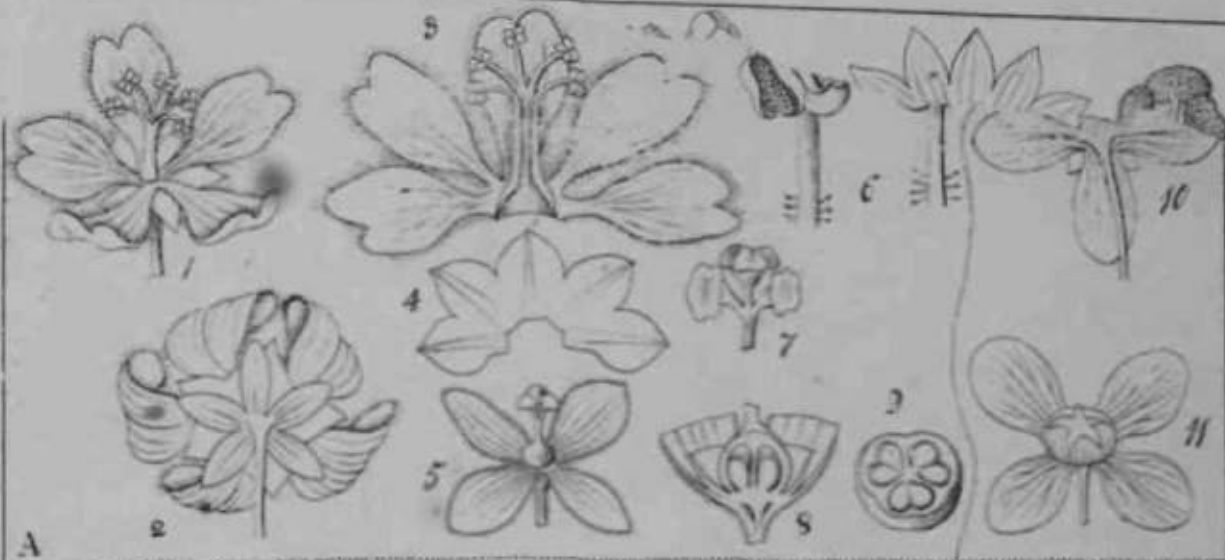


Wiegand del.

Hydia calycina ??
H. fraternd (Roxb)

Wiegand del.

2017

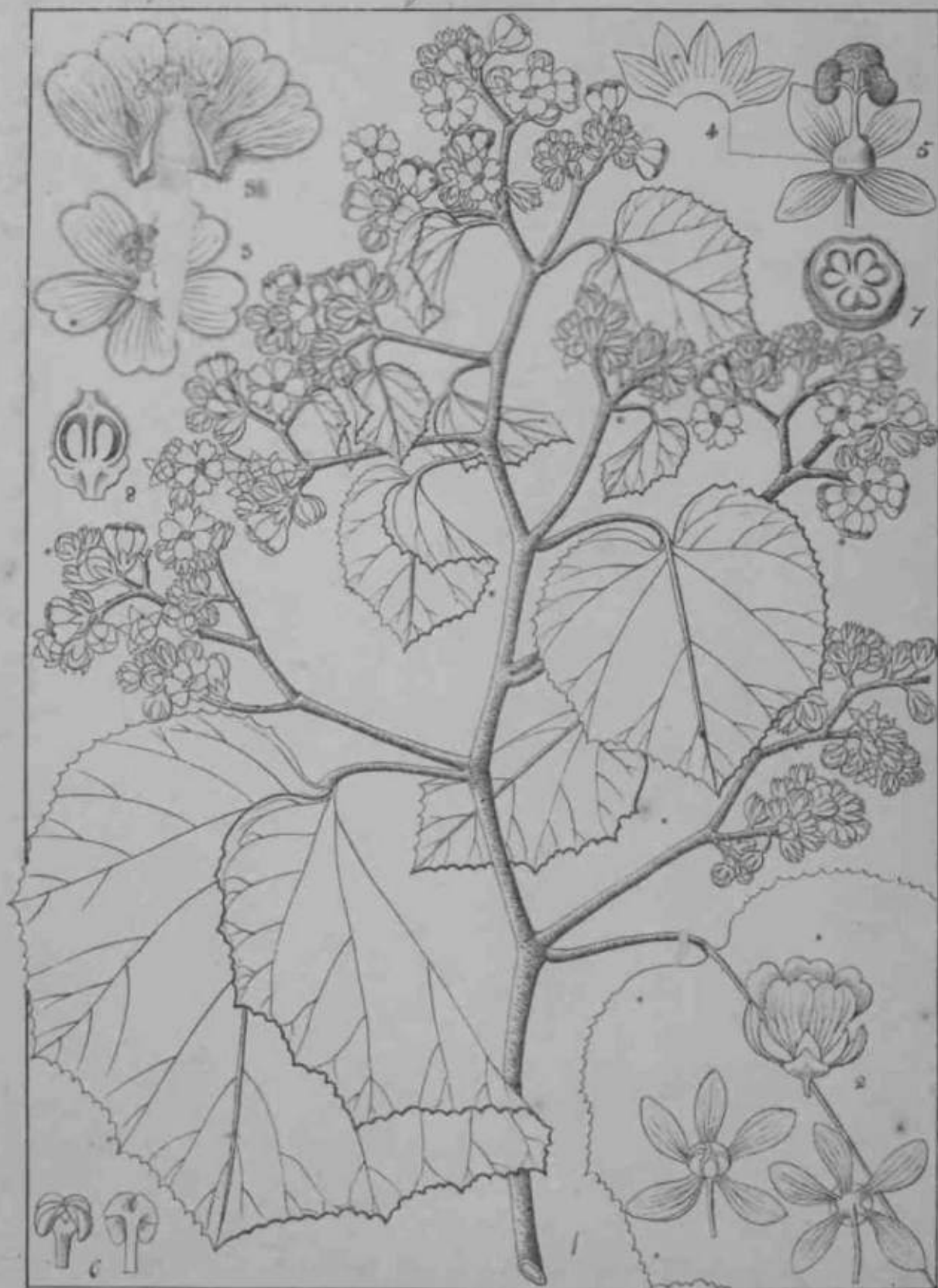


Kunze del.

Dumort. del.

A *Hydia calycina*. B *H. calycina* Roxb. C. *H. haterna* Roxb.

11



Rungtsh, del.

Hydia Roxburghiana (R.W.)

Thompson, del.



Burgr. del.

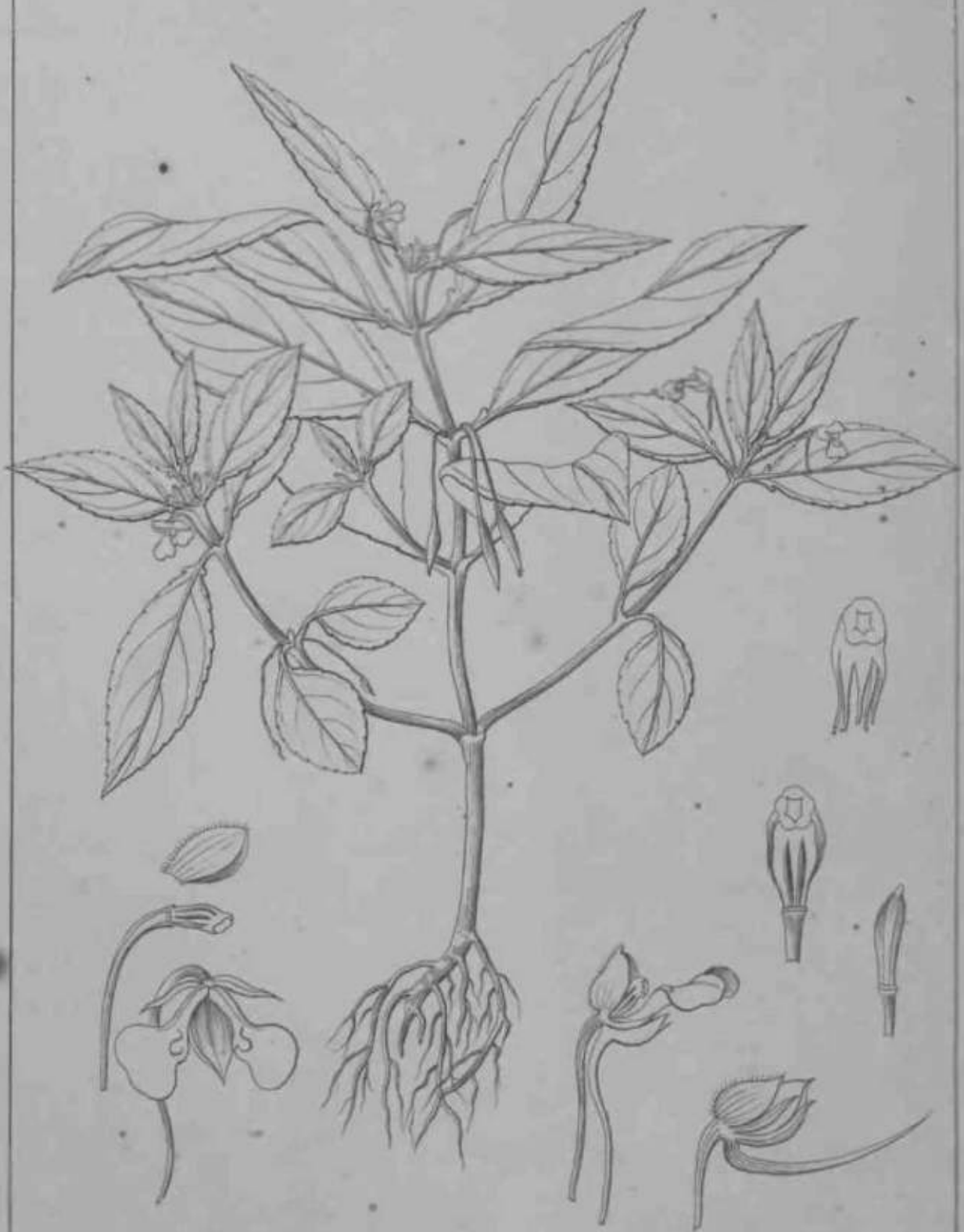
Miconia quinqueocularis (N. & G.)



Wiegand del.

Dumphy Lith.

Impatiens oppositifolia (Linn.)



Engelm. del.

Donny del.

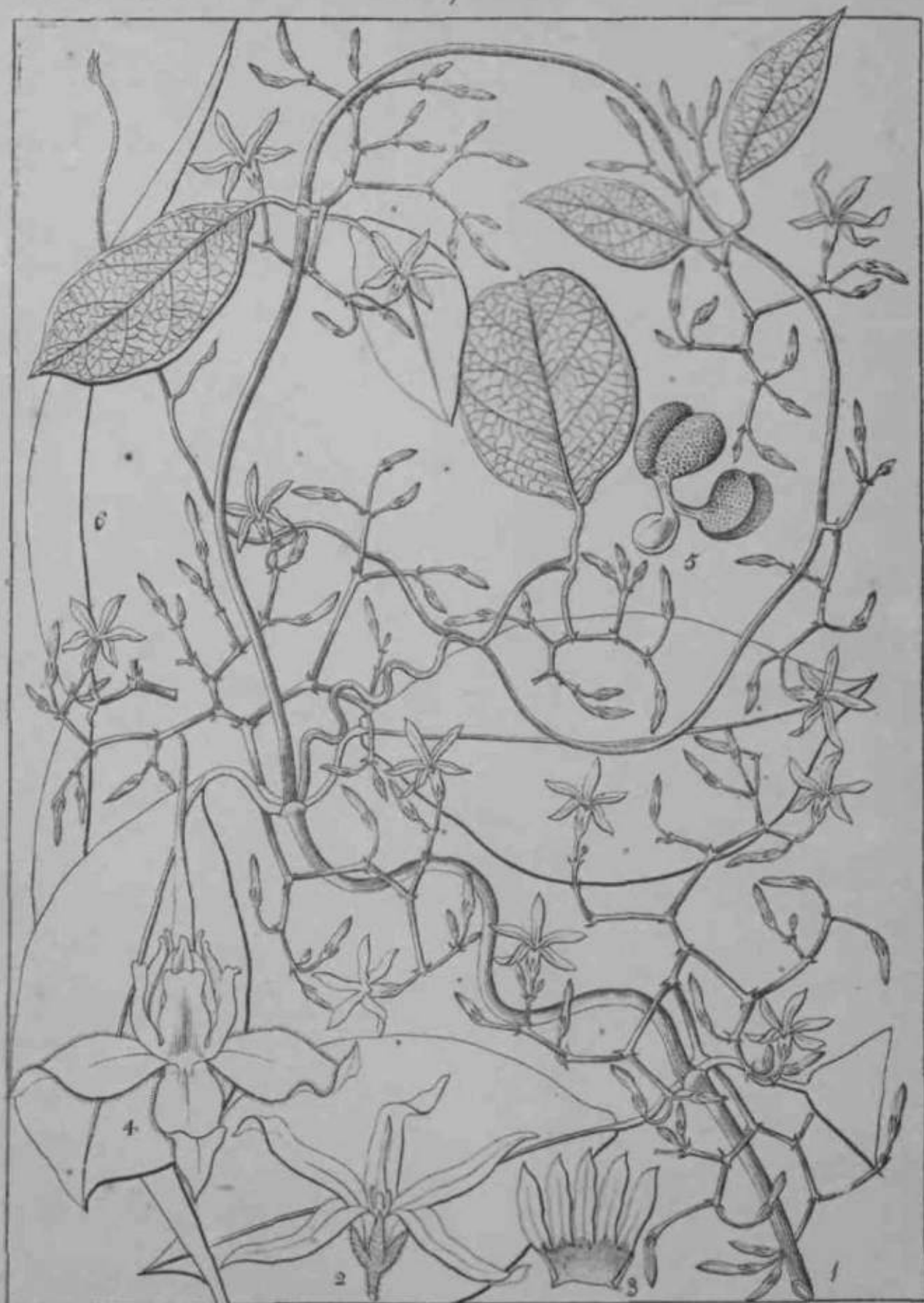
Impatiens Kleinii.



Kunze del.

Eschsch. lith.

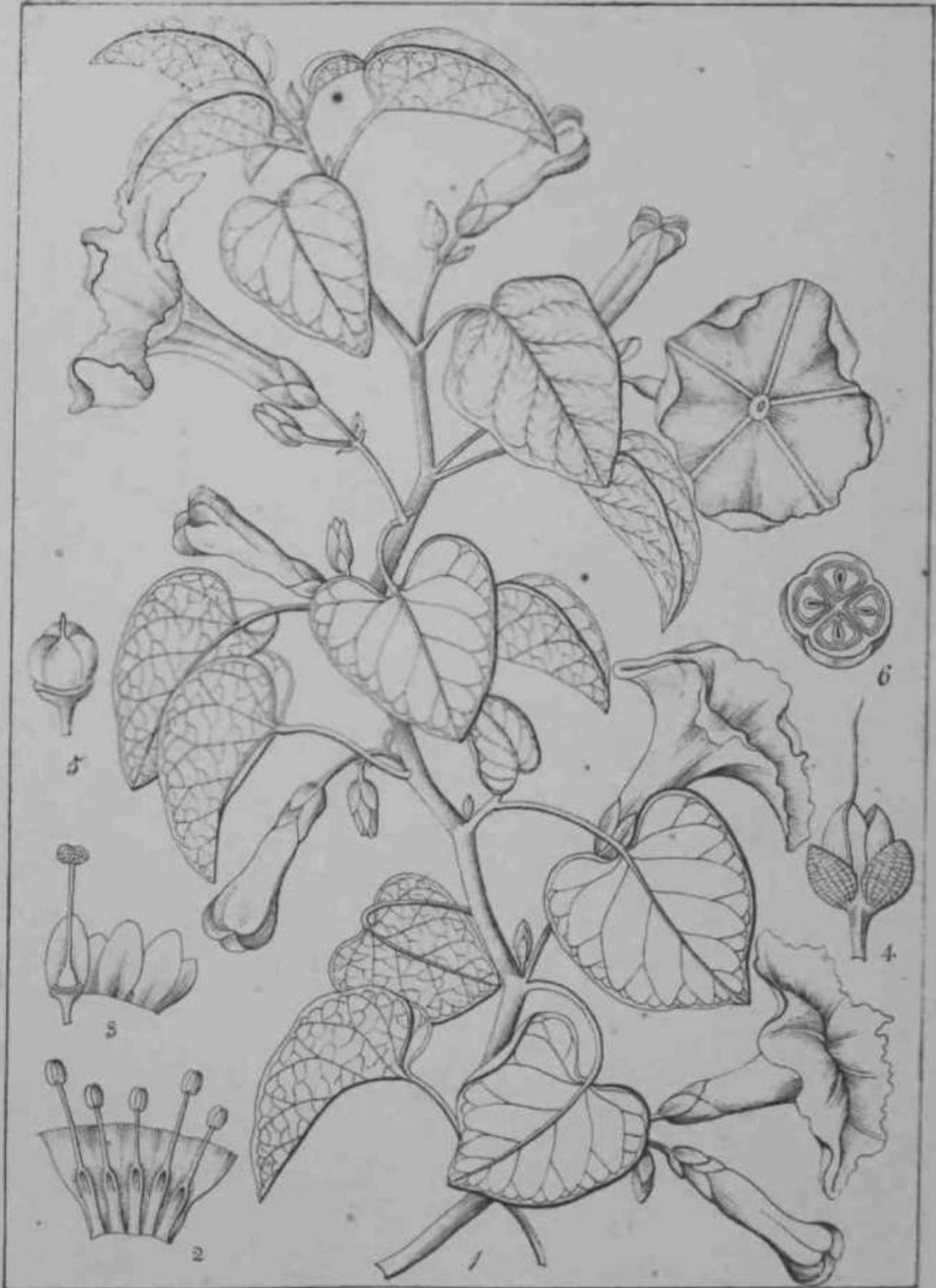
Brotalaria rubiginosa (Willd.)



Reynolds del.

Toxocarpus Hecini (W & A)

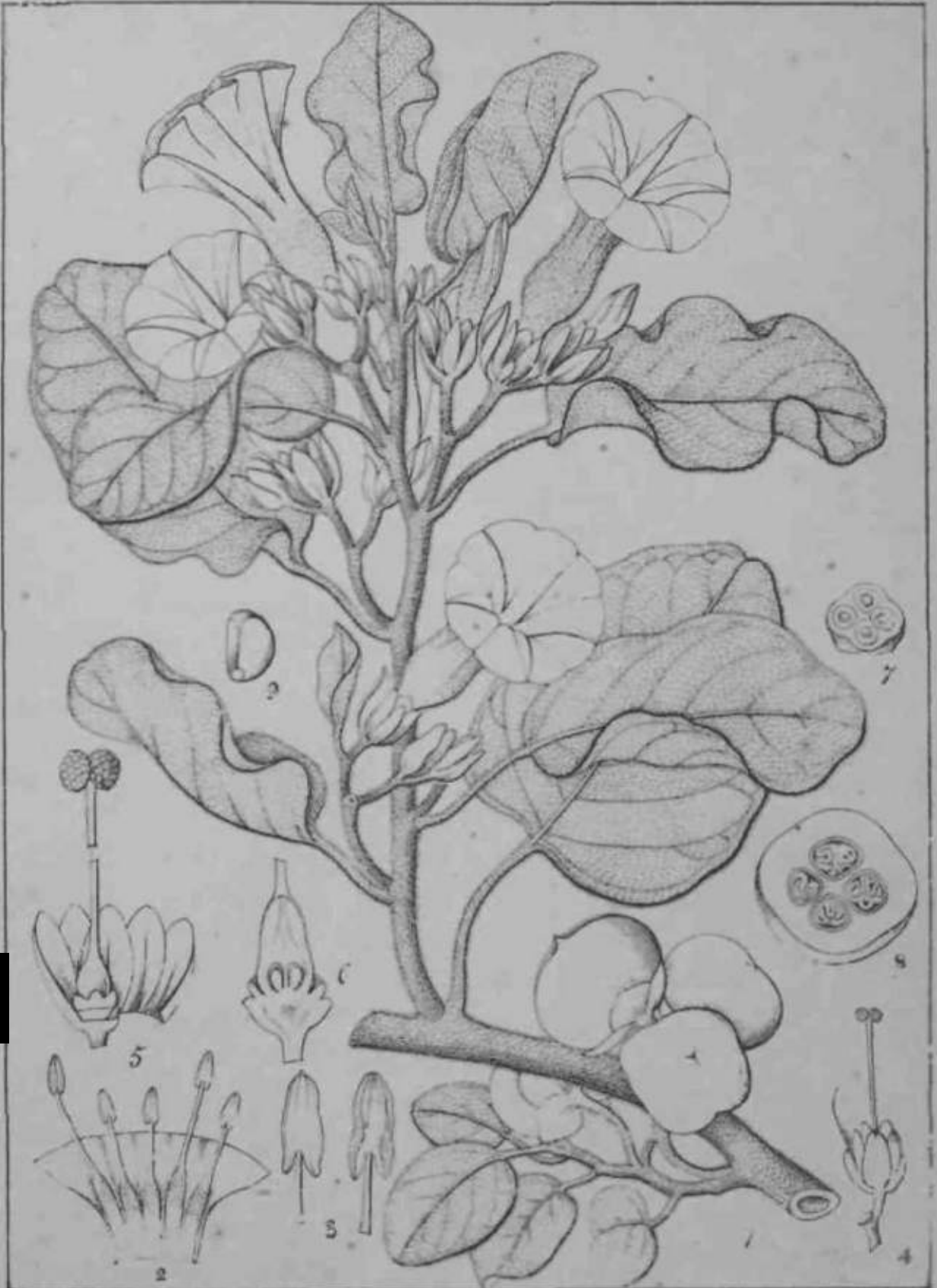
Drumley, Lith.



Harms del.

Drumh. Lith.

Ipomoea rugosa (Ch.)



Kunze & Steud.

Dumphy, Lich.

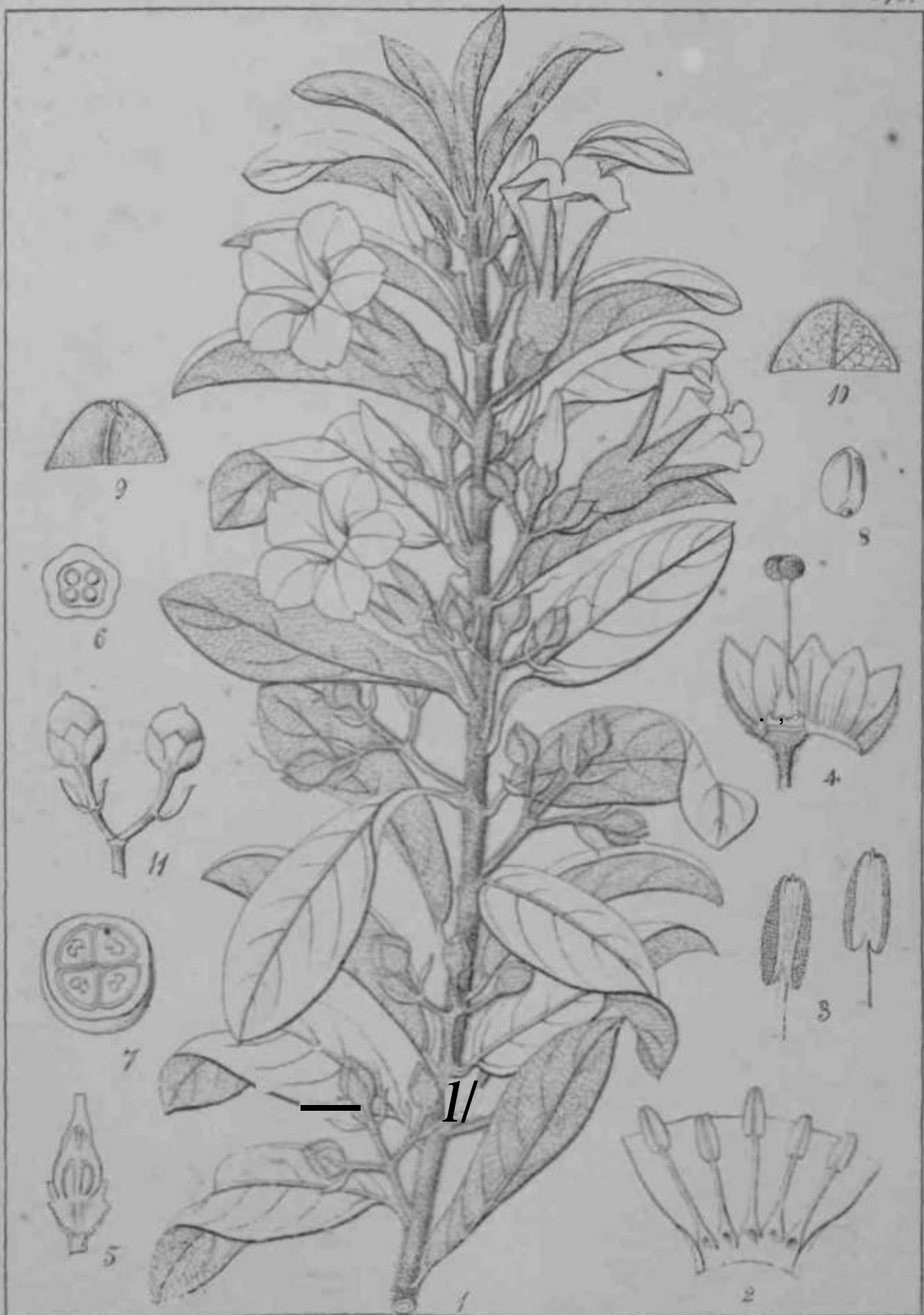
Rivea foma (Sw.) DC.



Ramisch del.

Capparis A. ff/JWJ//NfAr / (Lam.)

Ramisch del.



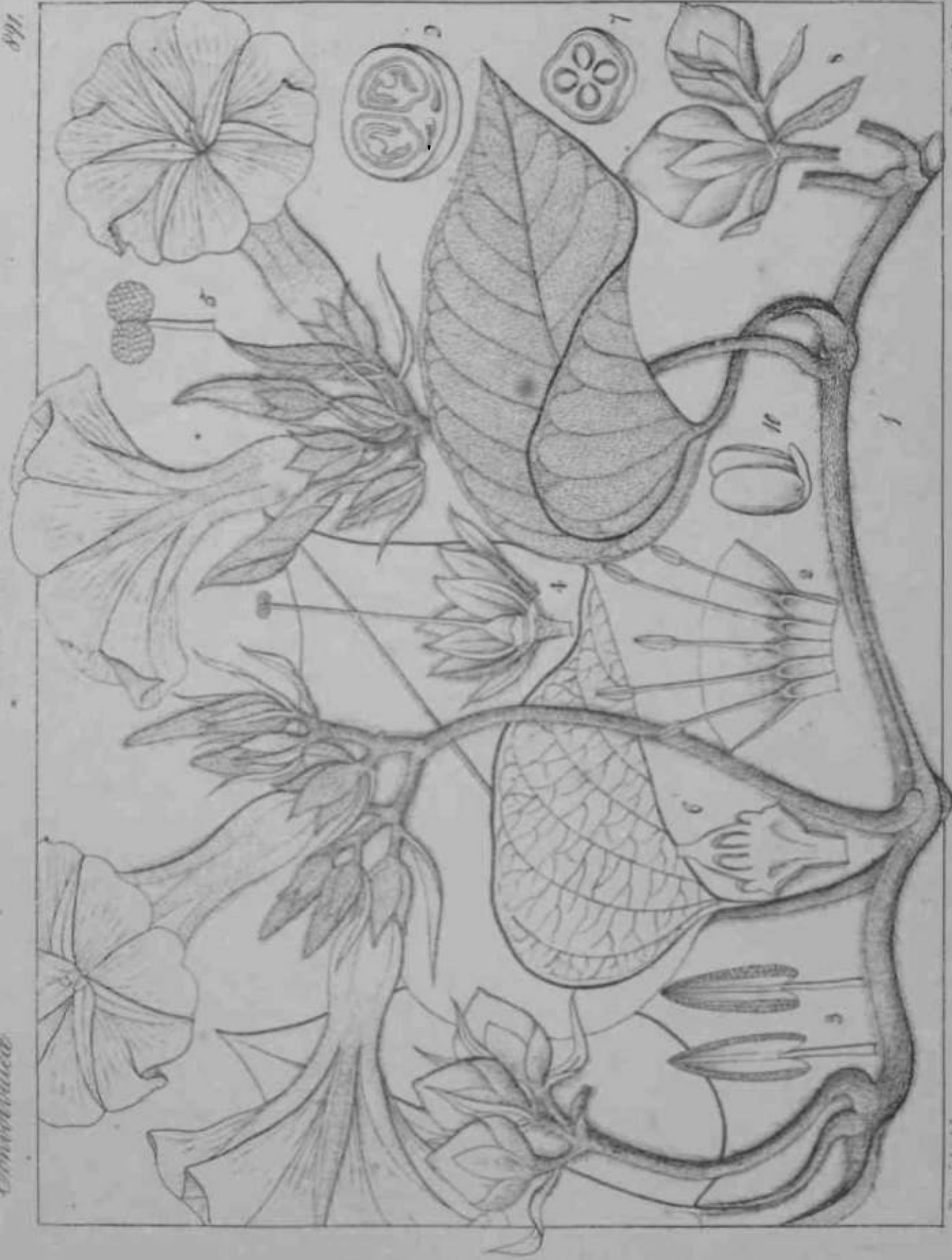
Rengsch del.

Dorshy Lith.

Rivea cuneata (R. %)
Ascyria cuneata (Choisy)

Convolvulaceae

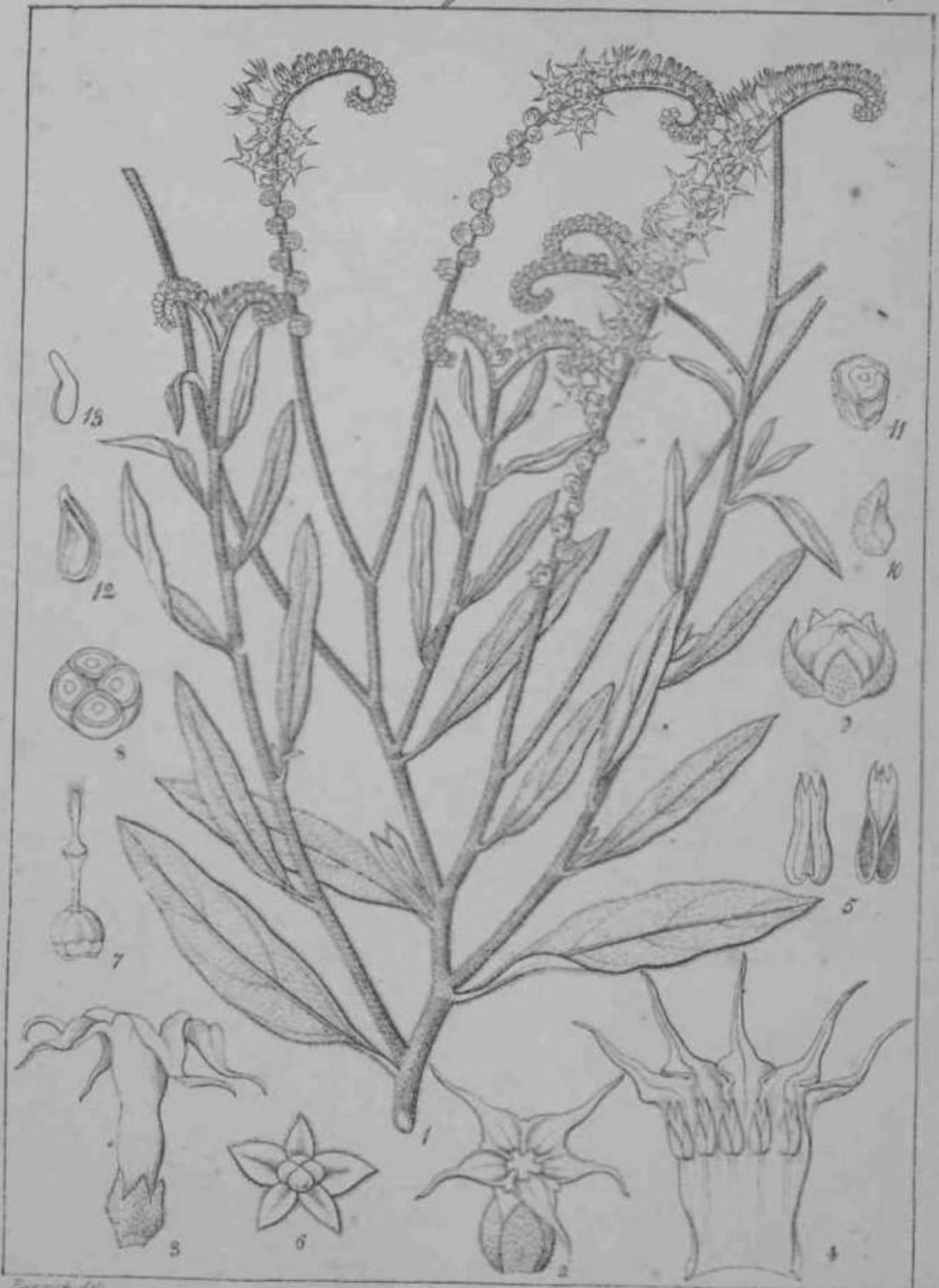
Convolvulaceae



Thompson's

Pilea hirsuta (R. W.)
Spencer hirsuta (Ch.)

Thompson



Engelm. del.

Drumh. scul.

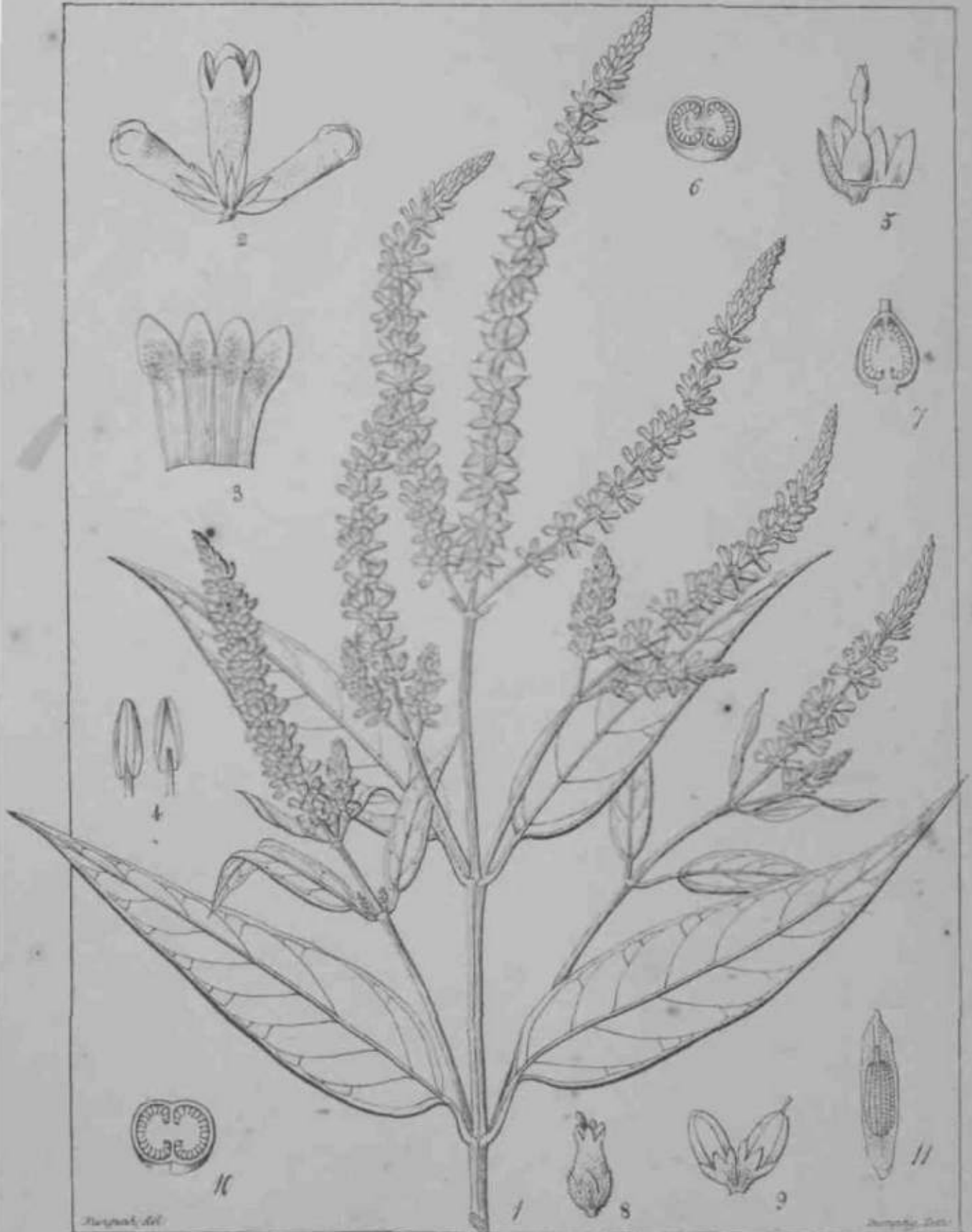
Heliotropium Zeylanicum (Lam.)



Rungt del.

Swampy Lith.

Solanum giganteum

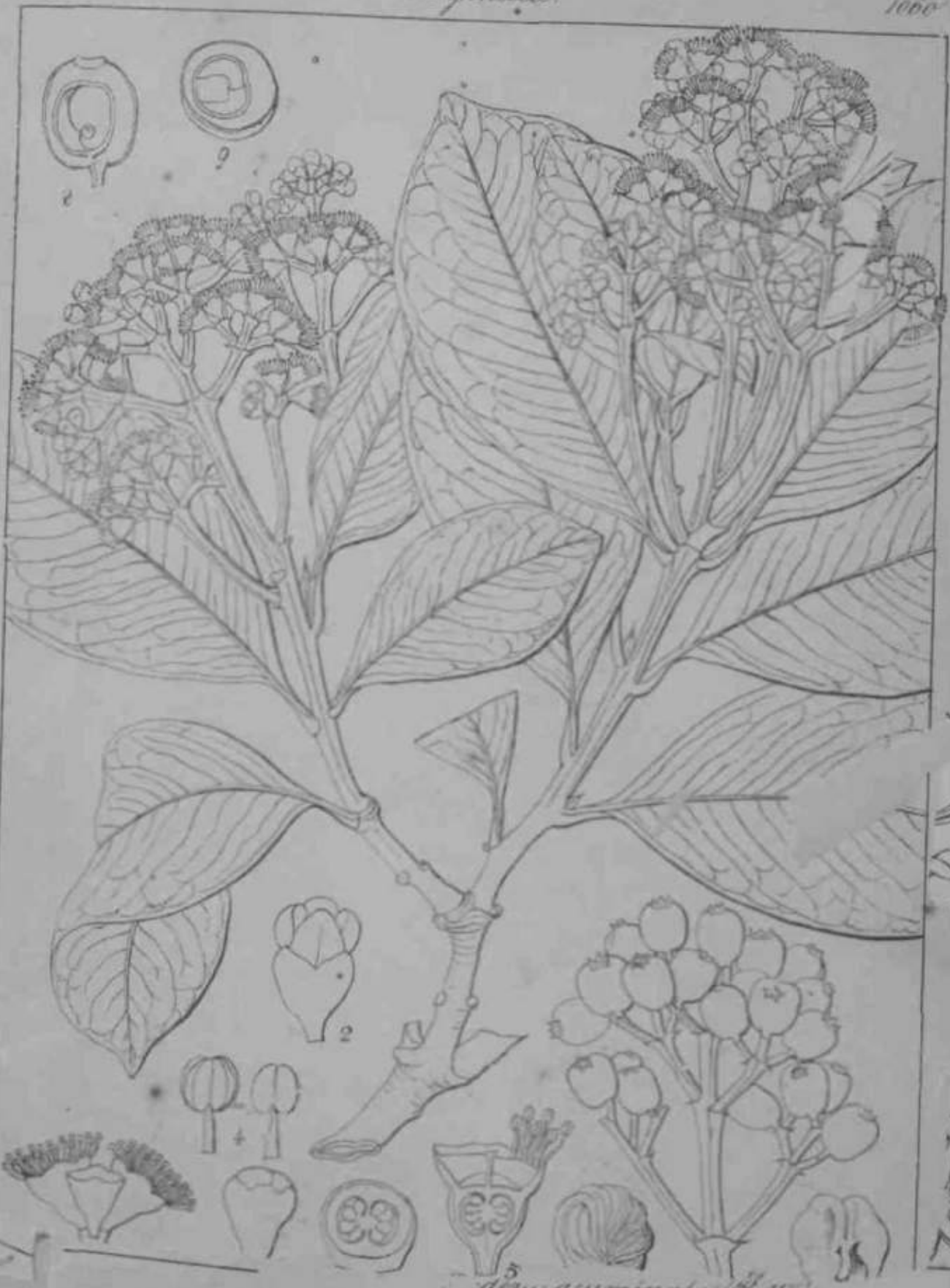


Buddleia discolor (Roth)

Myrtac

Myrtaceae

1000



Podocarpus acuminata (R. W.)

Vertical handwritten notes on the left margin, possibly describing the specimen or the artist's process.

Vertical handwritten notes on the right margin, possibly describing the specimen or the artist's process.



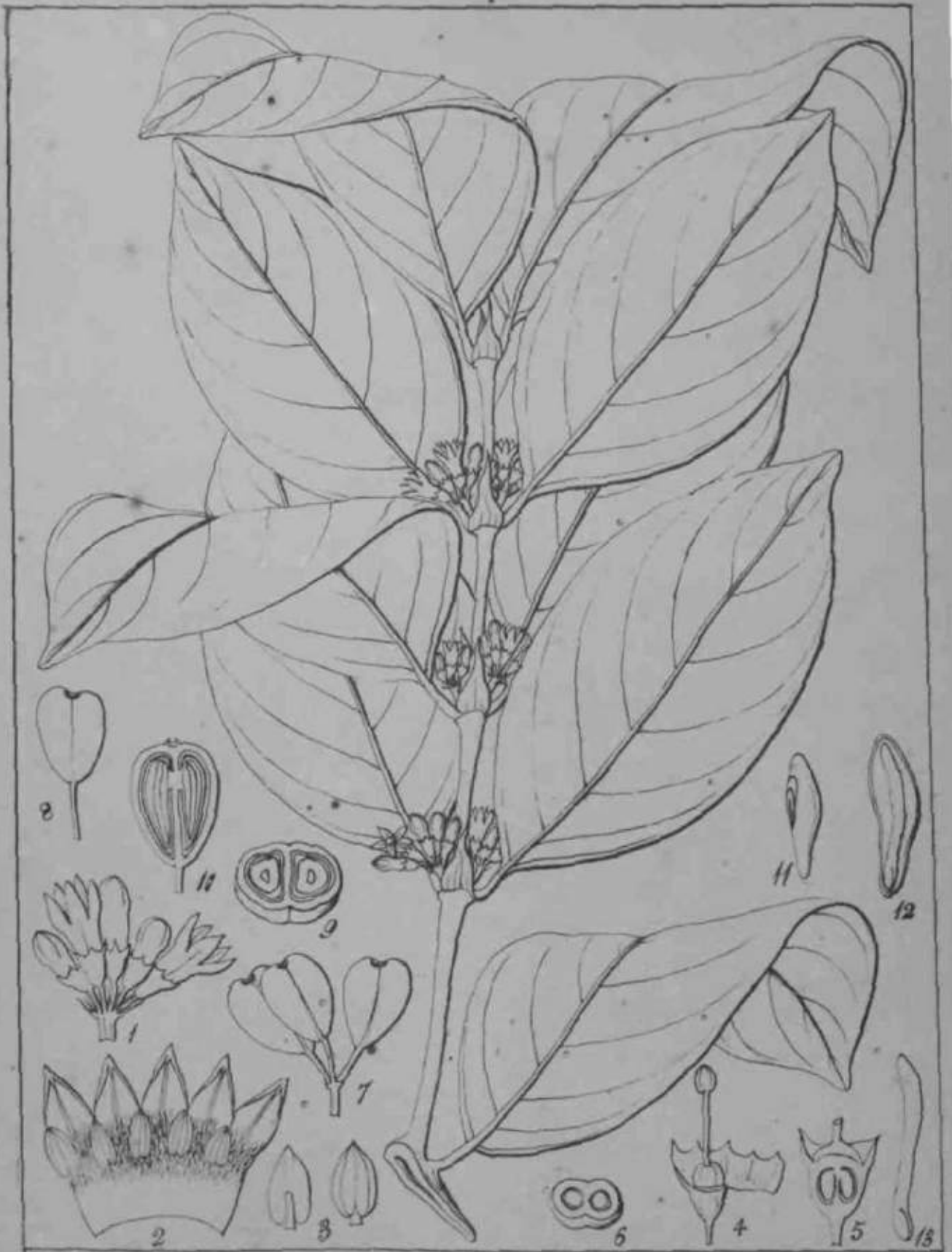
Harvey del.

Loranthus Eupho t4*a

Harvey del.



Pyleocoryne rigida (R. W.)



Cinthia nelygherrense (R. W.)



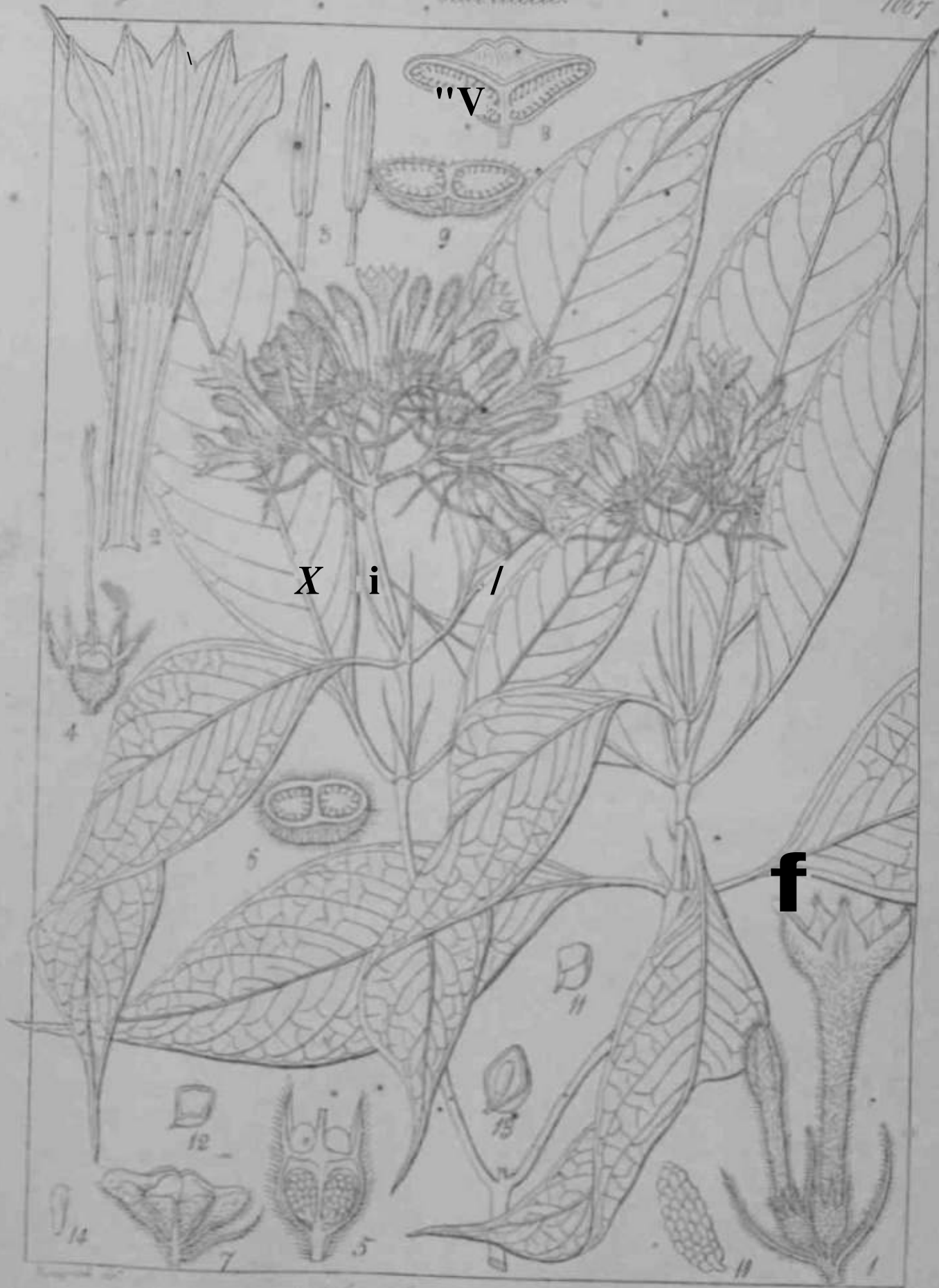
Pavetta Brunonis



Suria polyantha (L. H.)

Reynolds del.

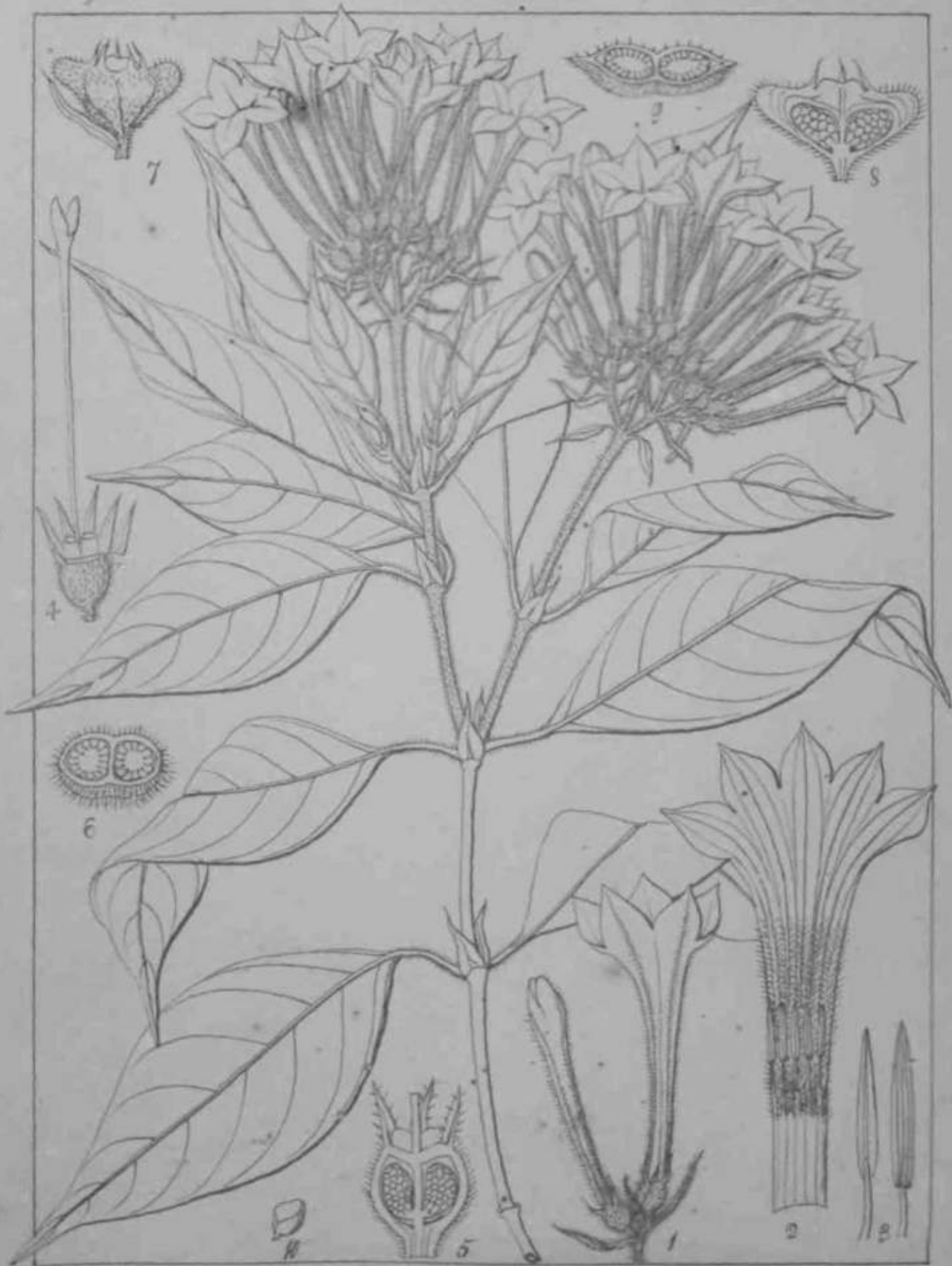
Reynolds del.



X i /

f

Ophiarrhiza ciantha (R. N.)



Opiorhiza hookeriana (P.W.)

Thompson del.

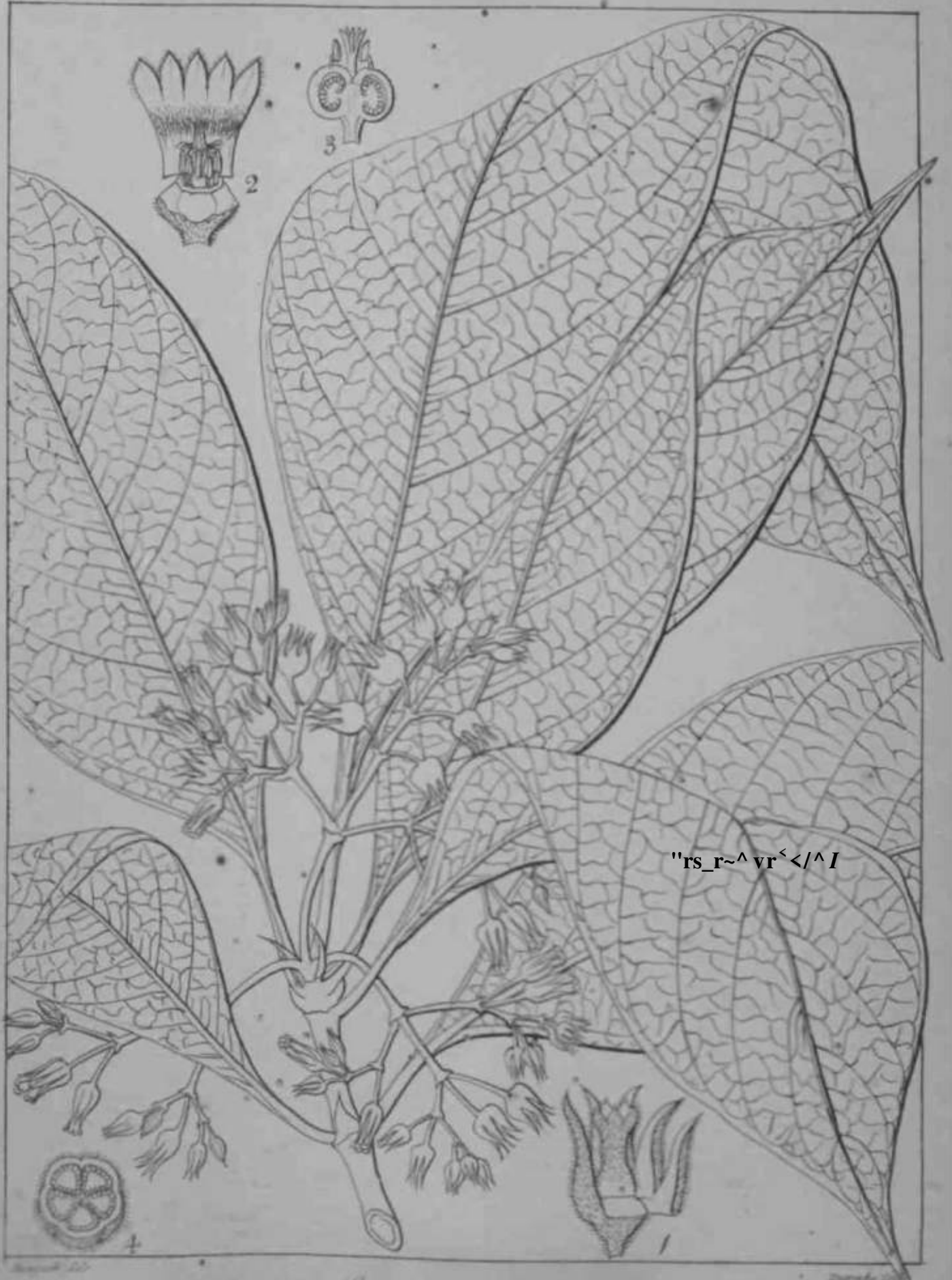
Thompson sculp.



Opiorrhiza grandiflora (R. W.)

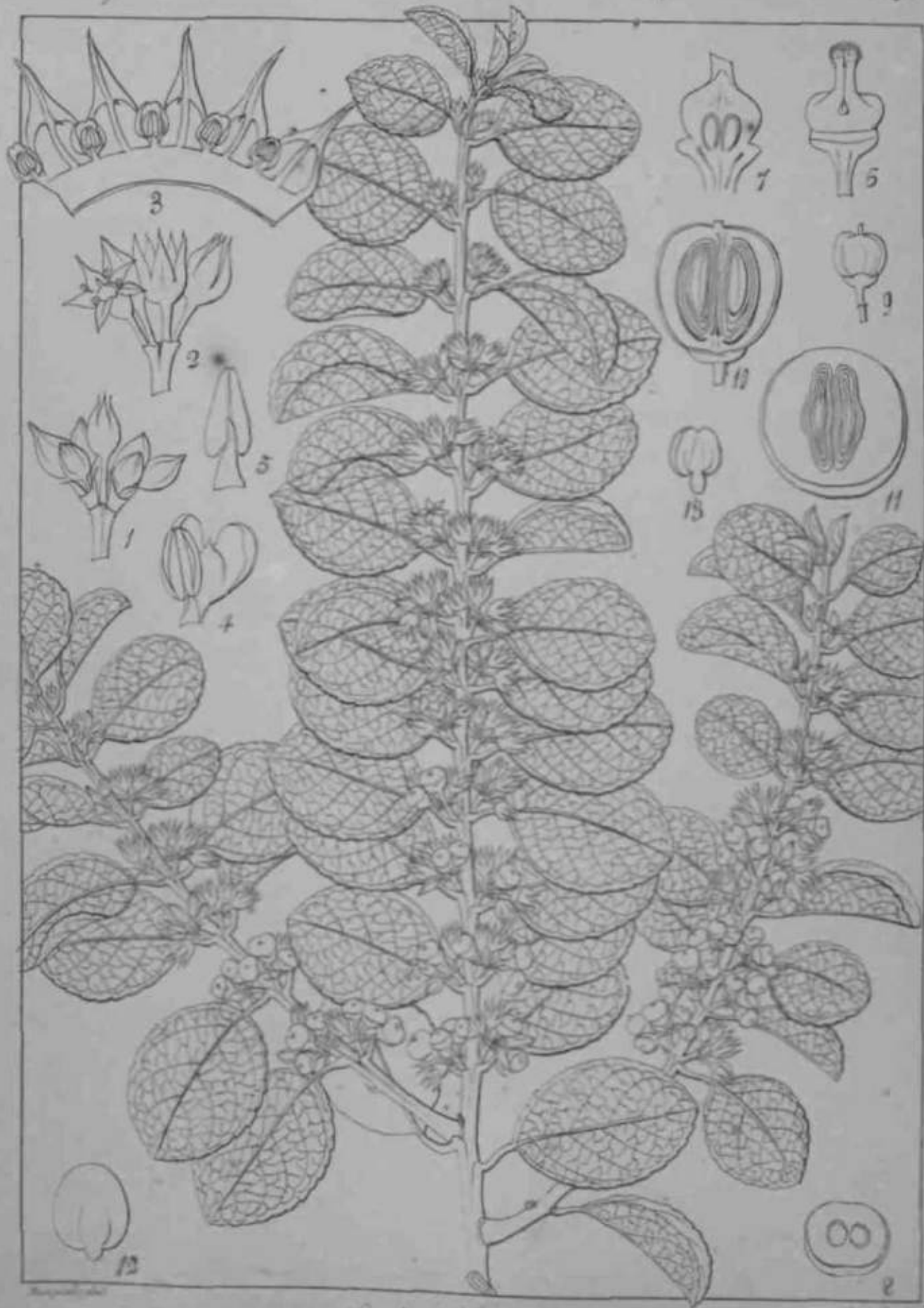
Wimperley del.

Wimperley scul.



"rs_r~^ vr^ </^ I

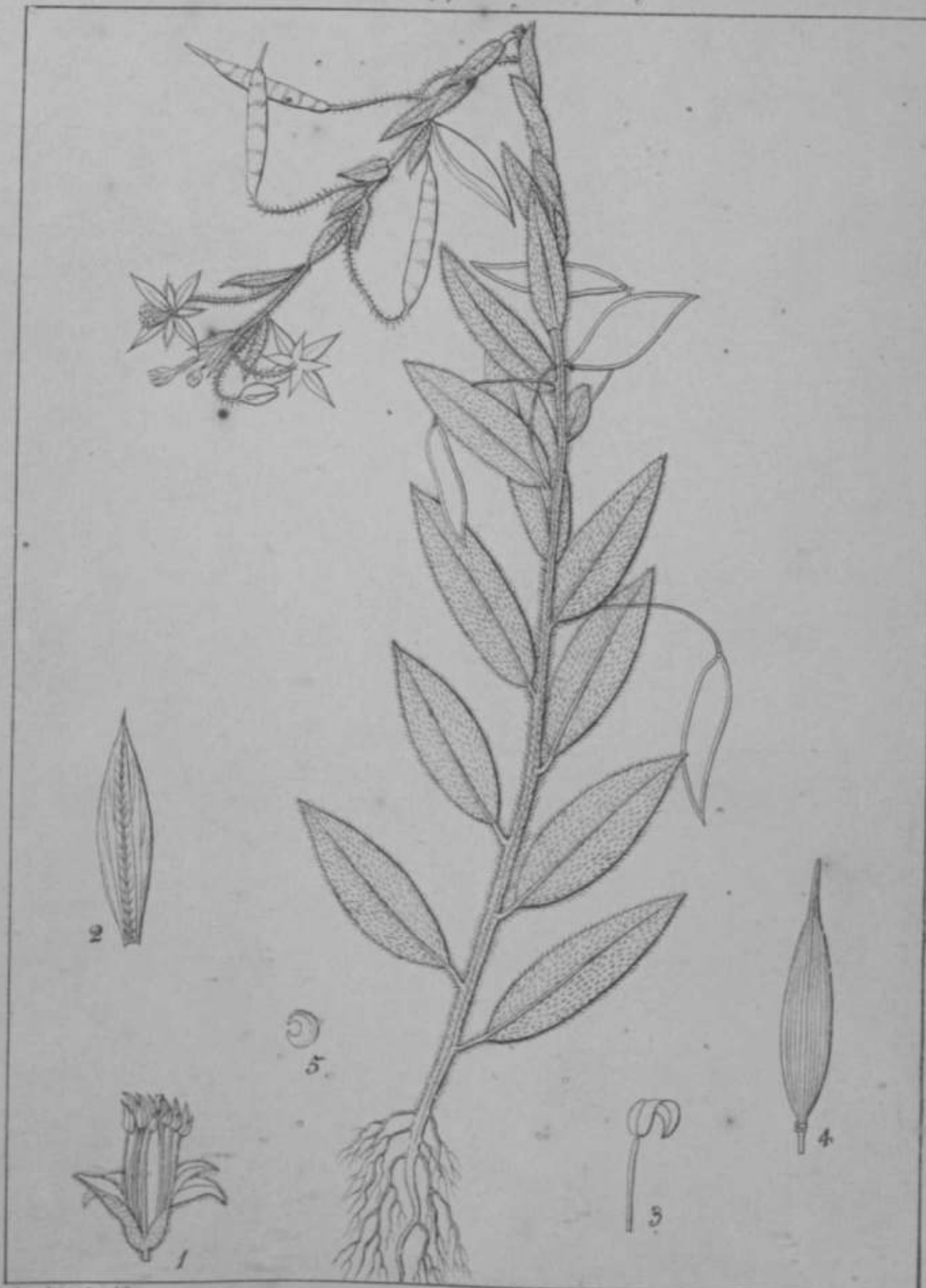
Sawia acuminata (R. W.)



Scaevola Rheediana (R. H.)

W. G. S. 1850

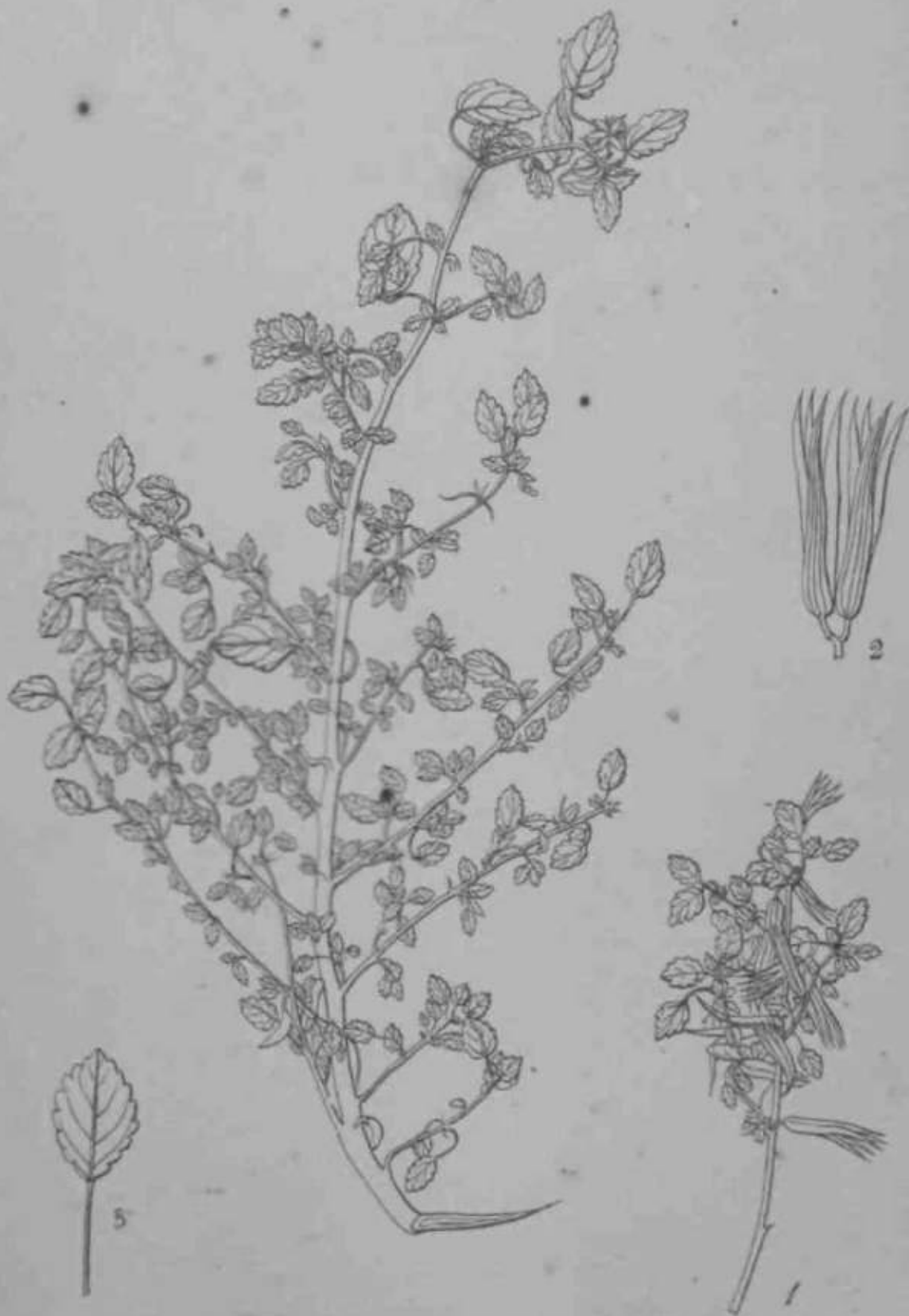
W. G. S. 1850



Spencerianus, del.

Polanisia Buthorensis (Munro)

Shimper, col.



Corchorus humilis (Munro)

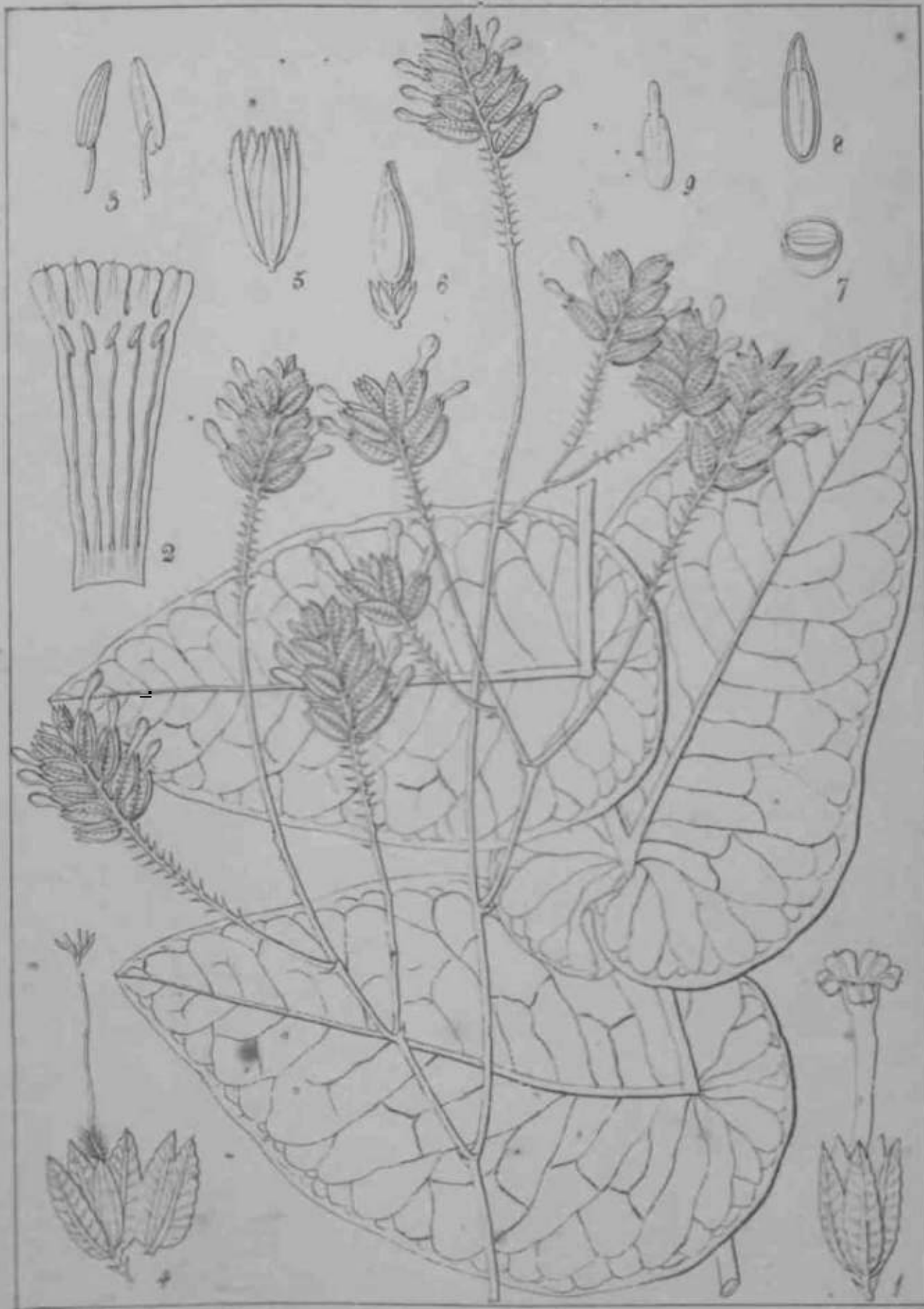
Thompson del.

Thompson sculp.



Erodium cicutarium (Munro)

W. H. S. 1884



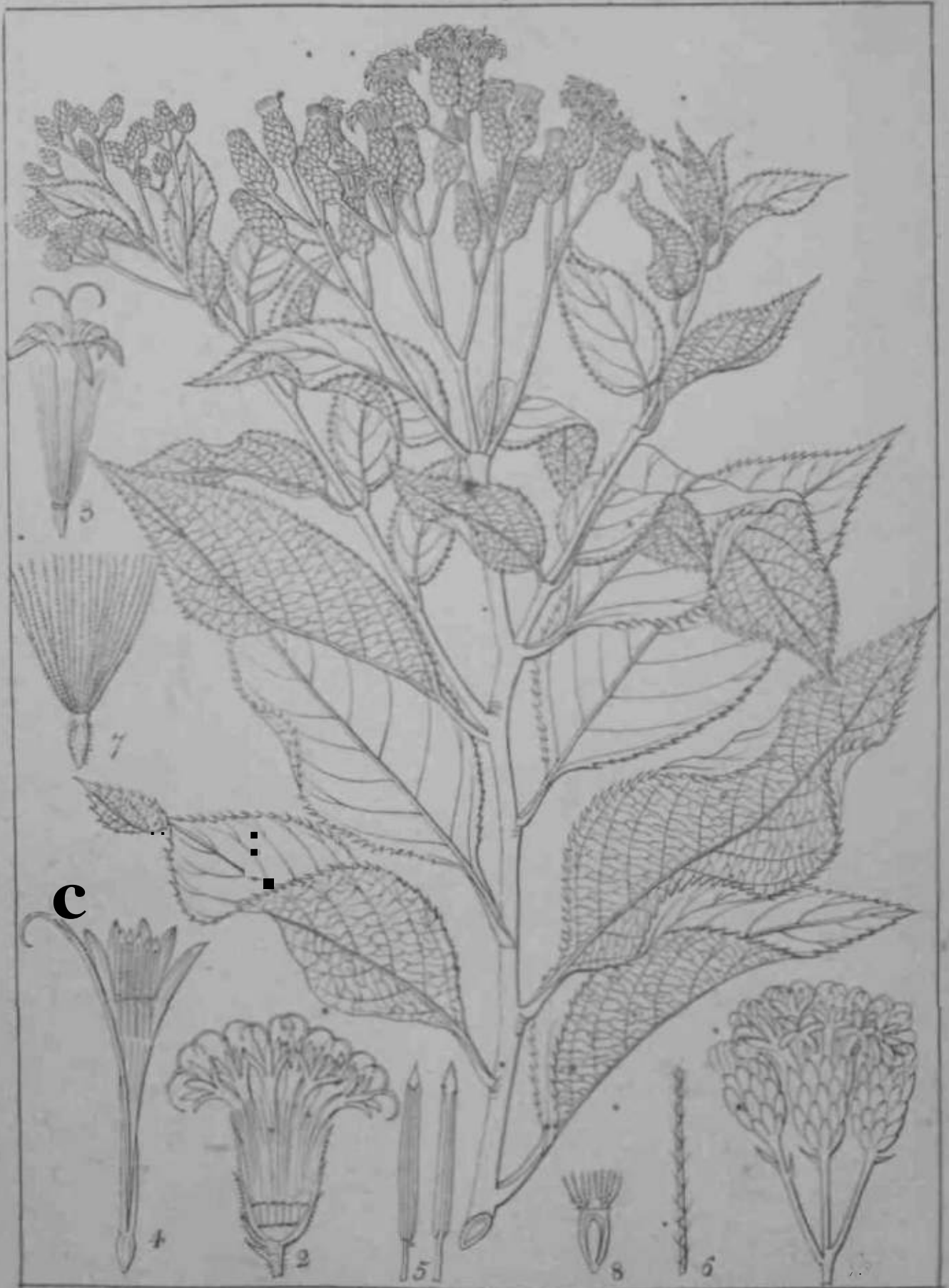
Plumbago indica (L.) Pers. M. 55



Engelm., det.

Vernonia conyzoides (D.C.)

Gray, det.



c

Engelm. Bot.

Vernonia pectiniformis (D.C.)

Engelm. Bot.



Vernonia Vulgherensis (D.C.)



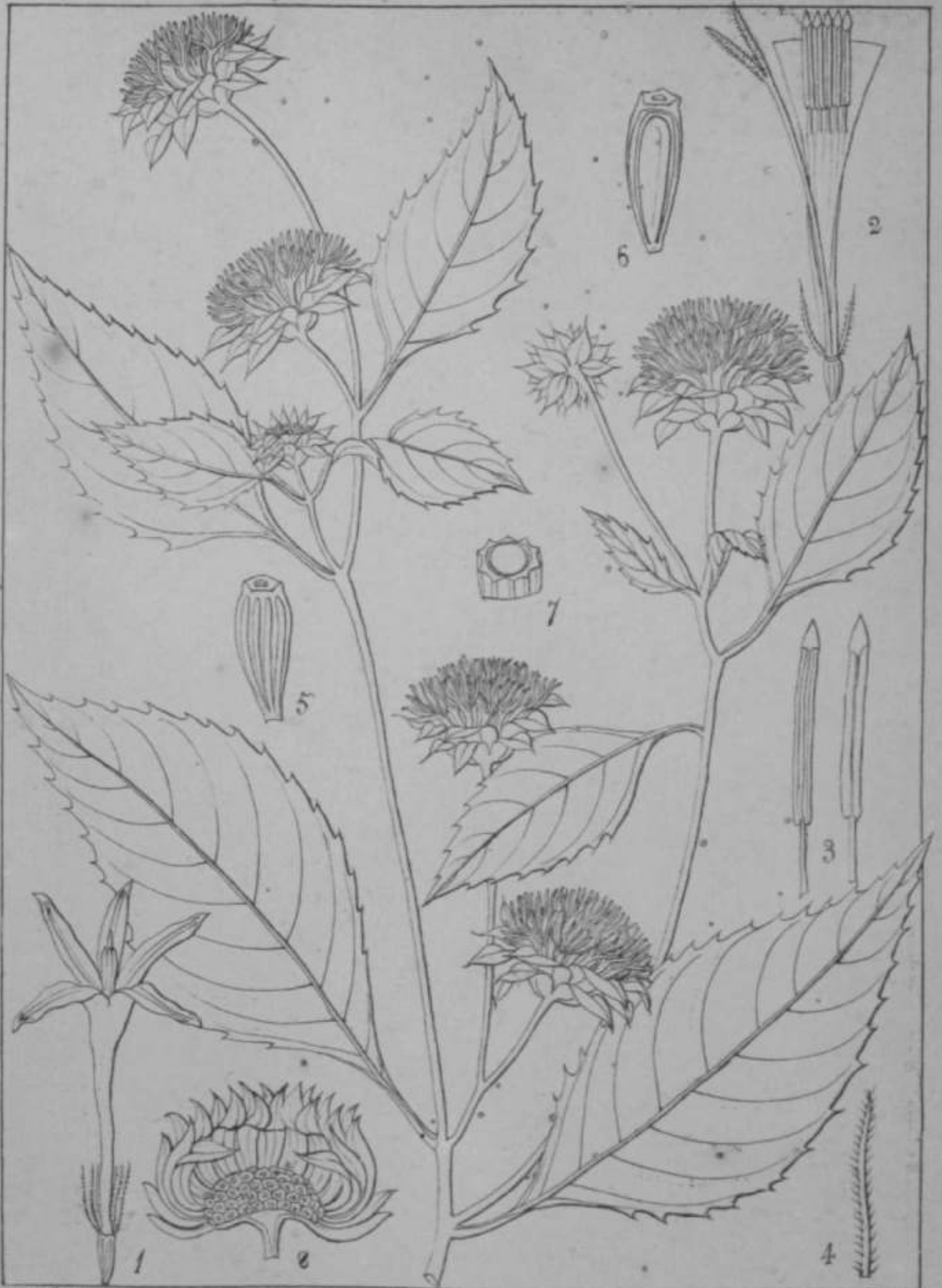
Vernonia salvifolia (R. W.)



Dicranerum reticulatum (L.) DC.



Dacnusa courtalense (R. W.)



Engelm. del.

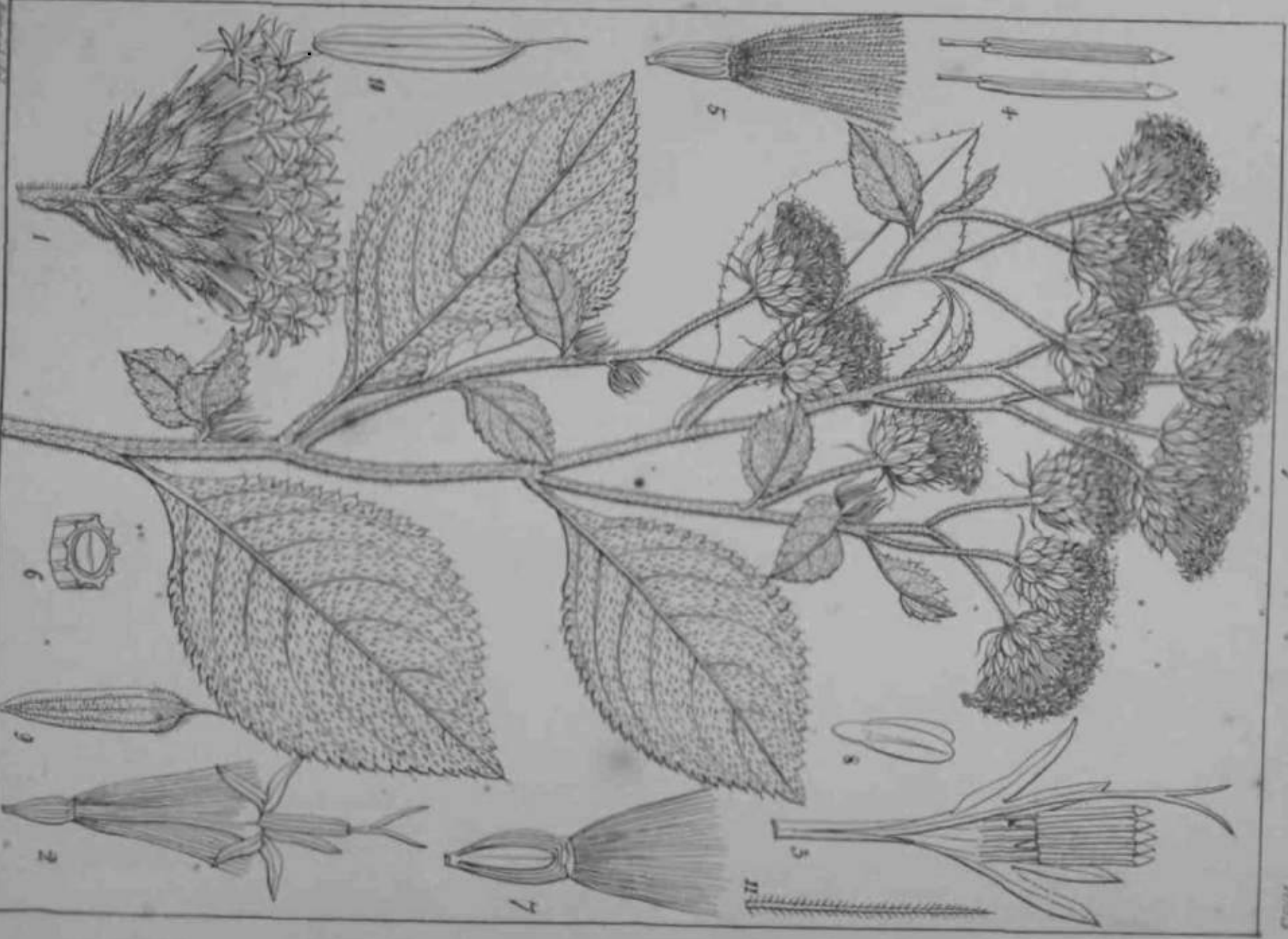
Wright. sculp.

Desmodium molle (D.C.)
et *Epiphanes* f.

Thymus

Compositae

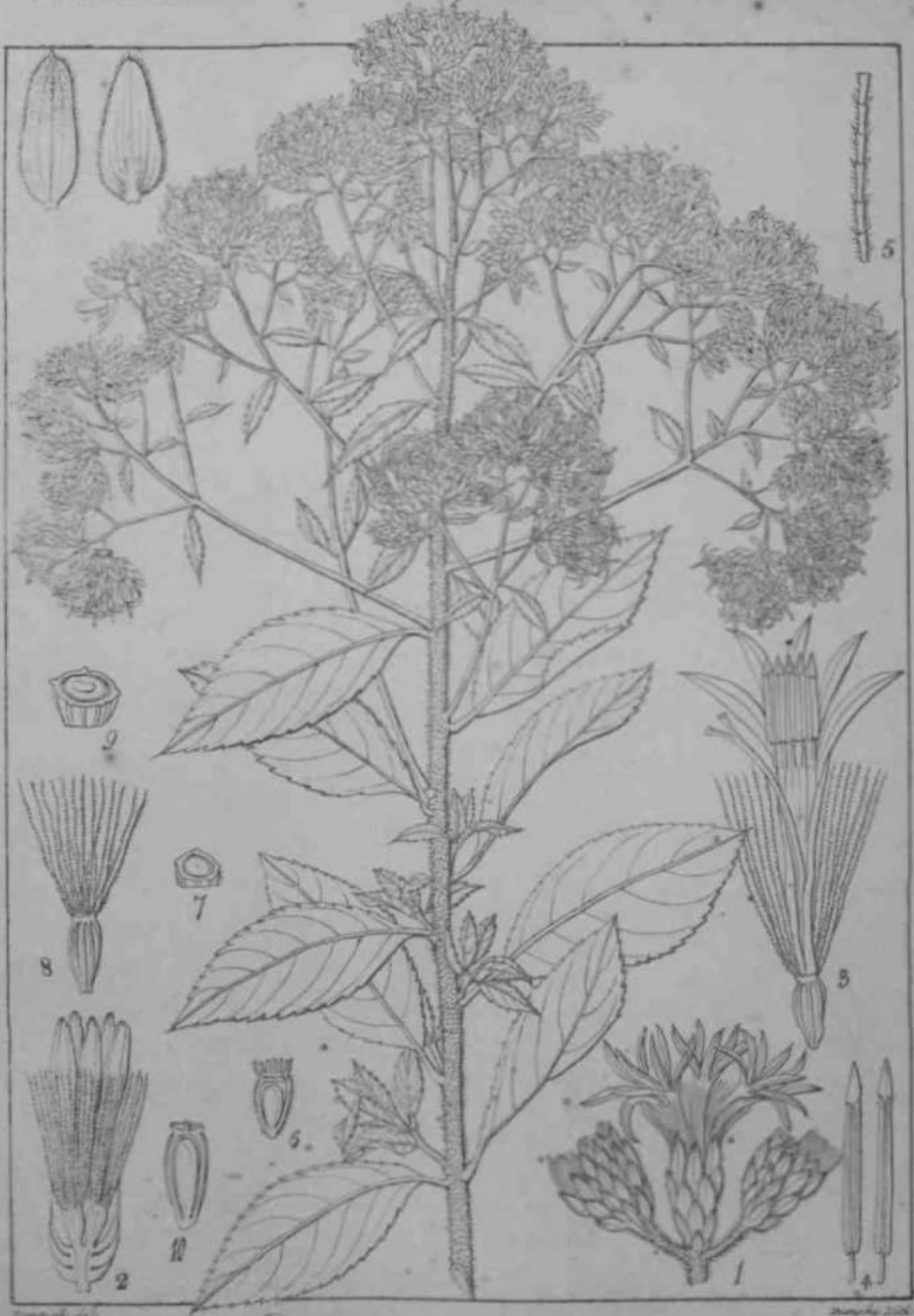
1853



Thymus sibiricus (D.C.)

Engelm. Bot.

Boiss. Fl. Sib.



Picaneurum divergens (P.C.)

Engelm. et al.

Wright 2102



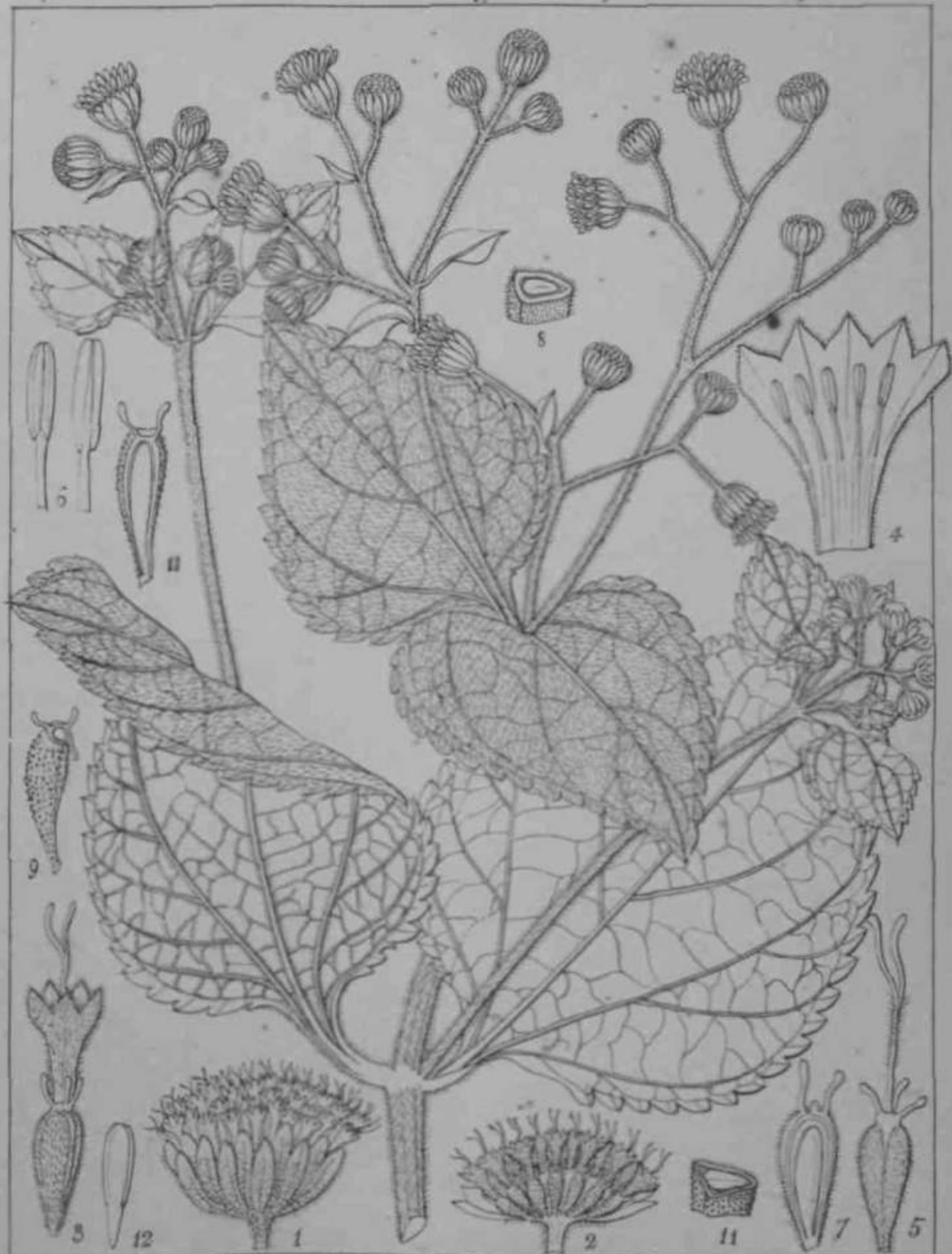
Drummond, Bot.

Monosia Wightiana

Drummond, Bot.



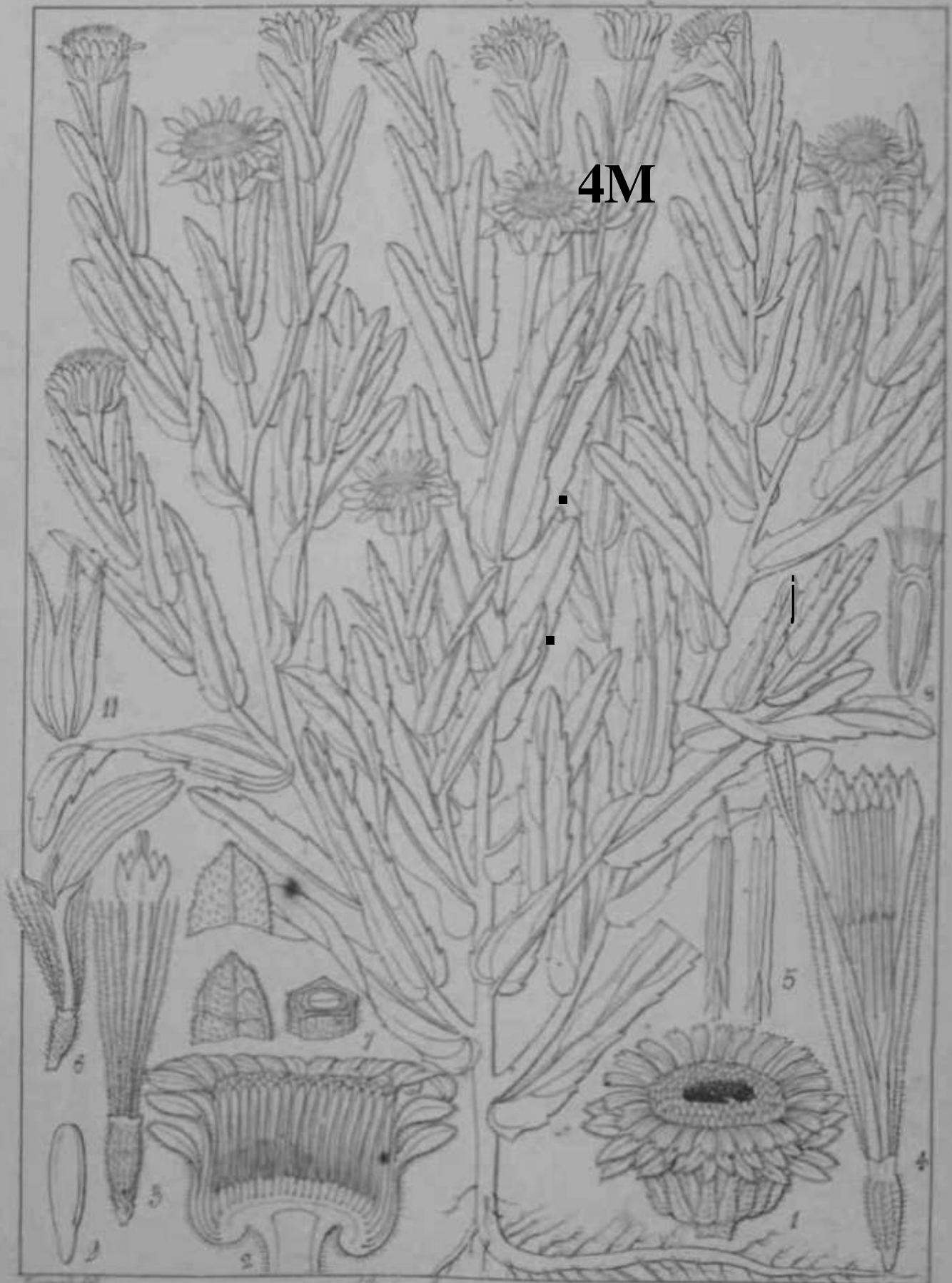
Elephantopus scaber (Lin.)



Adenostemma latifolium (D.C.)

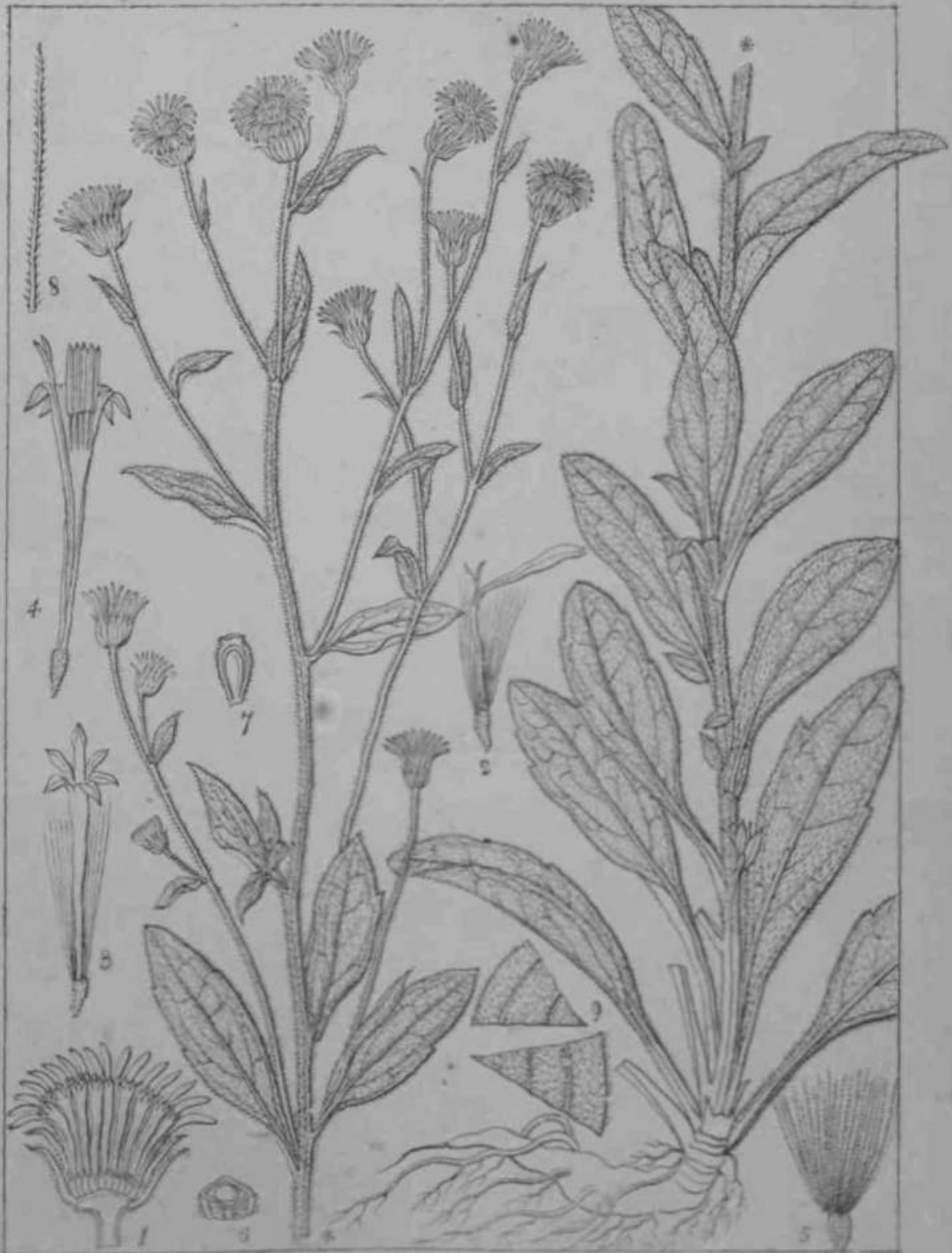


Adenostemma reticulatum (D. C.)



4M

Callistephus vWJA ighianus (D.C.)



Wightii (D. C.)

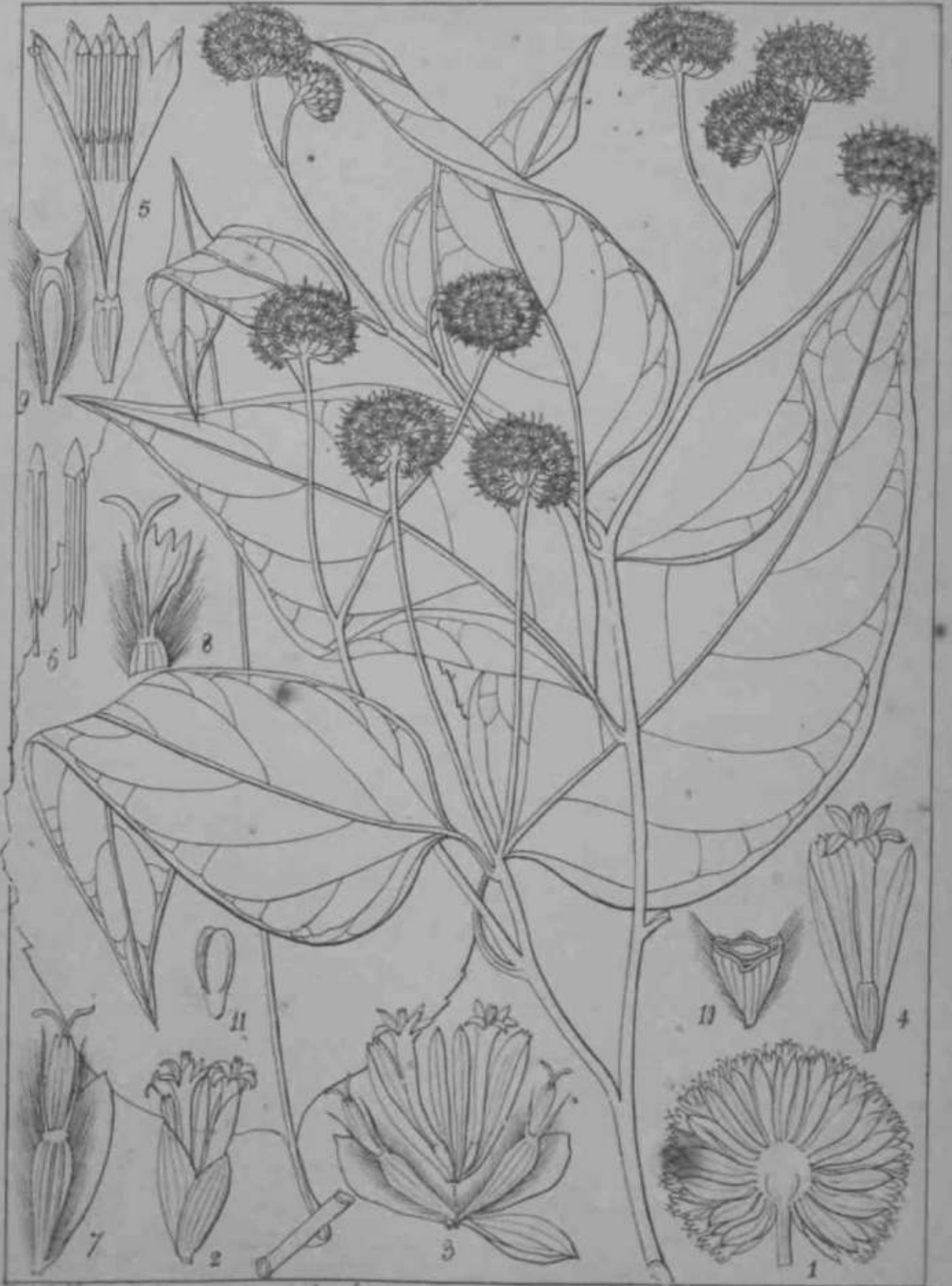
Eugenia Wightii (D. C.)

Dumphy Lond.

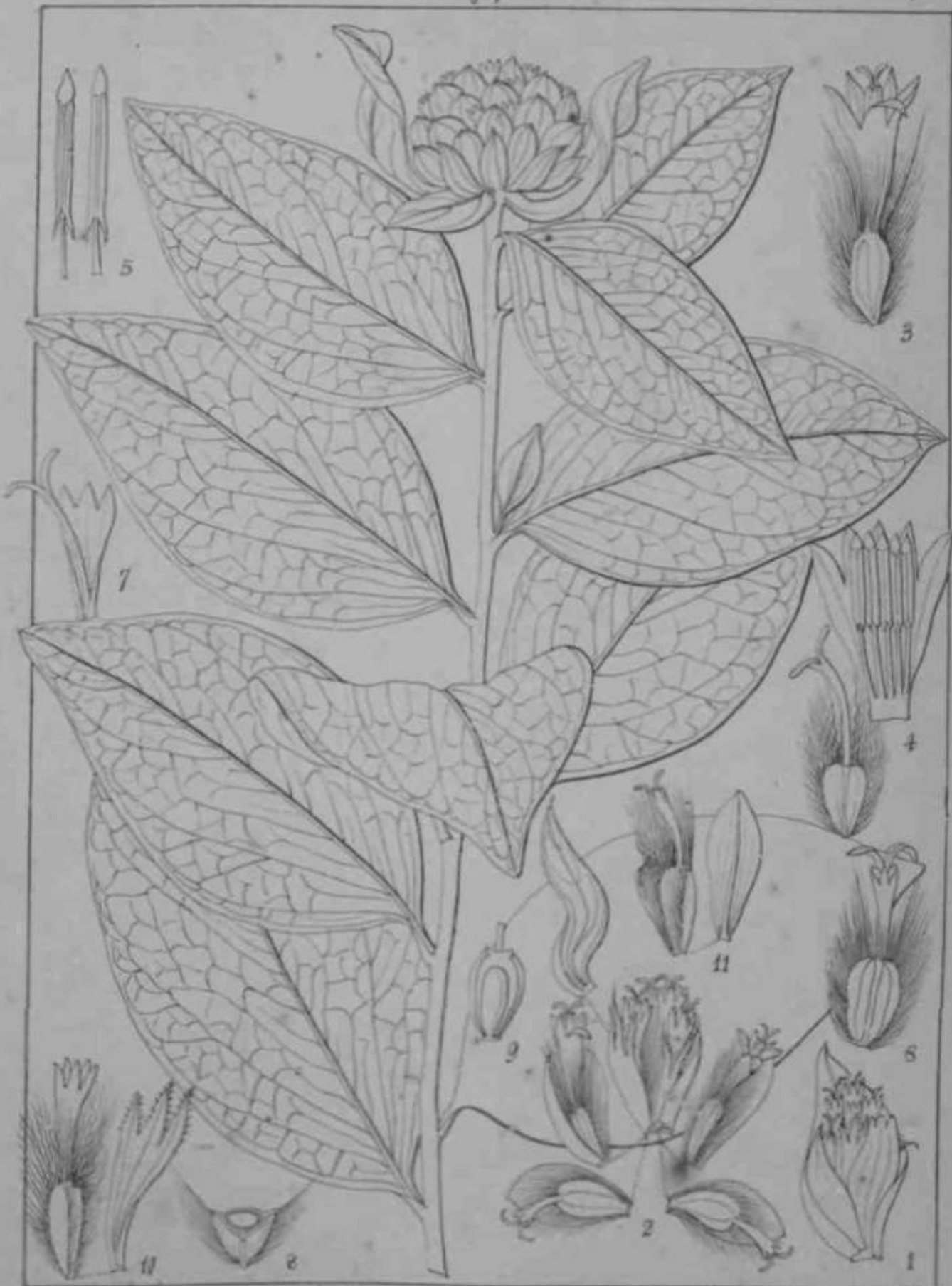


Myriactis Wightii (D.C.)

Drummond, 1827



Blepharispermun n 4, / clare (D.C.)



Blepharispernum subsessile (D.C.)



\ i

Sphaeranthus hirtus (Willd.)

Asteroides

Compositae

1096

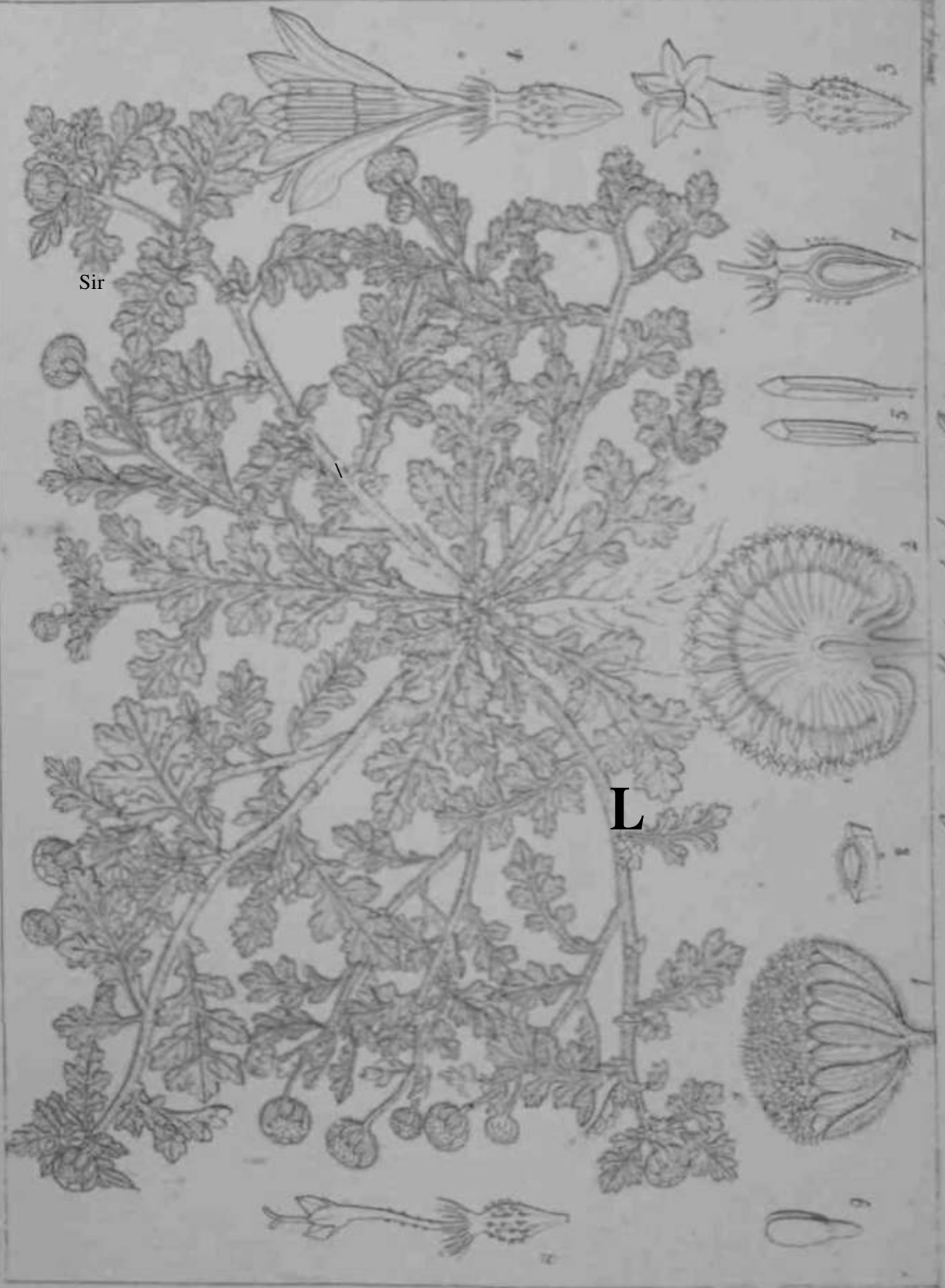


Tuberosophala latifolia (DC.)

Asteridea!

Compositae!

1047



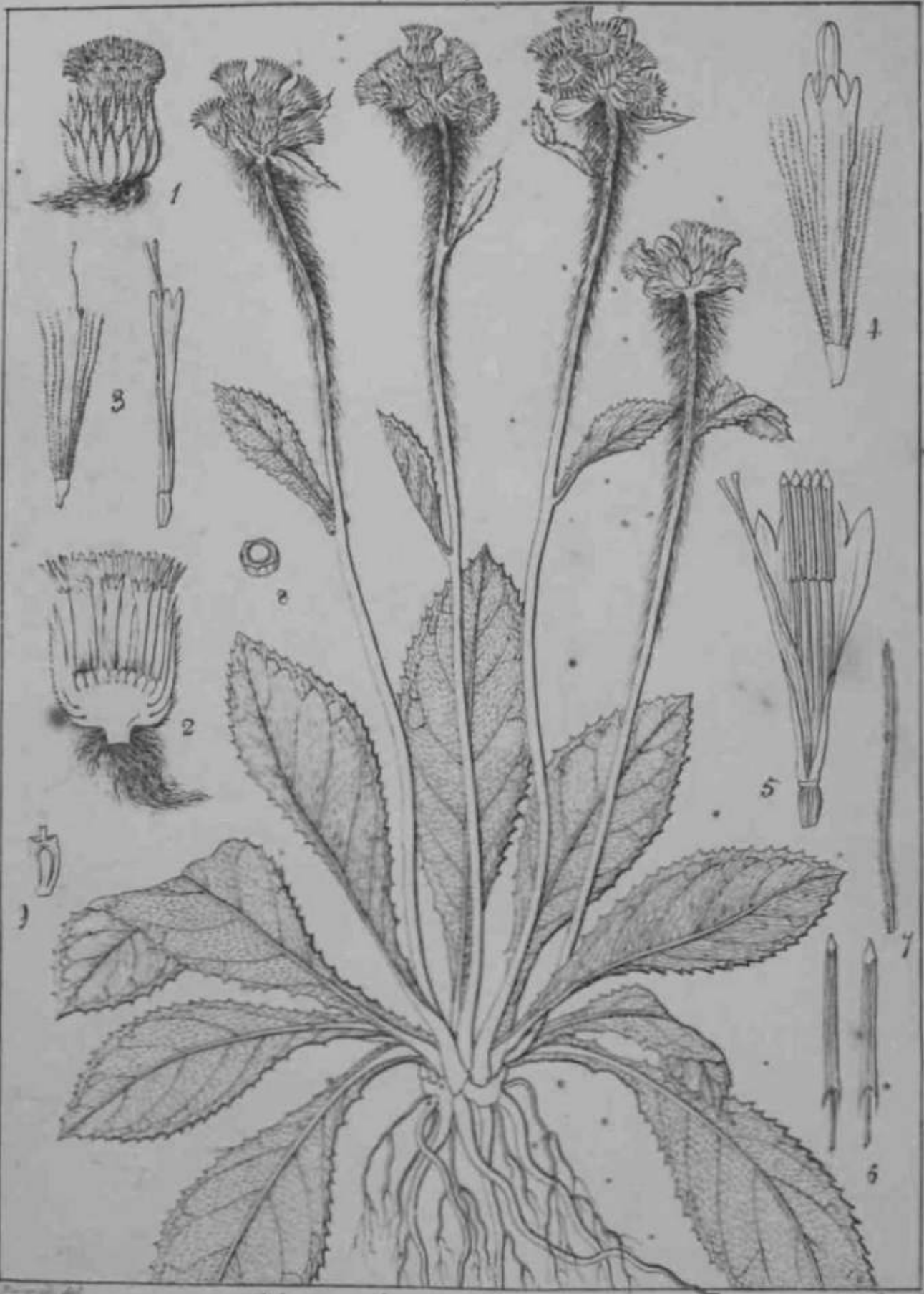
Grangea Madagascariensis (Reichb.)



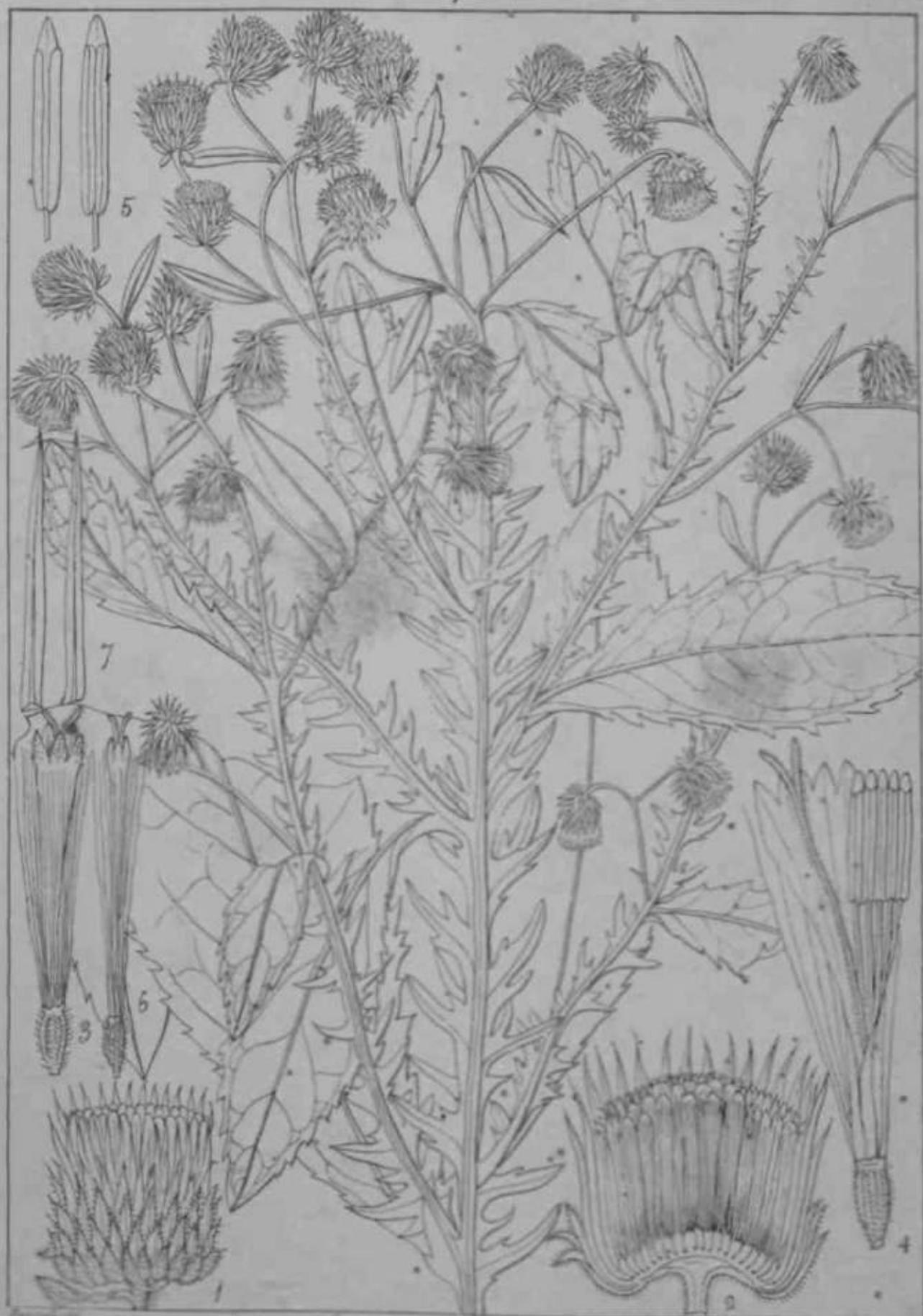
Wiegmann, del.

Wiegmann, del.

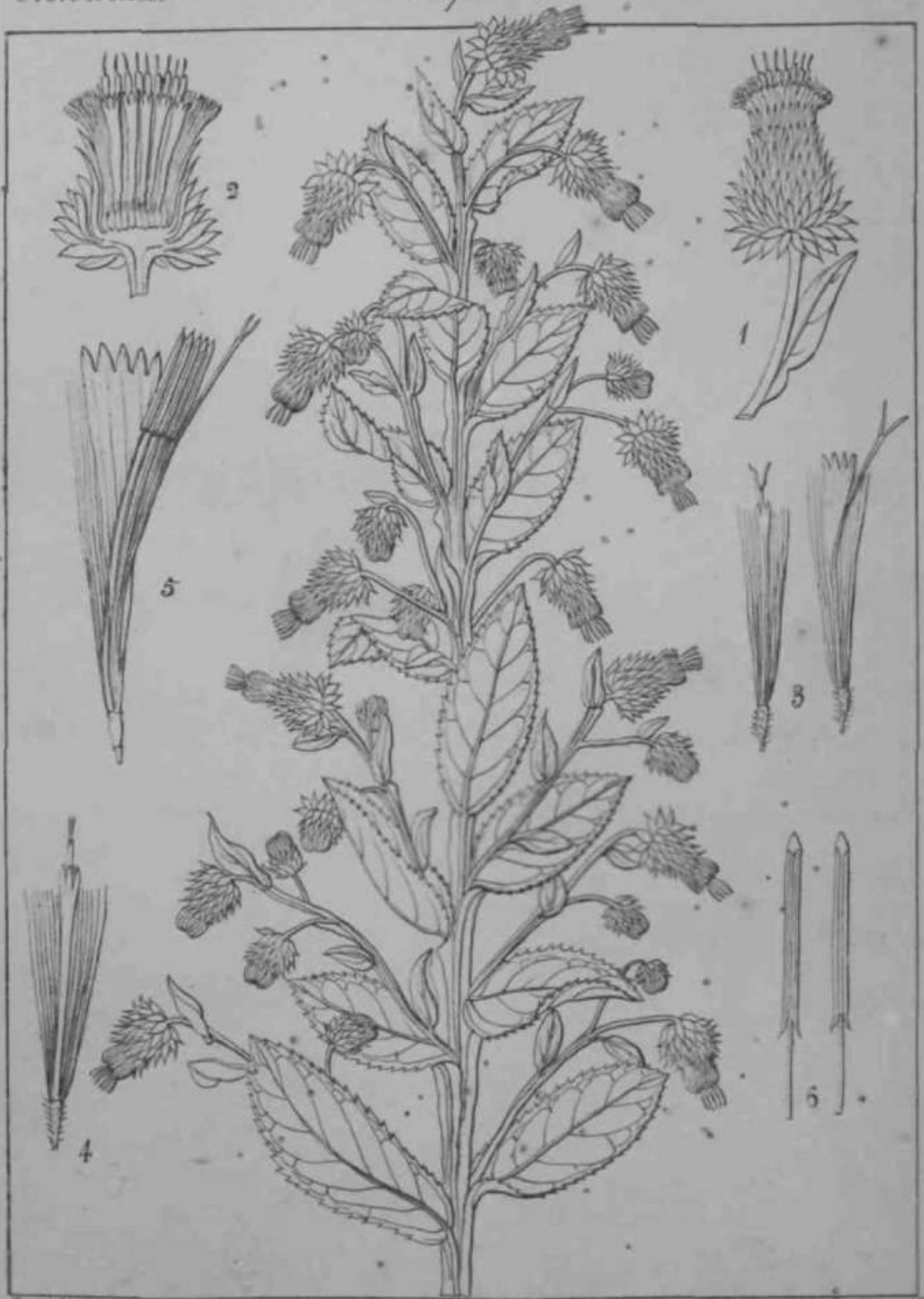
Cyathocline lyrata (D.C.)



Blumea hircacifolia (D.C.)



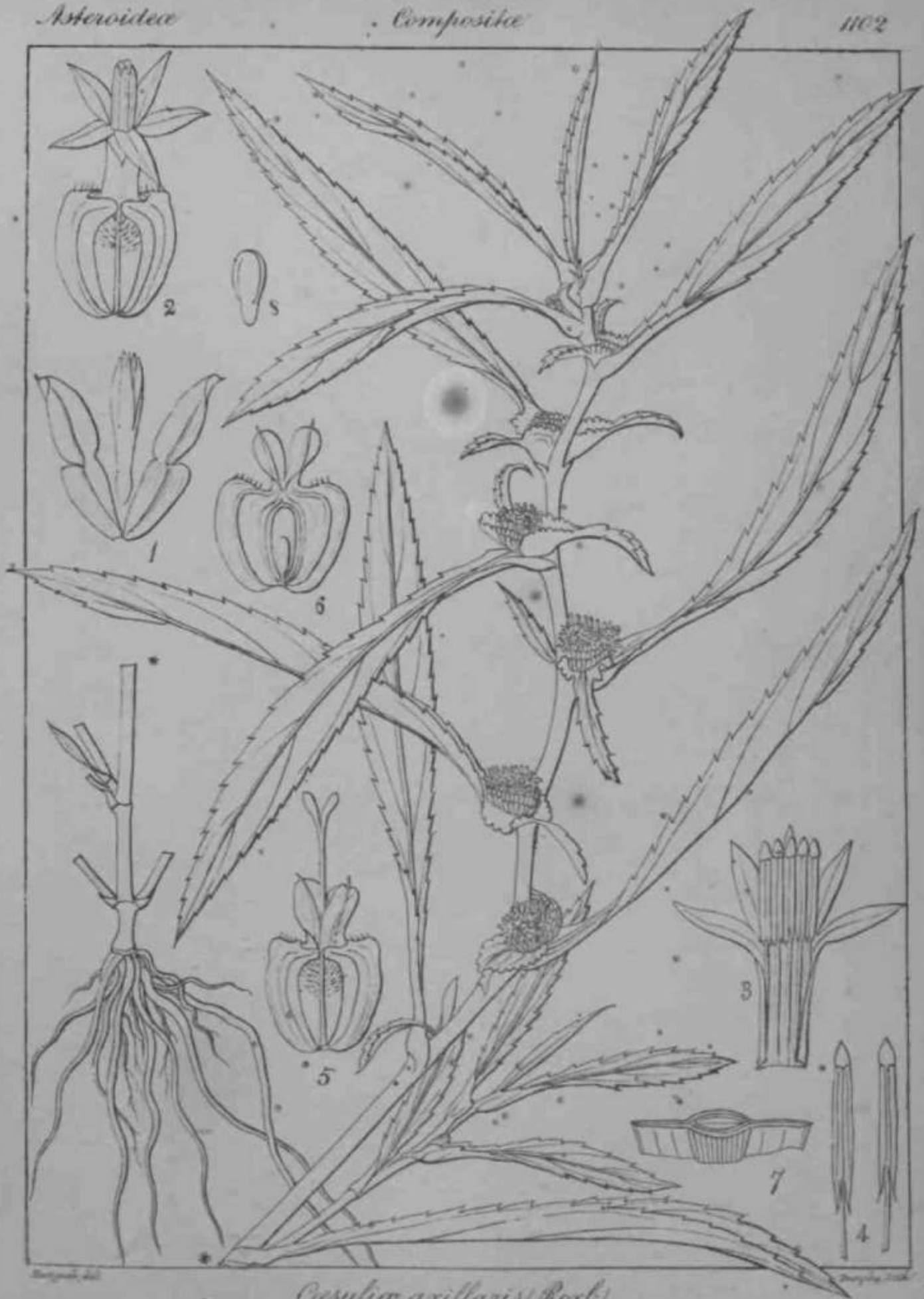
Humect pharodonta DC.



Engelm. det.

Windsor, 1888

Blumea alata (D.C.)
B. cernua



Cuscutia axillaris (Roxb.)



Rungtsh del.

Siegesbeckia orientalis (Lin.)

Dumfry Lith.



Xanthium indicum (Roost)

Wiegand, Bot.



All.

1^

Langsdorff del.

Humphry Zuck.

Moonia Arnottiana (R. W.)



Thunberg del.

Widelia urticifolia (D. C.)

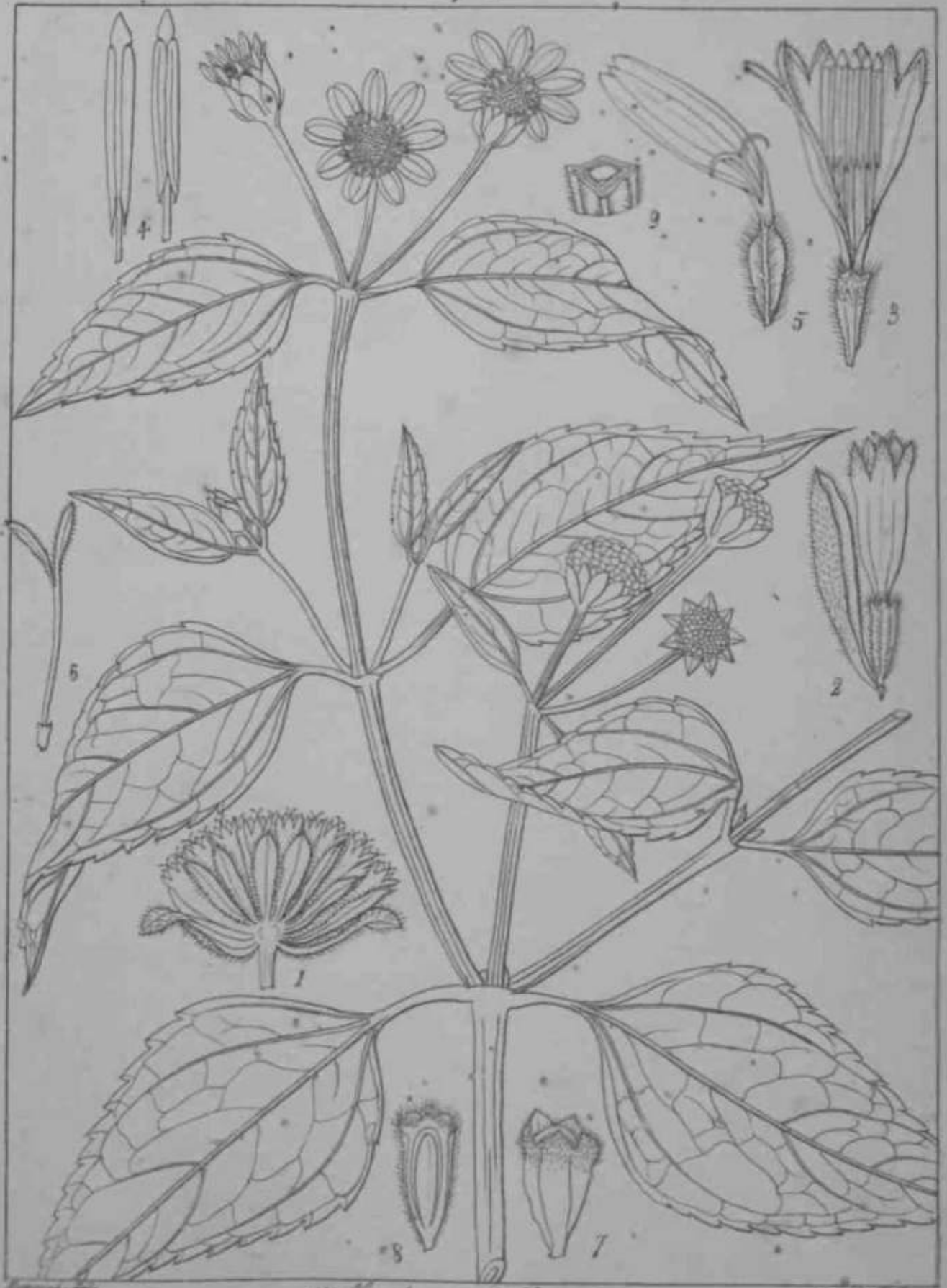
Thunberg del.



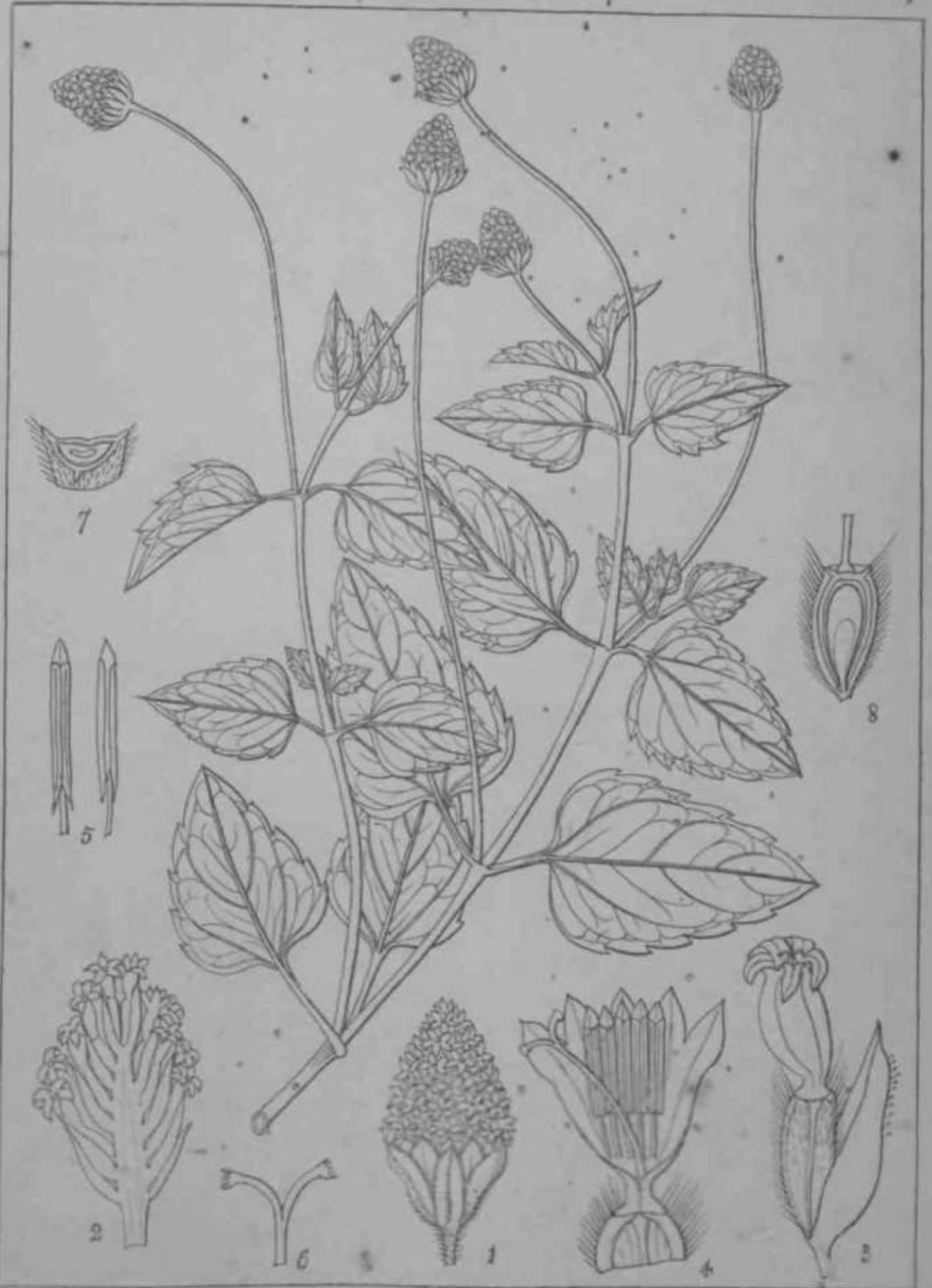
Kunze del.

Wedelia calandulacea (L.f.)

Z. Griffith sculp.



Hellestonia biflora (D.C.)

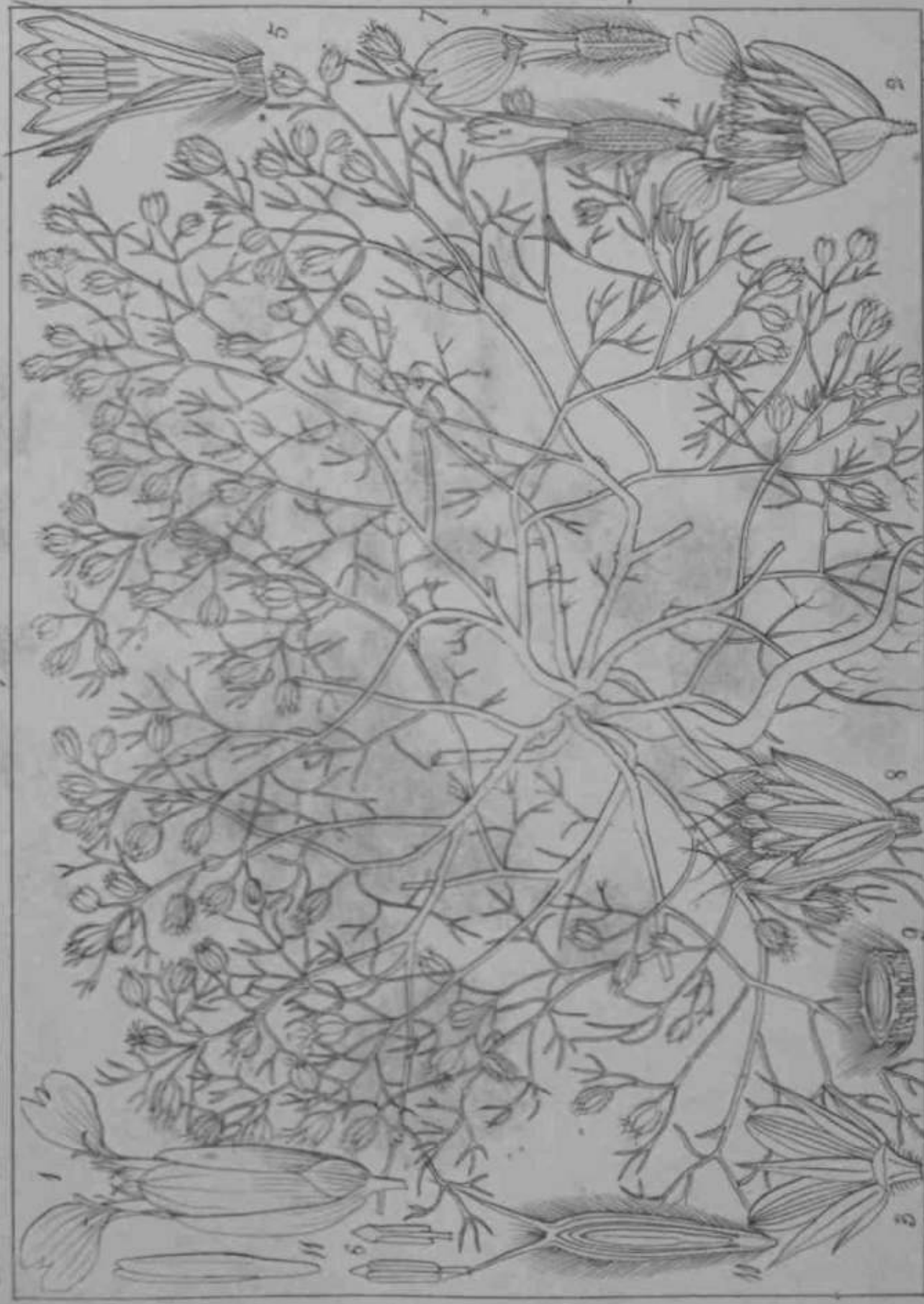


Spilanthes calva (D.C.)
B.S. Ulexaceu (Jacq.)

Amnicoidae.

Compositae.

110



Glossocardia Brewallii (D.C.)

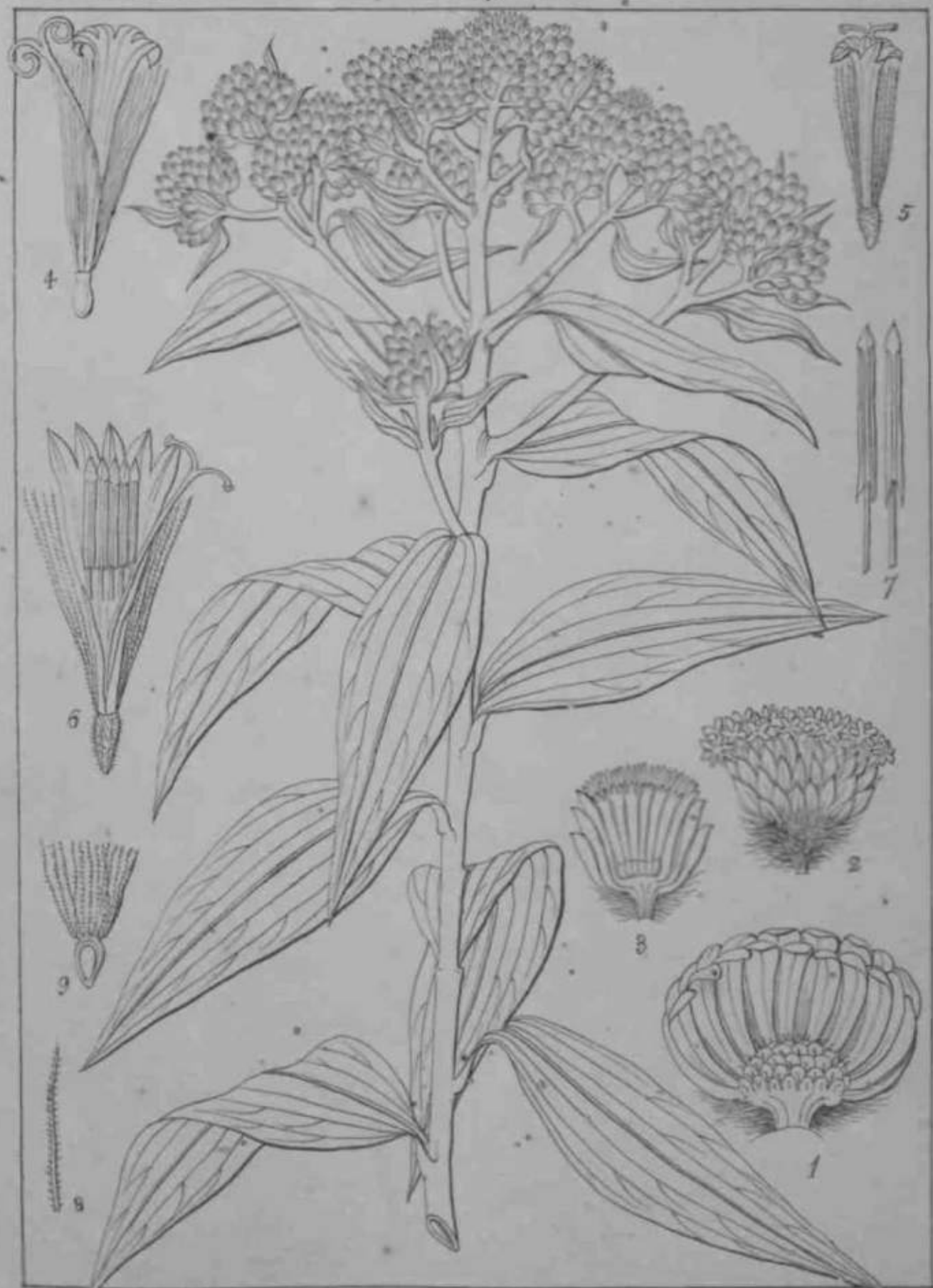
Wiegmann, Bot.



Artemisia glabrata (Walt.)



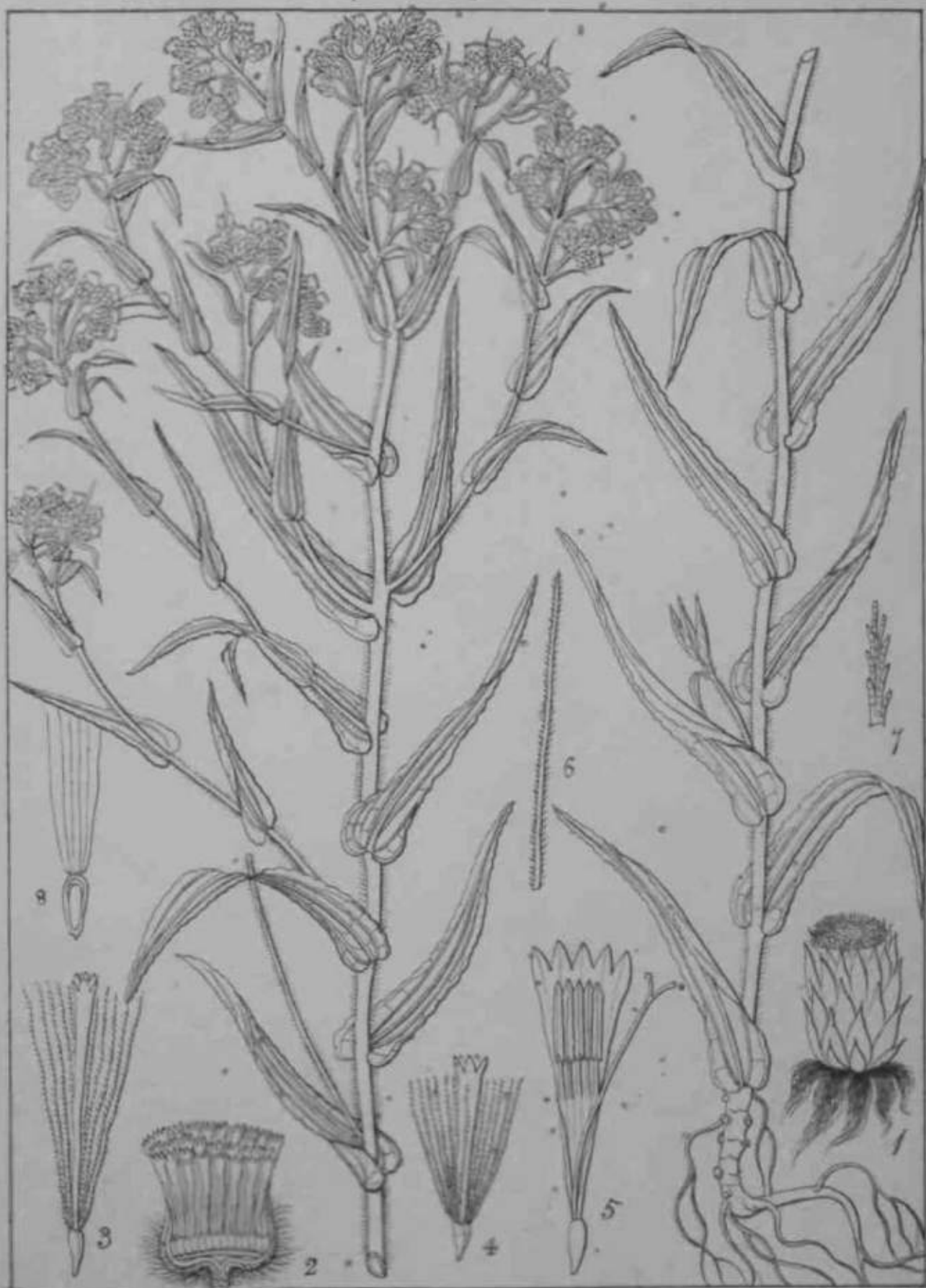
Artemisia Indica (Mild.)



Rangiah del.

Dumort. sculp.

Helichrysum buddleioides (D. C.)



Dunlop del.

Gnaphalium hypoleucum (D.C.)

Dunlop sculp.



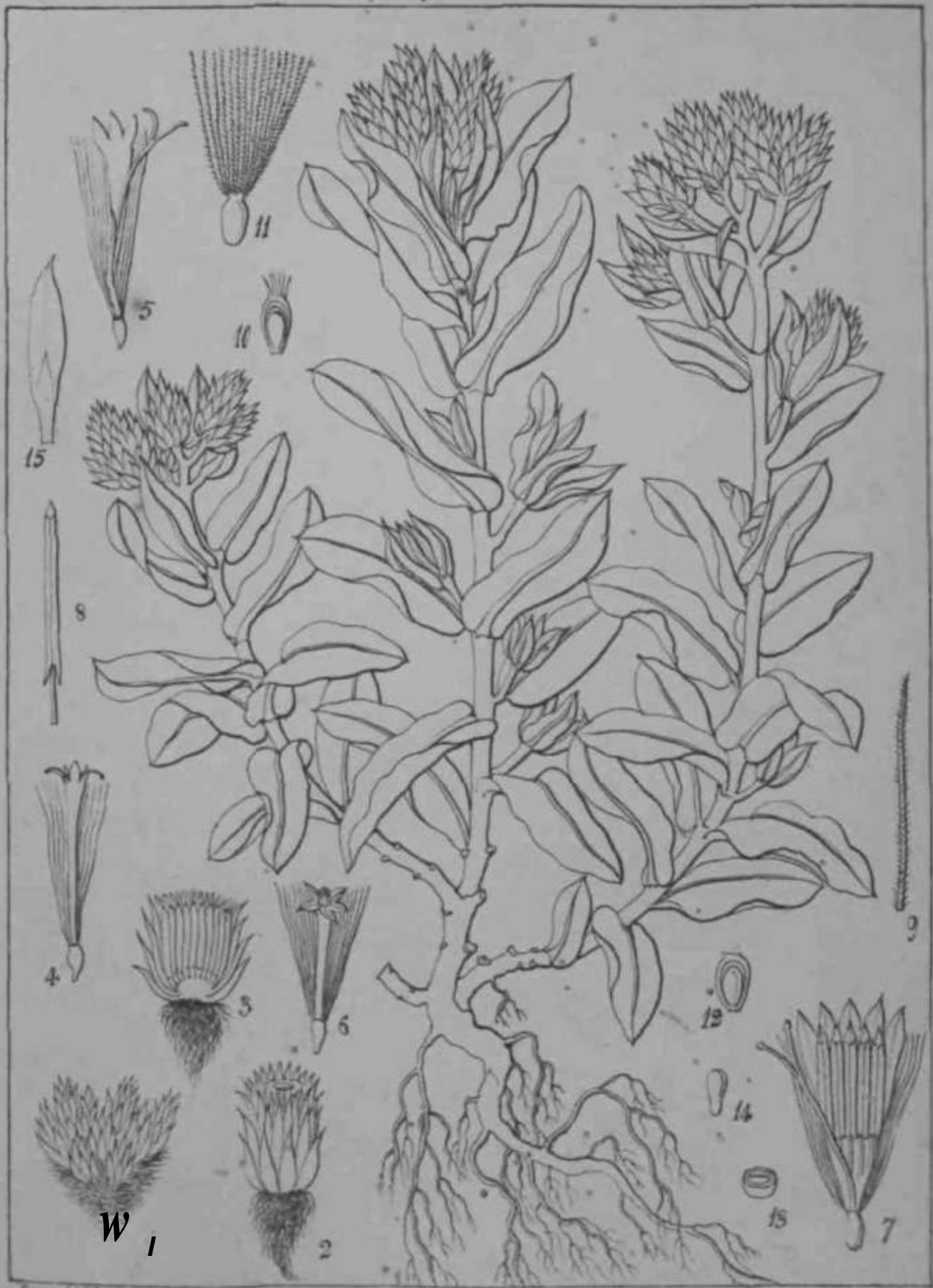
Gnaphalium maricensens (R. W.)



Anaphalis nitensiana (D.C.)



Anaphalis Mighliciana (D.C.)



W 1

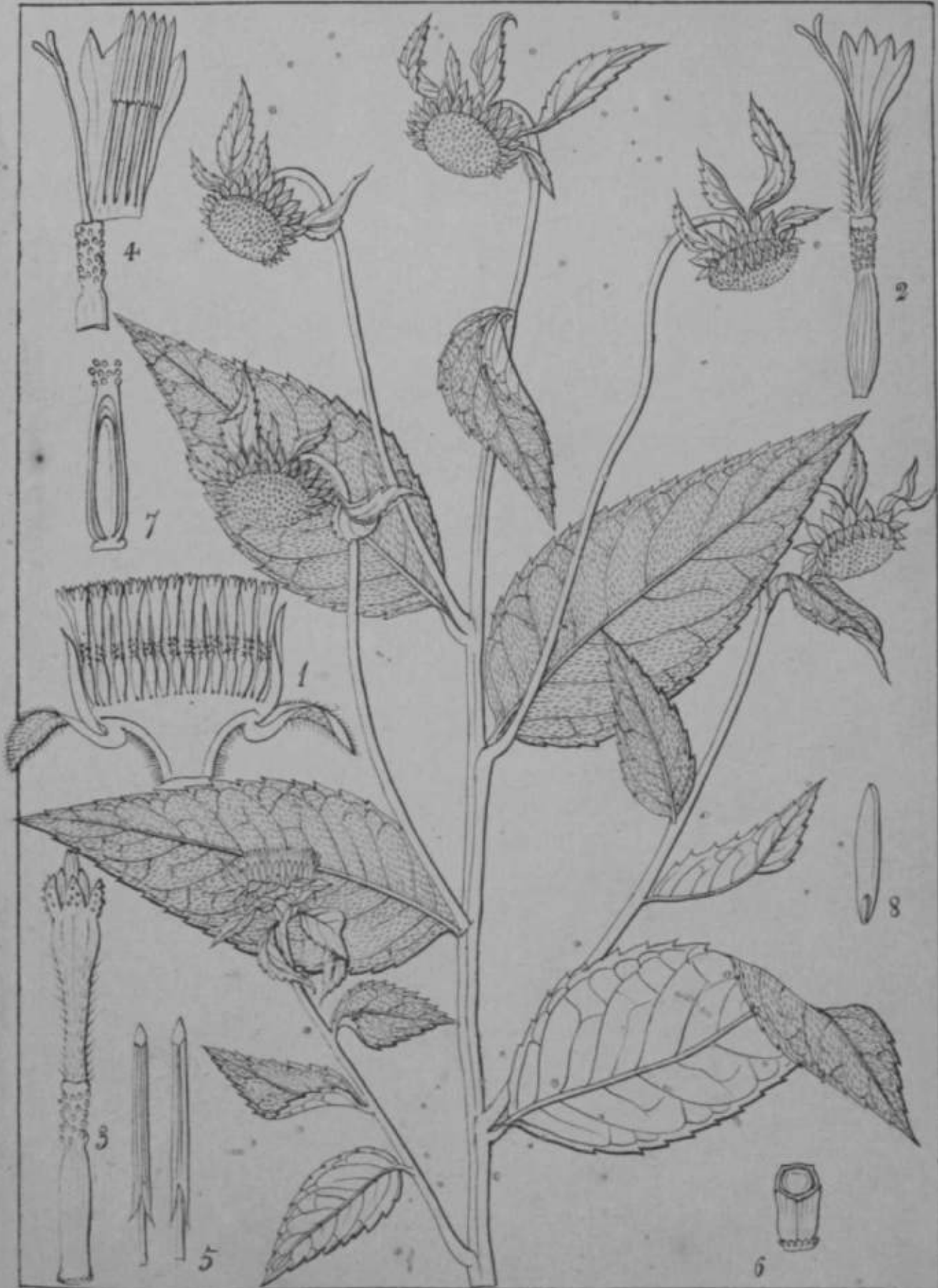
Anaphalis elliptica (D.C.)

Engelm., del.

W. & A. G. & P., lith.



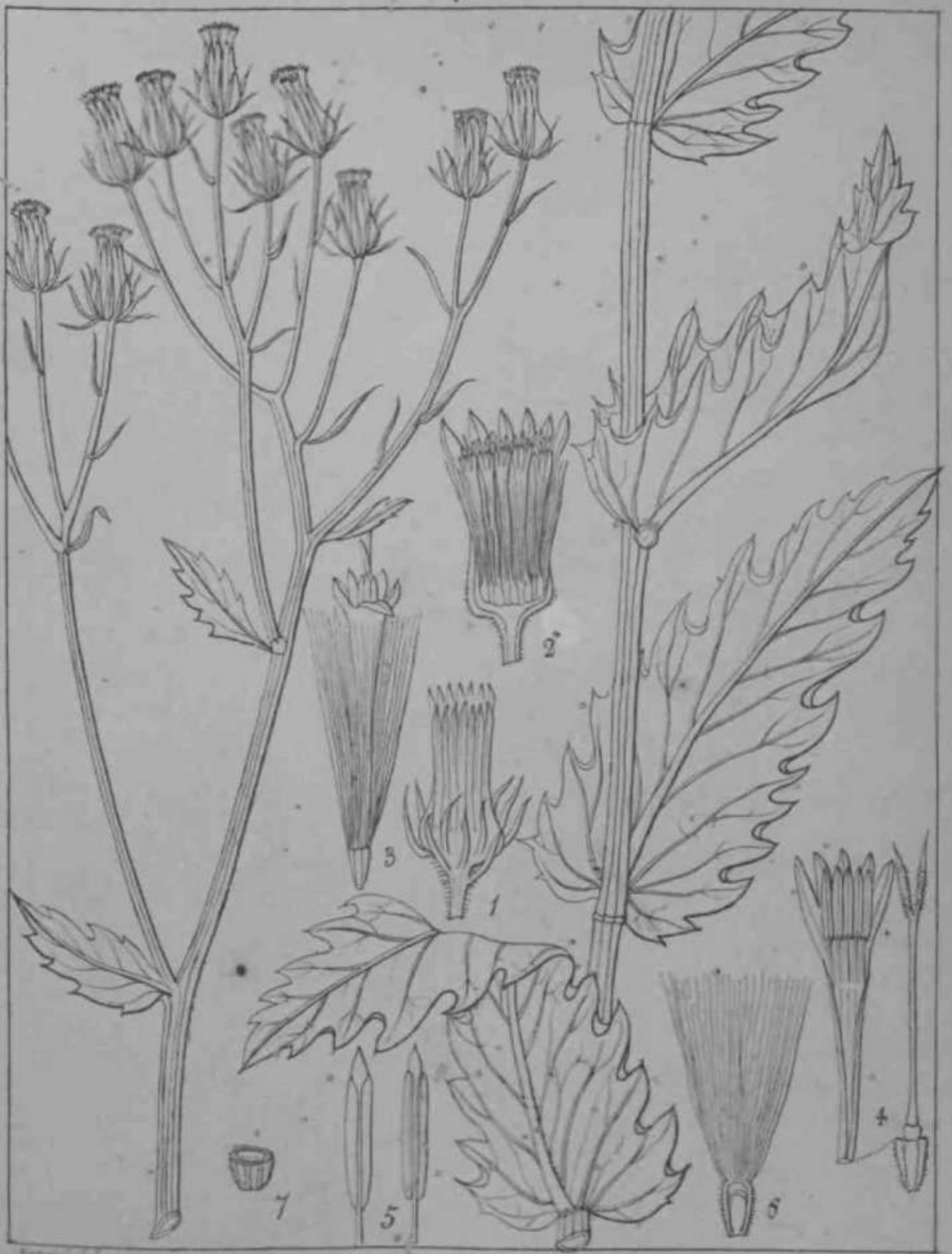
Anaphalis aristata (D.C.)



Rampal, del.

Carpesium Nipalense (Less)

Dumyba, scul.



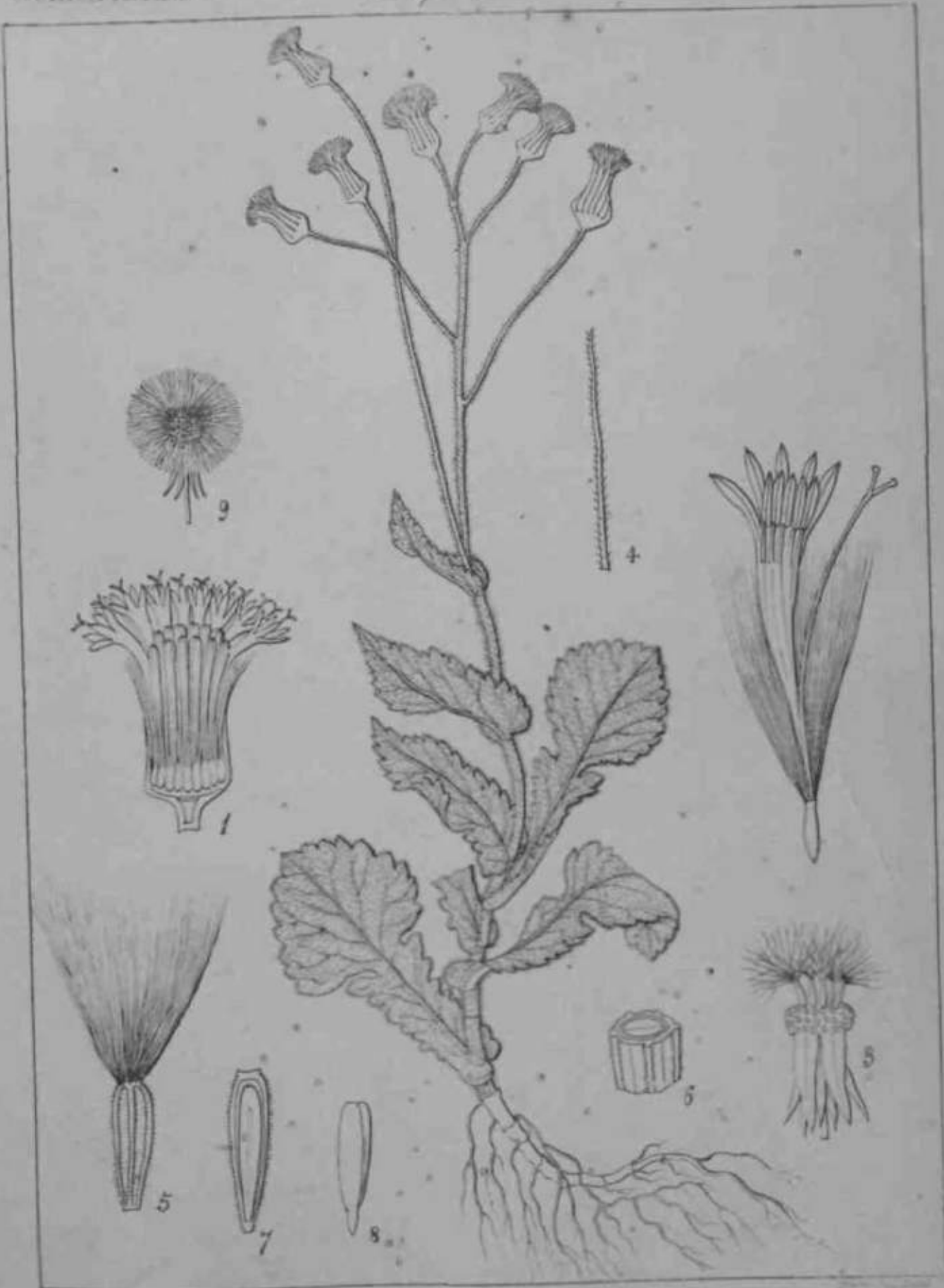
Gynura nitida (D.C.)

Winters

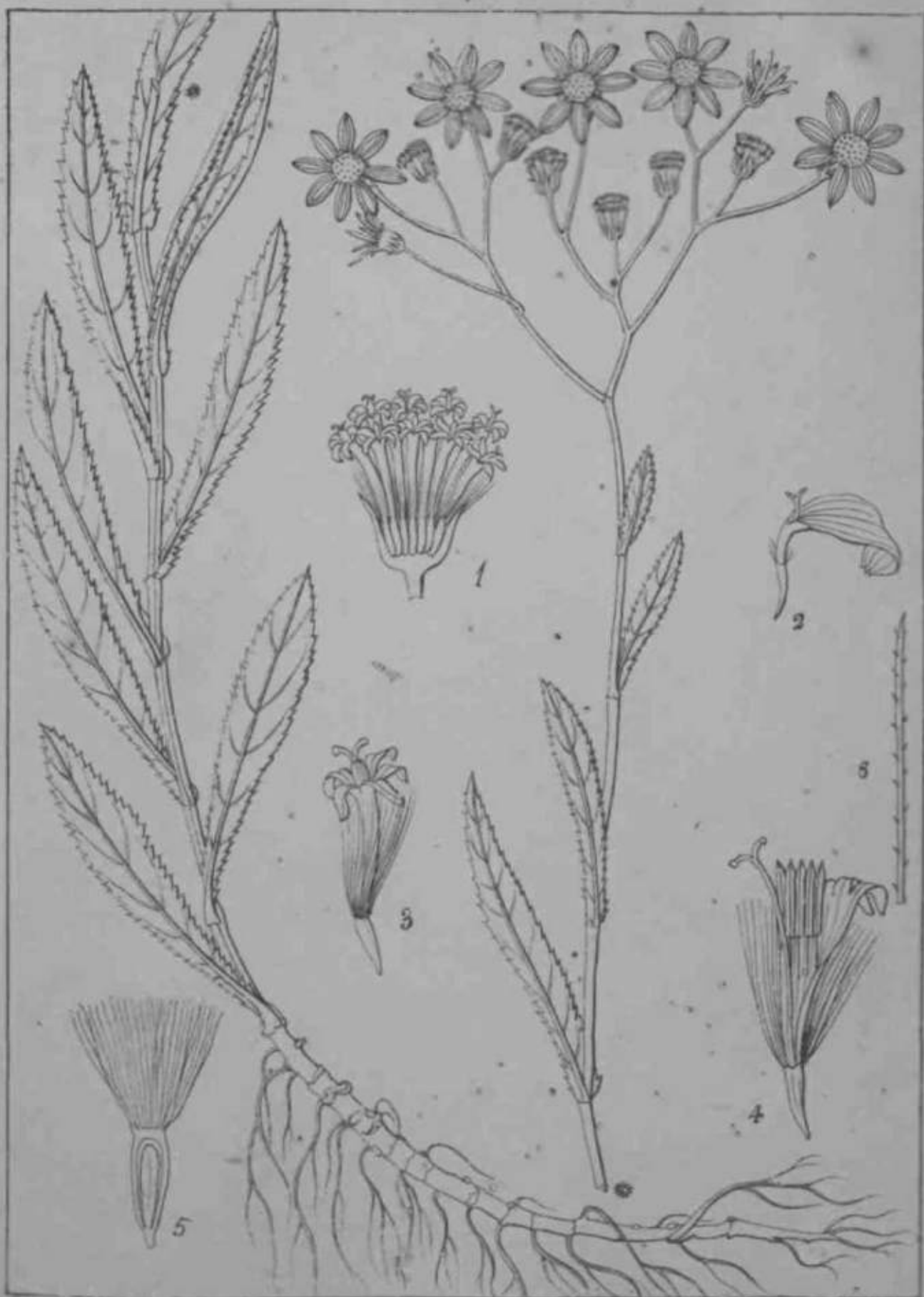
Winters



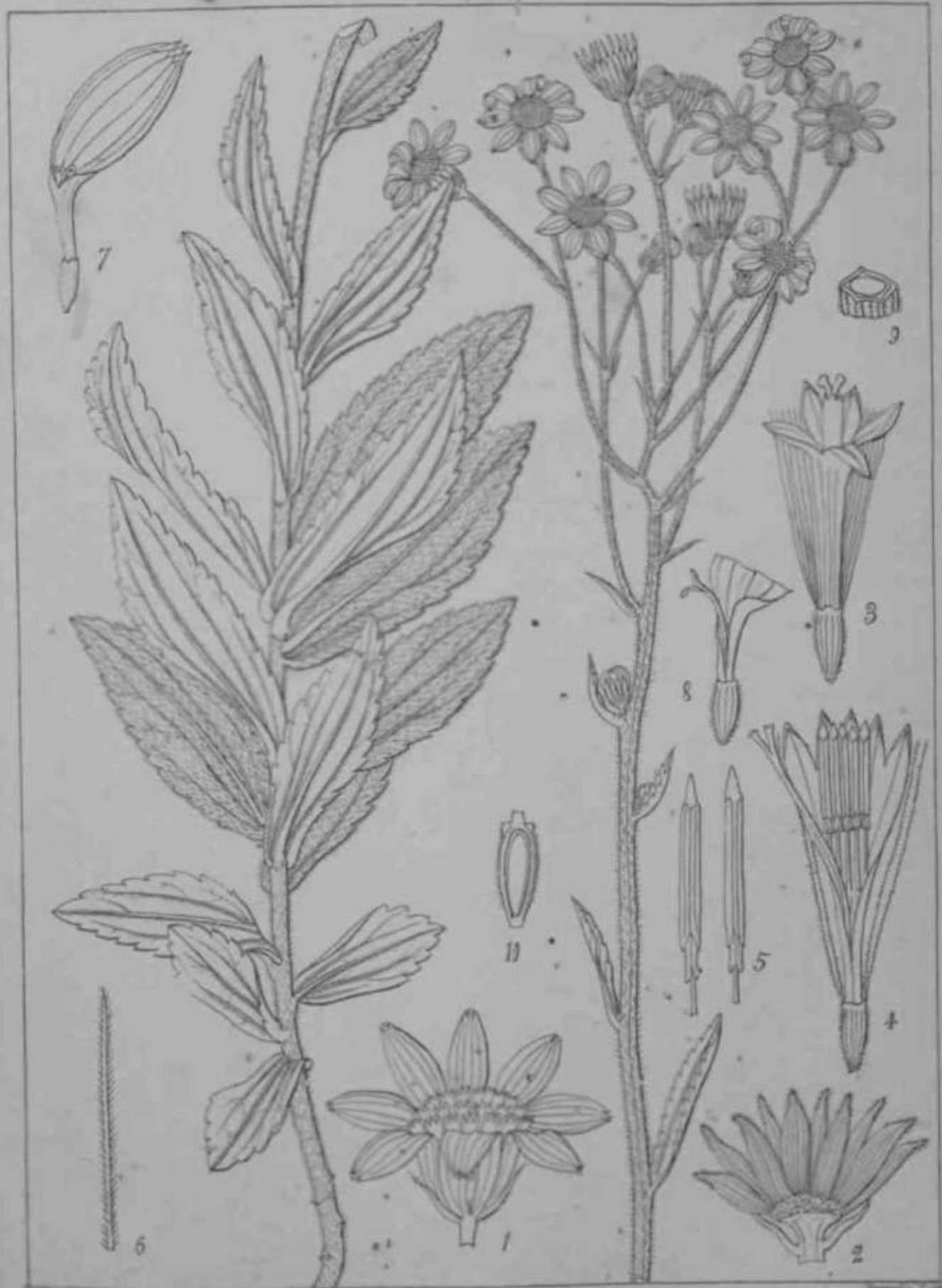
Gynura Waltheri 2/17



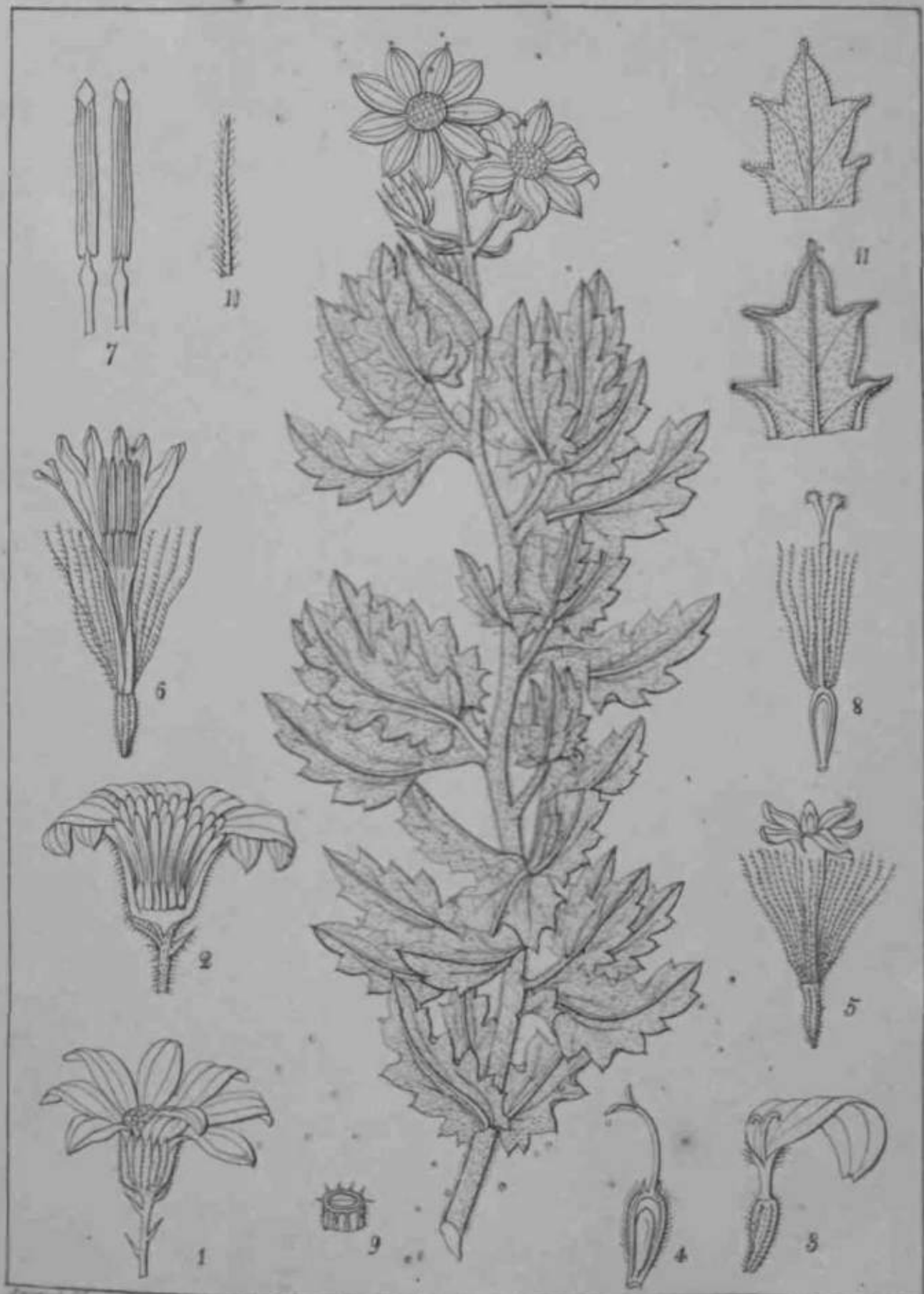
Emilia scabra (D. C.)



Doronicum Wightii (D.C.)



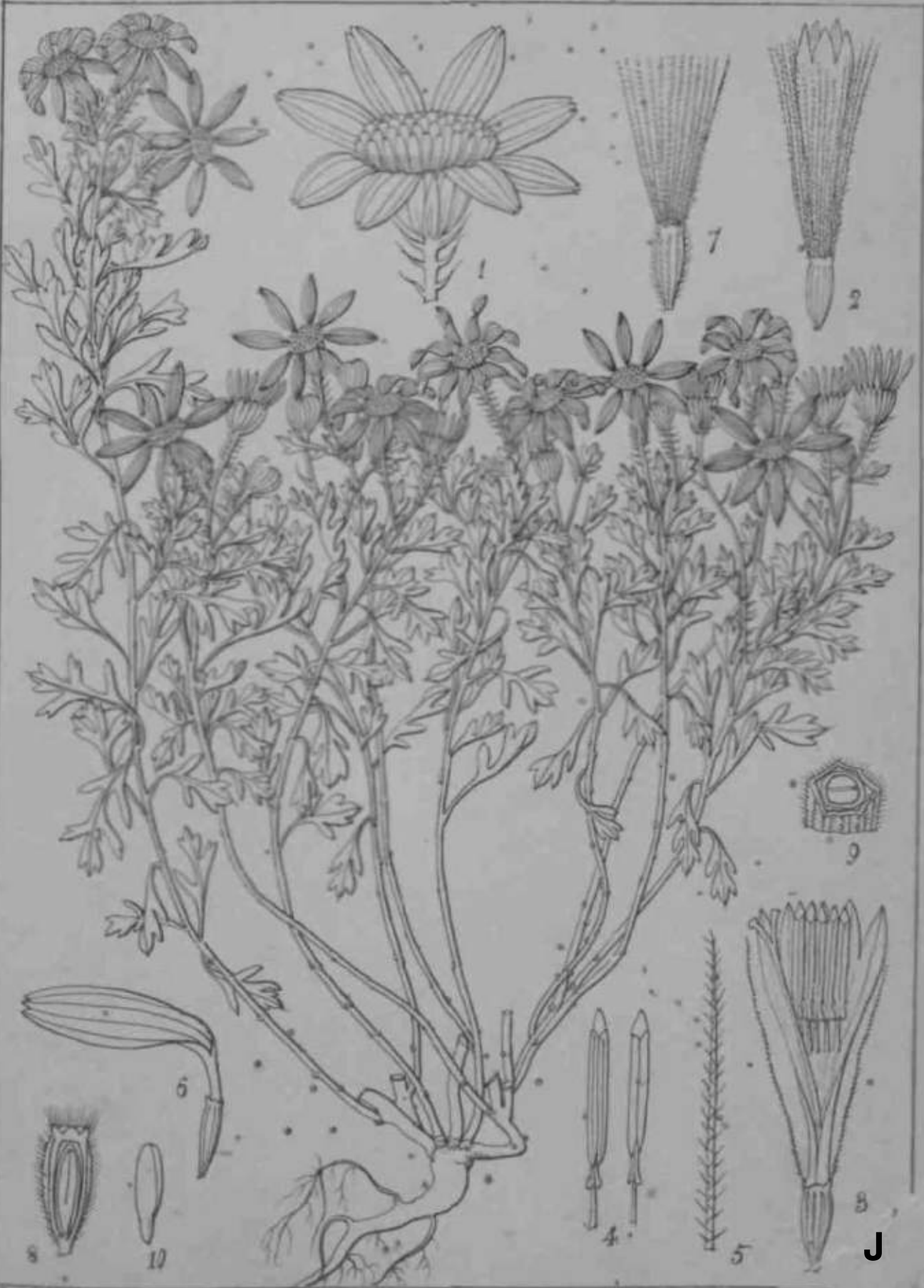
Toronicum Arnottii (D.C.)



Doronicum Lessingianum (Arn)



Dronium candolianum (Am.)



Doronicum rupestre



Dronium tenuifolium (R. W.)



Senecio corymbosus

Boissier

Boissier



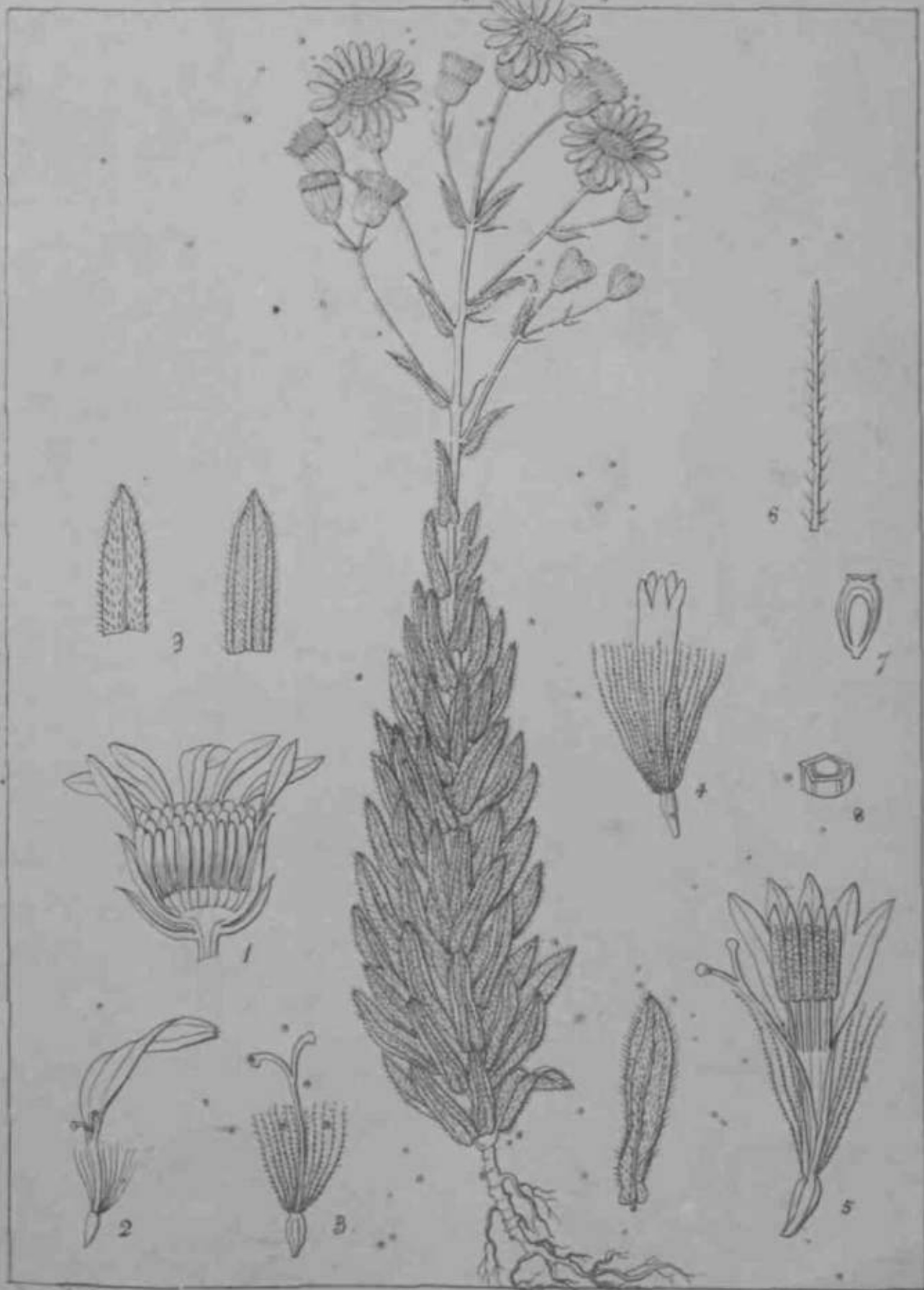
Senecia Walpolei



Wagner del.

Senecio vulgarianus, L. C.

Wagner del.



Senecis lavandulifolius (Wall.)



Burgess/col.

Senecio candicans (Wall.)

Drawn by L. C. C.



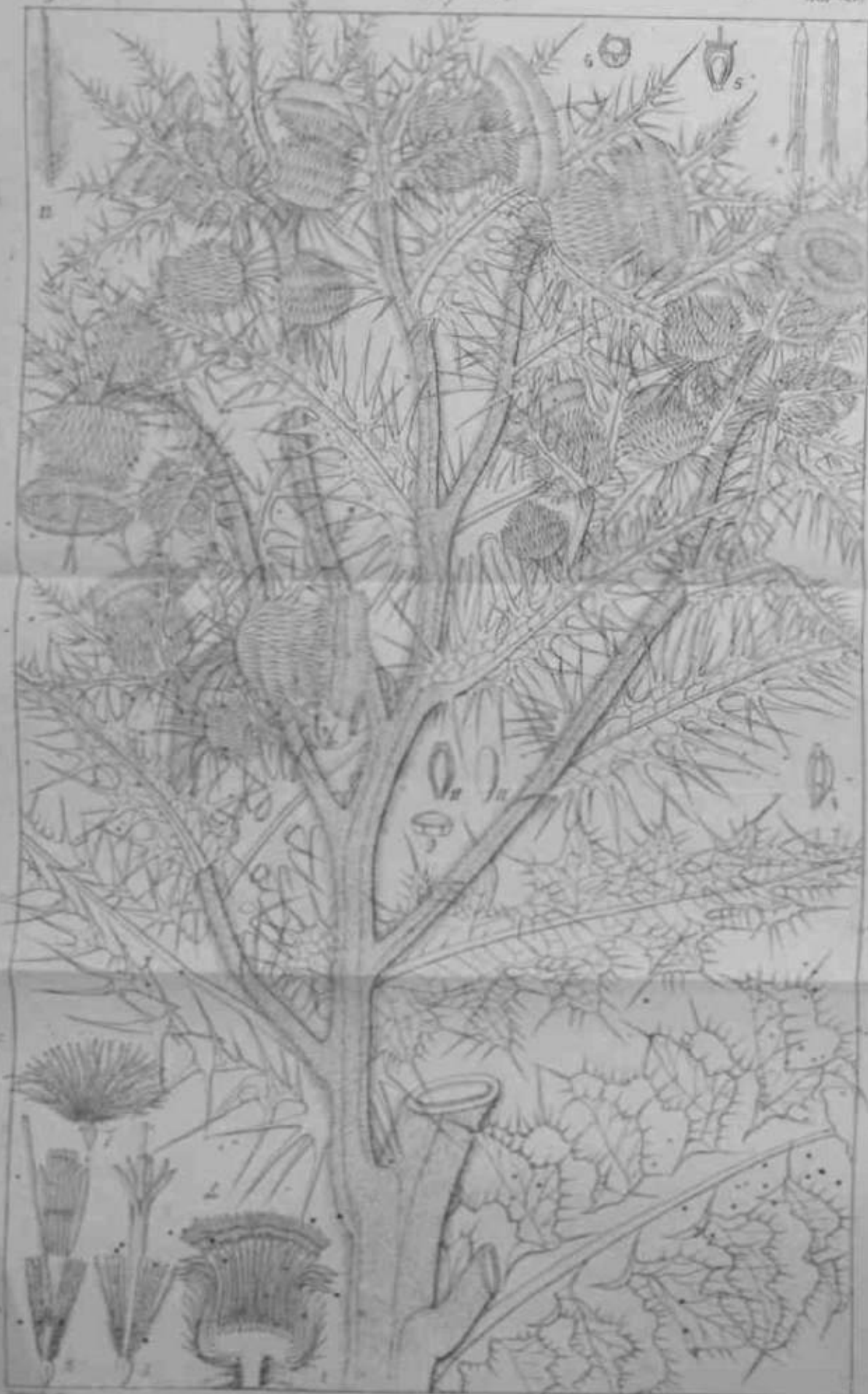
Senecio intermedius (R. W.)



H

J

Senecio Wightianus (D.C.)



Compositae

Cynaria

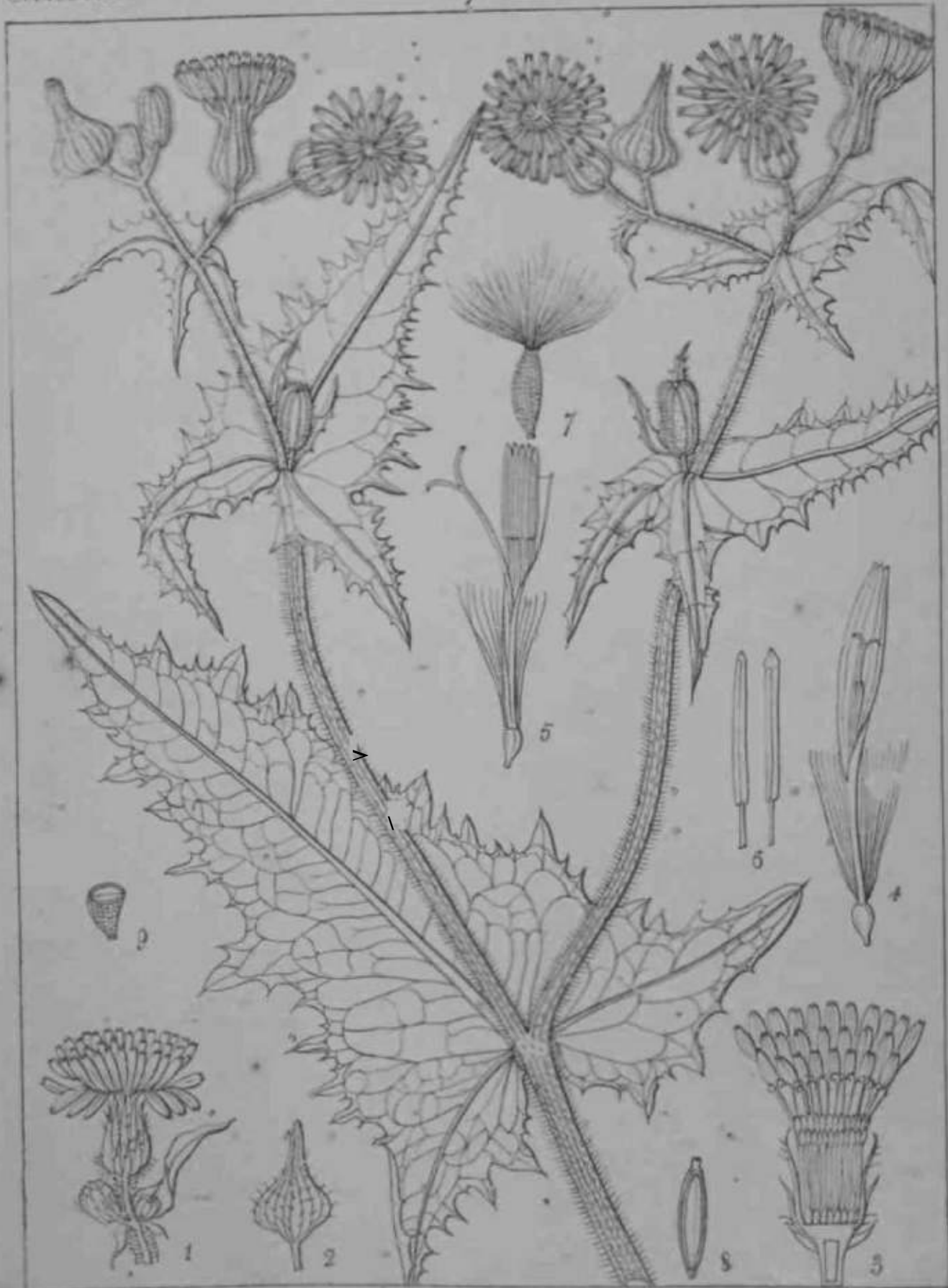


Tricholypis procumbens

Wiegmann, Bot.



Dicoma lanuginosa (D.C.)



Sonchus oleraceus (Lam.)

vY*



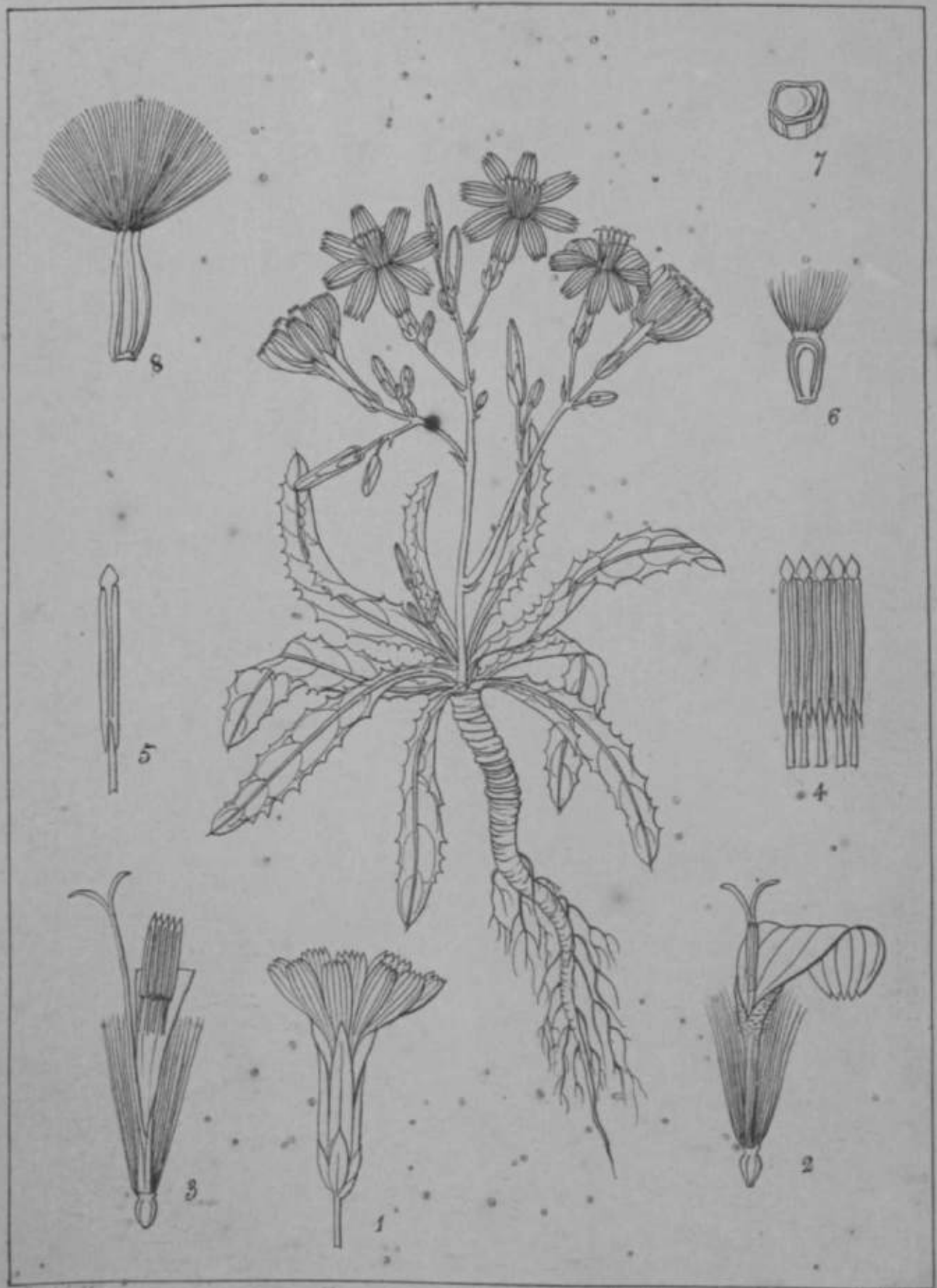
Sonchus Wightianus (D.C.)



Hieracium hieracioides Linn.



Helipedium vilgherense (R.W.)



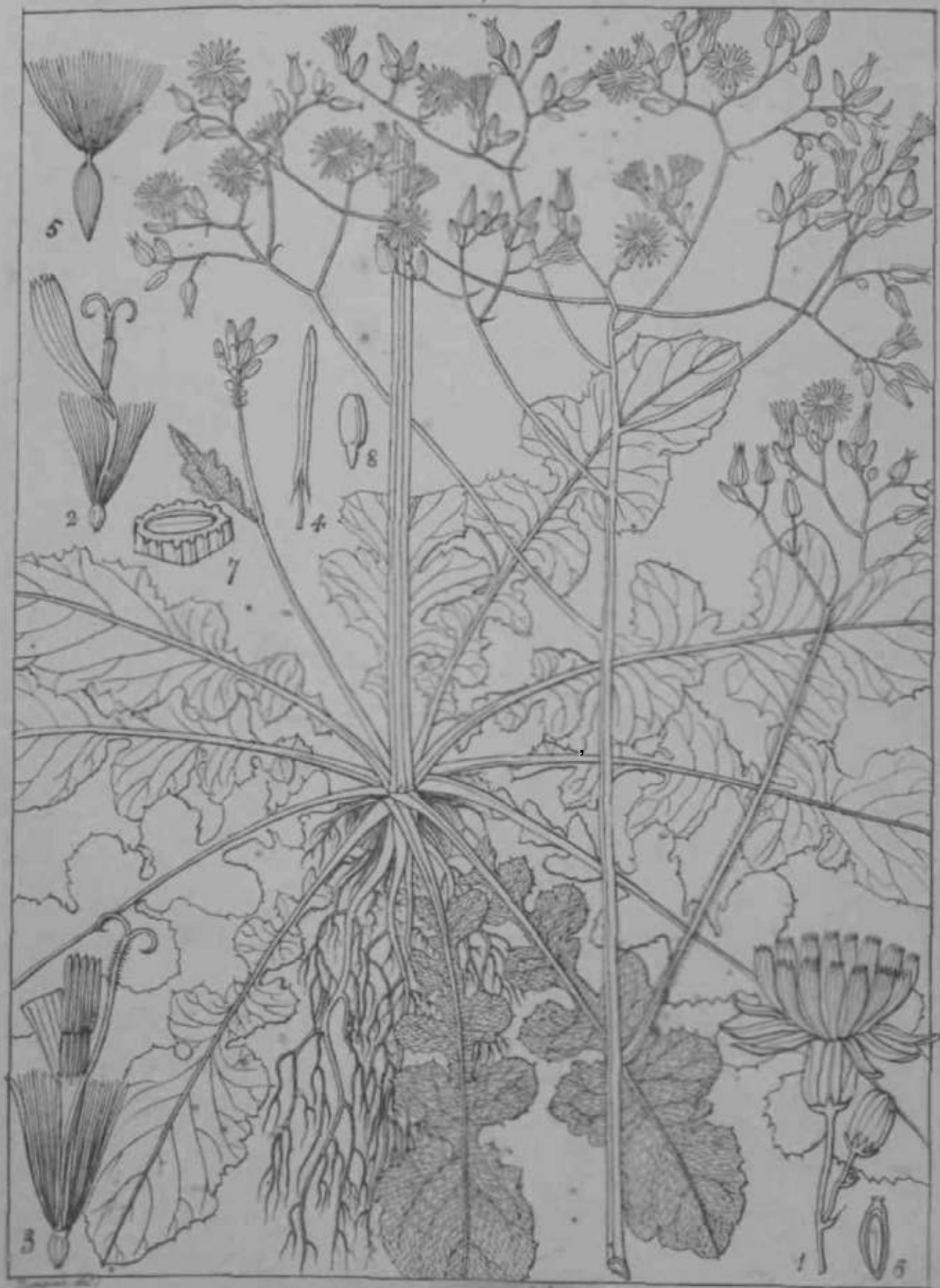
Engelm. del.

Microsymyx (R.) *glabra* (R.W.)
Lactuca glabra (D.C.)

Engelm. del.



Brachyramphus Heyneanus (R.W.)
Lactuca Heyneana (D.C.)



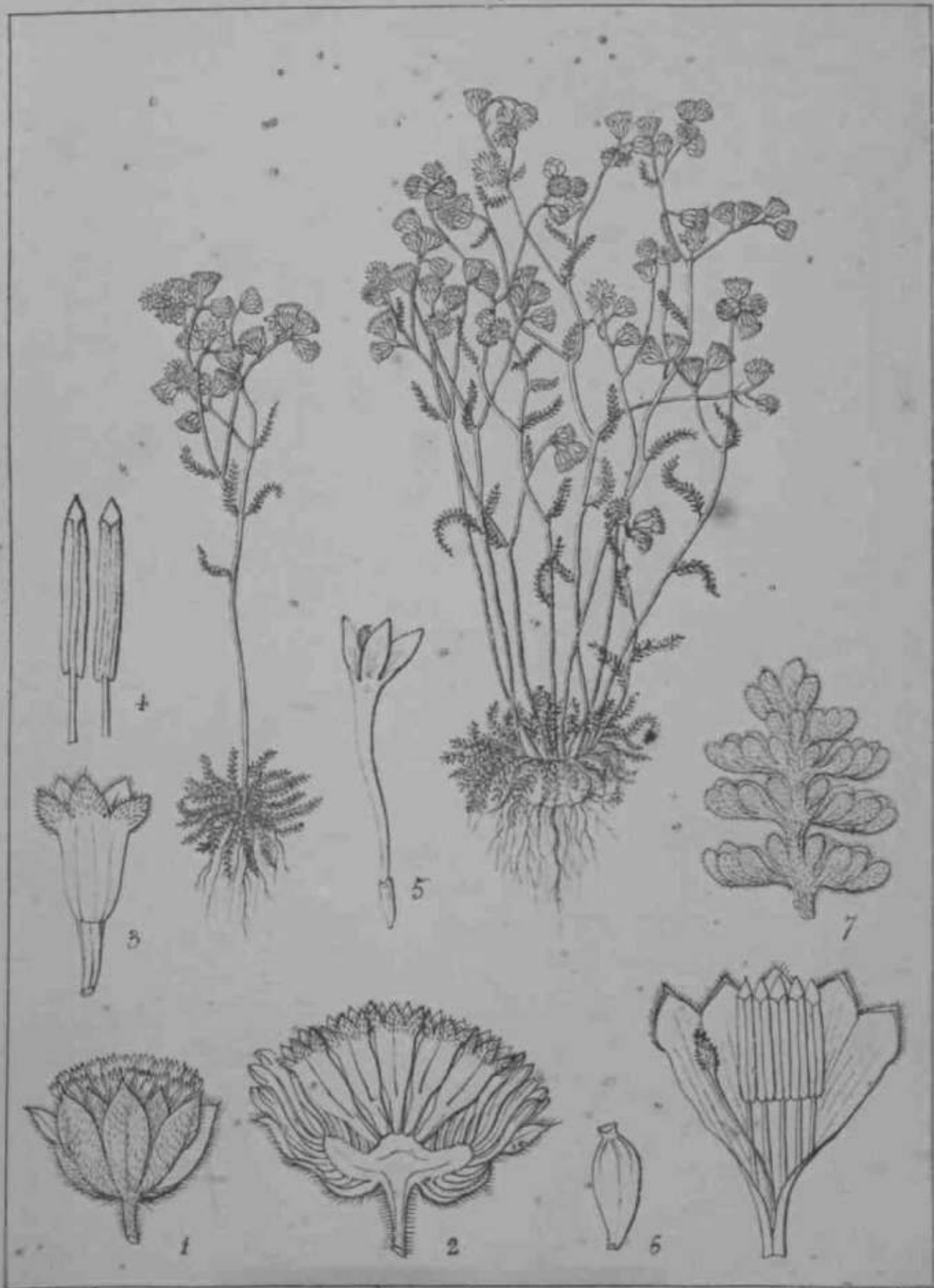
Youngia asplenifolia



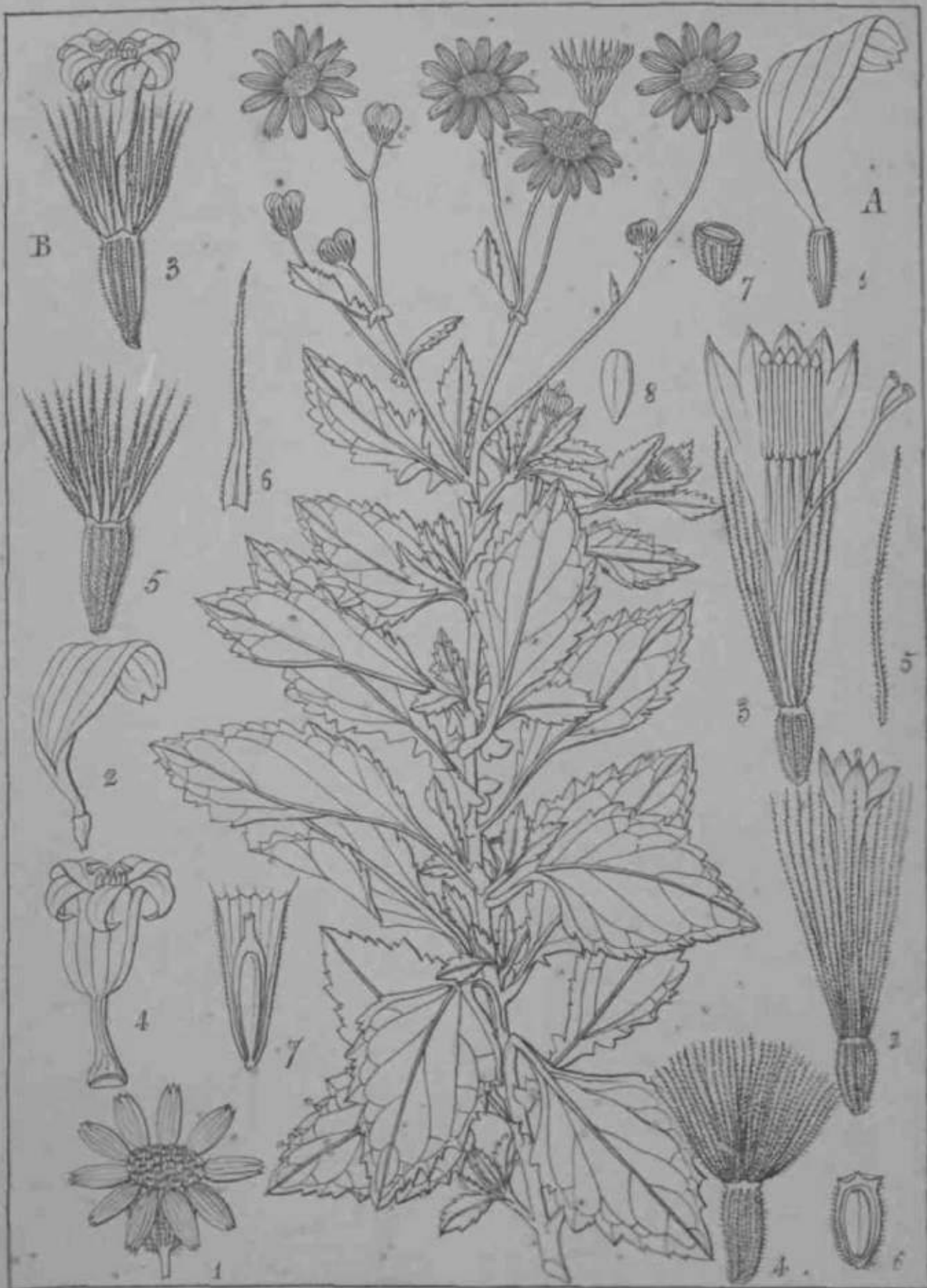
Vicia Indica (D.C.)



Clepeus amaranthoides (D.C.)
Spizantus amaranthoides



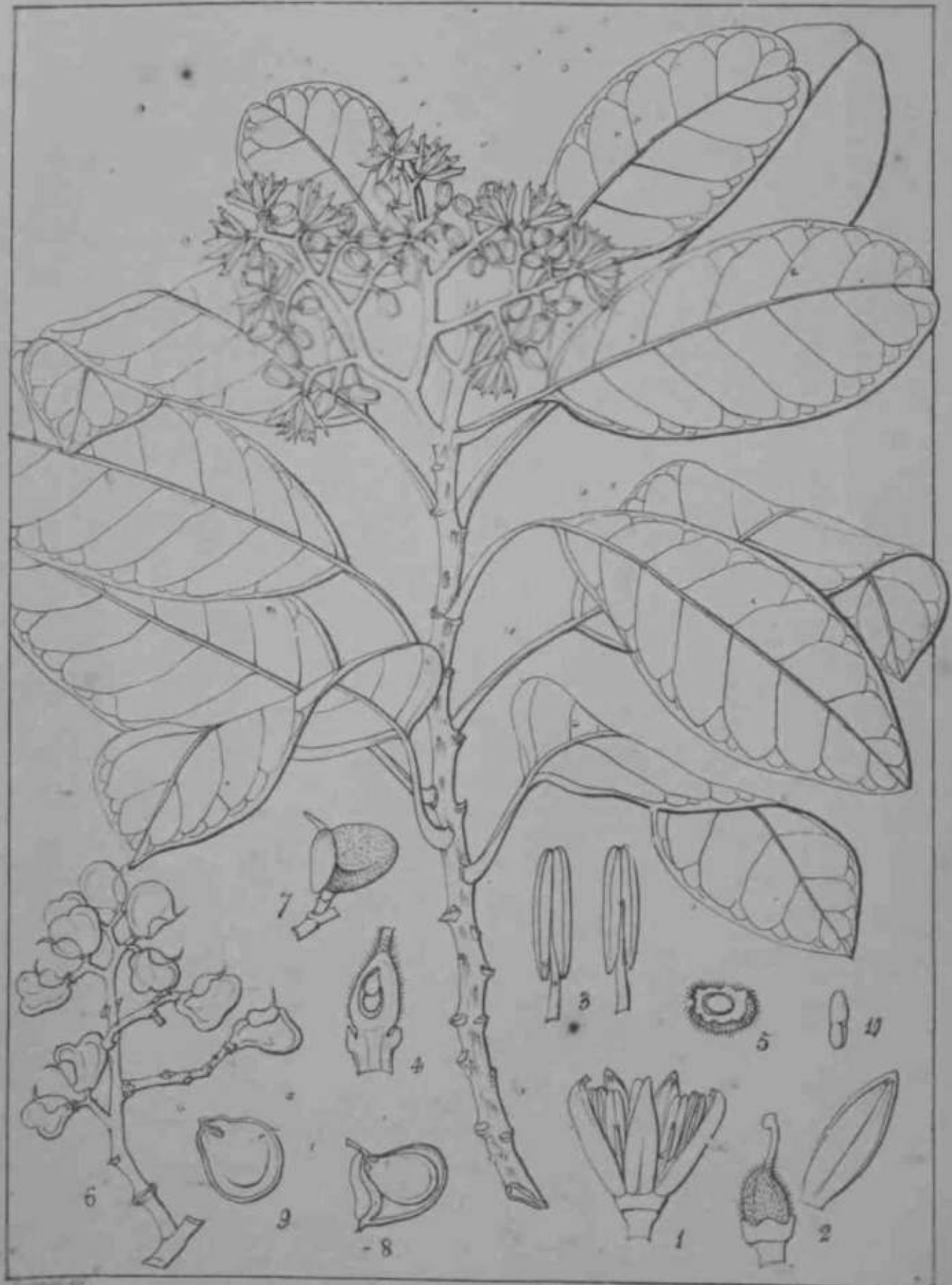
Cyathodone lutea (Law) W. & A.



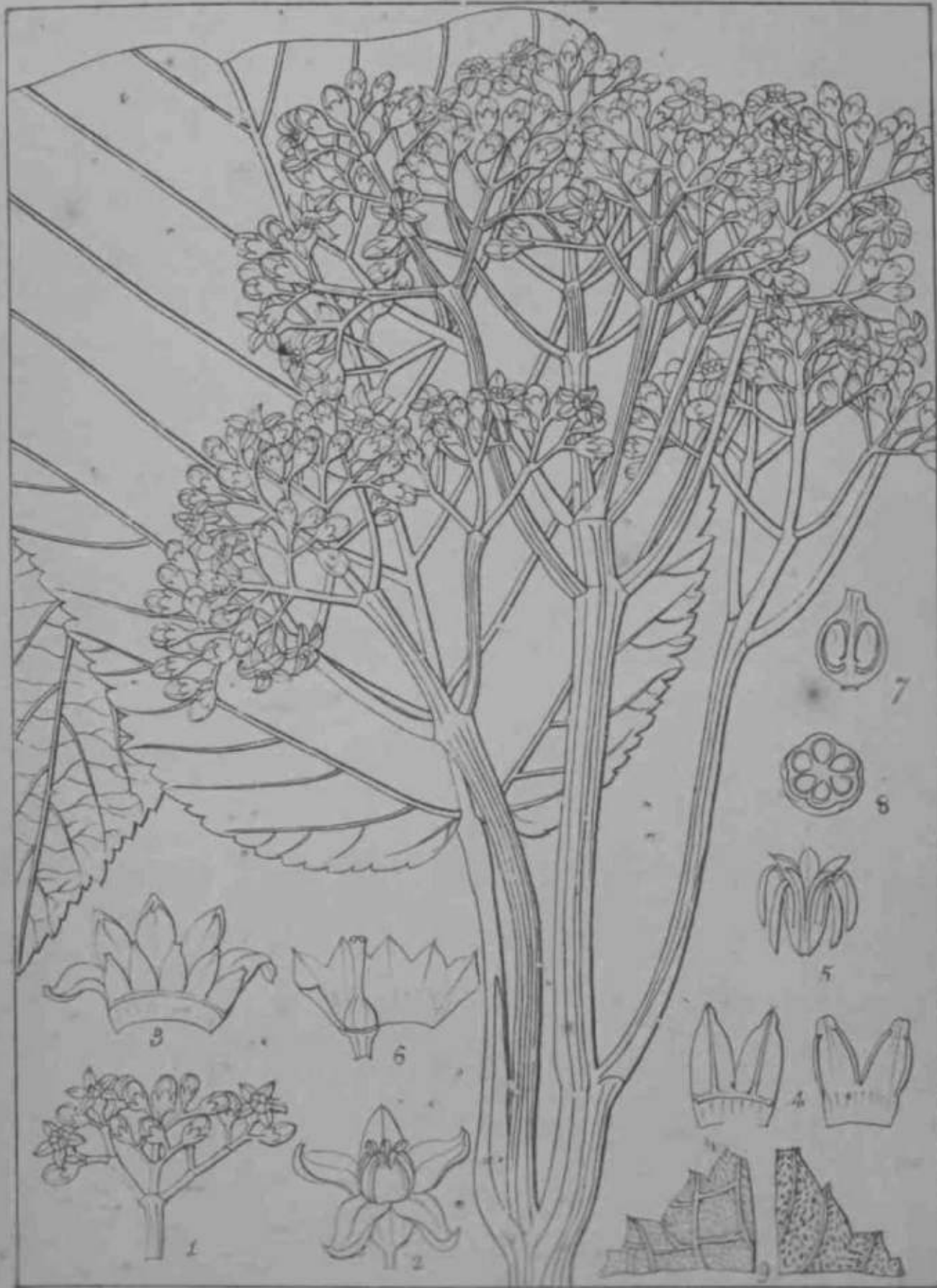
A *Doronicum tomentosum* (R. W.)
B *Doronicum schubertianum* (R. W.)



Helianthus Bogorumensis



Spodoptera Penthamiana R. W.



Leuc. macrophylla (Lam.)



Sophora heptaphylla (Linn.)

Dalbergia

Leguminosae

1151



Dalbergia latifolia (Roxb.)
Lamour.



Halanchoe laciniata (D. C.)