Plates bearing the legend "Roxburghianae" represent redrawings of Roxburgh's unpublished plates now at the Calcutta Botanic Garden, and thus represent Roxburghian species as described in his "Flora Indica" ed. 1,1 (1820), 2 (1824), and ed. 2 (1832). Where two numbers appear, one above the other, the "numerator" represents Wight's plate sequence (this number to be cited), the "denominator" a reference to the species number in Wight & Arnott's "Prodromus" (1834).

T 81
v. 2

ICONES

PLANTARUM INDIÆ ORIENTALIS,

OR

FIGURES OF INDIAN PLANTS.

BY

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SURGEON ON THE MADRAS ESTABLISHMENT.

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ERRATA.

457 *L. scariosa*, on the plate L. spinosa letter press. These proofs being corrected in Coimbatore while my Herbarium and Library are in Ootacamund, I am unable to say which is right, but believe the latter, though less appropriate name, to be so. The name alludes to the short rigid spinous points of the sepals.

481 Heading of Plate for *Leguminosæ Papilionaceæ read Compositæ Senecionideæ.*

491 For Batatus Choisyanus, *read* Rivea Choisyana. When this figure was published I had not seen the fruit and erroneously on account of its 4-celled ovary referred it the wrong genus.

524 For Menoxora *read* Rhodamnia Jack. I was not aware at the time of publishing this genus that it was identical with Jack's Rhodamnia. My attention was first directed, by Mr. Wm. Griffith, to this oversight, and I take the earliest opportunity of correcting the error.

EXPLANATION OF PLATES.

VOL. II.—PART I.

319. Polanisia Chelidonii (DC.) stem hispid, with scattered short prickly hairs, otherwise glabrous: leaves 7-9 foliolate; leaflets obovate or oblong, cuneate, hispid, with a close pressed rigid pubescence, scarcely so long as the petiole; upper floral leaves minute: stamens numerous (24-32); filaments club-shaped: siliqua glabrous, terete, sessile.—W. & A. Prod. p. 22.

1 a small plant, *natural size*—2 a dissected flower, showing the hypogynous insertion of the stamens—3 a siliqua dehiscing—4 a seed.

320. Triumfetta angulata (Lam.) stems herbaceous, glabrous or pubescent: uppermost leaves ovate, acuminated; middle and lower ones cuspidately 3-5-lobed; all more or less covered with stellate hairs, serrated: peduncles 2-3 together, axillary and opposite to the leaves, 3-flowered: calyx apiculate: stamens 10; filaments glabrous: fruit pubescent, 4-5-celled, 4-8-seeded; prickles glabrous.—W. & A. Prod. p. 174.

1 A branch bearing both flowers and fruit, *natural size*—2 an expanded flower, showing the 10 stamens and solitary style—3 a fruit cut transversely, 5-celled with 1 seed in each.

321. Salacia prinoides (DC.) glabrous: branches terete: leaves oblong, obtusely acuminated, serrulated, coriaceous: pedicels several, from an axillary tubercle, 1-flowered, about equal to the petioles: calyx-lobes round, much shorter than the petals, more or less puberulous and ciliated: petals broadly ovate, unguiculate, quite entire; torus large, cup-shaped, thick, fleshy, at first nearly enclosing the ovary: stamens short, about the length of the style, arising from the inner side of the torus: ovules 2, superposed, in each cell of the ovary: fruit nearly globose (about the size of a small cherry), 1 celled, 1-seeded.—W. & A. Prod. p. 105.

1. A flowering branch, with some fruit of the preceding season—2 an expanded flower, somewhat *magnified*—3 a seed divided into its lobes, showing the minute radicle at the base.

322. Alisma reniformis (Don. Fl. Nepal:) leaves reniform, long-petioled, nerved, glabrous on both sides: scape panicled, twice the length of the leaves: peduncles about 3, pedicels 3-5, fruit obovate obtusely 3-angular.

The specimens here figured, were kindly communicated by Mr. Edgeworth, B. C. S. of Seharumpore who, I believe, collected them near Simla.

I a flowering panicle—2 an unexpanded flower—3 a flower somewhat forcibly expanded—4 stamens back and front views—5 perigonium and stamens removed showing the ovary *in situ*—6 a detached ovary—7 the same cut vertically, ovule basilar erect—8 a leaf *natural size.*

323. Impatiens Scabrida? (DC.) peduncles 3-4 flowered, erect, shorter than the leaves: leaves oval, tapering at both ends, serrated, younger ones on both surfaces as well as the stem hispid, adult ones smooth: spur long: capsules subcylindrical, valves curling inward from the top.—DC. Prod. 1. p. 687.

Simla—I am also indebted to Mr. Edgeworth for this and the two following drawings, which he communicated along with many others, I have some doubts however, of this being DeCandole's plant, for, though generally it accords well with his character, the spur agrees better with the description of Roxburgh's *I. tripetala*, which, therefore it may be.

1 A flowering branch, *natural size*—2 a dissected flower, the different parts separately represented—3 ovary and stamens—4 stamens detached—5 ovary—6 the same *magnified.*

324. Geranium Wallichianum (Don.) stem decumbent, purple; leaves 5-parted, with broadly cuneated, ovate, deeply-toothed, lobes; clothed on both surfaces as well as the stem, with silky villi: stipules, ovate obtuse: petals emarginate: stigmas very long.—Flowers large, purple, peduncles very long, 2-flowered, the whole plant clothed with silky villi.—Don. Fl. Nepal:

This drawing is very characteristic of a specimen I have, of this plant, collected at Simla by the late Countess Dalhousie It does not agree very well with the above character, which I copy from Don, the authority for the species, but the remarkable stipules induce me to refer it to that species

1 Flowering branch, *natural size*—2 expanded flower—3-4 stamens—5 ovary, style and stigmas—6 ovules—7 stigma *much magnified*—8 a petal—9 sepals.

325. Salvia lanata (Roxb.) stems herbaceous, cæspitose at the base, woolly: leaves oblong-lanceolate, obtuse, entire, minutely crenulated; narrowing towards the base, rugous; above loosely, beneath densely, whitish, tomentose; the floral ones broad, acuminated, concave, persistent, as long as the calyx: branches simple, villous, viscid: verticellastri remote, about 6-flowered: calyx campanulate, upper lip shortly, 3-toothed, inferior bifid, teeth acute: corolla twice the length of the calyx, tube exserted, widening at the throat, upper lip vaulted, compressed, the lateral lobes of the inferior one oblong erect: connectiva dentulate deflexed, or abruptly dilated and callous at the extremity.—Benth. Lab. p. 228.

1 Flowering branch—2 calyx—3 the same opened—4 stigma—5 corolla—6 the same opened, showing the insertion of the stamens—7 a detached stamen showing the dilated posterior extremity of the connectivum—8 ovary, style and stigma—9 a stamen more highly *magnified*, showing separately the anther, connectivum, and short filament, the dotted lines showing the points of union—10 ovary more highly *magnified.*

326. Flemingia semialata (Roxb.) shrubby, ramous: leaves ternate; leaflets oblong, acute, three-nerved; petiole winged: raceme terminal and axillary, panicled.—Roxb. Fl. Indica 3 p. 310.

Is very nearly allied to *Fl. congesta* but is distinguished by the petiole being furnished with a narrow wing, and the leaflets sprinkled with a few inconspicuous yellowish glands, and not copiously dotted with black ones." W. and A. Prod. p. 241.

1 Flowering branch—2 a pod opened showing the 2 small seed.

327. Flemingia lineata (Roxb.) shrubby, erect, branched: old branches terete and nearly glabrous, young ones angled and pubescent: leaves trifoliolate; leaflets obovate or oblong, cuneate at the base; upper side glabrous; under pubescent when young, afterwards glabrous, inconspicuously dotted with minute yellowish glands, the nerves densely pubescent: petiole channelled, not margined, about half the length of the leaflets: stipules deciduous, nearly half the length of the petioles: racemes arranged in a peduncled diffuse panicle: bracteas deciduous: calyx-segments about equal and with the legume pubescent and covered with minute whitish mealy glands.—W. & A. Prod. 242.

1 Branch in flower and fruit—2 an open legume.

328. Pongamia ovalifolia (W. & A.) arboreous, leaflets 4-pair, drooping, oval, obtuse, glabrous: raceme: elongated, disposed along the leafless branches, slightlt compound; pedicels slender, arranged along very shors minutely-bracteated partial peduncles: vexillum withouy callosities: ovary with two approximated ovules about the middle.—W. & A. Prod. 262.

329. Flemingia stricta (Roxb.) shrubby, erect: stems numerous, with few erect branches; branches triangular: leaves trifoliolate; leaflets broadly lanceolate, acuminated, 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-acuminated, concave, sheathing, deciduous: racemes speciform, solitary, the length of the petioles or sometimes longer, peduncled: bracteas lanceolate-subulate, acuminated, 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. Indigofera 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. Indigofera paucifolia (Delile. I. argentia Roxb.) shrubby, erect, much branched, all hoary with short adpressed whitish pubescence; branches terete: leaves pinnated; 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, flattish, 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. 199.

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. 367.

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 pedicel—4-5 a detached petal showing its long inflated point—6 stamens—7 ovary cut vertically showing the pendulous ovules—8 cut transversely—9 a detached mericarp and seed.

335. Pimpinella involucrata (W. & A.) stem erect, dichotomous, glaucous: leaves ternate; segments cut and pinnated, 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 involucel 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 *carpophore*—8 the same cut transversely—9 a mericarp 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 Roxb.) 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: verticellasters solitary, large, globose, densely many-flowered: bractiæ 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; bractiæ 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. Zizyphus 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. Sonneratia 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 cut 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 the cotyledons.

341. Pimpinella Candoleana (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 5-8, subulate, deciduous, much shorter than the rays; of the involucel somewhat permanent, about the length of the rays: styles at length reflexed: fruit densely covered with small granular tubercles.—W. & A. Prod. p. 309.

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 involucel linear-lanceolate: calyx 5-toothed, teeth lanceolate enlarging with the fruit: flowers of the centre of the umbellets 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 (Desr.) 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 bractea at its base: limb of the calyx entire, cup-shaped: corolla infundibuliform, 5-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.—W. & A. Prod. p. 386.

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

344. Solanum rubrum (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, divaricated, 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) recurved, tomentose at the base: leaves in pairs sub-cordate, ovate, sinuated and lobed, or angular, tomentose, having the mid rib prickly: peduncles extra-foliaceous, corymbose many-flowered, and like the calyx are unarmed, segments of the calyx ovate acuminated.—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 quinquifid.—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, acuminated, glabrous, panicles many flowered: sepals ovate, obtuse, glabrous, equal: corolla 5-cleft, longer than the calyx.—G. Don, Dict. 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. Hterostemma tangorensis (W.& A.) twining glabrous; leaves broadly ovate or oblong, short acuminated 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, *natural size*—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. Gymnima sylvestre (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 petiols: 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, viz. 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. LEPTADENIA RETICULATA (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 smoothish 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. 47.

I now suspect this is not specifically distinct from the Bengal species—*L. imberbis*—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. TYLOPHORA 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 sub-cordate: 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 gynostegum.—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. CEROPEGIA TUBEROSA (Roxb.) herbaceous, glabrous, twining: leaves from nearly orbicular, to oval or ovate, cuspidate, sometimes lanceolate, acuminated: peduncles usually twin, 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 stipitate; 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 polleuea—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, acuminated, 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 acuminated, bifid at the point, the alternate ones very short and emarginate or truncate: pollen masses attached beneath their apices (erroneously represented here) stigma apiculated, 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.

355. 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 enclosed in the corona—6 and 7 different views from above of the same—8 pollenia showing the pellucid angle.

356. MARSDENIA BRUNONIANA (W. & A.) twining, glabrous: leaves broad, cordate, acuminated: peduncles shorter than the petioles: flower cymose, largish, 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 pollenia.

357. DICHROSTACHYS CINEREA (W. &. A.) thorns solitary: pinnæ of the leaves 8-10 pair; leaflets ciliated, 12-15 pair: petioles pubescent: spikes usually solitary, rarely 2-3 together, drooping, somewhat cylindric, 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. DILLENIA 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.

Balaghaut mountains, near Madras—This is a very handsome species, nearly allied to *D. retusa*, 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. Sapotaceæ.

GEN. CHAR. Calyx deeply 4-parted: corolla 4-cleft: stamens 8, all fertile, anthers posticous: ovary 4-celled, with a solitary erect ovule in each cell: nut chartaceous, 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 capitulæ, 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 others of the order by its perfectly symetrical 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 *Sideroxylon*, but the quaternary, not quinary, arrangement of the flowers and the absence of abortive stamens in any form, sufficiently separate them.

359. Isonandra lanceolata (R. W.) arboreous, leaves lanceolate, acute or sub-acuminate, glabrous: flowers, 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, limb 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 ovules—8 cut transversely—9 a 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 æstivation: 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 membranacious, 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 *Sepacæ*: I prefer, however, adopting Endlichers arrangement, as the more correct, by whom it is referred to *Antidesmacæ.*

361. Scepa Lindleyana (R. W.) The specific character cannot be given at present.

1 Flowering branch, female plant—2 portion of a male ament 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 involucrata (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*—2 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 placentary 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 is 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 walls, 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 *Verbenaceæ*, but I think there is much reason to doubt the propriety of this distribution. To me it seems probable that this and *Congia* Roxb. will unite to form a small but very distinct order, but whose affinities I have not yet made out.

364. Sterculea fœtida (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. Indigofera tinctoria (Linn.) suffruticose erect, branched, sprinkled with short whitish pubescence; branches terete, firm: leaves pinnated; leaflets 5-6-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. Indigofera cærulea (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 pulchella (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: flowers 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 spike of flowers and legumes detached. Copied from Roxburgh's drawing.

368. INDIGOFERA ARBORRA (Roxb.) arboreous; leaves pinnate; leaflets from 6 to 9 pair, oval emarginate; racemes the length of the leaves, wings expanded: legume fluted, straight, smooth.—Roxb. Fl. Ind. 3 p. 381

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

369. INDIGOFERA ATROPURPUREA (Buchan :) shrubby erect: leaves pinnate; leaflets from 6 to 8 pairs, oval, smooth: racemes when in flower as long as the leaves, in seed twice their length: legumes cylindric, straight, reflexed, from 8 to 9 seeded.—Roxb. Fl. Ind. 3 p. 311.

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

370. TEPHROSIA SENTICOSA (Linn.) shrubby, diffuse, nearly glabrous: leaves pinnated: leaflets 1-3 pairs, obcordate, the terminal one the largest: upper side glabrous, under whitish with a very fine pubescence: stipules subulate: flowers in pairs, axillary, towards 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—2 dissected flower—3 legume—4 the same open. Copied from Roxburgh's drawing.

371. TEPHROSIA INCANA (Graham Galega incana Roxb.) shrubby, diffuse, every where except the upper surface of the leaves tomentose or woolly: leaves pinnated; leaflets about 6 pair, obovate, retuse; upper side pubescent or silky, under woolly: stipules lanceolate, reflexed: racemes terminal, elongated, interrupted, many-flowered: flowers fascicled, almost sessile: calyx villous, with long fulvous hairs; segments subulate, several times longer than the tube: vexillum silky: legumes deflexed and falcately curved upwards, obtuse, densely fulvous-woolly, 6-8-seeded.—W. and A. Prod. p. 212.

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

372. TEPHROSIA SPINOSA (Pers.) shrubby; branches numerous, woody, rigid, spreading in every direction, clothed with white soft adpressed somewhat cottony hairs: leaves pinnated; leaflets 2-4 pair, cuneate, emarginate; upper side glabrous, under clothed with adpressed white silky hairs: stipules subulate, patent, rigid, spinous (in the wild plant); flowers axillary, 1-2 together, short-peduncled: calyx hairy; segments subulate, about the length of the tube: vexillum hairy: legumes spreading, much compressed, linear, falcate, more or less clothed with somewhat adpressed hairs, 6-8-seeded.—W. and A. Prod. p. 214.

Copied from Roxburgh's drawing.

373. DESMODIUM CEPHALOTES (Wall.) (Hedysarum cephalotes, Roxb.) arborescent: branches obtusely triangular, densely clothed when young with adpressed white silky pubescence, afterwards more glabrous: leaves trifoliolate; leaflets oblong or oblong-lanceolate, clothed with woolly or silky hairs when young, soon glabrous; nerves parallel, woolly beneath: stipules scariose, acuminated: peduncles axillary, several times shorter than the petioles, many-flowered: lower calyx-segments narrower and longer than the others: legumes densely villous, 2-3-jointed.—W. and A. Prod. p. 224.

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

374. DESMODIUM RECURVATUM (Graham. Hedysarum recurvatum Roxb.) shrubby: branches spreading, recurved, clothed as well as the raceme with short adpressed hairs, angled; young shoots triquetrous: leaves bifarious, trifoliolate; leaflets ovate or oval, glabrous above, pubescent beneath: stipules lanceolate, acuminated: racemes terminal, drooping before the flowers expand, afterwards very long (1-2-feet): bracteas lanceolate surrounding several smaller setaceous ones: flowers several together: legumes narrow-linear, straight on both sutures, clothed with short hooked hairs; joints more than twice as long as broad.—Graham Prod. p. 226.

Copied from Roxburgh's drawing.

375. OSBECKIA TRUNCATA (Don.) herbaceous, annual: stems slightly branched, 4-angled; the angles clothed with adpressed and afterwards spreading or deflexed hairs: leaves spreading or deflexed, ovate, strigose, quite entire, ciliated, 3-nerved, the four upper ones approximated and forming a kind of involucre under the flowers: flowers (very small) terminal, nearly sessile, aggregated: calyx urceolate, covered with spreading simple or palmate long bristles; segments 4, deciduous: appendages deciduous, shortish, crowned with bristles: anthers 8, truncated (without any beak!) ovary crowned with 16-20 bristles.—W. and A. Prod. p. 322.

1 Plant *natural size*—2 a flower partially dissected—3 anthers back and front views—4 ovary cut vertically—5 capsule *natural size*—6 cut vertically—7 cut transversely—8 a seed.

376. OSBECKIA VIRGATA (Don.) shrubby: branches straight, twiggy, 4-angled, hispid: leaves petioled, lanceolate or ovate-lanceolate, 3-nerved, quite entire; upper side sprinkled with adpressed hairs; under hirsute on the nerves, otherwise glabrous: flowers aggregated: calyx-tube urceolate, sprinkled with simple and 2-3-partite spreading bristles, sometimes nearly naked; segments 5, deciduous; appendages deciduous, being usually deeply trifid or 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 back and front views—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 oblong-lanceolate, acute, obtuse at the base, 3-nerved; upper side copiously clothed with adpressed bristles; under hirsute on the nerves, and harshly pubescent between them: flowers on short pedicels, terminal, somewhat racemose: calyx-tube cup-shaped, copiously clothed with adpressed rigid pubescence; segments 5, ovate-oblong, obtuse, deciduous; appendages caducous, consisting of a tuft of a few (sometimes only 1) bristles: stamens 10; anthers acuminated 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 same cut longitudinally—7 the embryo detached.

378. LORANTHUS TOMENTOSUS (Heyne) all over greyish with starry tomentum: branches terete: leaves alternate, roundish-obovate, obtuse, somewhat cuneate at the base, petioled, at length nearly glabrous on the upper side: peduncles axillary, solitary, bearing an umbel of 3-5 pedicelled villous flowers; bractea foliaceous, much larger than the ovary, unilateral, close to the ovary, cuneate-obovate, obtuse: calyx-limb 5-toothed: corolla tubular, gibbous on one side above the middle, curved, splitting into 5 linear recurved unilateral segments, one of the fissures much deeper than the others: filaments muricated: anthers linear.—W and A. Prod. p. 385.

In this plate three varieties are represented—varying in the forms of the leaves and of the bracteas, but agreeing in all having large foliaceous bracts.

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

379. CAPPARIS MURRAYANA (J. Graham) shrubby, diffuse, armed with short recurved (orange coloured) prickles; young shoots tomentose: leaves small, roundish, glabrous: flowers large: upper sepal larger than the others, saccate: berry long peduncled, oval, ribbed.

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

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

380. Hippocratea Grahamii (R. W. Ill. Ind. Bot. 131) shrubby, twining, glabrous: leaves coriaceous, entire, from broadly ovate to sub-orbicular, acuminated panicles, numerous, many-flowered, congested towards the summits of the branches, petals linear spathulate, obtuse, carpels obovate, obtuse, slightly emarginate.—Bombay.

1 Flowering branch—2 a flower seen from above—3 the same, the petals removed—4 a stamen, anther transverse—5 ovary cut vertically—6 cut transversely—7 young carpels—8 one of them opened showing the position of the seed at this early stage—9 a carpel further advanced cut transversely—10 a seed, the wing beginning to form

381. Hiræa Indica (Roxb.) leaves broadly ovate, more or less acuminated, shining, glabrous on both sides: panicles axillary or terminal: calyx without glands: carpels each surrounded with an oblong-linear entire wing. —Roxb. W. and A. p. 108.

1 Flowering branch—2 a flower, *natural size*—3 the same *magnified*, and partially open—4 the same somewhat forcibly opened—5 anthers—6 calyx, ovary and styles—7 ovary cut transversely—8 cut vertically, ovules pendulous—9 a cluster of fruit—10 one of them cut transversely—11 a single carpel cut transversely—12 a fruit with one carpel separated to show the mode of union—13 side view of one—14 one carpel attached to the pedicel—15 a seed detached.

382. Celastrus montana (Roxb.) thorny; young branches occasionally unarmed, smooth (purplish): leaves elliptical or obovate, tapering at the base into the petiole, minutely and rather sharply crenate-serrated, coriaceous, glabrous, whitish-glaucous (when dried): cymes axillary, lax, peduncled, about twice as long as the petiole: style deeply divided: capsules somewhat globose, 3-angled (about the size of a pea, black when dry.)— W. and A. Prod p. 159.

1 Flowering branch—2 a flower, side view—3 the same front view—4 stamens—5 ovary cut vertically—6 cut transversely—7 an ovary in which one of the cells have aborted.

383. Crotalaria obtecta (Graham) suffruticose, erect, covered all over with a short dense tomentum: branches terete: stipules and bracteas setaceous, minute: leaves oval, mucronate: racemes terminal, elongated; flowers numerous, approximated: bracteoles on the middle of the pedicels, setaceous: calyx deeply 5-cleft, densely covered with rusty tomentum; segments all distinct, linear-acuminated, falcate: legumes sessile, oblong, rather broader upwards, about four times as long as the calyx, densely tomentose, many-seeded.—W. and A. Prod. p. 185.

1 Flowering branch—2 dissected flower—3 an anther —4 the style and stigma—5 ovary cut lengthwise—6 a legume similarly cut—7 a seed—8 the same cut longitudinally.

384. Trigonella corniculata (Linn.) annual: stem somewhat erect, sometimes flexuose or diffuse, glabrous: leaflets obovate, toothed or serrated towards the apex: stipules lanceolate, nearly entire or toothed: peduncle axillary, longer than the leaves, mucronate at the apex: racemes many-flowered, at first dense and umbiliform, afterwards lengthening: corolla thrice the length of the calyx: legumes compressed, declinate, falcate, short pointed, transversely veined: seeds reniform, rugose; radicle prominent.—W. and A. Prod. p. 196.

Copied from Roxburgh's drawing.

385. Indigofera pentaphylla (Linn.) suffruticose: decumbent, terete, glabrous except the young parts: leaves pinnated; leaflets 1-2-pairs, oval; both sides but more particularly the under hoary from whitish soft hairs: stipules lanceolate-subulate, hairy: peduncles about the length of the leaves, bearing about 2-3 rather distant flowers: calyx-segments short, subulate: legumes straight, cylindrical, mucronate, glabrous: seeds 10-12, cylindrical, truncated at both ends.—W. and A. Prod. p. 200.

1 Branch with flowers aud fruit—2 a dissected flower —3 a legume opened.

386. Indigofera trita (Linn.—I. cinerea Roxb.) herbaceous or suffruticose, erect, rigid, more or less hoary from short adpressed pubescence: leaves pinnately trifoliate; leaflets oval or oblong, mucronate: racemes sessile, about the length of the leaves, many-flowered; flowers small, upper ones deciduous: calyx-segments long and subulate: legumes deflexed or horizontal, closely approximated at the base of the rachis, 4-angled, straight, rigid, and sharp-pointed: seeds numerous (6-10), 4-sided, truncated at both ends.—W. and A. Prod. p. 203.

1 Branch with flowers and fruit—2 the keel of the corolla spurred on each side.

387. Indigofera flaccida (Roxb.) suffruticose, sparingly covered with adpressed short hairs: stems and branches usually weak, the former terete, the latter angled: leaves pinnated; leaflets 2-3-pair, opposite, oval, acute, bristle-pointed: stipules long, setaceous, erect: racemes pedunculed, elongated, twice the length of the leaves: flowers small, recurved, rather distant: calyx-segments long and subulate: legumes scattered on the lower half of the rachis, drooping, long-linear, slender, 4-angled, pointed, many-seeded.—W. and A. Prod. p. 204.

1 Flowering branch—2 spurred keel of the corolla.

388. Tephrosia tinctoria (Linn—Galega Heyneana Roxb.) shrubby, erect, branched, everywhere except the upper surface of the leaves clothed with a silky white or fulvous tomentum: branches flexuose: stipules linear-lanceolate: leaves pinnated; leaflets 1-6 pairs, or occasionally reduced to the terminal leaflet, oblong-oval, terminal one longest, the lower pair at the base of the petiole and smaller than the others; upper side glabrous, under white and tomentose: peduncles usually longer than the leaves, axillary, erect, bearing a short spike-like raceme at the apex: calyx-segments subulate: flowers small, on pedicels shorter than the bracteas: vexillum silky: legumes flat, nearly straight, spreading, unilateral, 8-12 seeded.—W. and A. Prod. p. 211.

" Var α branches shorter, more rigid: hairs on the young parts fulvous: leaflets shorter, smaller, ½ to 1¼ inch long, more coriaceous.

1 Flowering branch—2 dissected flower—3 legume opened.

389. Flemingia nana (Roxb.) suffruticose, with a very short ligneous stem, and few short branches: leaves ternate: leaflets sub-ovate, petiole-winged: racemes axillary crowded: legume covered with red clammy glands. —Roxb. Fl. Ind. 3, p. 339.

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

390. Flemingia congesta (Roxb.) shrubby, somewhat erect, young parts villous: leaves trifoliolate; leaflets ovate-lanceolate; upper side nearly glabrous; under pubescent, dotted with numerous black glands, the nerves densely pubescent and rather distant: petiole nearly terete: stipules lanceolate-subulate, 5-6 times shorter than the petiole, caducous: racemes dense, oblong, rather shorter than the petiole, almost sessile, aggregated: bracteas ovate-cuspidate, shorter than the flowers, caducous: legume eglandular.—W. and A. Prod p. 241.

1 Flowering branch—2 spike of fruit—3 legume—4 same opened.

391. Dalbergia Ooreinensis (Roxb.) leaves ternate; leaflets sub-rotund: racemes terminal and axillary: flowers 3-fold: stamens 1 and 9: legume linear.—Roxb. Fl. Ind. 3, p. 220.

1 Flowering branch—2 flower-buds with their accompanying bractea, to show the ternary arrangement—3 a dissected flower—4 a one-seeded legume—5 a legume opened to show the seed.

392. Cæsalpinia mimosioides (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: pinnæ 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 pinnæ, 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, turgid, somewhat hairy, 2-seeded.—W. and A. Prod p. 281.

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. Tabernemontana 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, acuminated: panicles axillary and terminal, sub-globular, brachiate crowded: corolla 5-parted, segments sub-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 Dict. 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. Echites cymosa (Roxb. Aganosma cymosa G. Don Dict.) shrubby hairy: leaves elliptic, acuminated: 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 acuminated: panicles axillary and terminal, trichotomous throughout; the extreme divisions three-flowered: follicles sub-clavate, few-seeded: hypogynous scales combined into a cup-shaped 5-toothed urceolus.—G. Don Dict. 4, p. 75.

1 Flowering branch—2 dissected flower—3 calyx split open, showing the urceolus enclosing the ovary—4 ovary cut transversely—5 follicles—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.

398. Guatteria Korinti (Dun.) shrubby, climbing: leaves ovate-oblong, acuminated, coriaceous, glabrous; upper side shining, under prominently reticulated with veins: flower-bearing shoots 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 full 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, acuminated: pedicels harshly pubescent, axillary, about as long as the petioles: involucel-leaves 6-10, linear, hairy, somewhat persistent: capsule oblong, acuminated, 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*—8 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. Prod. 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 cuniform 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. Indigofera 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, acuminated, scariose: racemes sessile, short, oval, 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.

404. Indigofera viscosa (Lam.) suffruticose, erect, much branched; branches, petioles, peduncles, and legumes glutinous, with rigid gland-tipped hairs: leaves petioled, pinnated: leaflets 4-8 pairs, elliptic-oblong, pubescent from white adpressed 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 stamens united into one brotherhood—4 spurred keel of the corolla.

405. Æschynomene indica (Linn. Hedysarum Nali-Tali, Roxb.) annual, diffuse, branched: branches slender, glabrous: young shoots, petioles, and peduncles, often slightly muricated: 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 polycarpum (DC. Hedysarum purpureum Roxb.) suffruticose, procumbent, branched, often rooting at the joints: branches slightly angled, usually with white adpressed pubescence, but often with white spreading hairs on the young shoots: leaves trifoliolate; leaflets from exactly oval and obtuse at both ends to obovate-retuse or mucronate; upper side glabrous or very sparingly 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 acuminated, deciduous: racemes axillary and terminal, many-flowered: bracteas broadly ovate, pointed, pubescent, before expansion densely imbricated: pedicels nearly glabrous: keel narrow, straight, incurved at the apex, longer than the alæ: 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: bracteas three-fold, one-flowered: legume from 5 to 6 jointed, notched underneath, hammose 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.

1 Flowering branch—2 dissected flower—3 legume—4 the same opened.

409. Desmodium diffusum (DC. Hedysarum diffusum Roxb.) herbaceous, procumbent, diffuse, branched: branches 4-5-angled, hispidly pubescent: leaves trifoliolate; leaflets oval, pubescent on both sides: stipules large, foliaceous, auricled and stem-clasping: racemes terminating every branch, very long: bracteas small, lanceolate, 2-3 together: flowers in pairs or threes: legumes ascending or nearly erect, 5-6-jointed, notched on both sutures, hispid with short hooked hairs; joints 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. Uraria picta (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: bracteas below the raceme persistent, ovate-lanceolate, acuminated, rigid: pedicels covered with short hooked hairs, much 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, Roxb.) 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-seeded, 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. Lagerstrœmia Reginæ (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 same cut vertically—9 cut transversely—10 mature and dehiscing—11-12 seed *natural size* and *magnified*.

414. Pergularia odoratissima (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, decurrent 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 gynostegum—3 corolla opened—4 gynostegum 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—9 one carpel cut transversely.

415. Diospyros kaki (Koenig) leaves bifarious, ovate, 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 bi-sexual 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.

416. Diospyros racemosa (Roxb.) leaves from oblong to lanceolar, obtuse, glossy: both male and hermaphrodite flowers on axillary, cymose racemes; the former 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 not cymose 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 the 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 subterminal panicled: 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 scaly involucre—4 the same cut vertically—5. ovary cut transversely—6 a fruit the spines removed from the front aspect—7 a fruit with two 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 pulchellum (DC.) stem erect: stipules free from the petiole and from each other: leaves long-petioled, pinnately trifoliolate: leaflets elliptic-oblong, pubescent beneath, glabrous above, terminal one the largest, all furnished with partial stipules. floral leaves bifoliolate, the odd one abortive, the lateral ones orbicular and bractea-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 cohering 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 adpressed hairs—W. and A. Prod. I. page 230.

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

420. Pongamia elliptica (Wall. *Galedupa elliptica* Roxb. M.S.S and Fl. Ind. 3 p. 242) Twining: leaflets opposite from four to five pairs, cuneate oblong: racemes panicled, axillary: partial peduncles from 2 to 5 flowered: calyx bowl-shaped almost entire: banner with 2 scales at the base: legume elliptic. Roxb. Fl. Ind. l. 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 adpressed 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): bracteas 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 the shorter—7 ovary cut open to show the position of the ovules—8 legume opened showing the seed.

422. Alstonia scholaris (R. B. *Echites scholaris* Roxb.) leaves 5—7 in a whorl obovate oblong obtuse ribbed and having the veins approximating the margin: cymes on short peduncles corolla a little bearded: follicles very long—G. Don, Dict. 4 p. 86.

1 Flowering branch—2 a dissected flower.

423. Echites parviflora (Roxb.) leaves lanceolate; panicles terminal and axillary, brachiate; tube of corolla gibbous towards the base; segments of the limb linear, falcate—G. Don, Dicty. 4 p. 75.

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, acuminated, glabrous; panicles axillary, longer than the leaves, trichotomous, diffuse: segments of corolla linear, falcate, curled—G. Don. Dicty. 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 cut longitudinally.

425. Aganosma marginata (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 subtrichotomous, and then dichotomous, glabrous; segments of corolla linear, falcate; nectary annular. G. Don. Dict. 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.) subarboreous: leaves ovate, mucronate, or elliptic, obtuse, glabrous; spines often 2-forked: corymbs terminal and axillary, few-flowered: cells of fruit 4-seeded—G. Don. l. 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 dichotomous branches: leaves almost sessile, roundish-ovate, cordate, mucronate, polished: corymbs terminal, rarely axillary, many flowered: cells of berry 2-seeded—G. Don. l. c. 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 Corymbosa (Roxb.) leaves oblong, lanceolate, obtuse, pointed, glabrous: corymbs terminal, decussate: lobes of calyx ovate—G. Don. l 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, G. Don l. 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. l. 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 (G. Don—*Cerbera fruticosa* Roxb.) leaves opposite, remote, oblong to lanceolate, glabrous, acuminated: corymbs at first terminal, but afterwards in the forks, with sub-trichotomous, short divisions—G. Don. l. 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, acuminated, downy beneath; cymes terminal.—G. Don, l. c. p. 76.

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

433. Tabernœmontana dichotoma (Roxb.) leaves oblong, obtuse, coriaceous, shining, with many parallel nerves beneath: cymes elongated, dichotomous: calcyne segments obtuse: segments of corolla oblong-falcate, about equal in length to the tube. G. Don. l. 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 acuminated, triple-nerved, polished: berries many-seeded.—G. Don l. 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. Eugenia (J. jambos) Lin Wight's Illustrations 2, p. 14—(*Jambosa vulgaris* DC.) leaves narrow-lanceolate, attenuated at the base, acuminated towards the apex: racemes cymose, terminal: (flowers 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 venenata (R. Br.—*Echites venenata* Roxb.) leaves 4 in a whorl, oblong-lanceolate, acuminated, 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, l. 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: cells of fruit 2-seeded.—G. Don, l. 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 11 dissections of the same.

438. Vallaris dichotoma (Wall *Echites dichotoma* Roxb.) leaves lanceolate-oblong, glabrous: racemes axillary, dichotomous: segments of corolla roundish: filaments bearded and woolly—G. Don. l. 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 (?) antidysenterica (G. Don. *Echites antidysenterica* Roxb.) shrubby erect angular: leaves ovate-lanceolate, with obsoletely crenulated edges, glabrous on both surfaces: corymbs axillary, dichotomous: calyx and corolla downy—G. Don. l. c. p. 76.

1 Flowering branch with follicles—2 a dissected flower.

440. Aganosma Roxburghii (G. Don—*Echites caryophyllata* R.) leaves ovate, cordate, acuminated: 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. l.c. p. 77.

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

441. Cerbera odollum (Gært: Roxb—*Tanghinia odollum* G. Don.) leaves lanceolate, approximate, shining: corymbs terminal: calcyne segments linear, revolute: segments of corolla sub-falcate. G. Don. l. 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. l. 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 tomentosa* R.) leaves oblong, acuminated, downy: corymbs terminal, small: tube of corolla larger than the calyx: corona fleshy, lacerated into obtuse segments: follicles scabrous; distinct.—G. Don, l. 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, acuminated, glabrous: panicles terminal, branches and corymbs decaricate: tube of corolla twice longer than the calyx: follicles distinct, but united at the apex.—G. Don, l. 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: alæ and keel strongly cohering for a little space by their limb.—W. and A. Prod. I. page 206

1 A flowering branch—2 a detached flower—3 the same dissected—4 detached petals—5 stamens—6 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*.

446. 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 dehiscing *natural size*—8 the same *magnified*, showing the numerous seed—9 a detached seed, *magnified*.

447. DYSCHORISTE LITORALIS (Nees, Wall. Pl. As. Rar. 3. p. 81 *Ruellia* Lin) stem fruticose, diffuse: leaves cuniform retuse, dentate towards the apex, glabrous.

1 Flowering branch *natural size*—2 calyx and bracteas—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.

448. PHLEBOPHYLLUM KUNTHIANUM (Nees l. 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 5000 feet of elevation.—R. W.

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

449. ASTERACANTHA LONGIFOLIA (Nees l. 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 dehiscing.

450. BARLERIA ACUMINATA (R. W. Nees l. 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* R. 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 dehiscing.

451. BARLERIA CUSPIDATA (Klein Nees. l. c. p. 93) shrubby, bracteæ and bractioles spinous, fascicled: leaves lanceolate or oblong lanceolate, spinously mucronate, sprinked with a few adpressed 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 bracteas—4 long stamens—5 the short ones—6 ovary cut vertically—7 capsule dehiscing—8 a seed—9 the same cut vertically showing the testa and immature embryo—10 cotyledons removed from the testa.

452. BARLERIA PRIONITIS (Linn. Nees l. c. p. 93) shrubby, the sterile spinous bracteas and bracteoles in 4-cleft fascicles; the fertile bracteoles subulate spinous: leaves elliptic-oblong, attenuated at both ends, glabrous beneath, on the lines and 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 bracteas—6 ovary cut vertically—7 capsule dehiscing—8 a seed—9 the same cut transversely—10 cut longitudinally—11 cotyledons separate.

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

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

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

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

455. LEPEDAGATHIS CRISTATA (Willd. Nees l. 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 bracteas 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 bracteoles—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.

456. LEPIDAGATHIS PUNGENS (Nees l. c. p. 97) stem shrubby, very ramous: leaves (small) spinously dentate: spikes binate or ternate, capitately congested, axillary villous: dorsal bracteæ 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.

457. LAPIDAGATHIS SPINOSA (Nees l. c p. 95) stem shrubby and like the under surface of the ovate ripand leaves pulverulently tomentose: spikes terminal, capitate, involucrate. All the bracteas membranaceous and like the segments of the 4-cleft calyx, shortly armed, the inferior one deeply bifid acuminated.—Nees.

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

458. BLEPHARIS BOERHAAVIÆFOLIA (Juss. Nees l. c. p. 97) bracteoles cuniform, 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 5 anthers different views—6 ovary and ovules—7 capsule dehiscing, seed rough.

459 DILIVARIA ILICIFOLIA (Juss. Nees l. c. p. 98) shrubby, spinous or unarmed, glabrous: leaves elliptic, serrately-dentate, spinous: spikes many-flowered: flowers bracteate 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 dehiscing.

460. Crossandra axillaris (Nees. l. 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 magnifiea*—9 the same cut longitudinally—10 embryo detached.

461. Crossandra infundibuliformis (Nees l. 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. Gendarussa Tranquebariensis (Nees. l. 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 calcarate, leaves roundish, small.—Nees.

1 Flowering branch—2 calyx and bractioles—3 corolla split open—4 anthers—5 ovary and calyx—6 ovary opened—7 capsule dehiscing—8 a seed—9 cut longitudinally—10 embryo.

463. Justicia Ecbolium (Linn. Nees, l. 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 dehisced—8 a seed—9 cut transversely—10 cut longitudinally—11 embryo detached.

464. Rhinacanthus communis (Nees l. c. p. 109) 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—6 capsule after dehiscence.

465. Rungiah repens (Nees l. c. p. 110) 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 dehisced—7 a seed, rough and furrowed—8 divided lengthwise showing the embryo—9 embryo detached.

466. Eranthimum montanum (Roxb. Nees. l. 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 ciliates.—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. l. c. p. 117) herbaceous hairy; leaves oblong, subsessile, somewhat crenated: racemes 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 dehisced *natural size*—6 a seed *magnified*—7 the same cut transversely—8 cut longitudinally—9 the embryo detached.

468. Gendarussa vulgaris (Nees l. 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. Cordia serrata (Roxb. Fl. Ind. 1 page 591) arborious tender parts hairy: leaves ovate cordate, serrate, acuminate: 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. Tabernæmontana crispa (Roxb.) leaves oblong, undulated peduncles few-flowered: pedicels elongated: calyx deeply 5-parted: segments broad-ovate, foliaceous.—G. Don. l. c. p. 91.

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, acuminated, glabrous, flat: flowers corymbose, terminal.—G. Don l. c. page 91.

1 Flowering branch—2 dissected flower—3 follicle.

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

Gen. Char. Calyx 5-parted, segments acute. Corolla inferior, hypocrateriform, 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 celled, with numerous ovules in each, attached to an elevation down the centre" (Roxb.) style short: stigma capitate bifid. 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 *Euapocyneæ*, the character is taken from Roxb. figure and description which proves the plant distinct from all 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 awned anthers of *Nerium* and the exserted ones of *Wrightia*, exclusive of belonging to a different section. To no other genus does the character of the crown permit it to approach

472. Echaltium piscidium (R. W. *Nerium piscidium* Roxb. *Wrightia? piscidia* G. Don *Echilut Silhetee.*)

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 (Roxb. 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 thim partially dissected showing the numerous seed.

474. Hoya pendula (W. and A. *Asclepias pendula* Roxb.) twining: leaves fleshy, glabrous, from oblong-oval acute to broad ovate, acuminated, 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 l. c. p 125.

1 Flowering branch—2 ovary, detached stigma and erect pollenia—3 a stamen and its crown—4 and 5 different views of detached crown leaves.

475. TOXOCARPUS ROXBURGHII (W. and A. *Asclepias longistigma* Roxb.) branches clothed with rusty down: leaves broad, oval, acuminated: 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, l. c. page 160.

1 Flowering branch—2 a dissected flower.

476. TABERNÆMONTANA RECURVA (Roxb.) leaves oblong-lanceolate, undulated, glabrous: calcyne teeth ovate: segments of corolla convex, of two forms, crenulated: cymes divaricate; flowers drooping.—G. Don. l. c. p. 91.

1 Flowering branch.

477. TABERNÆMONTANA CORONAREA (R. B.) leaves elliptic or oblong, bluntly acuminated: peduncles from the forks of the branches twin, 1-3 flowered: bracteas deciduous: calcyne teeth very short, rounded: anthers exserted: stigma undivided: follicles torulous.—G. Don. l. 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. ANAPHALIS NEELGERRYANA (D.C. 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 onesalong 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 pencillate at the point.—DC.

1 Plant *natural size*—2 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 pencillate apex.

479. AMBERBOA 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. CROTOLARIA LUNULATA (Heyne) suffrutescent, erect, much branched, clothed all over with glutinous soft hairs patent on the branches and adpressed on the leaves: stipules and bracteas 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: bracteas alternate, more pointed than the stipules: bracteoles similar to the bracteas, 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. CROTALARIA PULCHERRIMA (Roxb.) shrubby, erect, branched, covered all over with fulvous shining soft hairs: stipules none: leaves cuneate-obovate, obtuse: racemes elongated, terminal, on panicled axillary 1 2-leaved branches; lower flowers abortive: bracteas alternate, cordate, acuminated, reflexed, upper surface viscous: bracteoles on the middle of the pedicels, similar to the bracteas: calyx deeply 5-cleft, shorter than the corolla,and like the vexillum silky with fulvous hairs: segments oblong-lanceolate, the margins 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 LONGEFOLIA (R. 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. temuiflora* 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. PAROCHETUS MAJOR (Don) leaflets obovate, retuse, crenulated.—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 (D.C. Prod. 6 page 442) leaves broadly elliptic, obtuse, floriferous branches naked, bearing a many headed bracteated corymb on the apex, capitula longer than their pedicels. D.C. (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 unguiculate; 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.

486. Cocculus cordifolius (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 accumination, 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. Byttneria herbacea (Roxb.) stem herbaceous, without prickles; leaves not glandular, toothed, ovate, acuminated, 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 Heyneanum (Wall.) leaves cuneate-oblong, acuminated, 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: involucel-leaves and bracteoles imbricated round the base of the flower-bud, palmatifid and laciniated, 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 aud 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 *in situ*—11 embryo detached to show the foliaceous cotyledons.

490. Vittmania 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 5 anthers—6 ovary cut vertically—7 cut transversely.

491. Batatas Choisyana (R. W.) stems either procumbent, or twining if near support, everywhere clothed with course hairs: leaves petioled, ovate, acute, hairy above, tomentose beneath, peduncles axillary solitary. 1-3 flowered, longer than the petioles, 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. Calotropis herbacea (Wight—*Asclepias herbaceæ* 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 tridendate at the apex, and lying upon the gynostegium.—G. Don. l. c. p. 147.

1 Flowering branch—2 flower dissected.

493. Cryptolepis? pauciflora (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. Cryptolepis Buchanani (Roem. and Sch. *Nerium reticulatum* Roxb.) flowers small, yellow; leaves oblong, white and veiny beneath; corymbs inter-petiolar, almost sessile.—G. Don, l. c. page 82.

1 Flowering branch—2 dissected flower—3 follicles.

495. Boucerosia umbellata (W. and A.—Contributions) segments of corolla glabrous.—G. Don. l. 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 stamenal crown—6 gynostegium and pollen masses—7 follicles—8 a seed.

496. Cucumis pubescens (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 ½ 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 crowded; female solitary: fruit oval, rounded at both ends, obsoletely 3-angled, 10-striated, glabrous, (about 1½ inch long and 1¼ 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 a seed—11 cut lengthwise—12 embryo detached.

498. CITRULLUS COLOCYNTHIS (Arn. *Cucumis colocynthis* Linn.) stems scabrous: leaves glabrous and nearly quite smooth above, copiously muricated 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. page 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. LUFFA PENTANDRA (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 10 longitudinal lines but not ribbed, (1-3 feet long and about 3 inches thick): seeds (gray) 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, acuminated, serrated: petioles shorter than the leaves, muricated: 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, tuberose margins, and gibbous suberose sides.—W. and A. Prod. I. page 345.

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 reduncular stamens—7 young fruit cut transversely 3-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 sprinkled 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—2 male flower, side view—3 the same opened and spread out to show the stamens and reduncular ovary—4 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 amplexicaulis* Arn.) monœcious: 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 rather 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- (about 4-) seeded: seeds oval, thick, compressed, surrounded with a thick corky closely warted and rugose zone, the sides flattish, sprinkled with little tubercles.—W. and A. Prod. I. page 346.

1 Flowering branch, *natural size*—2 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 EPIGÆA (Rottl. *Achmandra epigæa* Arn.) 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 muricated: 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*—8-9 the same dissected.

505-506. MOMORDICA DIOICA (Roxb.) diœcious: 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 subulate: petals lanceolate: fruit (about the size and shape of a partridge-egg) ovate, muricated: seeds oval, surrounded with a large red arillus—*a*; leaves cordate, acuminated, usually entire.—W. and A. Prod. I. page 348.

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 superintendence, 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 redunculary stamens? —7 ovary cut transversely—8 cut longitudinally.

508. Cardiospermum Halicacabum (Linn.) annual : stem, petioles, and leaves, nearly glabrous : leaves biternate : leaflets oblong, much acuminated, 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 veluttnum* Wall.) The only species of the genus, a beautiful and richly flowering tree of very rapid growth, a native of Java. Leaves cordate, acuminated, 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 stamenal 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. Polycarpæa 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, spathulate, oblong obtuse, or somewhat acute : flowers imbricately spiked : spikes several fascicles on the summits of the branches ; sepals scariose, 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. Aglaia 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 stameniferous tube—4 stameniferous 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, brillate, equalling the acute lanceolate leaflets of the calyx.—Roxb.

1 Flowering branch, *natural size*—2 a male flower and bracteaæ—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. l. c. page 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 tristes (Willd. Roxb. l. 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. Fœniculum vulgare (Gærtn.) biennial: stem 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 vittæ.

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 toothed 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.

517. Andrographis serpyllifolia (R. W. *Erianthera* Nees) stem procumbent; leaves suborbicular, subsessile: flowers axillary, pedicels from 1 to 3 flowered.—Nees in Wall. Pl. As. Rar.

The essential distinction between *Erianthera* and *Andrographis* 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 conforms.

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 racemosely panicled.—Lam. En. p. 662.

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 acutish: 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. Nelitris paniculata? (Lindl.) leaves oblong acuminated: 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. Myrtus tomentosa (Ait.) branches downy: leaves ovate, 3-nerved, the lateral nerves near the margin, upper side when young downy, under tomentose and hoary: pedancles 1- or occasionally 3-flowered, bearing 2 ovate bracteoles under the flower: calyx downy, 5 cleft: petals slightly downy on the outside: berry 3-celled: seeds compressed, forming two rows in each cell.—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 the cotyledons.

523. Jossinia indica (R. W.) leaves short petioled, obovate spathulate, glabrous on both sides: peduncles axillary, solitary, or congested, sometimes, from abortion of leaves, corymbose on the ends of the branches, one flowered: tube of the calyx globose, clothed with short whitish tomentum, limb 4-lobed, lobes persistent: ovary and fruit 2-celled, seed several in each: testa polished soft: cotyledons foliacious.

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 drupacious, 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 acuminated, 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 spectabilis (R. W. *Myrtus spectabilis* Blume).—The plant here figured is the only species of the genus. Its one-celled ovary (whence the name) with parietal placentæ 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 size*—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) hemisperica (R. W.) leaves petioled, lanceolate, acuminated at both ends: cymes axillary solitary or paired, shorter than the leaves: calyx tube short, semiglobose: petals orbicular, reflexed: fruit —*Ceylon*.—R. W. Ill. 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, limb 4-cleft, fruit oval.—R. W. Ill. Ind. Bot. 2. p. 14.

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

1. Flowering branch *natural size*—2 a flower bud 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 cotyledons separated.

527. Eugenia (J) cylindrica (R. W.) leaves short petioled, ovate, acuminated 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 —— ?---R. W. Ill. 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 acuminated at both ends, finely parallelly veined: racemes spicate, 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.—R. W. Ill. 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 (R. W. Ill. Ind. Bot. 2. p. 15.—*Syz. 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.—W. 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. Ill. Ind. Bot. 2. p. 15. *Syzygium lanceolatum* W. 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) bractiolata (R. W. Ill. Ind. Bot. 2 p. 15.) ramuli 4-sided, angles subacute: leaves short petioled, elleptico-lanceolate, acute or slightly acuminated at both ends, pellucid dotted: cymes terminal and from the upper axils, the extreme divisions terminating in a cluster of from 6 to 9 sessile flowers; each division and each flower furnished with two minute, persistent, acute bracteols: 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 spathulate, 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.---R. W. Ill. Ind. Bot. 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---petals detached.

533. Eugenia (S) Neesiana (R. W. Ill. 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 a 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. Ill. 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. Ill. Ind. Bot. 2. p. 16.—*Syzygium Jambolanum* DC.) arborescent, leaves oval or oblong, more or less acuminated or obtuse, feather-nerved, coriaceous: cymes panicled, 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, acuminated, 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. Ill. 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 old branches: calyx truncated, entire: petals calyptrated. *Bulaghaut Mountains.*—R W. Ill. Ind. 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 an 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. *Syz. salicifolium* Graham's Cat. Bombay plants) leaves linear lanceolate, tapering towards both ends, obtusely acuminated, 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. Ill. 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) caryophyllæa (R. W. *Syz. caryophyllæum* Gærtn.) leaves obovate, obtuse or with a very short sudden blunt acumination, tapering towards the base, somewhat coriaceous, inconspicuouly 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 calyptra 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.

541. Eugenia (S) reticulata (R. W.) leaves ovate lanceolate, acuminated, 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. Ill. 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. *Mergui.*—R. W. Ill. Ind. Bot. 2. p. 16.

1 Flowering branch *natural size*—2 a flower bud cut vertically after the petals had 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) polyantha (R. W.) leaves penninerved oval lanceolate, tapering at the base, bluntly acuminated, coriaceous, dotted, shining above, dull somewhat glaucous beneath: cymes numerous, short, many-flowered, several springing together from the scars of fallen leaves: calyx 4-cleft, petals 4, constantly expanding before falling: fruit. *Mergui.*—R. W. Ill. 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 gives 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. balsamea* from which I fear on further acquaintance it will be found scarcely distinct.

544. Eugenia (S) cordifolia (R. W. *Calyptranthis 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 calyptriform.—R. W. Ill. 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, acuminated 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. Ill. 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. Barringtonia 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-bracteated 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 Gærtner.

548. Eugenia (J) alba (Roxb. R. W. Ill. 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. Ill. 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. Ill. Ind. Bot. 2. 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) Moonana (R. W.) shrubby, glabrous, leaves pellucid dotted, short petioled, ovate, tapering at the base, acuminated; 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. Ill. 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. Ill. Ind. Bot.—Syz. nervosum DC.) leaves elliptico-ovate, attenuated at the base, acuminated at the apex, subcoriaceous, penninerved, the lateral nerves slightly prominent: peduncles lateral, laxly cymosely panicled, 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) caryophyllifolia (Lam. Roxb.) leaves elliptico-ovate, acuminated at both ends, coriaceous, feather-nerved: peduncles lateral, densely cymosely panicled, 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.

554. Eugenia (S) ferruginea (R. W.) ramuli compressed, leaves oblong-lanceolate, acuminated, 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 fasciculed on the ends of the branchlets: calyx 4-lobed, lobes obtuse on the margin, caducous: petals expanding before expansion.
Mergui—Griffith.

This is the plant alluded to (Ill. 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, acuminated, 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. Ill. Ind. Bot. 2. p. 17.

This is certainly a beautiful plant, and though in character not easily distinguished from *E. S. polyantha* 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 spherica (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 fascicules of anthers—3 a full grown fruit—4 fruit cut transversely.

557. Careya herbacea (Roxb,) herbaceous: flowers peduncled: leaves obovate, cuneate. serrulate.—Roxburgh's l. 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. Semecarpus 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. 168.

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. Semecarpus 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 oblong-lanceolate, acuminated, shining, beneath reticulately veined of a uniform colour.—DC. Prod. 2. p. 68.

1 Flowering branch—2 a *magnified* flower.

561. Rhus Bucki-amela (Roxb. *R. semialata var* γ *Roxburghii* DC.) arboreous: leaves pinnate, leaflets 5 pairs ovate, serrate, villous, exterior half of the petiol winged: panicle terminal: berries orbicular, compressed viscid.—Roxb. Fl. Ind. 2. p. 99.

1 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 oldenlandioides (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.—W. and A. Prod. I. p. 364.

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

564. Hydrocotyle rotundifolia (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 crenated, 7-nerved, glabrous, or slightly villous on the under side when young: petioles and peduncles fascicled, 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. Prod I. p. 368.

1 Flowering plant *natural size*—2 an expanded flower—3 the ovary after the fall of the 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.

Obs. The plant figured No. 335 of this work differs so much in its general appearance from this, which is the true *Roxburgian* 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. Dasyloma Bengalense (DC. Sessile Bengalensis Roxb.)

Obs. DeCandolle distinguishes two species of this genus one *D. Bengalense*, by its umbels being sessile—the other *D. glaucum* by its umbels having a distinct peduncle. As this is Roxburgh's plant, therefore the true *D. Bengalense*, 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 pinnatifid, laceneœ 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. Fœniculum panmorium (DC. Anatheum panmorium Roxb.) stem erect ramous: leaves supra decompound 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 mericarps suspended from the carpophore—4 detached mericarp—5 the same cut transversely.

571. Oenanthe stolonifera (DC. Phellandrium stoloniferum Roxb.) stem piped striated, repent at the base, afterwards ascending: leaves bi-pinnatifid, the upper ones pinnatifid, lobes lanceolate acuminated at both ends coursely and widely serrated: umbels opposite the leaves, exinvolucrete: 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-decompound: 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 cremocarp---4 the same full grown---5 transverse section of the same---6 transverse section of a single mericarp.

573. Panax fruticosum (Linn. Roxb.) shrubby, unarmed: leaves pinnately decompound; leaflets petioled, oval-oblong, acuminated, very acutely serrated, often variously laciniated: 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 (Kœn. W. & A. G. latifolia Roxb. not Aiton) arboreous, unarmed: leaves opposite or in threes, nearly sessile, from ovate to obovate, 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.

575. GARDENIA LUCIDA (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 ½ 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 stamen detached—4 a fruit full grown—5 the same cut transversely.

576. GARDENIA GUMMIFERA (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 acuminated 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 acuminated 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 TURGIDA (Roxb.) arboreous armed, bark thick: leaves obovate attenuated at the base into a petiol, smooth: flowers lateral, 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 or 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 NUTANS (DC. Posoqueria nutans Roxb.) spines opposite, horizontal: young branches long, drooping, pubescent: leaves from cuniform-oblong to round, glabrous: flowers short pedicelled, at the extremity of short leafless or few leaved axillary young shoots: calyx with a short rather hairy cylindric 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 of 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 LONGISPINA (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, short 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.

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

1 Flowering branch—2 dissected 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 scaly leafless young shoots: calyx glabrous; tube cylindric, segments of the limb somewhat lanceolate, acuminated, 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—6 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 stamenal crown—3 ovary and stigma, the crown and filaments removed—4 stamens and crown.

586. HOYA VERIDIFLORA (R. Brown) twining: leaves ovate or cordate, acuminated, membranaceous glabrous: corolla glabrous, with ovate acute lobes: leaflets of the stamenal 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.

587. Hoya parasitica (Wall. Asclepias parasitica Roxb.) scandent, parasitical, glabrous, branches slender, terete: leaves fleshy, glabrous, shining, slightly 3-nerved at the base, oblong-lanceolate, tapering to a point: peduncles about half the length of the leaves, many-flowered: corolla glabrous, deeply 5-cleft: leaflets of the crown ovate-acute, the interior angle resting on the stigma.—Wight's Contributions.

Lower leafy portion of a branch showing the parasitic roots—1 a flowering branch—2 a flower, front view—3 back view of the same—4 a follicle.

588. Tylophora tenuissima (W. and A.—Asclepias tenuissima Roxb.) twining, glabrous, stem and branches slender: leaves oblong-lanceolate, subcordate at the base, veinless, slightly revolute on the margin (two or three inches long by about half an inch broad): peduncles flexuose, pedicels numerous fascicled on the flexures: flowers small, leaflets of the crown ovate-oblong: pollen masses ascending: stigma convex: follicles diverging glabrous.—W. and A. Contributions p. 49.

Obs. The flexuose peduncles with the pedicels aggregated in fascicles on the flexures is nearly peculiar to this genus and occurs in almost every species I know. In my genus *Iphesia* a similar habit prevails which leads me to doubt whether it ought to be kept up.

1 Flowering branch—2 expanded flower.

589. Marsdenia tinctoria (R. Br.—Asclepias tinctoria Roxb.) twining: leaves ovate or oblong, acuminated cordate at the base, nearly glabrous, furnished with glands near the base: thyrses lateral; flowers small bearded on the throat: leaflets of the crown subulate, as long as the gynostegium: stigma blunt.—Wight's Contributions p. 40.

1 Flowering branch—2 an expanded flower—3 the same dissected showing the gynostegium *in situ*—4 ovary and stigma.

590. Marsdenia Tenacissima (W. and A.—Asclepias tenacissima Roxb.) twining: leaves cordate acuminated, tomentose on both sides: cymes large panicled: segments of the corolla broad obtuse: leaflets of the crown broad truncated, entire or slightly bifurcated at the apex: stigma obtusely apiculate.—Wight's Contributions p. 41.

1 Flowering branch—2 dissected flower—3 ovary and stigma—4 detached pollen—5 stamens front view, with the crown attached.

591. Cosmostigma racemosa (R. W.—Asclepias racemosa Roxb.) This is the only species of this genus, which is easily distinguished by the peculiar habit and its remarkable crested or ornamented stigma (whence the name) which however is not very clearly shown in the figure.

1 Flowering branch—2 dissected flower—3 pollen—4 ovary cut transversely—5 cut vertically—6 a follicle—7 a seed—8 cut transversely—9 dissected showing the embryo.

592. Gymnema tingens (Var ovalifolia W. and A.—Asclepias montana Roxb.) twining, shrubby, younger branches herbaceous, glabrous, leaves from cordate-ovate to ovate or oval, usually abruptly acuminated, glabrous: umbels or corymbs often paired, at first shorter than the petiol, at length elongating spirally: flowers largish (pale yellow) throat of the corolla naked, tube furnished with hairy lines: glands of the filaments more than a half shorter than the stamens, stigma blunt, exceeding the stamens.—Wight's Contributions p. 45.

1 Flowering branch—2 calyx—3 corolla split open showing the hairy lines, but not representing them quite correctly—4 gynostegium showing the stamens and prominent obtuse stigma—5 a detached stamen.

593. Gymnema tingens (Var cordifolia W. and A.—Asclepias tingens Roxb.) see the preceding character.

Obs. Dr. Roxburgh assigning a higher value to characters taken from variations in the foliage than I feel disposed to adopt, has, mainly on that ground, constituted the plants represented in these two figures, distinct species. I am not disposed to follow him in that division, but think it incumbent on me, having the opportunity of doing so, to show Roxburgh's reasons and leave those interested in the question to decide which is right.

1 Flowering branch—2 dissected flower showing more correctly the form of the hairy lines—3 gynostegium—4 pollen—5 stamen—6 follicle—7 a seed.

594. Hemidesmus indicus (R. Br.—Asclepias pseudosarsa Roxb.) glabrous: leaves from cordate to ovate, cuspidate, passing into narrow linear, acute, often oblong-lanceolate: cymes often subsessile, sometimes peduncled scales of the corolla obtuse cohering the whole length of the tube: follicles slender, straight.—Wight's Contributions p. 63.

1 Flowering branch—2 a *magnified* flower front view—3 the same dissected, calyx and corolla detached to show the gynostegium—4 follicles—5 a leaf of different variety.

595. Sarcostemma brevistigma ? (W. and A.—Asclepias acida Roxb.) twining, leafless, umbels terminal or terminating short lateral branches: calyx and pedicels glabrous: exterior crown 10-plaited, 10-crenated; the leaflets of the interior one gibbous on the back equaling the gynostegium: stigma blunt.—Wight's Contributions p. 59.

Obs. In the true *S. viminale* the stigma is prolonged, pointed, and bifid at the apex, here it is evidently flattened, on which account I have doubtfully referred Roxburgh's *As. acida* to this species, in place of to *viminale* to which it is usually assigned.

1 Flowering branch—2 an expanded flower front view—3 back view—4 ovary and stigma with the attached pollen.

596. Dæmia extensa (R. Br.—Asclepias echenata Roxb.) shrubby twining: leaves roundish, cordate, acuminate, auricled at the base, pubescent above, glaucous, peduncles and elongated pedicels filiform: margin of the corolla ciliated.

1 Flowering branch—2 dissected flower—3 pollen and ovary—4 stamen and crown—5 follicle. The pubescence of the corolla is not shown.

597. Holostemma rheedii (Spreng.—Asclepias annularia Roxb.) leaves broad ovate-cordate.—Wight's Contributions p. 55.

Obs. To the localities mentioned in the "Contributions" I am now enabled to add Courtallum and the Neilgherries from both of which I have specimens.

1 Flowering branch—2 a flower with the corolla removed to show the annular crown—3 ovary, stigma and pendulous pollen masses—4 detached pollen—5 a stamen.

598. Toxocarpus laurifolius (R. W.—Asclepias laurifolia Roxb.) glabrous: leaves oval, sometimes obtuse, oftener acuminate coriaceous: corymbs sessile, devaricately trichotomous, very ramous: flowers numerous small, segments of the corolla reflexed, bearded within: leaflets of the crown fleshy, short, roundish-ovate, acute, with the interior lacinula shortly exserted, equaling the gynostegium: apices of the anthers thickened, sub-crestate, curved over the obconically apiculate stigma: follicles slender, diverging horizontally.—Wight's Contributions p. 61.

1 Flowering branch—2 back view of the corolla—3 front view *more highly magnified*—4 ovary and stigma—5 stamen seen from within—6 a seed.

599. Strophanthus dichotomus (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 verticellata Linn. fl. Roxb. Exacum 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, 3 nerved leaves, tetragonal, simple stems, and axillary sessile small white flowers, generally 3 in each axil and therefore appearing verticellate."—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. Celtis Orientalis (Willd.) polygamous arboreous: leaves bifarious, obliquely cordate, serrate, fine 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 lanceœfolia (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 ovules 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 full grown—5 cut vertically—6 the embryo detached.

607. Eugenia (A) acuminata (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. Eugenia (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 Lal 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. 497.

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) lanceolaria (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—3 full grown fruit—4 cut transversely, apparently several seeded, but probably with but one, many lobed seed all uniting in a single, central embryo.

614. Eugenia (S) grandis (R. W. Ill. 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 cut transversely.

615. 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 eaten. This species, which much resembles some forms of *E. Jambolana* is readily distinguished by its free expanding petals, a character not noticed by Roxburgh.

616. Eugenia (S) paniala (Roxb.) leaves broad lanceolar, acuminate, coarsely veined : panicles lateral, brachiate : flowers in little heads : berries oval.—Roxb. Fl. Ind. 2. p. 489.

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 calyptrate: berry oblong one-seeded.—Roxb. Fl. Ind. 2. p. 485.

Native of the Molluccas.

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) lanceæfolia (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-jamb. 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*" Roxb. 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. 496.

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 clawed, orbicular, concave, redish petals.—Roxb. 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) brachiata (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 Amboyna. " 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) corymbosa (Roxb.) leaves ovate-lanceolate, entire, smooth : corymbs terminal decompound : calyx with large 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 disseeted—4 ovary cut transversely.

628. Eugenia (S) pulchella (Roxb.) leaves broad lanceolar, acuminate, finely veined, lucid: panicles terminal, divided in a triternate form: peduncles and pedicels four sided: berries spherical.—Roxb. 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) glandulifera (Roxb.) shrubby: leaves broad lanceolate, highly polished: panicles terminal brachiate; ramifications simple and umbelliferous: calyx five toothed, and with the germs and pedicels glandular.—Roxb. 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. 496.

Native of Chittagong. 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 (Lamarck) 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 roughish 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: ovarium oblong, 5-angled, with 12-14 ovules in each cell: capsule oblong, 5-angled; outside encrusted with a furfuraceous pubescence.—W. and A. Prod. .I p. 69.

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

EXPLANATION OF PLATES.

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632. Ficus polycarpa (Roxb. not Jacq. *F. copiosa*, Steud. Nom. Bot.) Arboreous: leaves oblong some of them slightly waved, or serrulate, both sides scabrous: fruit in fascicles from the trunk or woody branches.—*R. Fl. Ind.* 3. 506.

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 nerves.

633. Ficus asperrima (Roxb.) leaves oval, often scolloped, very scabrous: fruit axillary, paired, peduncled, round, downy.—*R. Fl. Ind.* 3. 554.—*Hort. 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 6 leaved.—*R. 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.) Pirennial 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. 535.—*Willd. sp.* 4. 1149.

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. dæmona* 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—4 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. Hb. 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. Rumphii* Blumé) leaves long, slender petioled, ovate-cordate, acuminate, glossy: fruit paired, sessile, round, smooth, black.—*R. 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 coalesed trunks."—Roxb.

641. Ficus dœmona (Roxb. Kön. 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.—*R. 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.*)

Obs. 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, Willdenow'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. nitidæ et pertusæ valde similis a quibus caute distinguenda.*" The following are his specific caracters of these two species.

"*F. Benjamina* (Lin.) leaves elliptic, oblong, entire, narrower at the base, obtusely acuminate at the apex, slenderly parallely 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* Thunb. 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 small trees, shrubs &c.

1 A flowering branch—2 a female flower—3 a male 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. Ind.* 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.—*R. Fl. Ind.* 3. 561.

Nepaul.—Whence it was introduced by seed 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-crenate, three-nerved, downy: fruit axillary and lateral, peduncled, solitary, oval, smooth.—*Roxb. Fl. 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 excelsa (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: calyx of the peduncle tridentate: navel 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.

Coromandel mountains.—A small but very ramous tree.

652. Ficus ampelos (Roxb. Kön. Mst.) Branches dropping fibrous roots: leaves obliquely oval, scabrous: fruit paired, axillary, pedicelled, pisiform, smooth, yellow.—*R. Fl. Ind.* 3. 553.

A large tree, native of mountainous countries.

653. Ficus hederacea (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. Ind.* 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. 533.

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, scandent, 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 subulate, stigma acute.

1 Flowering branch—2 female floret.

657. Ficus ramentacea (Roxb.) arboreous, branches dropping roots: leaves long ovate—cordate, acute, entire, in the bud hirsate, 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. 546.

Chittagong.—In drying, the leaves become particularly glossy, while, until pretty well expanded, the large veins are very hairy.

658. Ficus comosa (Roxb. Willd.) leaves oblong ventricose, pointed, smooth: fruit in pairs, generally terminal, turbinate, smooth, red.—*R. Fl. Ind.* 3. 552.

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 heterophylla (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 denticulata, truncata, serrata*, and *aquatica* of Vahl and Willd. and probably *F. cannabina*, 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 mountains—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. Ind.* 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 cuniform 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.—*Roxb. Fl. Ind.* 3 541.

Mountains of Silhet.—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.—*R. Fl. Ind.* 3. 555.

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.—*R. 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 laciniate, 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.—*Roxb. Fl. Ind.* 3. 558.

A large tree widely distributed over the Southern provinces of India, usually growing in moist ground near the banks of rivers and water courses. 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 and simple: fruit paired, axillary, sessile round-turbinate.—*Roxb. Fl. Ind* 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 *F. indica* (Banyan tree) or *F. Benjamina*, the pendulous roots of which are often dangerous impediments on a road.

669. Ficus conglomerata (Roxb.) arboreous, leaves alternate, subsemi-cordate, cuspidate, rough and hard: fruit roundish, tubercled, crowded on long procumbent, or drooping, dicompound, cauline, leafless branches.—*Roxb. Fl. Ind.* 3. 559.

Chittagong.—In the Botanic Garden of Calcutta this tree is loaded with fruit the whole year.

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

Silhet.—The fruit is eaten by the natives.

1 A branch with young fruit—2 male flower—3 female, ovary separated to show the calyx—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.

Silhet.—Where it grows on old walls, bushes, trees &c. like the ivy in Europe, but generally has its main 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.

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

673. Ficus macrophylla (Roxb. not Desf.) arboreous: 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—Silhet—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 indigenous, the fruit is eaten by the natives in their curries.

674. Morus indica (Lin.) diœceous, 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 tartarica (Willd.) diœceous arboreous: 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, dioœceous: 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 (Roxb.) 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 INTEGRIFOLIA (Lin. fil.) leaves oblong, entire: flowers cauline.—*R. 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 LANCEÆFOLIA (Roxb.)leaves broad-lanceolar, or oblong, acuminate, entire: fruit terminal spherical.—*Roxb. Fl. 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 CHAPLASHA (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.) dicœceous 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 *Urera* Gaudichau 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 NAUCLEIFLORA (Roxb. *Conocephalus* Blume) dicœceous, shrubby, twining: leaves alternate, cordate entire: glomerules globular compact; the male ones panicled.—*Roxb. Fl. Ind.* 3. 593.

Chittagong—Silhet.—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 Artocarpeæ, along with the fig, jack, &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 CRENULATA (Roxb.) shrubby, dicœceous, erect: leaves alternate, oblong, acute, crenate: spikes axillary compound dichotomous.—*Roxb. Fl. Ind.* 3. 591.

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

687. URTICA HETEROPHYLLA (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 (Rumph. Roxb.) shrubby: leaves alternate, cordate, serrate, rugose, bristly: female spikes composed of alternate bifarious ramifications.—*Roxb. Fl. 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 bracteæ, seed compressed.

690. URTICA PARVIFLORA (Roxb.) dicœceous, herbacious, 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. 581.

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, cylindric, 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 Linnæan, 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.

694. URTICA SUFFRUTICOSA (Roxb.) suffruticose: leaves alternate, lanceolate, broadest at the base, entire, three-nerved, smooth: flowers axillary crowded, subsessile: female calyx one-leaved, ribbed, mouth bidentate.—*Roxb. Fl. Ind.* 3. 584.

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

695. URTICA 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. URTICA PENTANDRA (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.* 3. 583.

Found about Calcutta among bushes in wet places. The unusual developement 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*.

OBS.—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 succesfully illustrated from living specimens, in his own words.

698. JASMINUM ANGUSTIFOLIUM (Willd. Roxb. *Nyctanthes* 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. Ind.* 1. 96.

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

699. JASMINUM ARBORESCENS (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 begining 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. Roxb.) 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. Fl. 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. Ind.* 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 LATIFOLIUM (Roxb.) shrubby, twining: leaves opposite, petioled, cordate: corymbs terminal: calycine segments from 5 to 7, subulate: those of the corolla from 10 to 12 linear and cuspidate: berries kidney shaped.—*Roxb. Fl. Ind.* 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. arborescens*, 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 (Aiton Roxb.) shrubby, twining: leaves opposite, subsessile, from cordate to oblong, acute or obtuse: segments of the calyx subulate: berries globular.—*Roxb. Fl. Ind.* 1. 88.

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

705. JASMINUM SIMPLICEFOLIUM (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. Ind.* 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: calycine segments ensiform.—*Roxb. Fl. Ind.* 1. 383.

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

1 Flowering branch—2 corolla dissected—3 brateas 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 decompound, dense, sub-hemispheric: lacineæ of the corolla obovate and reflexed.

I. STRICTA (Roxb.) shrubby straight: leaves subsessile oblong: corymbs dense, compound, hemispheric: lacineæ of the corolla round, spreading: anthers bristle pointed.—*Roxb. Fl. Ind.* 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 Prodromus considered them distinct and both of Indian origin, referring *Ix. alba* to our *I. parviflora*, while *I. stricta* is retained as a distinct species nearly allied to *I. 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, decompound, 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 cuneate at the base, pointed, glabrous: corymbs trichotomous, open; flowers (small and whitish) fascicled 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 slightly exserted; 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 æstivation forming a globose head: anthers sessile: style scarcely exserted, glabrous; divisions of the stigma oblong, short, erect.—*W. 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 cuneate-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 bracteas 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 æstivation: style hairy! exserted; divisions of the stigma oblong, erect: berry somewhat didymous.—*W. and A. Prod.* 1. 429.

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 scariose, lanceolate, acuminated, 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 usual 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 Willdenows 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 dstermined 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 confess 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. 603.

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. 605.

Roxburgh, though he quotes Willdenow as his 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 Konig 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 lanceolatus (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 termenal, composed of a few simple cylindric branches: bractes minute, shorter than the obtuse three-leaved calyx; which is shorter than the obtuse rugose capsule. —*Roxb. Fl. Ind.* 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 tenuifolius (Willd. Roxb.) annual, diffuse: leaves wedge shaped, emarginate: glomerules axillary: male flowers diandrous, with a two-leaved calyx; the female ones irregular.—*Roxb. Fl. Ind.* 3. 602.

In cultivated ground near Calcutta.

1 Flowering branch—2 male flower—3 a female flower the perianth of which has 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 (Lin. Willd. Roxb.) diffuse: leaves obovate: glomerules axillary, two-parted: capsule bullate, equaling the acute, lanceolate, leaflets of the calyx.—*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 daggered: capsule wrinkled, seed pellucid, with callous white margins.—*Roxb. Fl. Ind.* 3. 609.

A large species, much cultivated on the slopes of the higher hills in several districts of Southern India. In Coimbatore, Salem, and Madura, I have frequently met with large fields of it, often on 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. Leiospermum 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 lands near Calcutta.

722. Centrostachys diandra (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 antheriferous: stigma two-cleft —*Roxb. Fl. Ind.* 1. 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 2-lobed.—*Roxb. Fl. Ind.* 1. 676.

Native of hedges near Calcutta.

725. Aerua monsoniæ (Mart. *Achyranthes* Roxb.) tetandrous, cœspitose, very ramous: leaves subulate, tufted: spikes terminal sub-cylindrical.—*Roxb. Fl. Ind.* 1. 673.

A very common weed in dry sterile and sandy soils.

726. Achyranthes sericea (Kön. Roxb.) stem erect downy: leaves opposite, broad cordate, acute, covered with much much silky down: peduncles axillary, longer than the leaves, bifid or trifid, many flowered.—*Roxb. Fl. Ind.* 1. 673.

A large straggling annual 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. Alternanthera sessilis (R. B. *Achyranthes triandra* 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. Deeringia celosioides (R. Br., Roxb.) perennial, scandent: leaves alternate, cordate: spikes terminal, panicled: styles three: berries three seeded.—*Roxb. Fl. Ind.* 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. Deeringia tetragyna (Roxb.) shrubby, scandent: leaves ovate cordate: flowers axillary: styles four cleft.—*Roxb. Fl. Ind.* 1. 683.

Moluccas.—Thence introduced into the Calcutta Botanic Garden. Seeds from 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 cylindric, 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. Desmochœta atroporpurea (D C. *Achyranthes lappacea* Roxb.) bi-ennial, straggling: leaves opposite, petioled, ventricose-oblong, smooth: spikes terminal: flowers 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. Desmochœta 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. Desmochœta 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 as it is figured in the Hort. Mal. 10 t. 79 (fid. Roxb.) it seems also to be a native of Malabar.

734. Chionanthus ramiflora (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 back 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 Roxburgii (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 paniculata* 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.

நிலநாய்க்கடுகு Tam.
Nielanaicadooyoo

Polanisia Chelidonii (D.C.)

Vaccariah del.

Pancras, Lith.

தடுப்பிலை

Thoopillay

Triumfetta angulata Lam.

Kurzia princeps D.C.
Johnia Coromandelliana, Roxb.

Alisma reniformis (Don)

Impatiens noli me tangere ? L.

Geranium sibiricum

Geranium sibiricum auct.

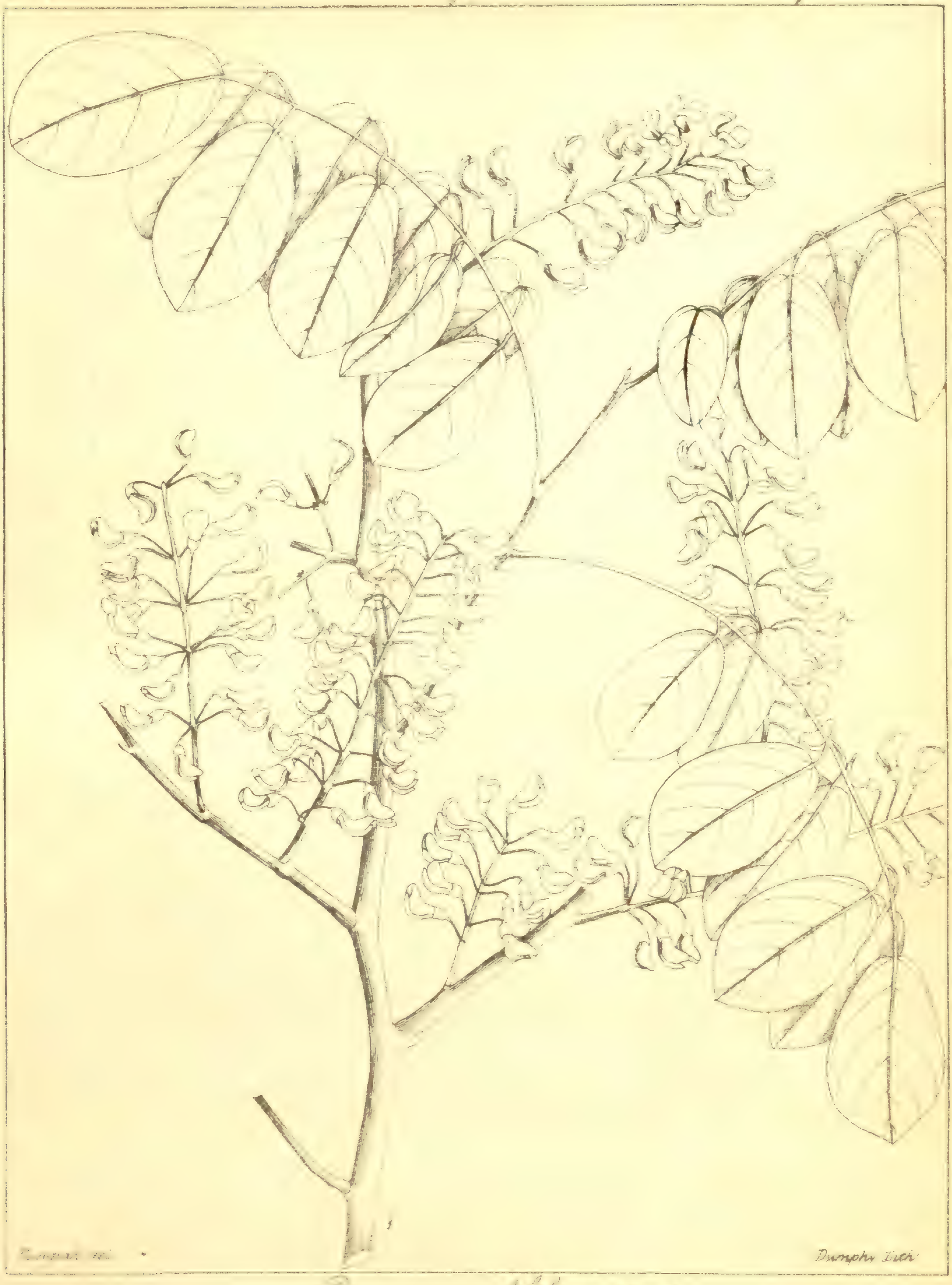
Cajenneth. del. Dumphy, Lith.

Salvia lanata, Roxb.

Roxburghiana

Flemingia semialata (Roxb.)

Flemingia lineata (Roxb.)



Dumont del.

Dumont Lith.

Sangamia ovalifolia (W & A)

Flemingia stricta (Roxb.)

Indigofera glandulosa (Roxb.)

Roxburghiana

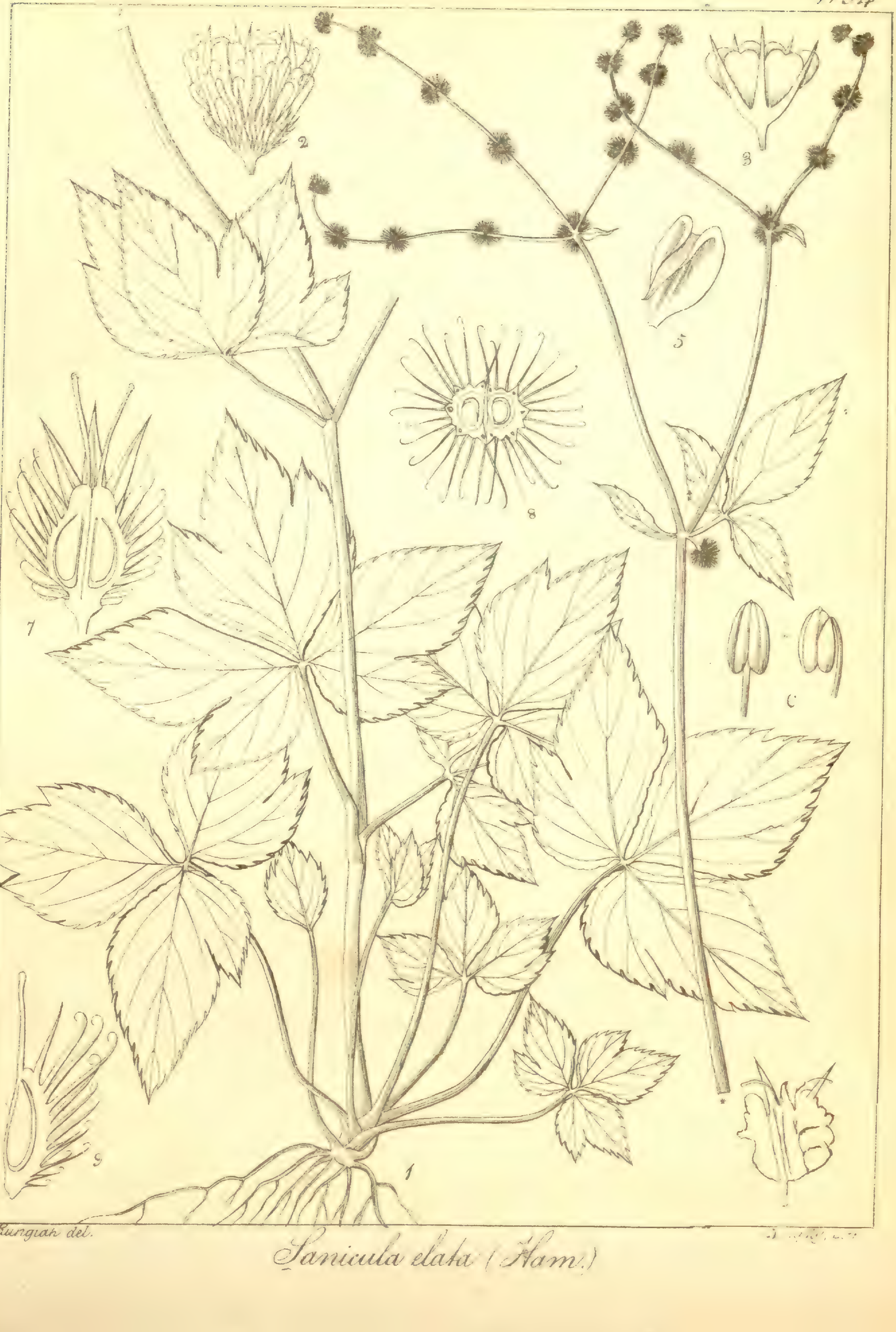
Indigofera paucifolia (Delile)
Ind. argentea (Roxb.)

Indigofera aspalathoides (Vahl.)

Roxburghiana.

Dumphy, Lith.

Indigofera uniflora (Ham.)



Rungiah del.

Sanicula elata (Ham.)

Rungiah del.

Pimpinella ? involucrata. (Wt. 4.)

Rungiah del. Dunphy. Lith.

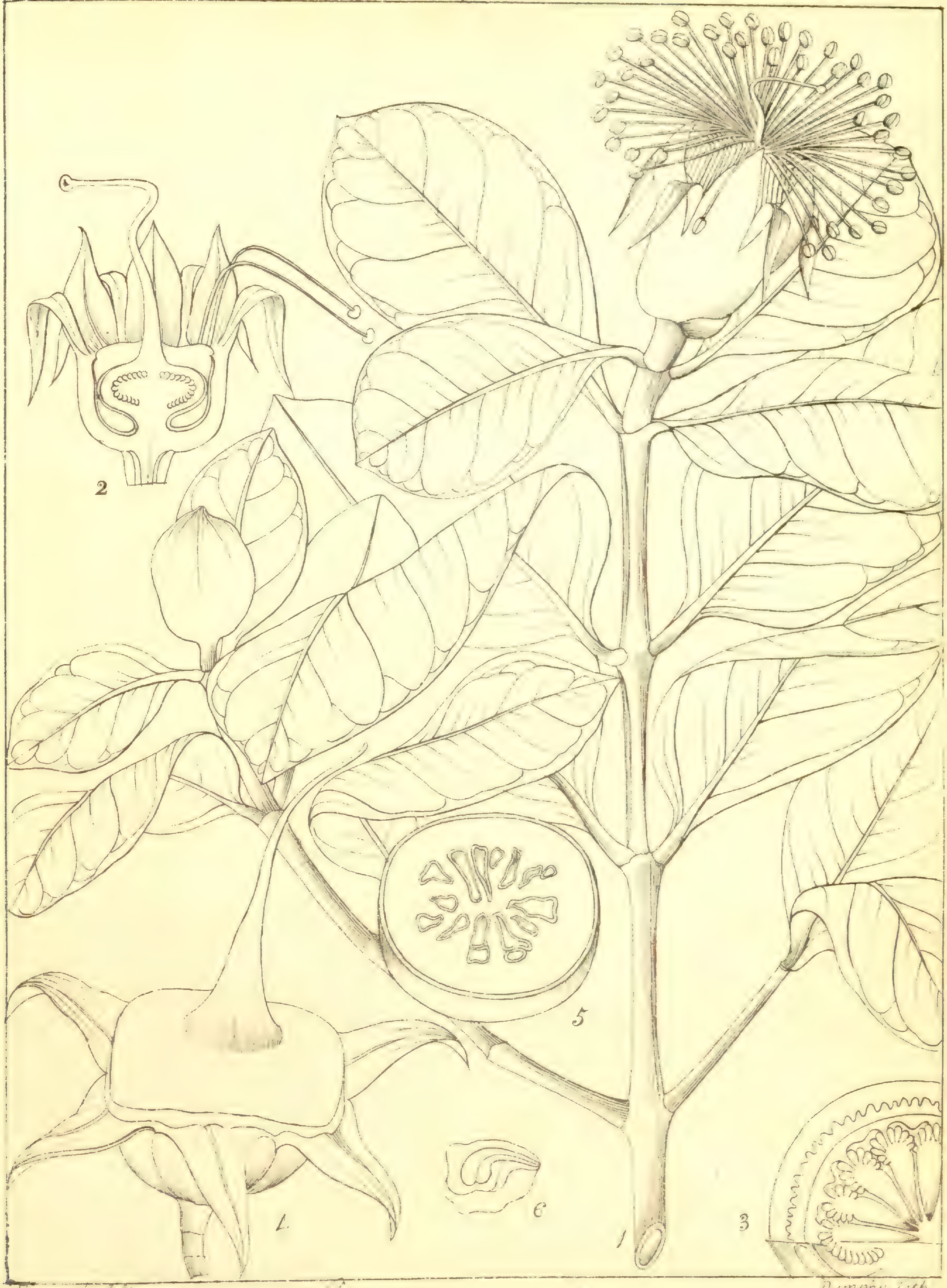
Exacum pedunculare.

Leucas Cephalotes (Spreng)

Leucas vestita (Benth.)

Zizyphus rugosa (Lam.)

கட்டுவலாய் தும்மட்டி
Cattoovalai Thummattie

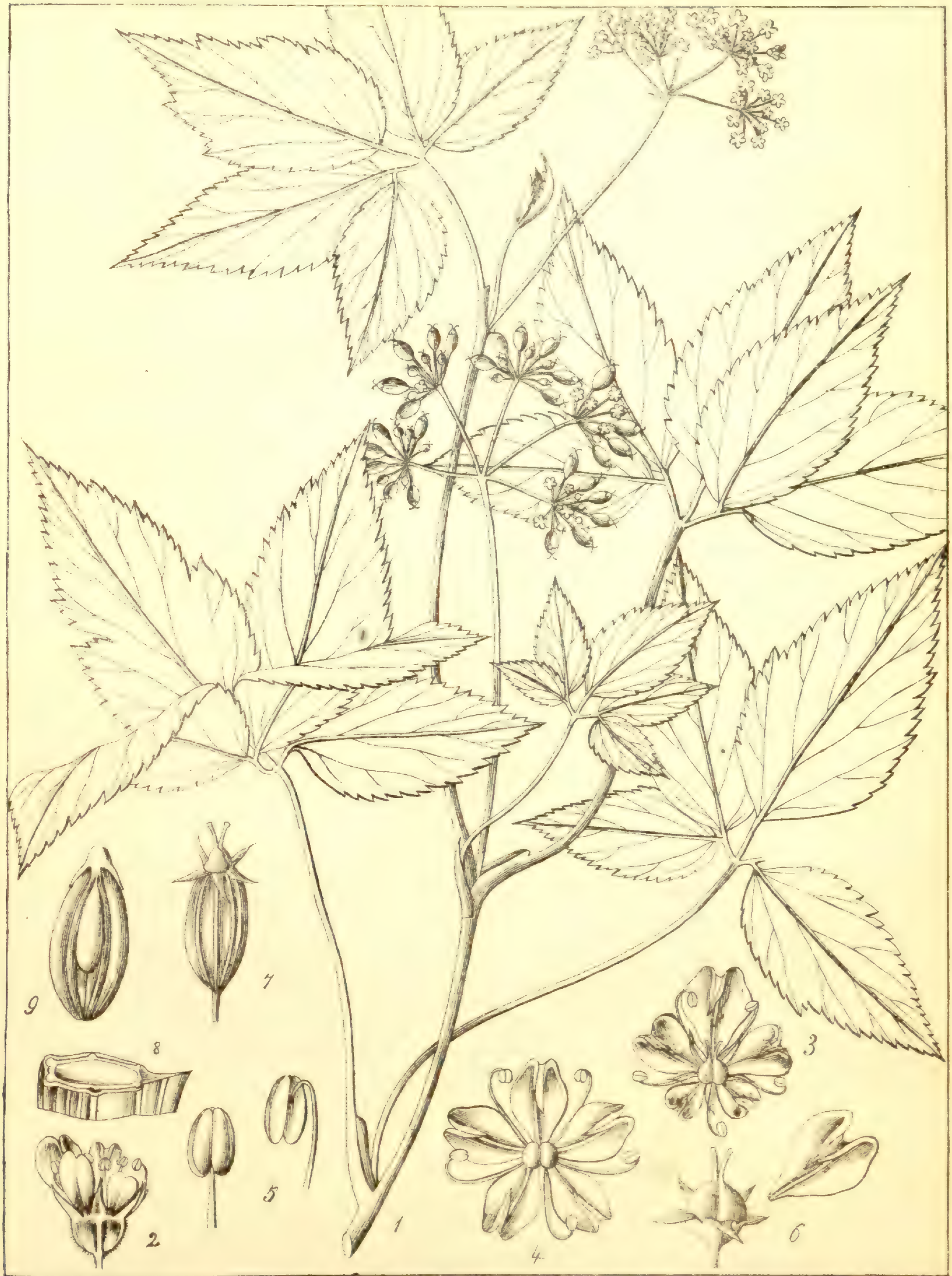


Tramzpah del. Dumpsy. Lith

Semneratia acida (Linn.)

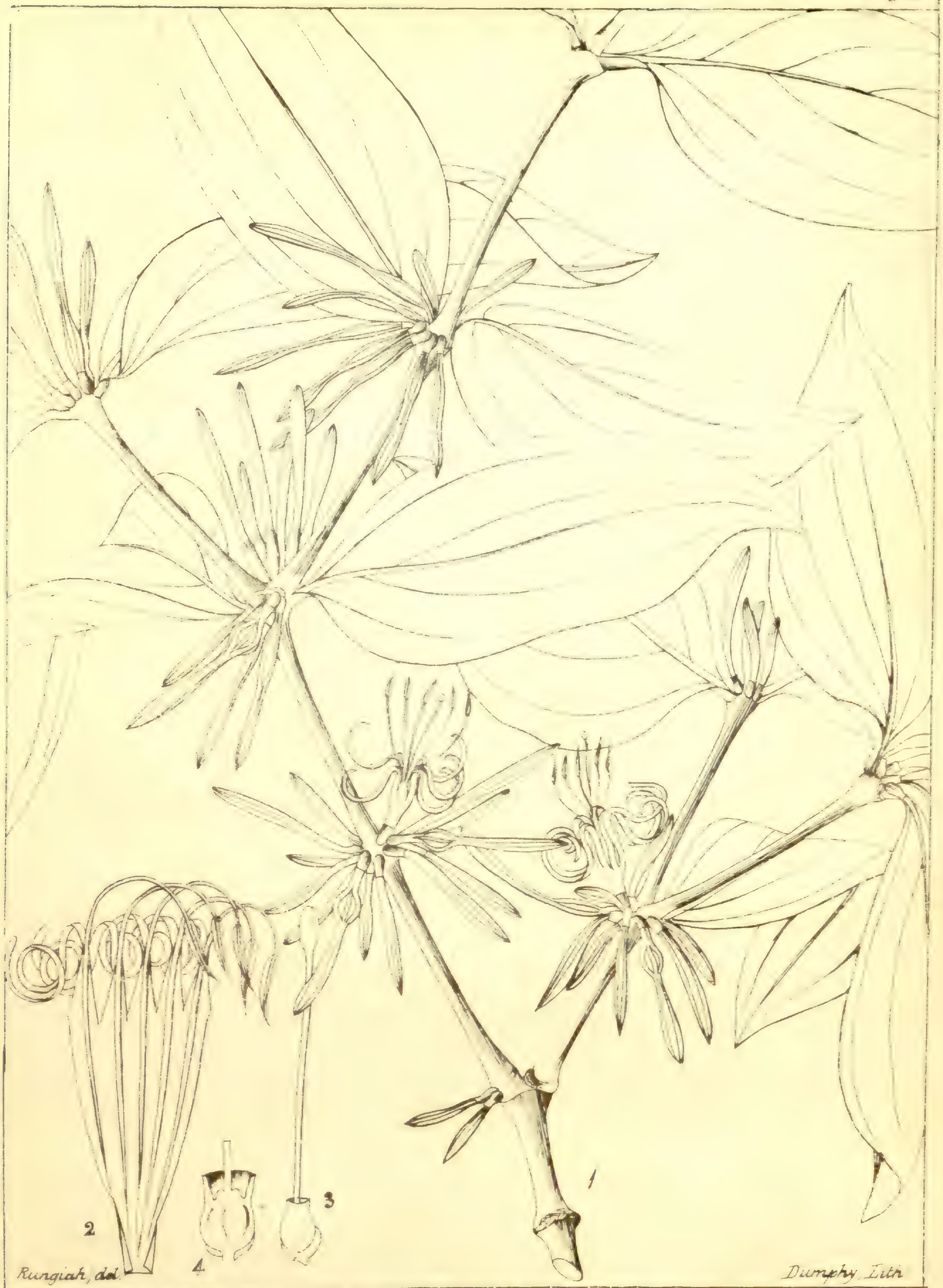
Pimpinella Candolliana (Wight)

Kungligh. del.
Malaseratum Jan.



Kungiah, del. Dunphy, Lith.

Heracleum pedatum (R. W.)



Loranthus elasticus (Desr.)

Maroothoovottoo

ಶಿವನಾರಕಾಲು ತಂಬ

Solanum rubrum

ಲಂಕಾ ಹಲಸಂಡಸಿ } Tam
c Halasoondacie

Solanum torvum

Rungiah, del:

Dumphy, Lith

குத்துகலன்டலிங்குத்திரி Tam
Coathoocunduncultere

Solanum Indicum

H. D. Alves ad. *Ipomœa volubilis (Linn.)*

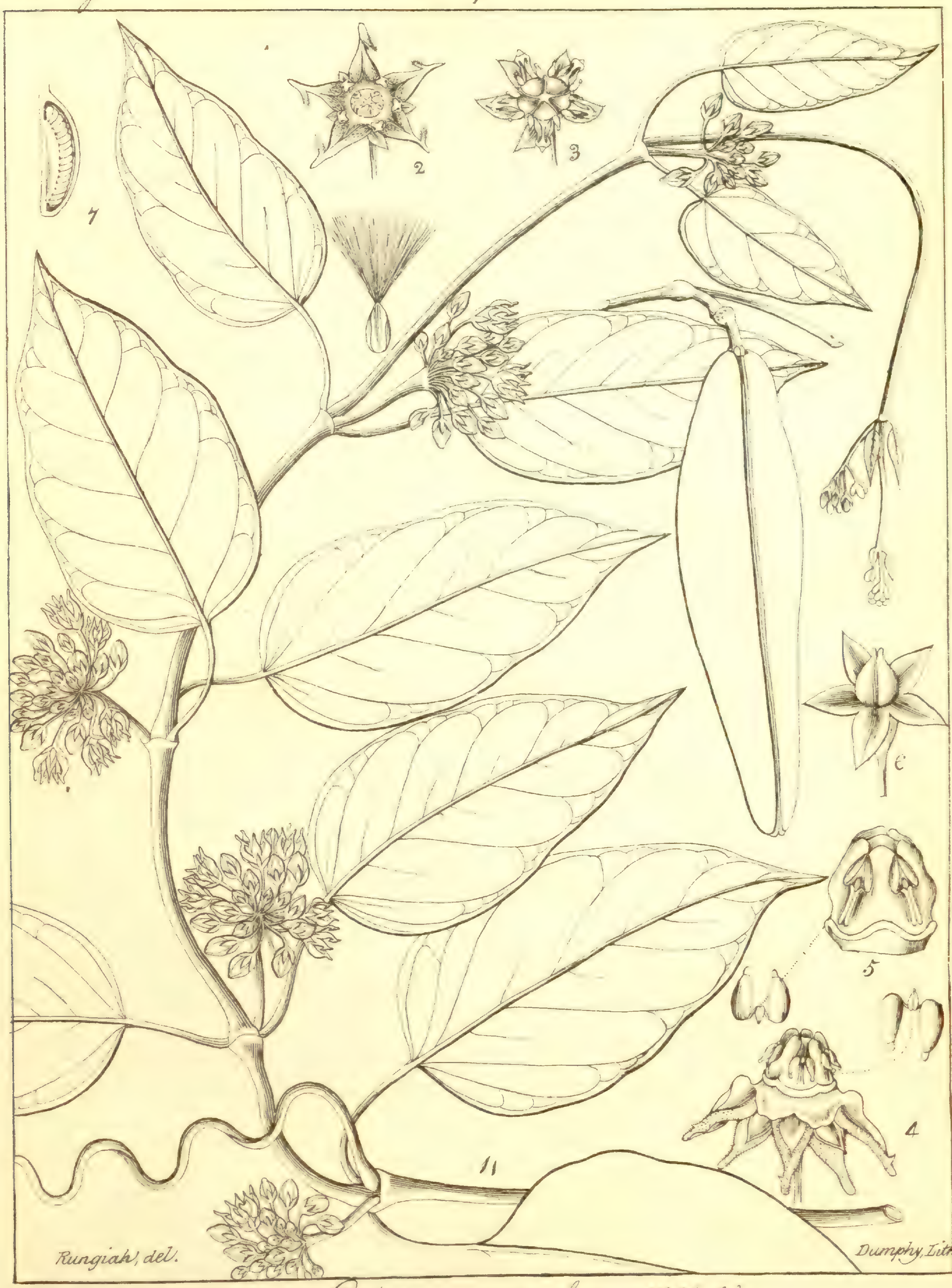
Rungiah, del. Dumphy, Lith.

Tam. தூதணாப்பாலை / Thoothanaipaalai

Heterostemma Tanjorensis (W. & A.)

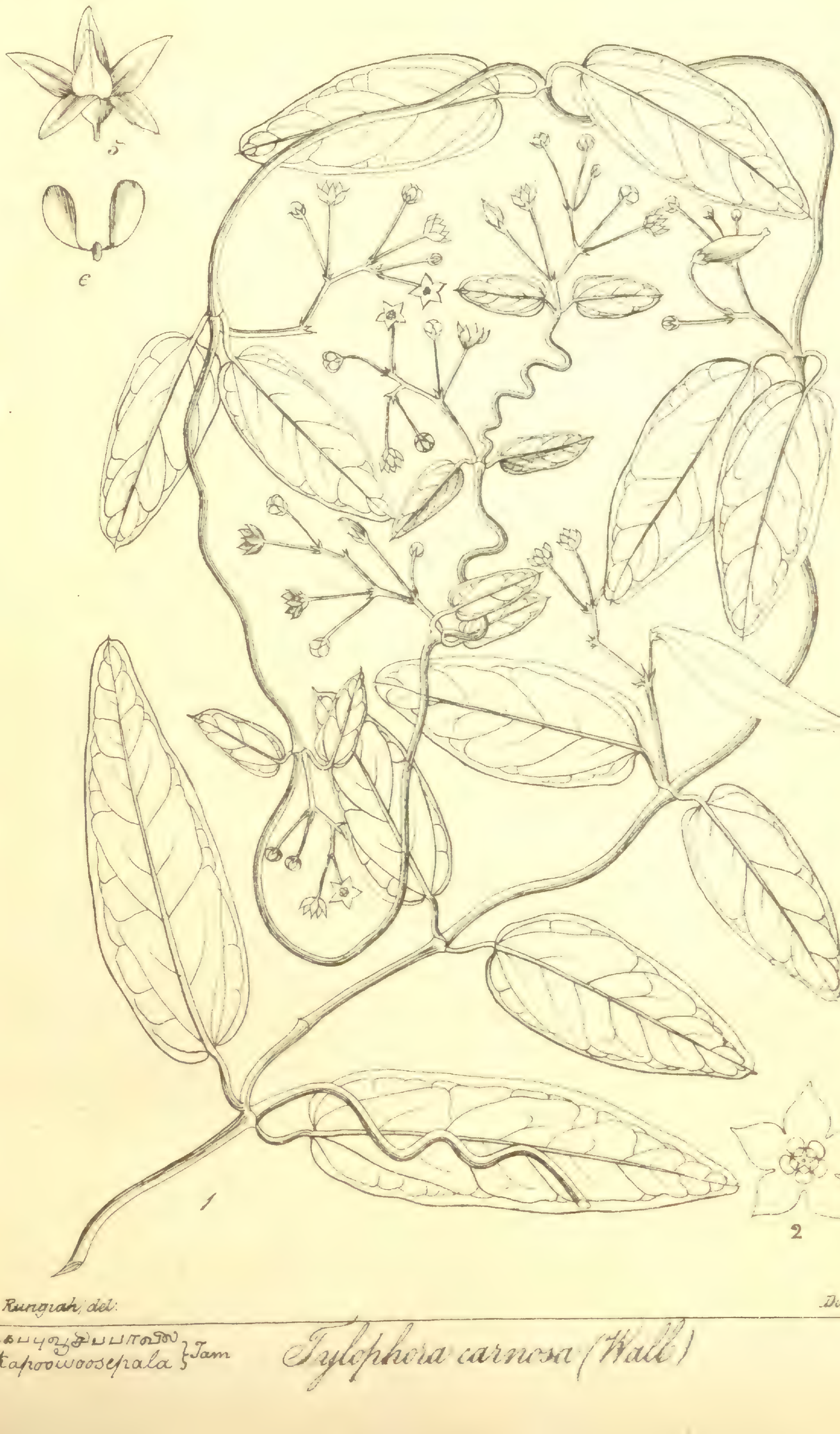
சிருகுறிஞ்சா
Sirookoorinja } Tam

Gymnema sylvestre (R. Brown.)



பாலைக்கொடி
Palacody } Jam

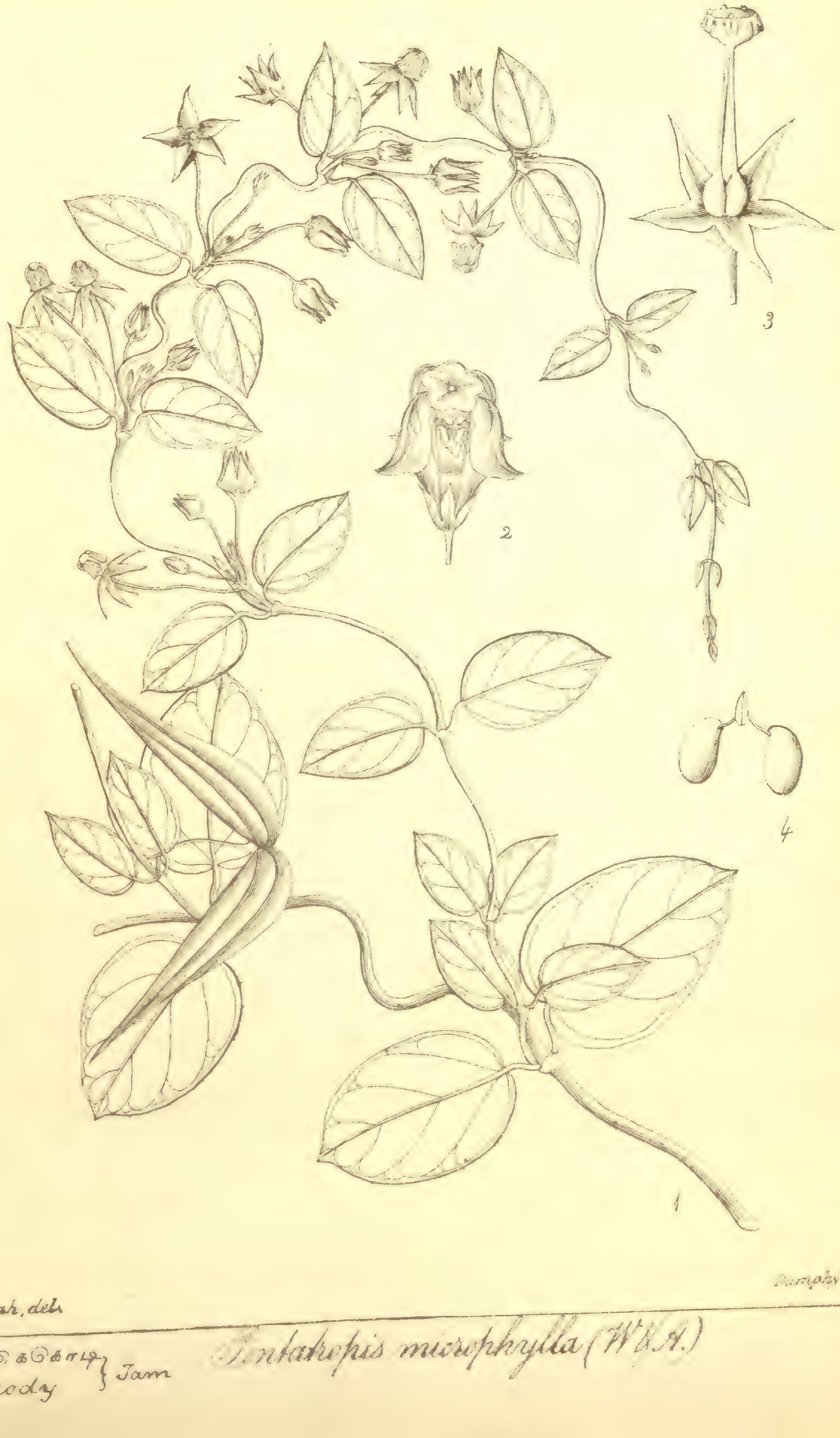
Septadenia reticulata (W & A.)



Rungiah, del. Dunphy, Litr.

Sakapoowoosepala } Tam

Tylophora carnosa (Wall.)

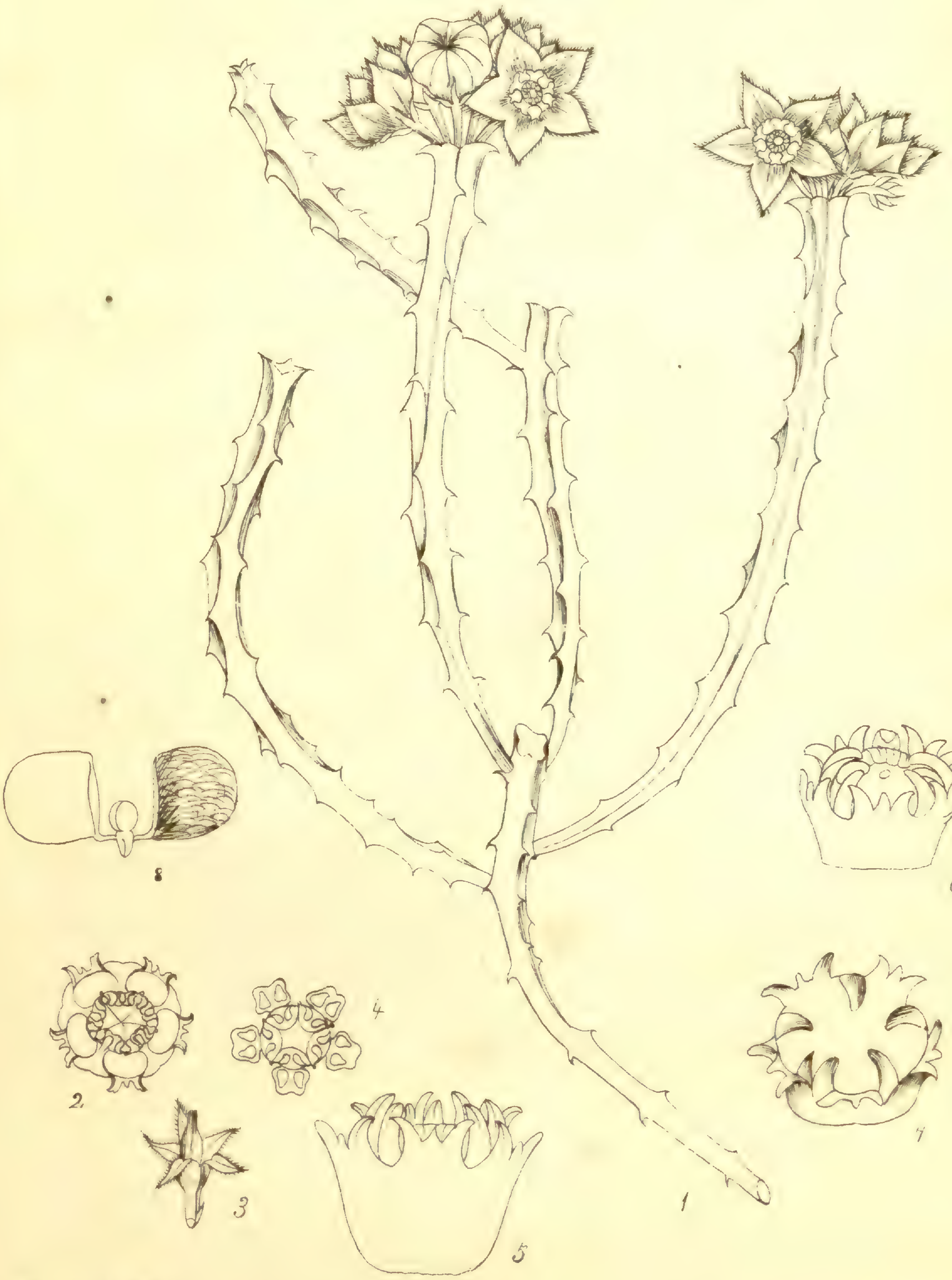


ஆபத்தில் கொடிகாய் } Jam
Oopelicody

Tintatropis microphylla (W & A.)

Ceropegia tuberosa (Roxb.)

Cynanchum pauciflorum (R. Brown.)



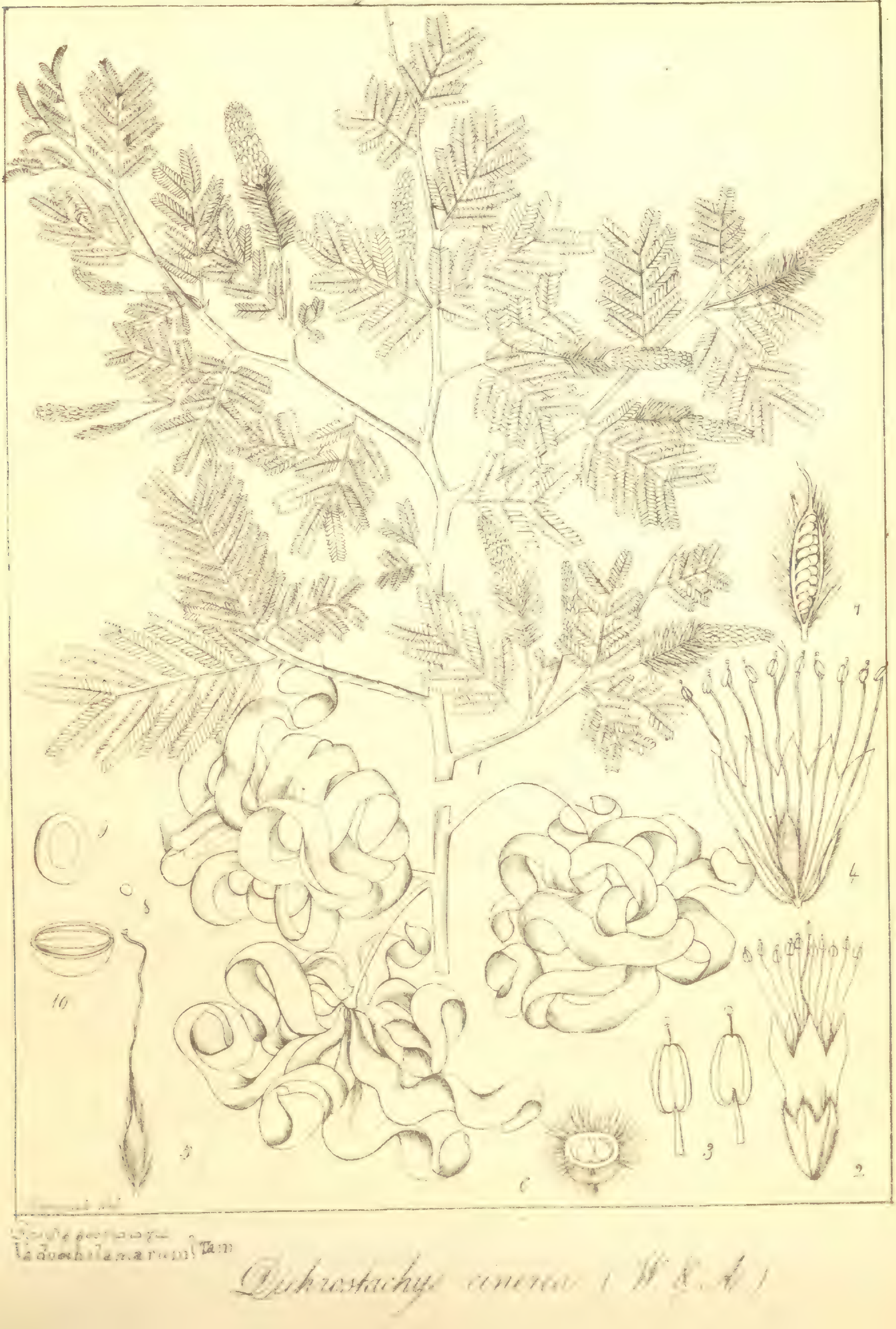
Rungiah, del.

Culleemnolayan } Tam.

Hutchinia Indica (W. & A.)

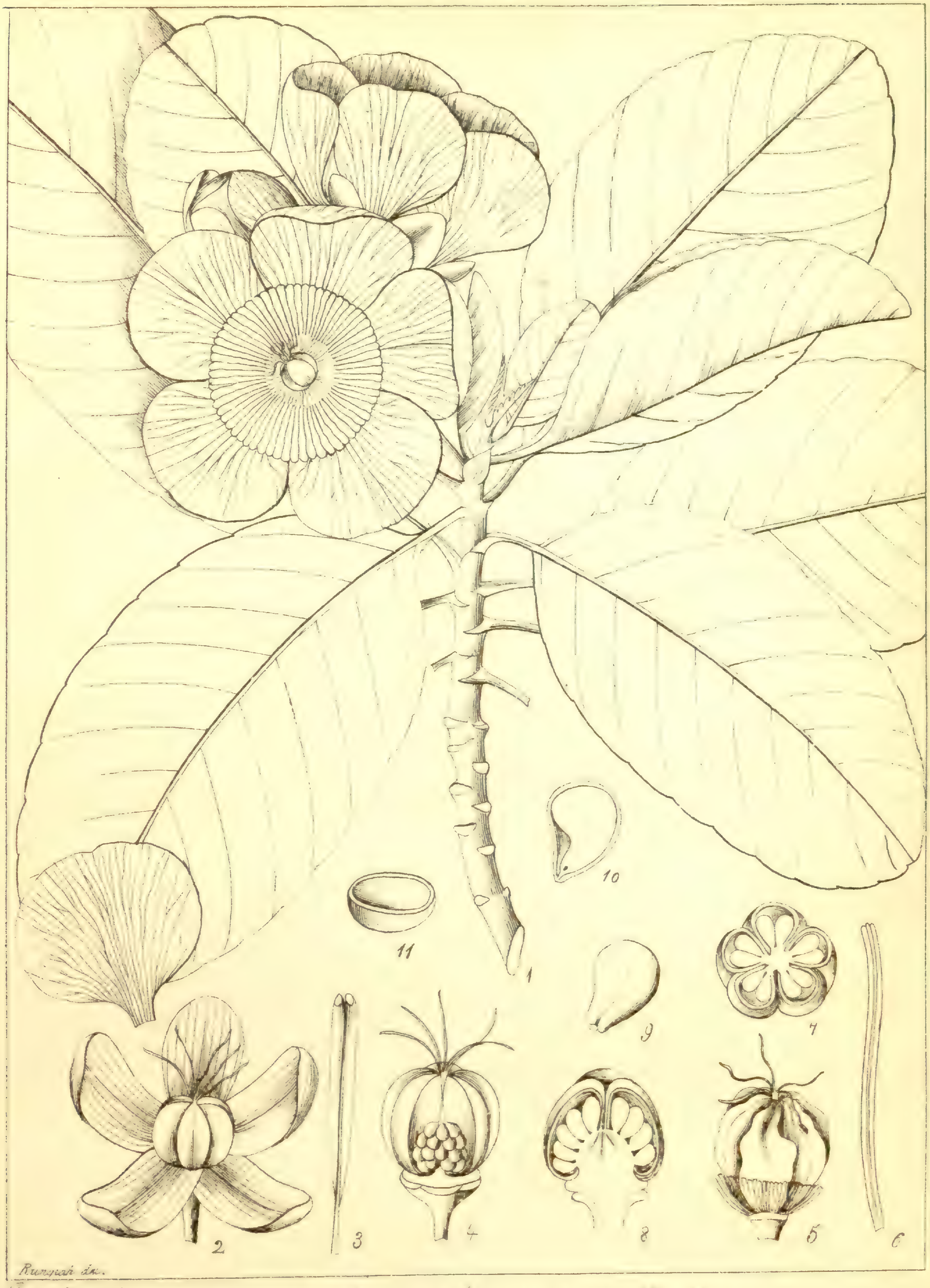
Lith. & Gamla Palacodey Tam.

Marsdenia Brunoniana (W&A.)



Dubreuilh del.

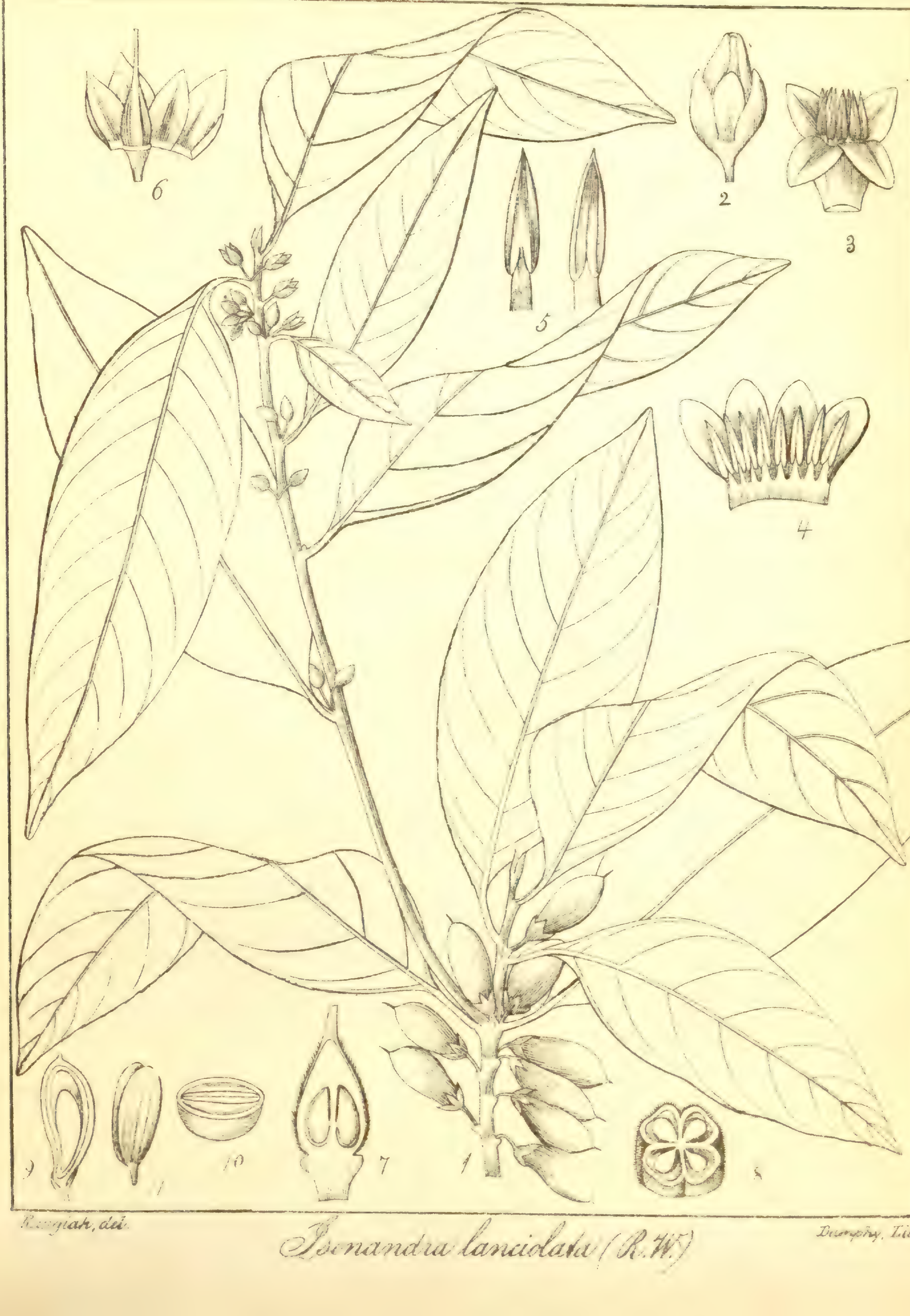
Duchesne sculp.



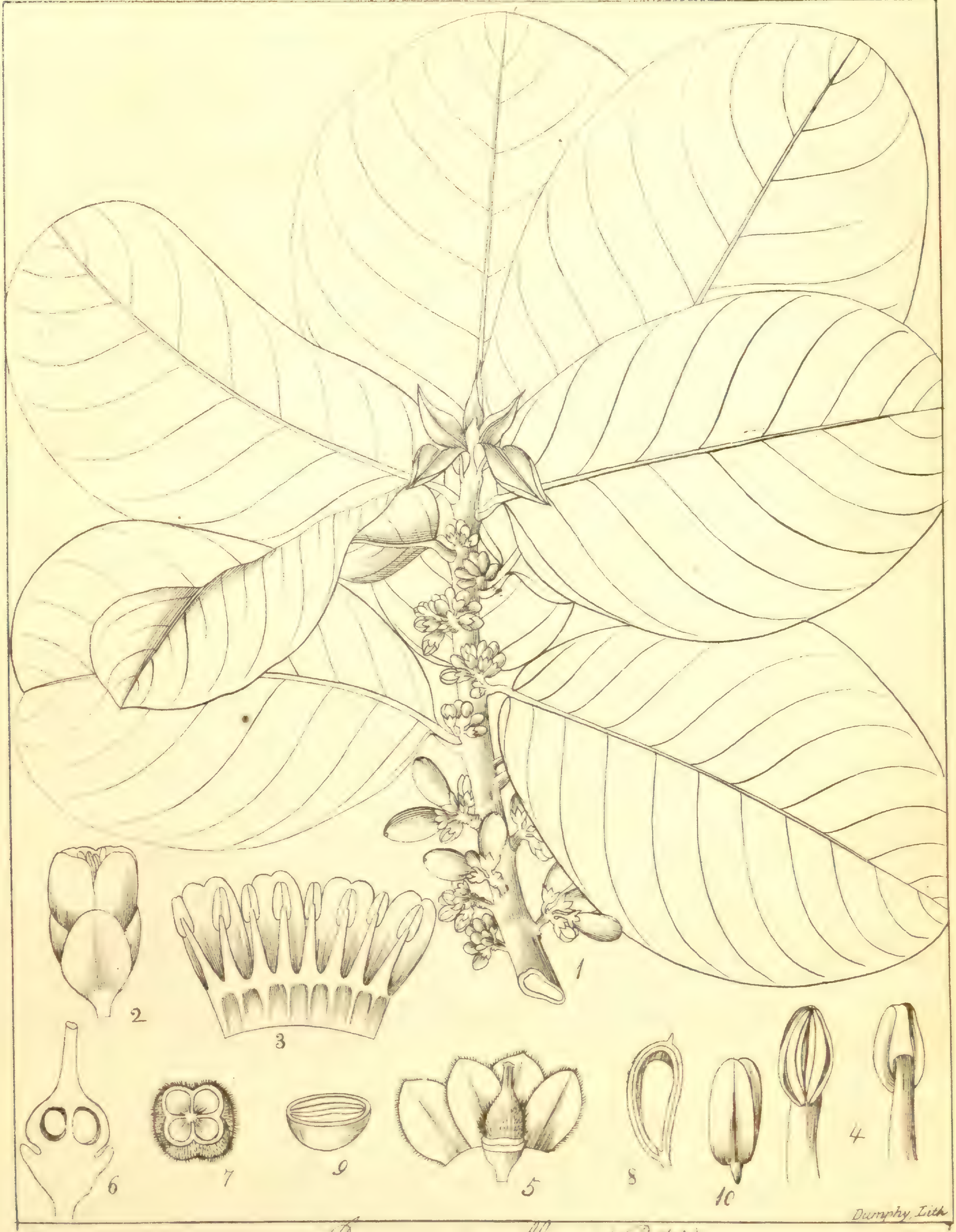
Ruyzch. del.

Jo. Lee & Nurserym. Tam

Dillenia bractiata (R. W.)



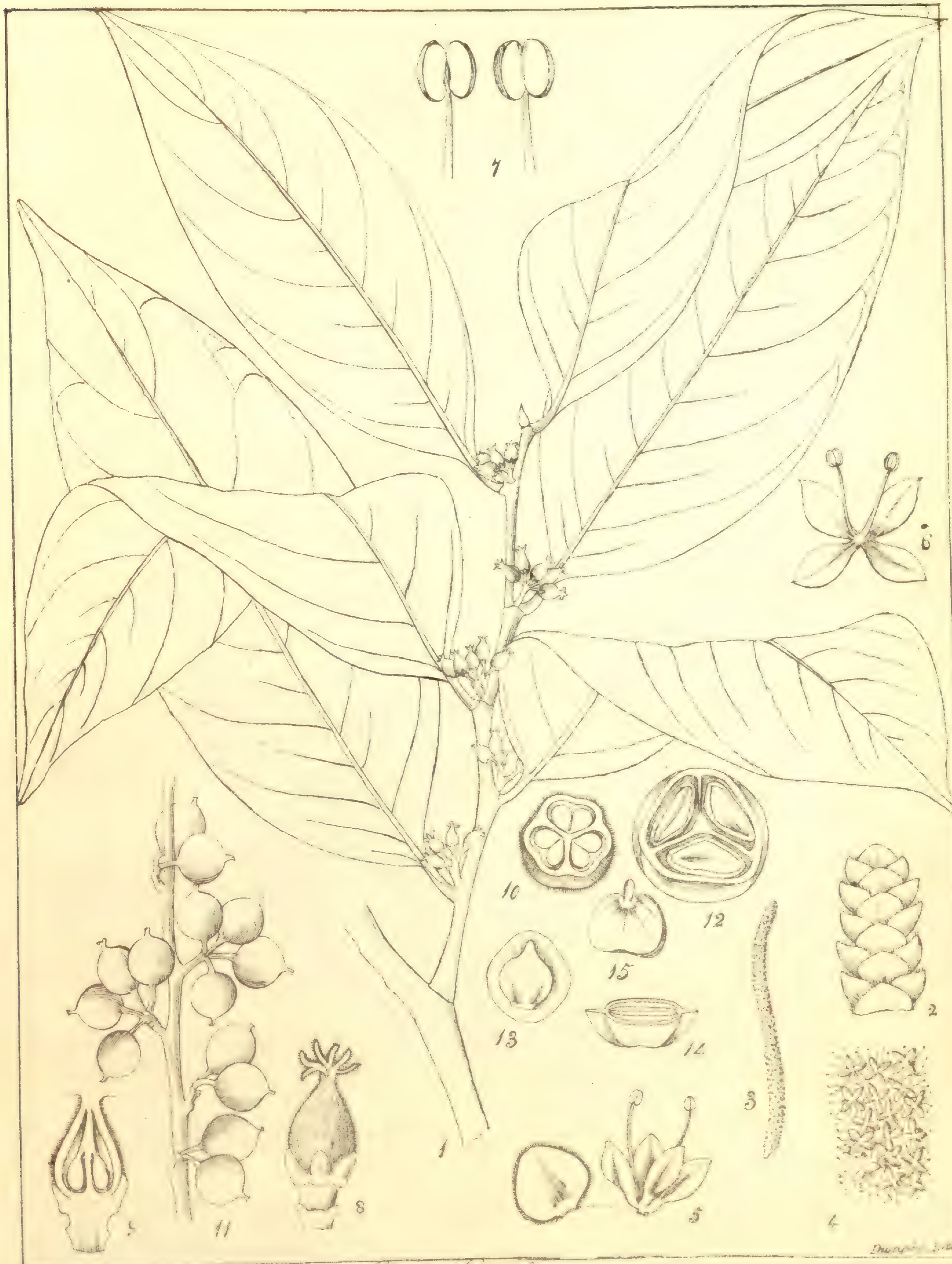
Ranyiah, del. Isonandra lanceolata (R.W.) Dicconson, Lith.



Rungiah, del

Dunphy, Lith

Isonandra villosa (R. W.)



Rungiah del.

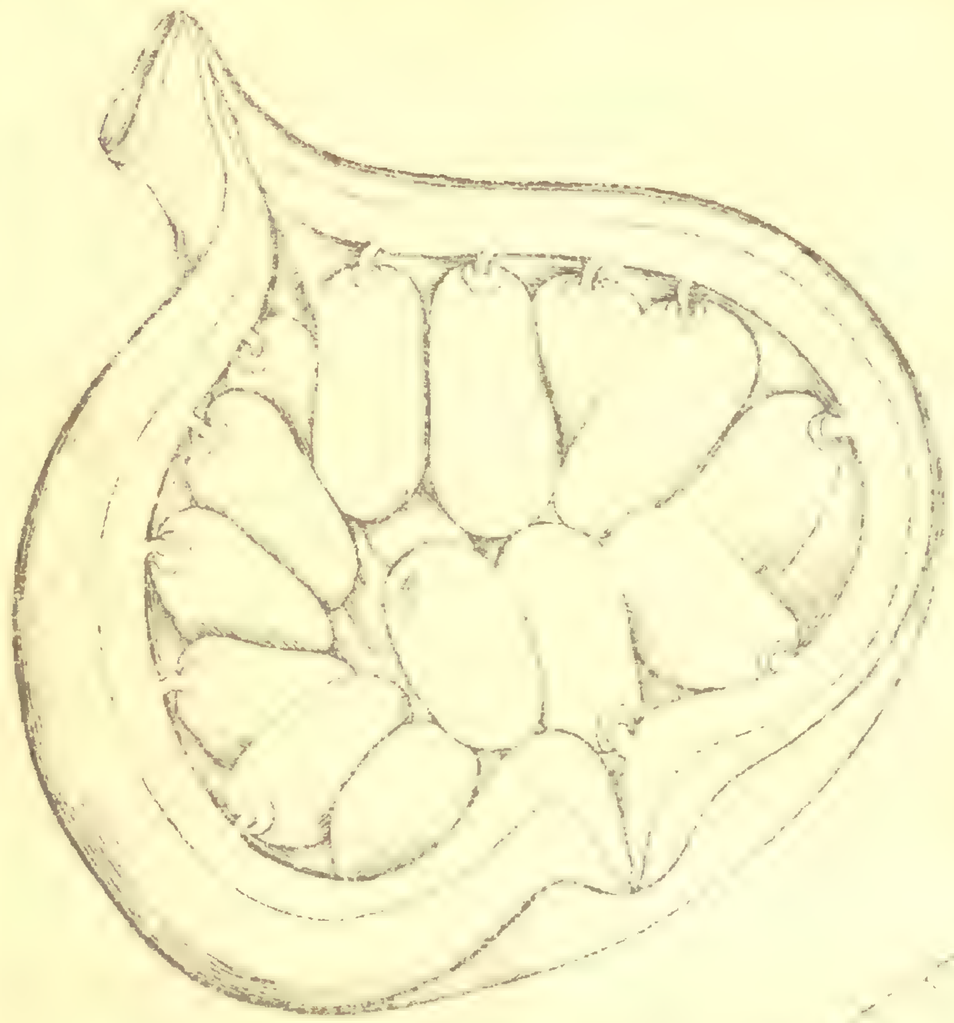
Tapa Sindleyana.

Fergian, del.

Symphorema involucrata (Roxb.)

Ruruyiah del. Dunphy Lith.

Lymphaena patyandra (R. W.)



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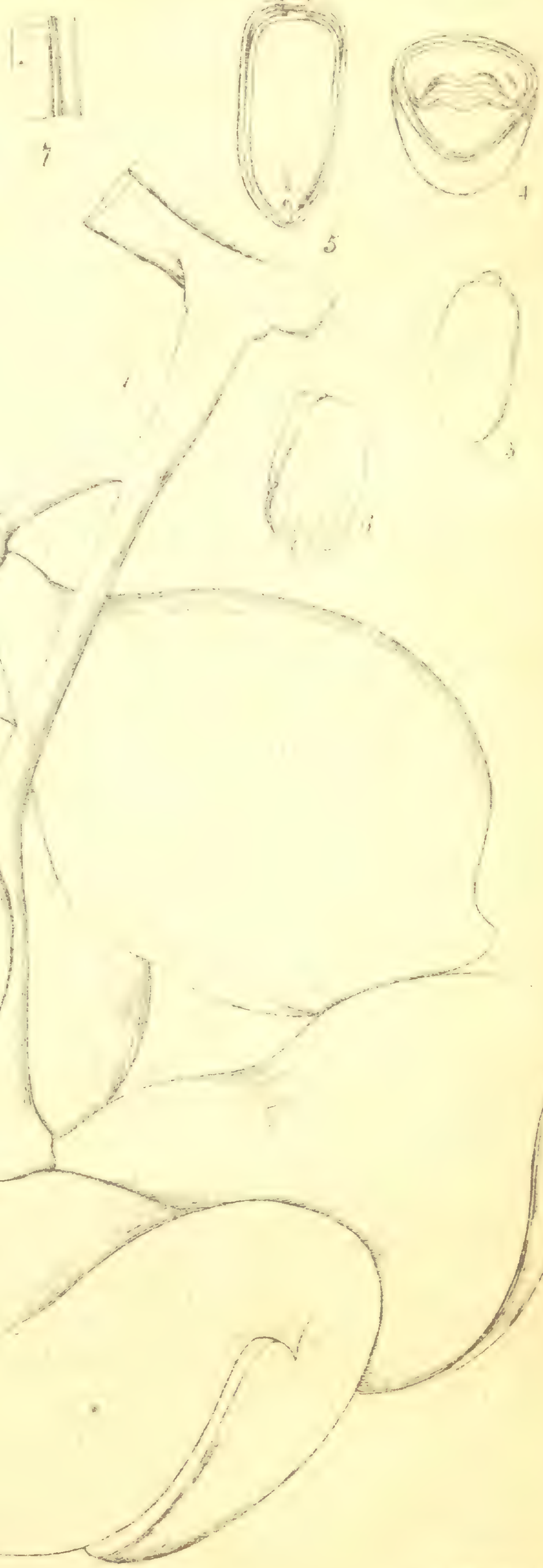

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Runyah del.

Dunphy Lith

Coltneria coldcomarum } Jacq. *Bercutia fatida (Linn.)*

Indigofera Garckeana (Linn.)

Roxburghiana

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Lucy Dixon Del.

Indigofera caerulea (Roxb.)

Roxburghianæ

Lonchocarpus punctatus (Kunth)

Roxburghiana

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Indigofera arborea (Roxb.)

Indigofera atropurpurea (Roxb)

Roxburghiaceæ

Tephrosia senticosa (Pers)
Galleya pentaphylla (Roxb)

Roxburghianæ

Tephrosia incana (Graham)
Galega incana (Roxb.)

Roxburghianæ

Tephrosia spinosa (Pers.)
Galega spinosa (Roxb.)

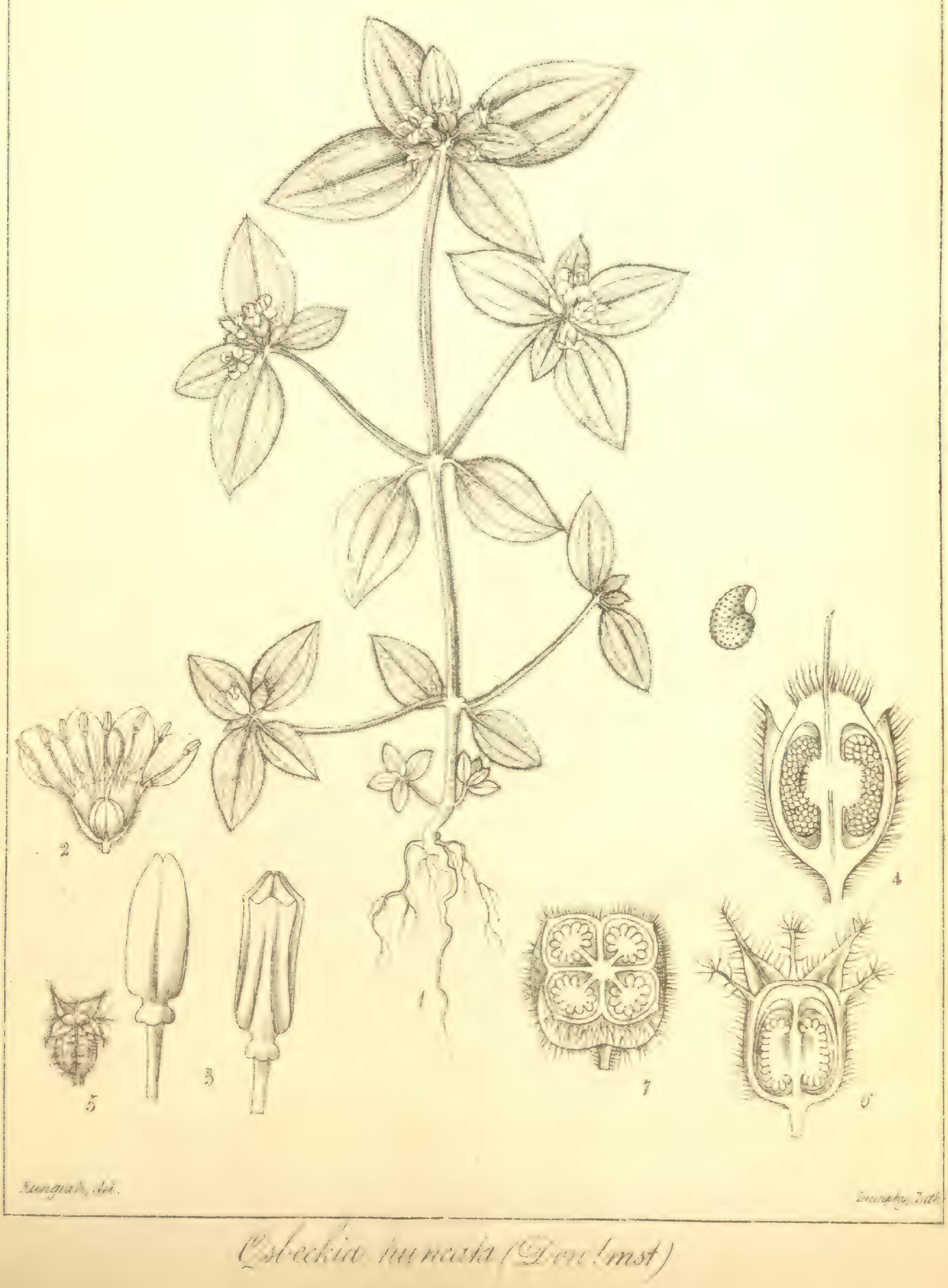
Roxburghianæ.

Desmodium cephalotes (Wall.)
Hedysarum cephalotes (Roxb.)

Roxburghiana

Durwis, Lith.

Desmodium recurvatum (Graham)
Hedysarum recurvatum Roxb.



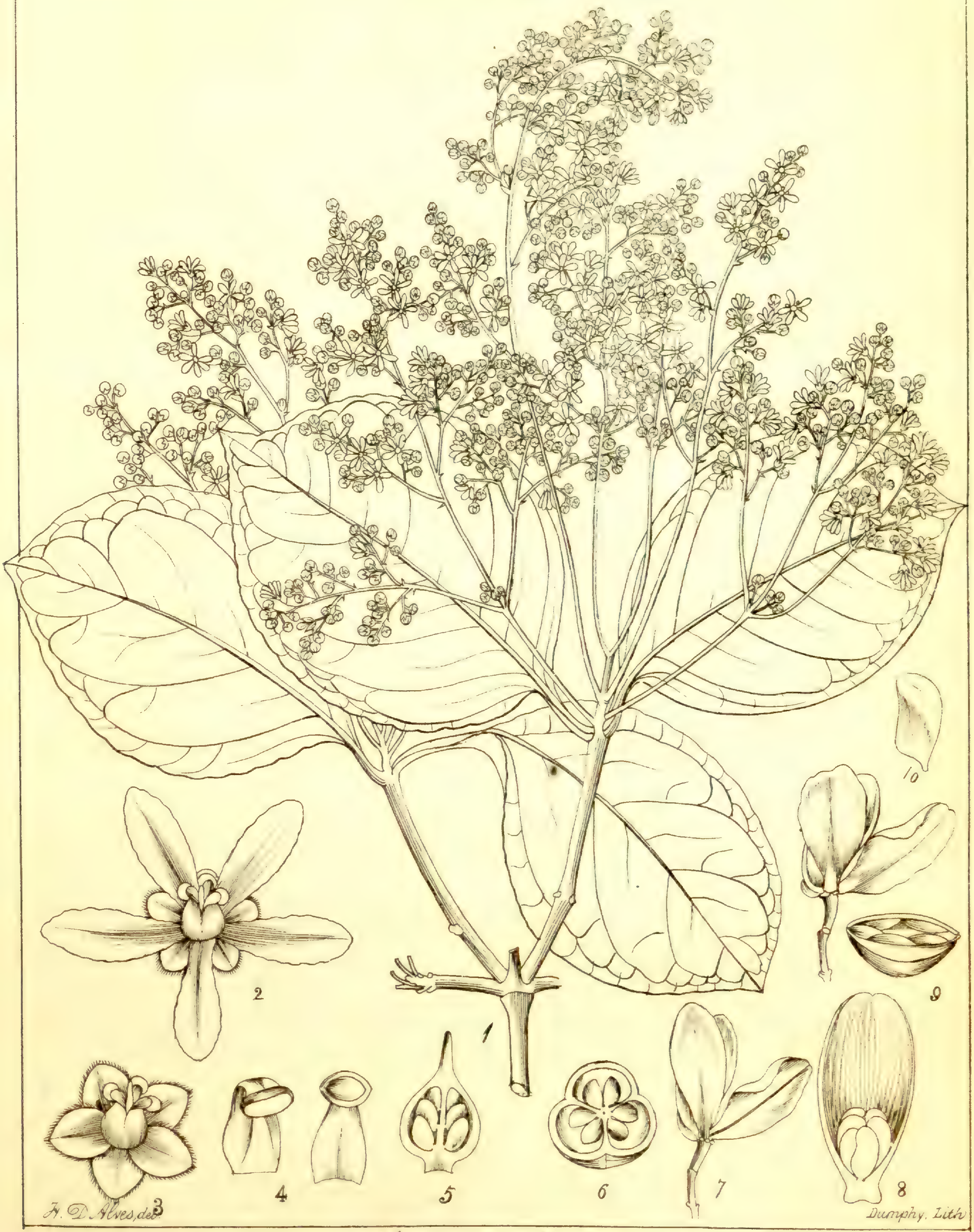
Osbeckia hirsuta (Benth)

Osbeckia virgata, Don! mss.

Clidemia asperata (Blume)

Loranthus tomentosus (Hayne)
(three varieties)

Capparis Murrayana (Graham)
Cat Bombay Plants P.9.



Hippocratea Grahamii (R.W.)

Rungiah del. Dunphy, Lith

Hiraea Indica, Roxb.

Celastrus montana (Roxb.)

Rungiah, del. Dumphy, Lith.

Crotalaria obtecta (Graham)

Roxburghiana

Dunphy Lith

Trigonella arriculata (Linn.)
Medicago arriculata (Roxb. m.s.)

Roxburghianæ.

Indigofera pentaphylla (Linn.)
Indigofera fruticosa (Retz.)

Roxburghianæ

Indigofera trita. /Linn/
Indigofera cinerea. /Roxb./

Roxburghianæ.

Indigofera flaccida. /Roen./

Roxburghianæ

Tephrosia tinctoria (B
Galega Heyneana (Roxb.)

Roxburghianæ

Flemingia nana (Roxb.)

Corallophaseolus

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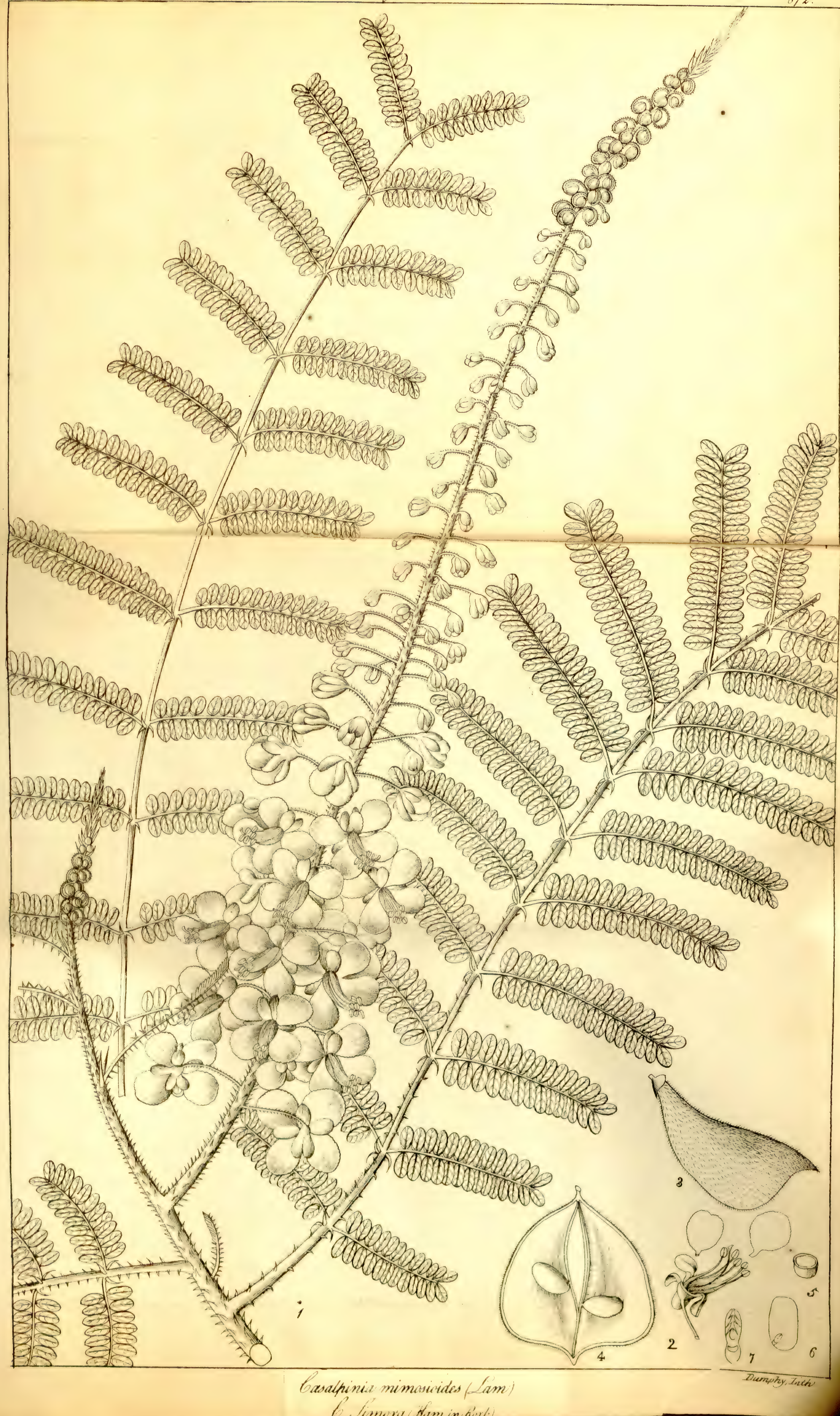
Durufle, direx.

Phaseolus coccineus (Roxb.)

Roxburghianæ.

Dalbergia Coromandeliana Roxb.



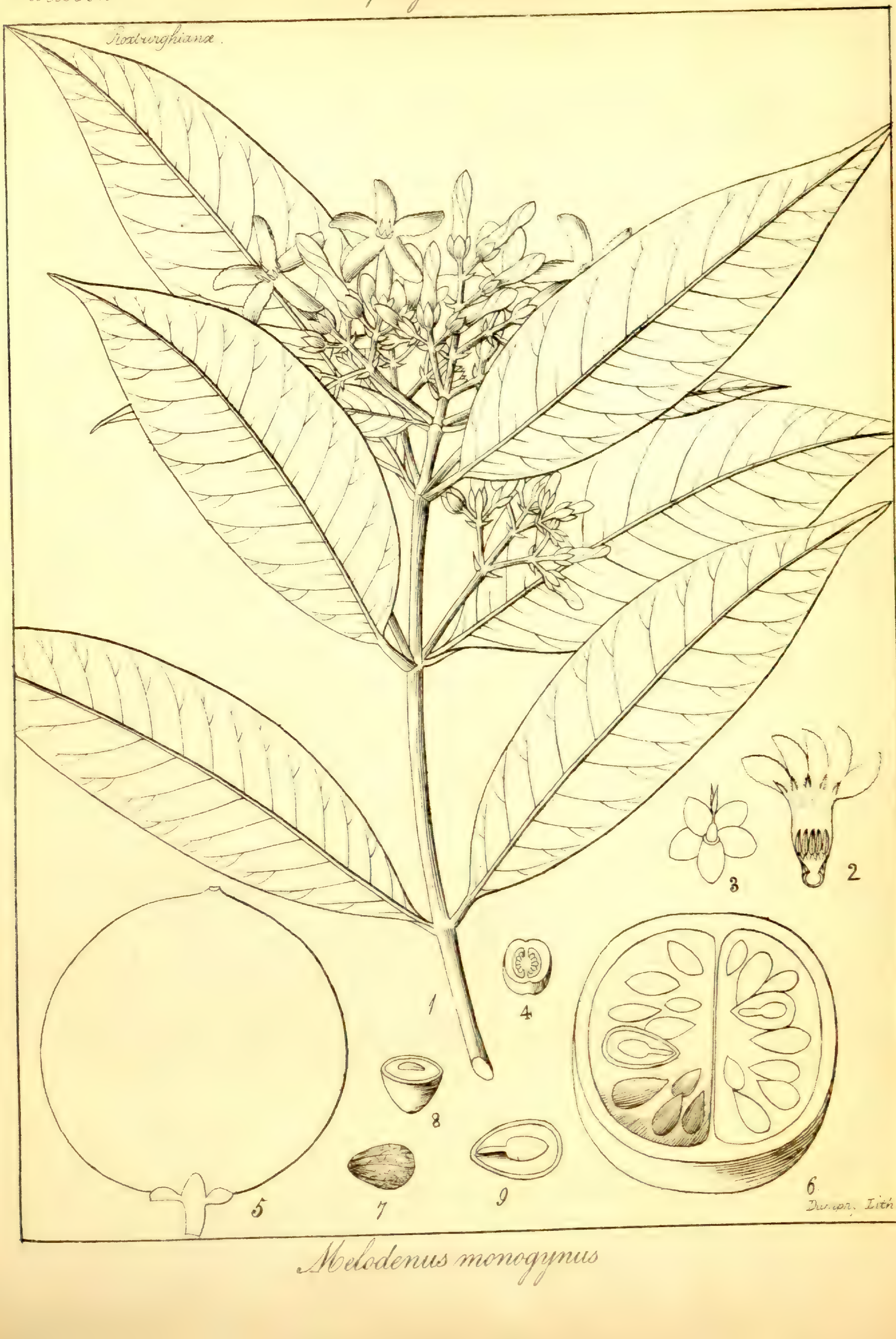
Dumphy, Lith

Casalpinia mimosoides (Lam)
C. Simora (Kam in Kew)

Roxburghiana

Tabernæmontana parviflora (Roxb)

Roxburghiana.



Melodenus monogynus

Roxburghiana

Dumphy, Lith.

Echites cymosa (Roxb.)

Roxburghiana

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Dumphy, Lith.

Echites paniculata (Rox.)

Rungiah, del. Dumphy, Lith.

Randia uliginosa (D.C.)

H. D'Alves del. Dumphy Lith.

Guatteria Korinti (Dun.)

Abelmoschus moschatus, Moench

Riungrath del.

Dumphy Lith.

Eriodendron anfractuosum (D.C.)

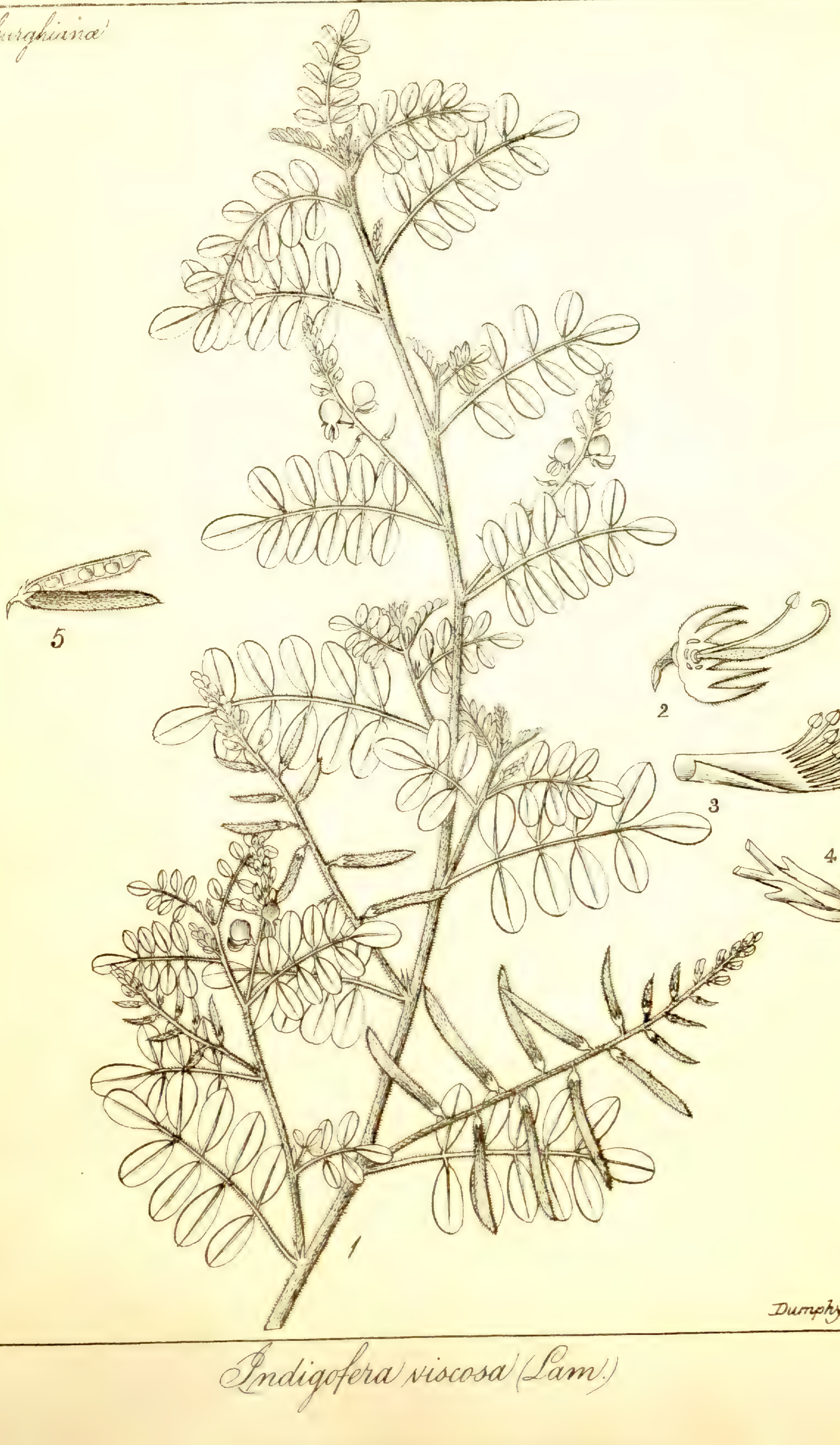
Schmidelia villosa
Ornitrophe villosa (Roxb.)

Cupania pentaphylla (R W)
Schleichera pentapetala (Roxb)

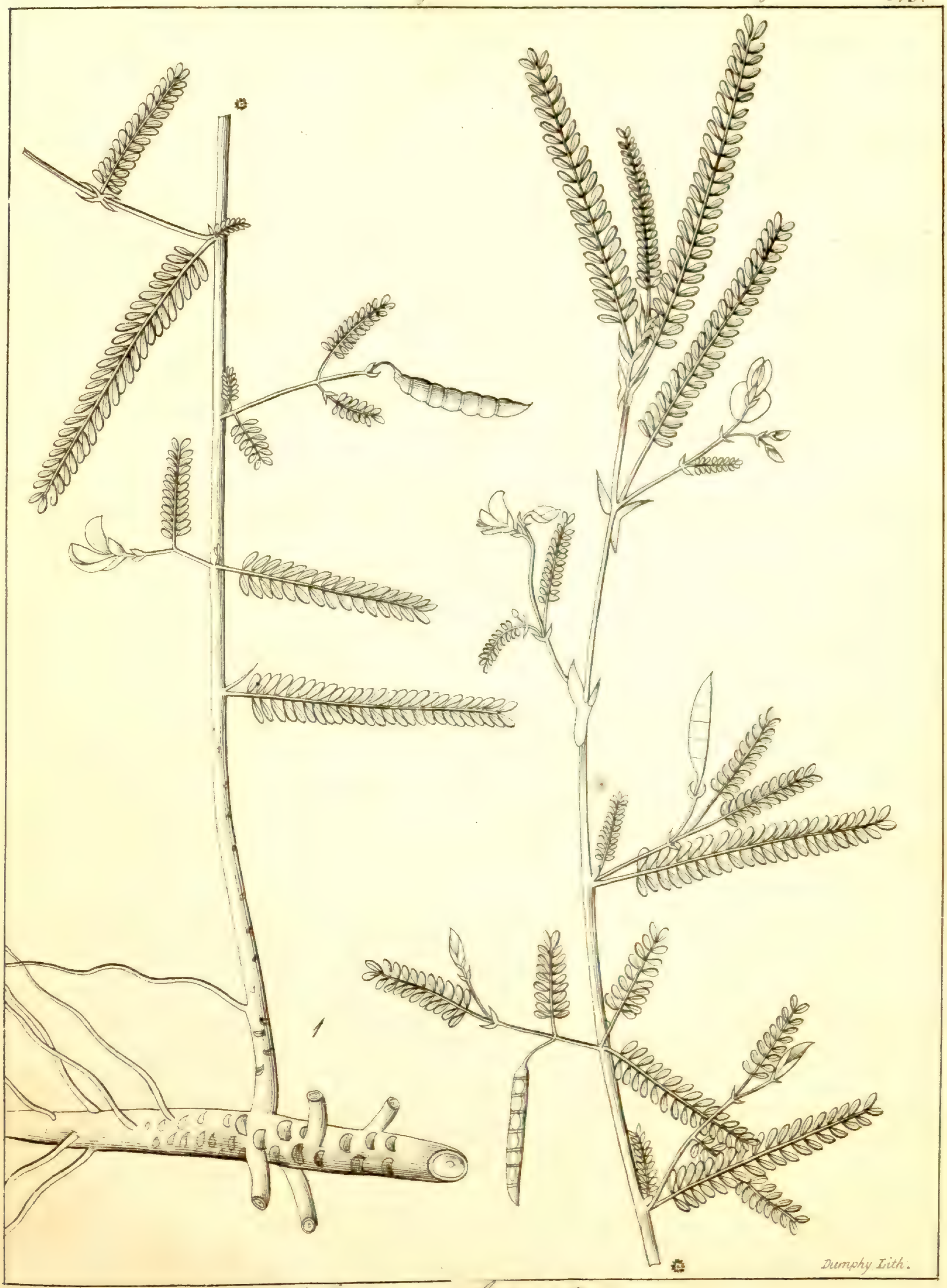
Roxburghiana

Indigofera enneaphylla (Linn.)

Psoraleinæ



Indigofera viscosa (Lam.)



Aschynomene Indica (Linn)
Hedysarum Néli-tali (Roxl.)

Roxburghiana.

Desmodium polycarpum (DC.)
Hedysarum purpureum (Roxb.)

Desmodium patens
Hedysarum patens (Rox.)

Roxburghiana.

Flemingia procumbens
Hedysarum procumbens Roxb.

Desmodium diffusum (DC.)
Hedysarum diffusum (Heyne)

Cassia nodosa (Roxb.)

Roxburghiana

Dumphy. Lith.

Uraria picta (Desv.)
Hedysarum pictum (Roxb.)

Pueraria tuberosa (D.C.)

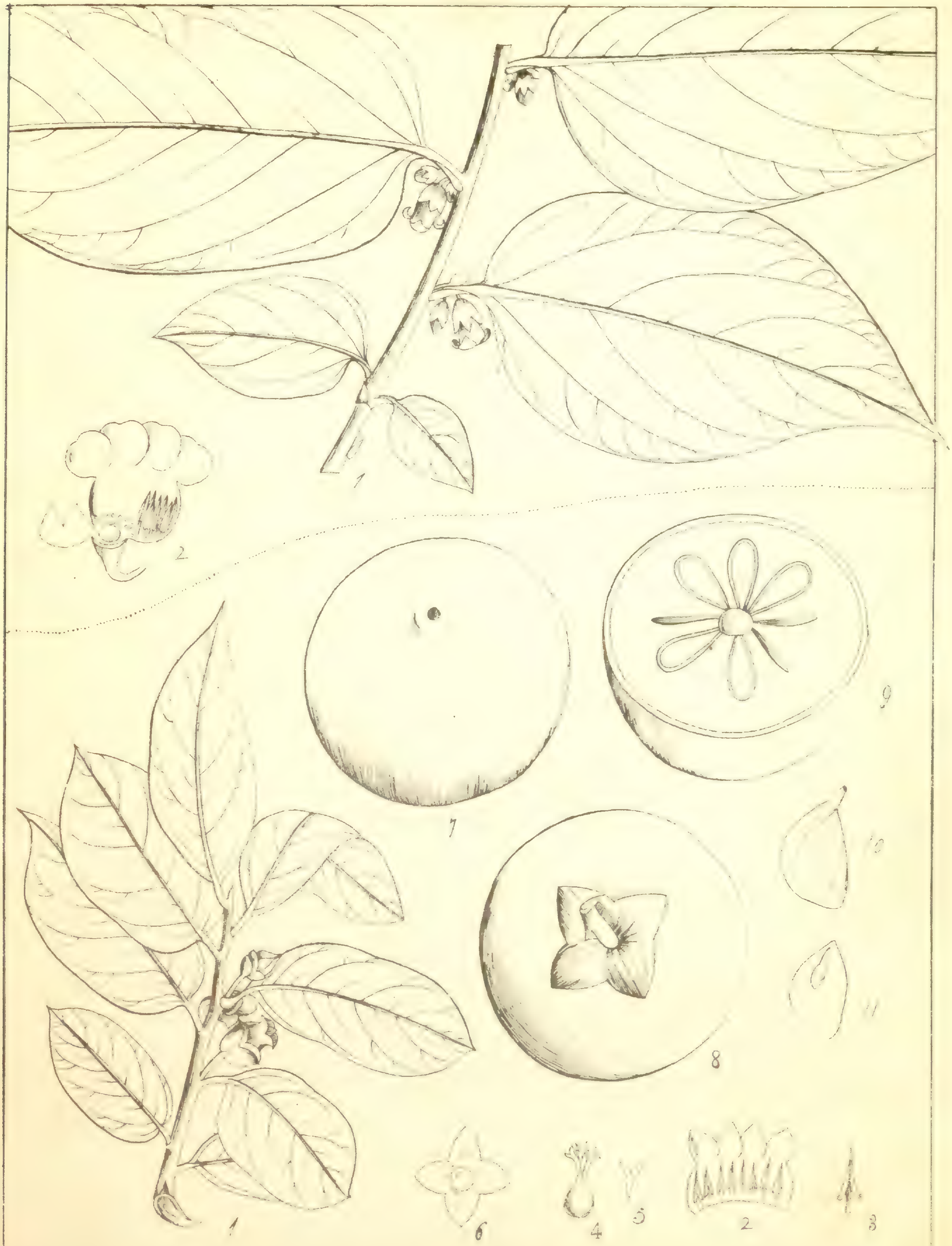
Hedysarum tuberosum (Roxb)

Kurz del. et lith.

Lagerstroemia Regiæ (Roxb.)

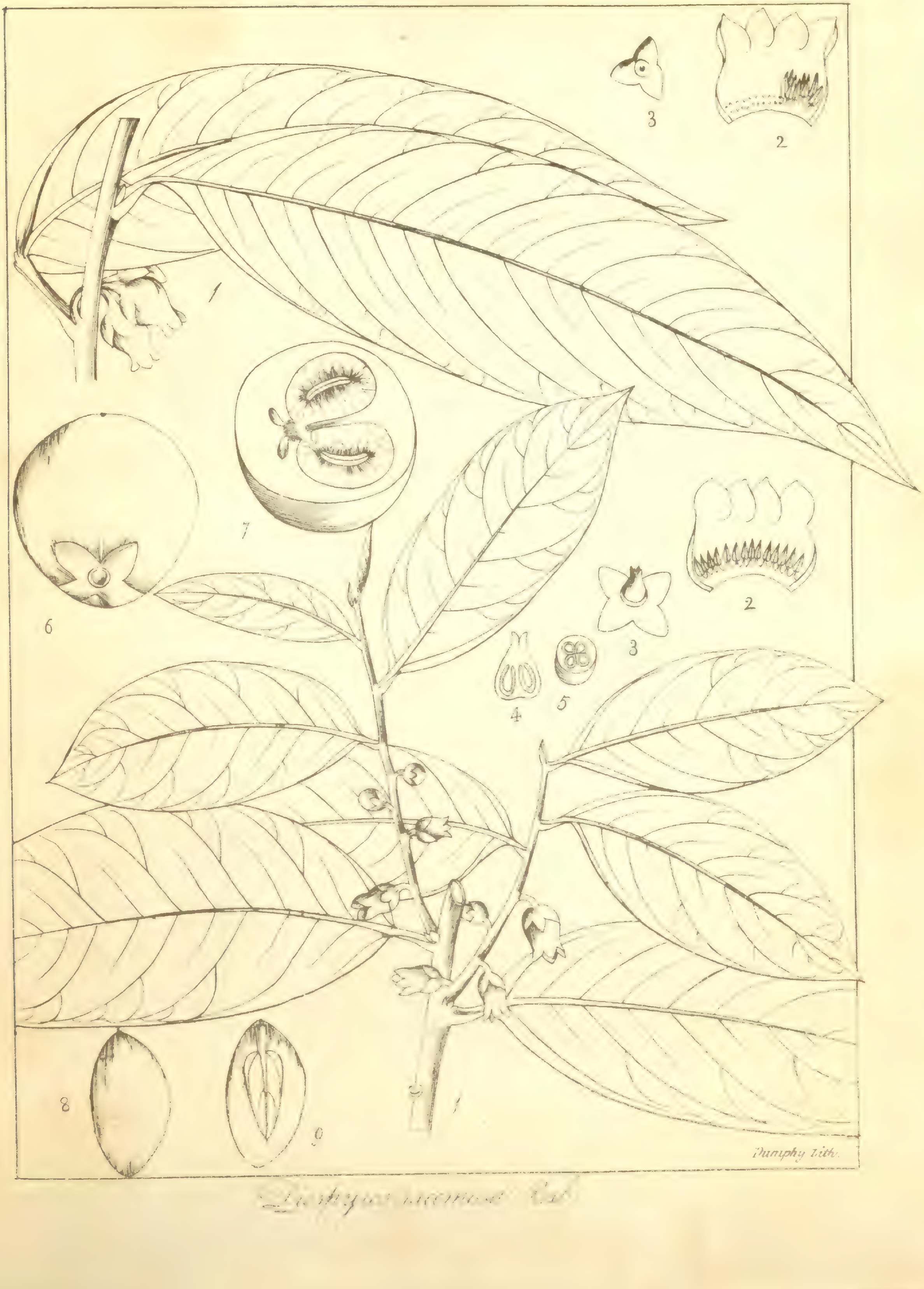
Dumphy, Lith.

Periploca graeca.



Diospyros kaki Linn.f.

Bunyday Lith



Lithogr. Institut Calcutta

Castanea indica (Roxl.)

Roxburghianæ.

J. Dumphy Lith.

Dicerma pulchellum (D. C.)

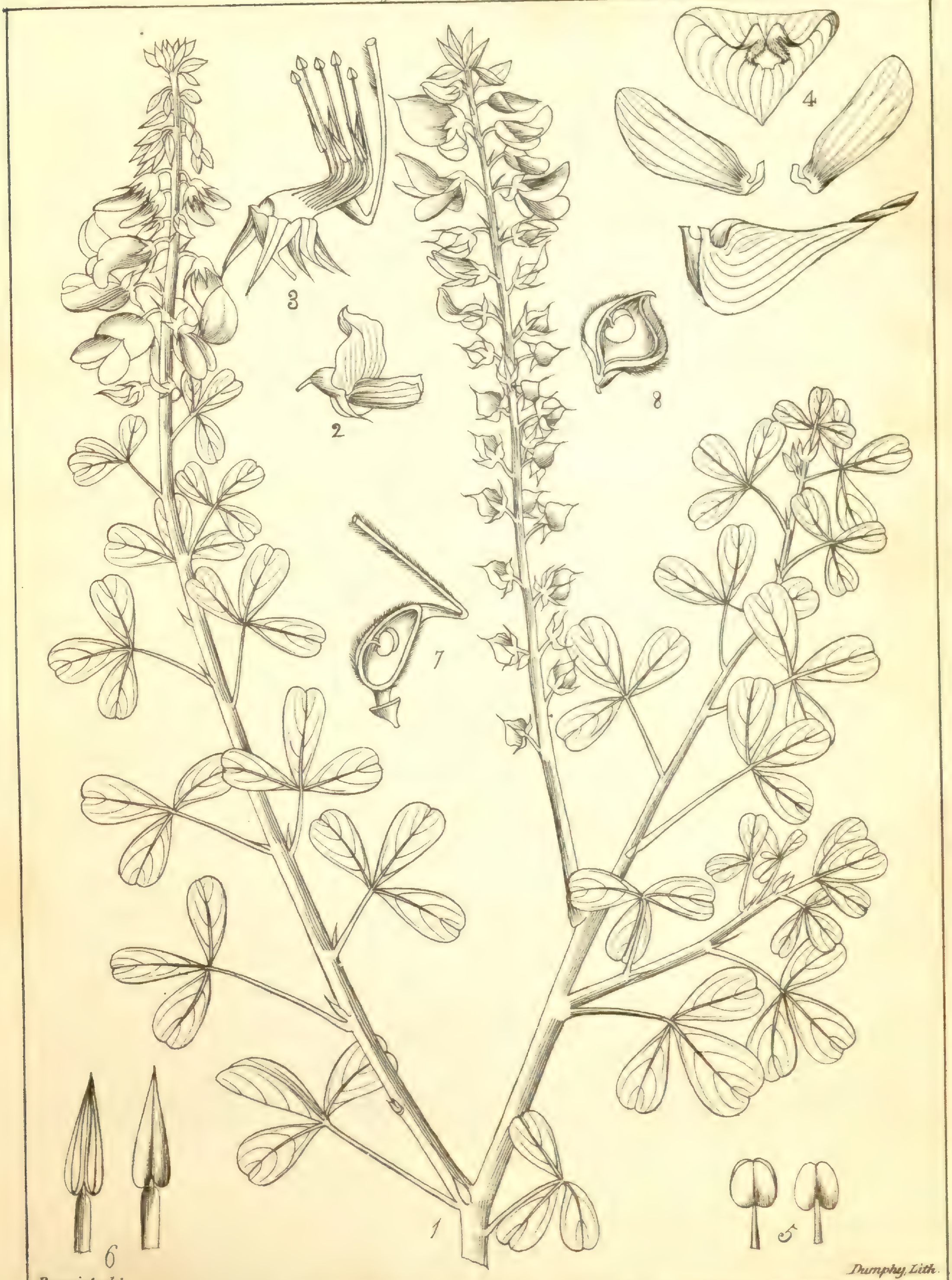
Hedysarum pulchellum.

Roxburghiana.

J. Dunphy Lith.

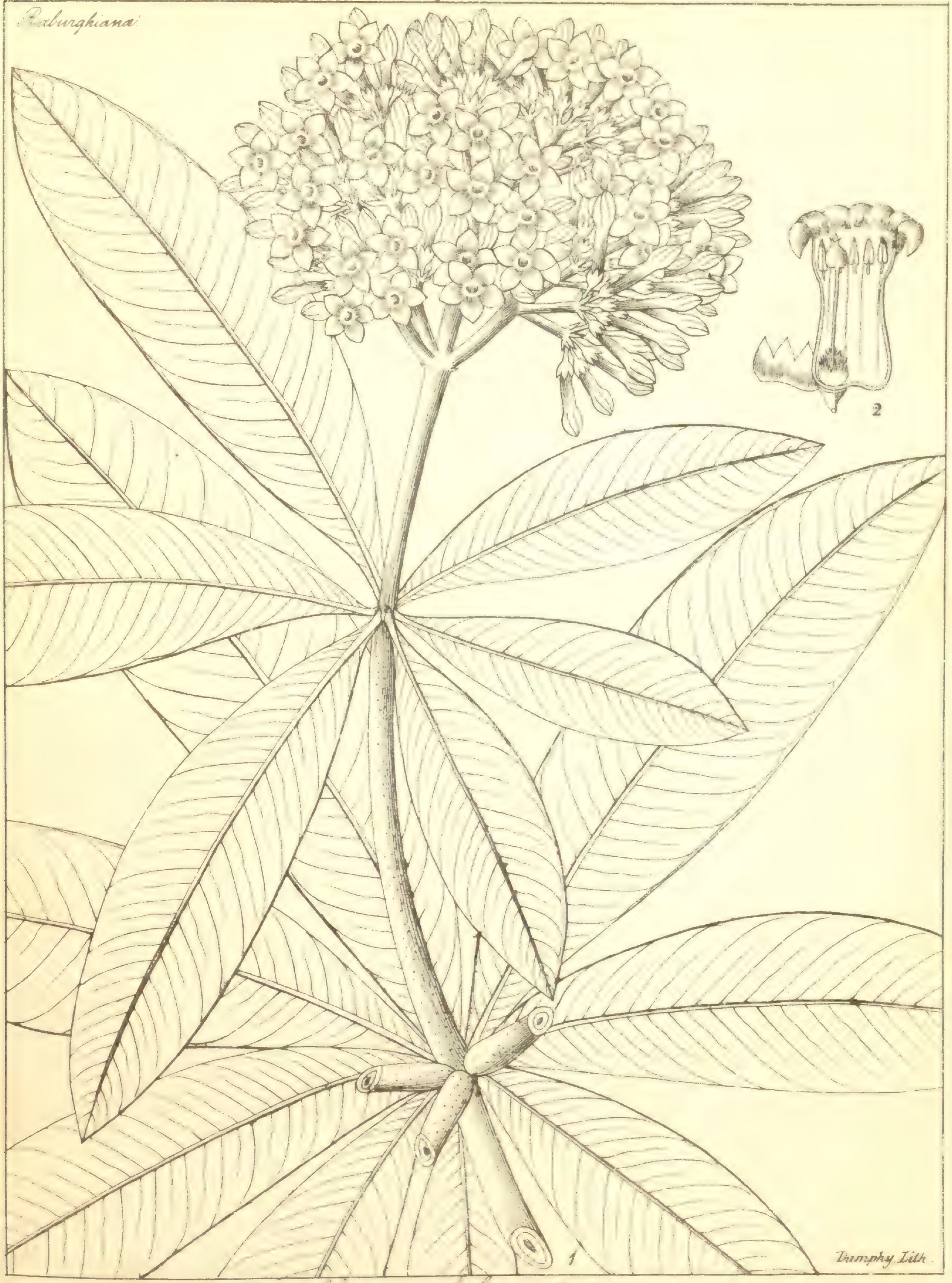
Desmodium triarticulatum (D. C.)
Hedysarum triarticulatum.

Pongamia elliptica (Wall.)
Cyclodupa elliptica (Roxb.)



Tetalaria bifoliastrum (Willd)

Roxburghiana



Hotonia scholaris (R. Br.)
Echites scholaris Lin.

Echites paniflora. Roxb.

Roxburghiana.

Dunuhy Lith

Tyanecma acuminata (G. Don)
Echites acuminata, Roxb.

Roxburghiana

Dunphy Lith

. Ioga nisma marginata . G. Don.
Echites marginata . Roxb.

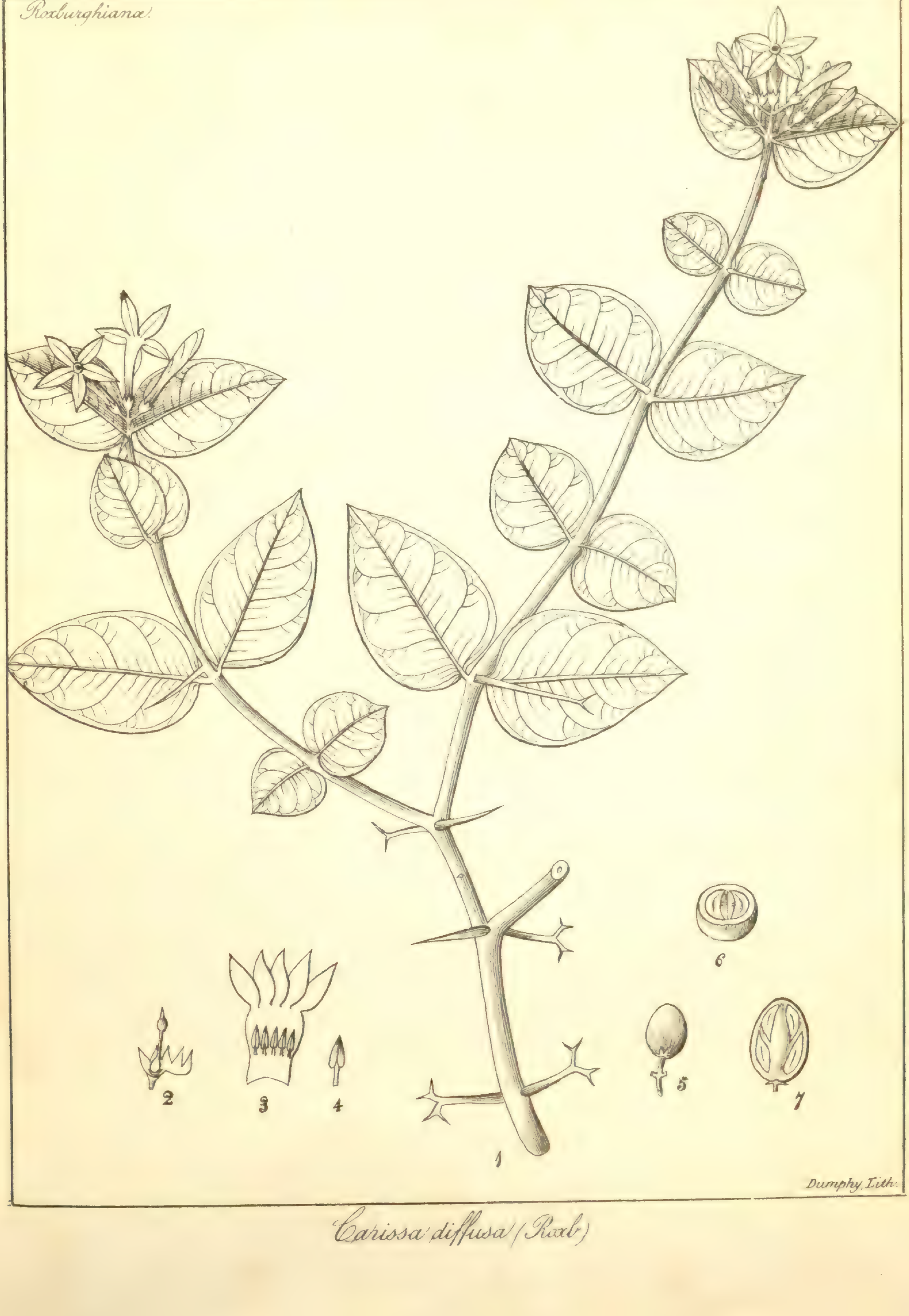
Roxburghiana

Drawn by Lieut.

Calacca bush.

Carissa Carandas (Lin.)

Roxburghianæ.

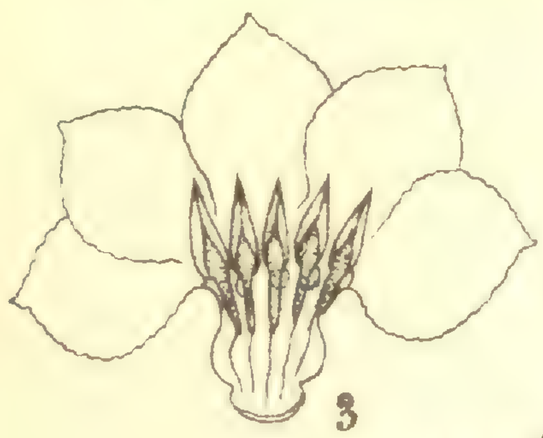


Dumphy, Lith.

Carissa diffusa (Roxb.)

Hunteria corymbosa (Roxb.)

Roxburghianæ



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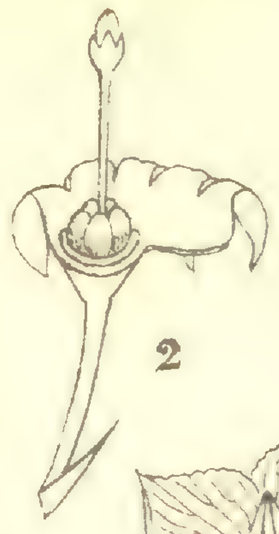

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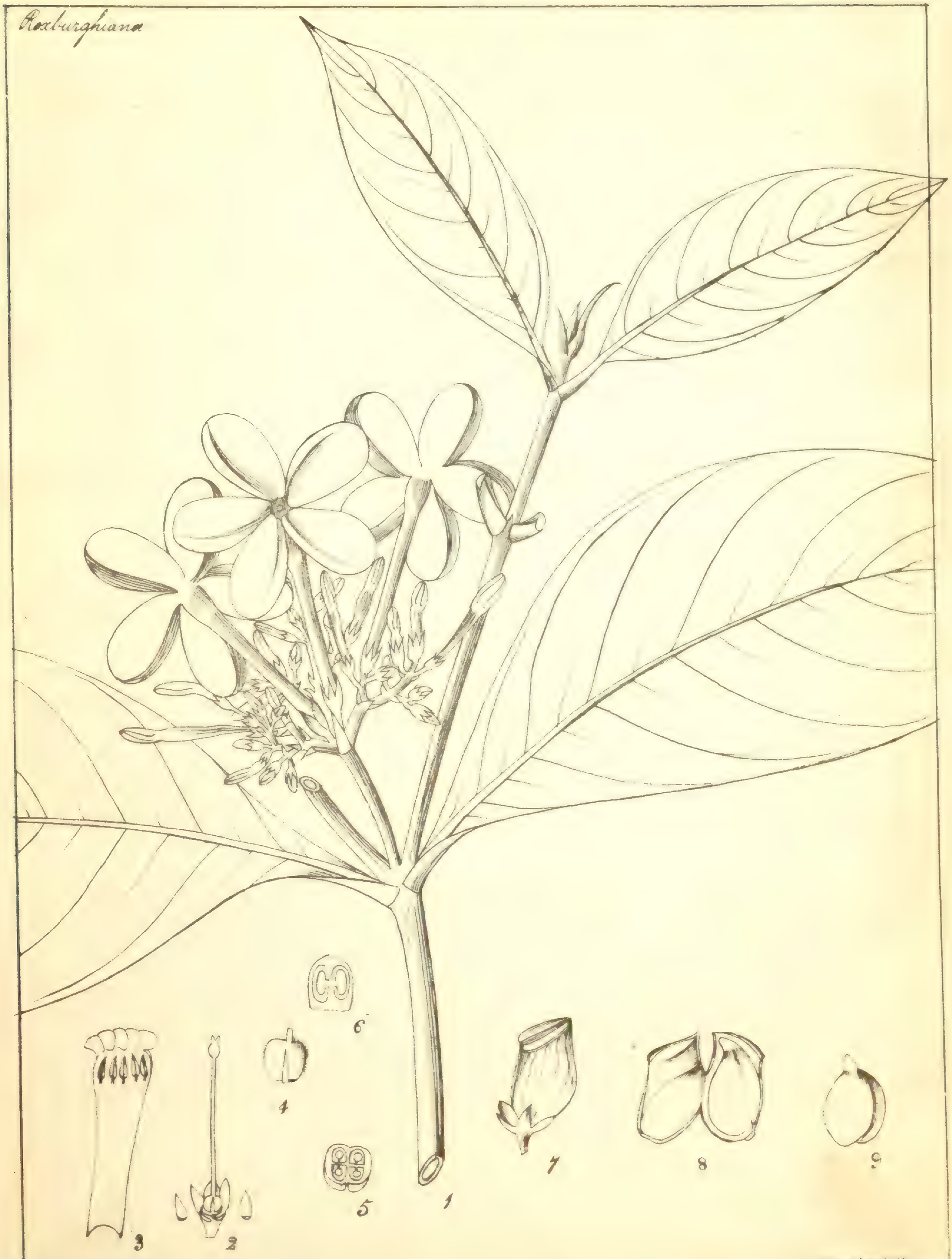
Dunphy, Lith.

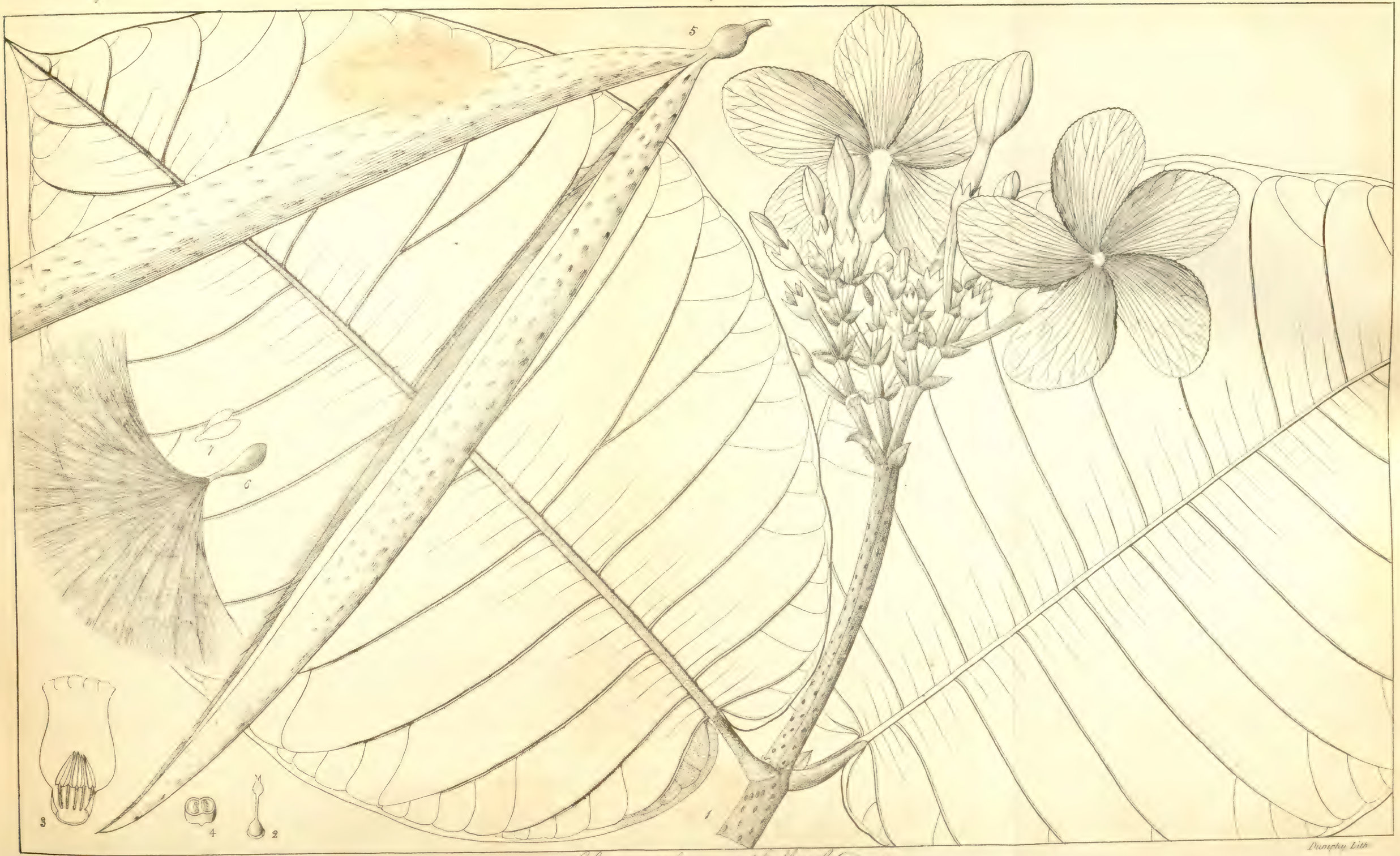
Tallanis Pergulana (Burm.)
Echites hirsuta (Roxb.)

Roxburghianæ

Schnocarpus frutescens (R. Br.)
Echites frutescens (Roxb.)



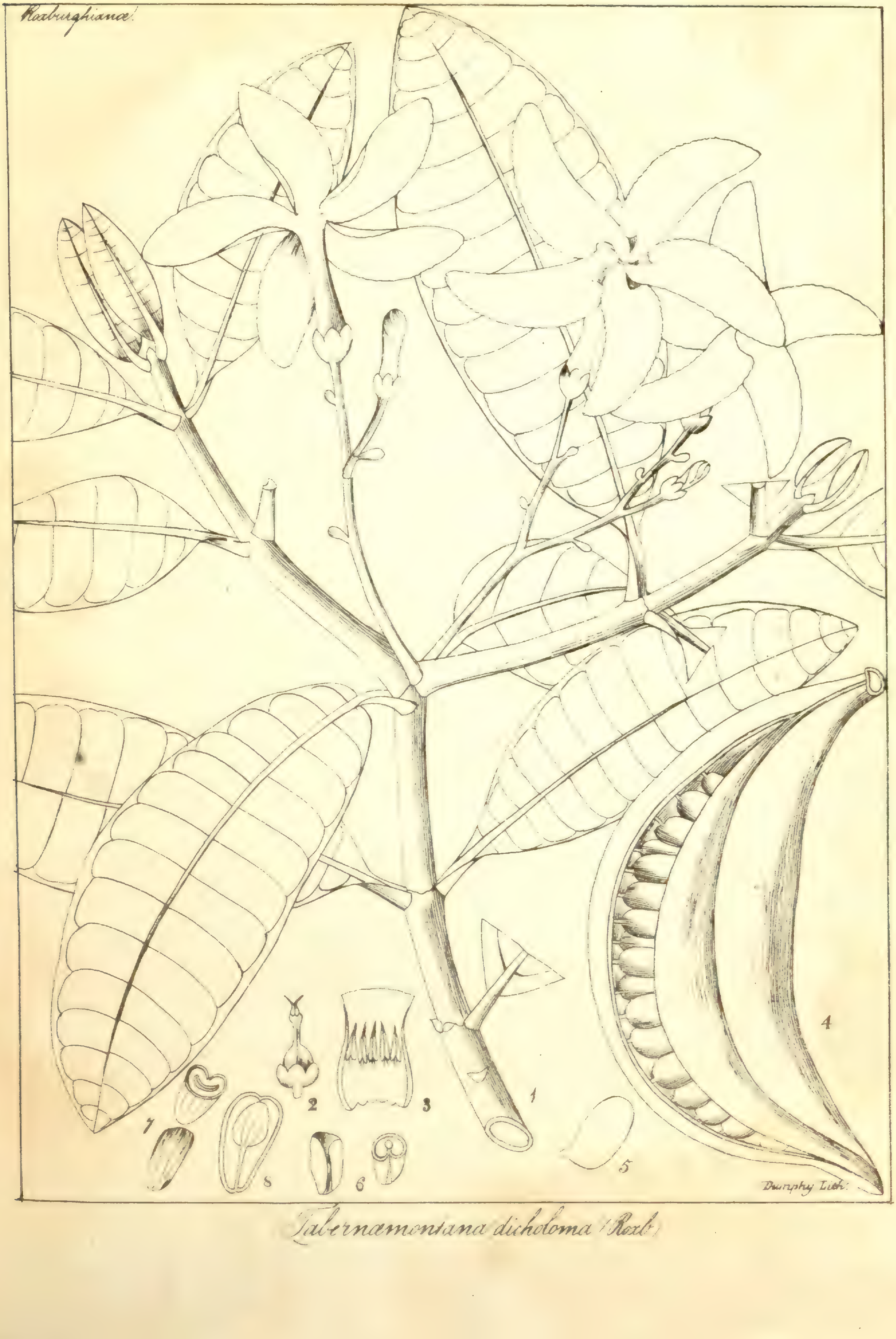
Cultivarpum Roxburghii G. Don
Cerbera fruticosa Roxb.



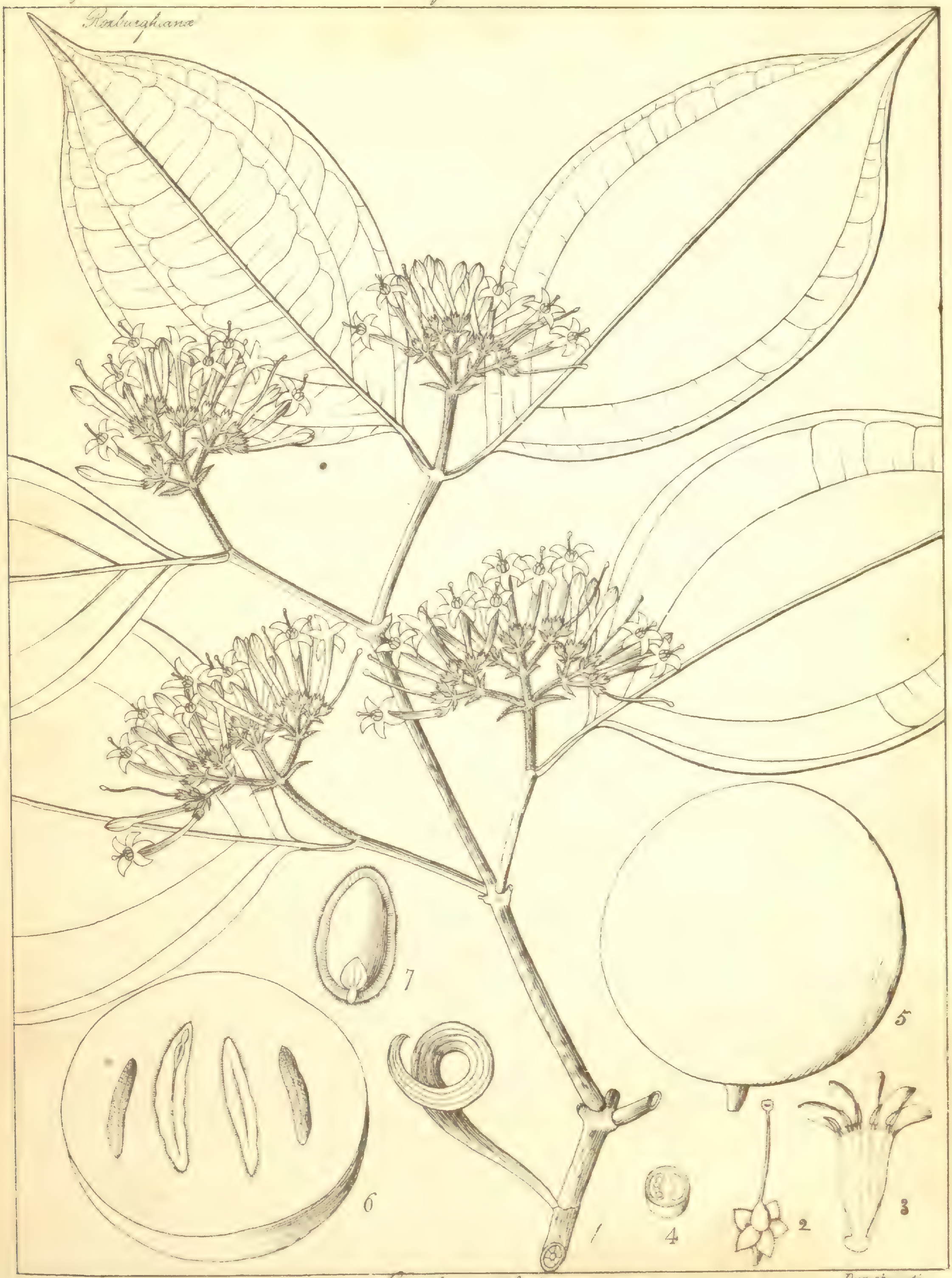
Dunphy Lith

Chonemorpha macrophylla (G. Don)
Echites macrophylla (Roxb.)

Roxburghianæ.



Tabernæmontana dichotoma (Roxb.)



Strychnos colubrina Lin.

Rungish del. Dunphy Lith.

Pambosa vulgaris (D. C.)

Alstonia venenata R.Br.
Echites venenata Roxb.

Roxburghiana.

Purnphy. Lith

Carissa villosa Roxb.

Roxburghianæ.

Tabernæmontana dichotoma Roxb.
Echites dichotoma Roxb.

Dumphy Lith.

Chonemorpha ? antidysenterica (G Don)
Echites antidysenterica Roxb:

Roxburghiana

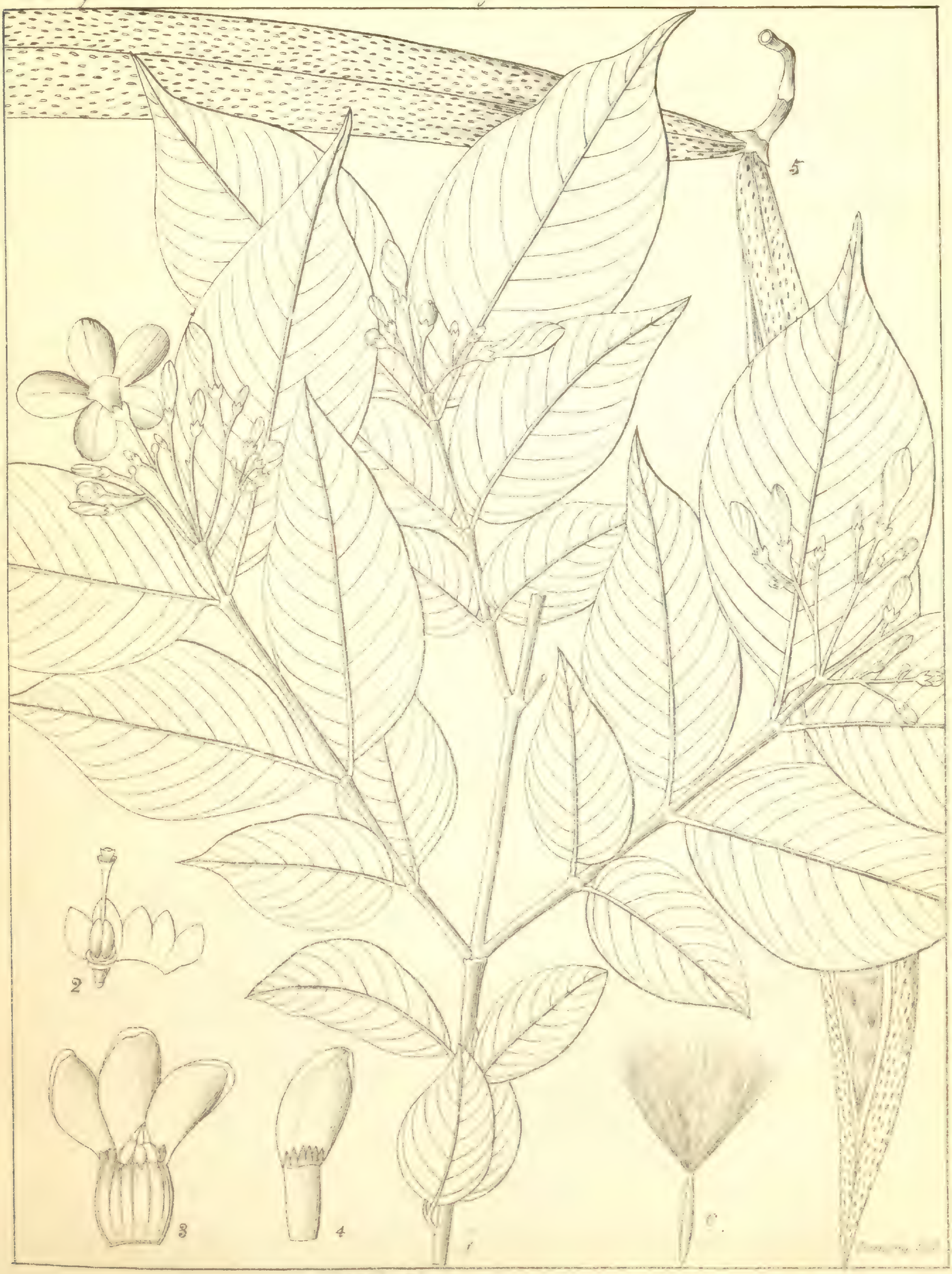
Aganosma Roxburghii (G.Don)
Echites caryophyllata (R.)

Roxburghianæ.

Odollum. Kurz.

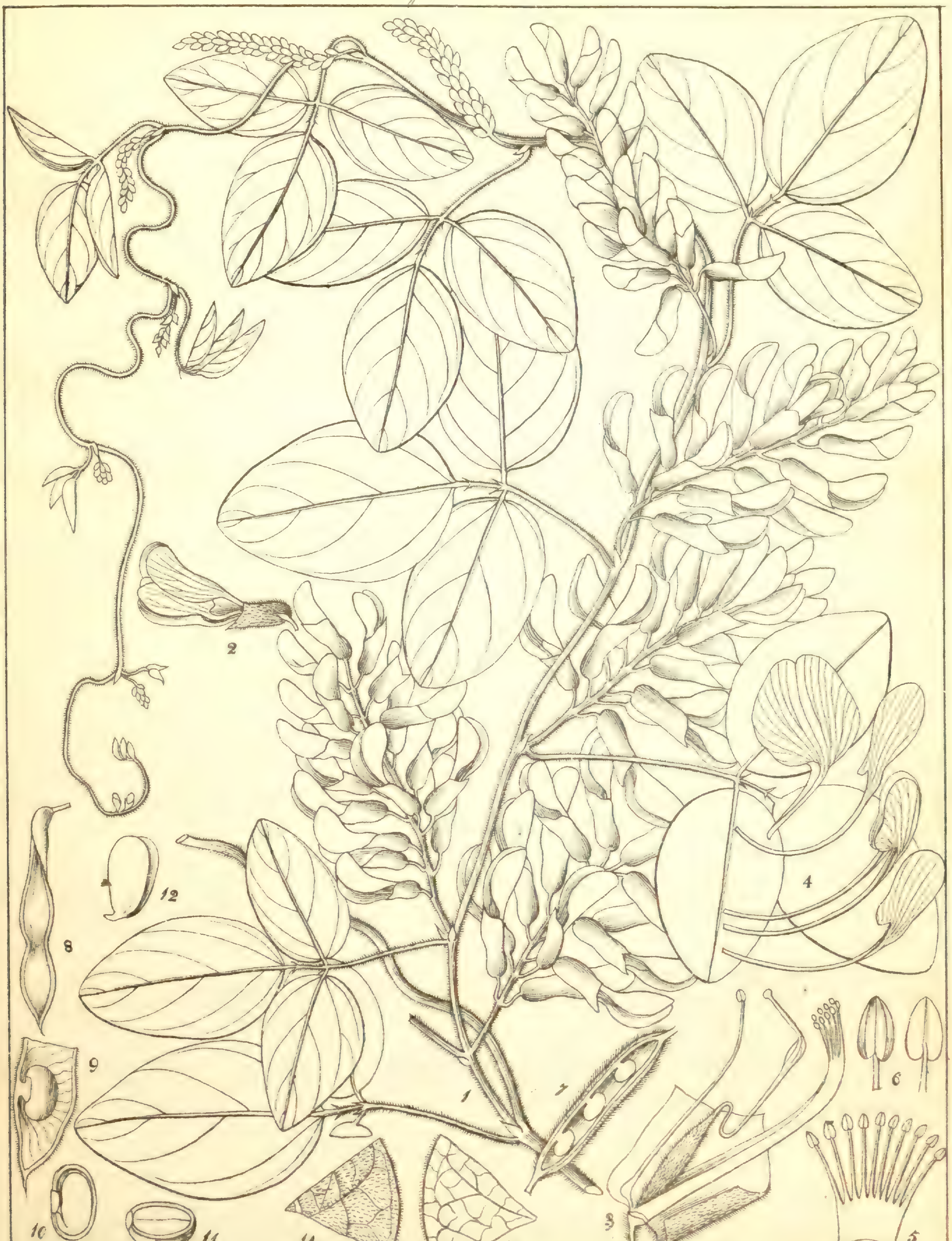
Cerbera odollum, Gært. Fruct.
Tanghinia, dollum, G. Don.

Wrightia coccinea (Sims)
Nerium coccineum (R.)



Wrightia tomentosa (G. Don)
. Nerium tomentosum (R.)

Wrightia tinctoria R. Br.
Nerium tinctorium Roxb.



Rungiah, del. Dumphy Lith.

Dunnsia congesta (Graham)

Adenosma balsamea (Spic.)

Dyschoriste littoralis (Nees)
Ruellia littoralis, Linn.

Rungiah del. Dunphy Lith.

Phlebophyllum kunthianum . Nees.

Asteracantha longifolia (Nees)

Barleria luminata. (Wight)

Tellamvelu } Jam.

Barleria cuspidata (Klein)

Maroomoollee Jam. *Barleria prionitis Linn.*

Woothamcelee. Jam.

Barleria cristata (Linn)

Rungiah, del. Dumphy Lit.

Malliekeru. thee Jam

Barleria nilida (Nees.)

Lepidagathis cristata (Willd.)

Dumphy, Lith.

Kelaiorundeeloondoo } Tam

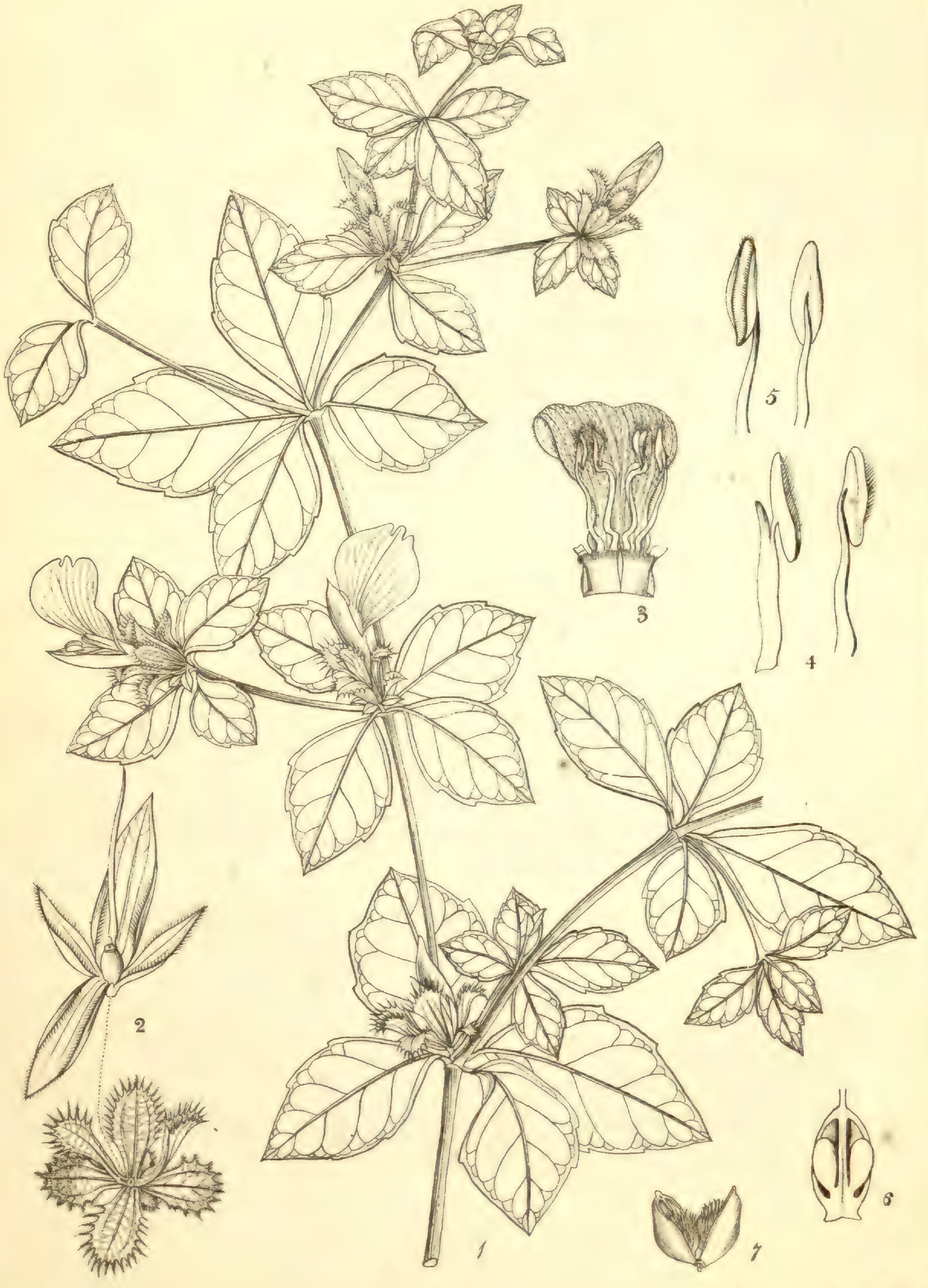
Hygrophila Pectinata Wall.

Lepidagathis fungens (Nees)

Rungiah del. Dumphy. Lith.

காடுசிலுருத்தி
Kattooseliundee } Tam.

Lepidagathis scariosa (Nees)



Rungiah del

Dumphy, Lith

Blepharis Boerhaaviæfolia Juss

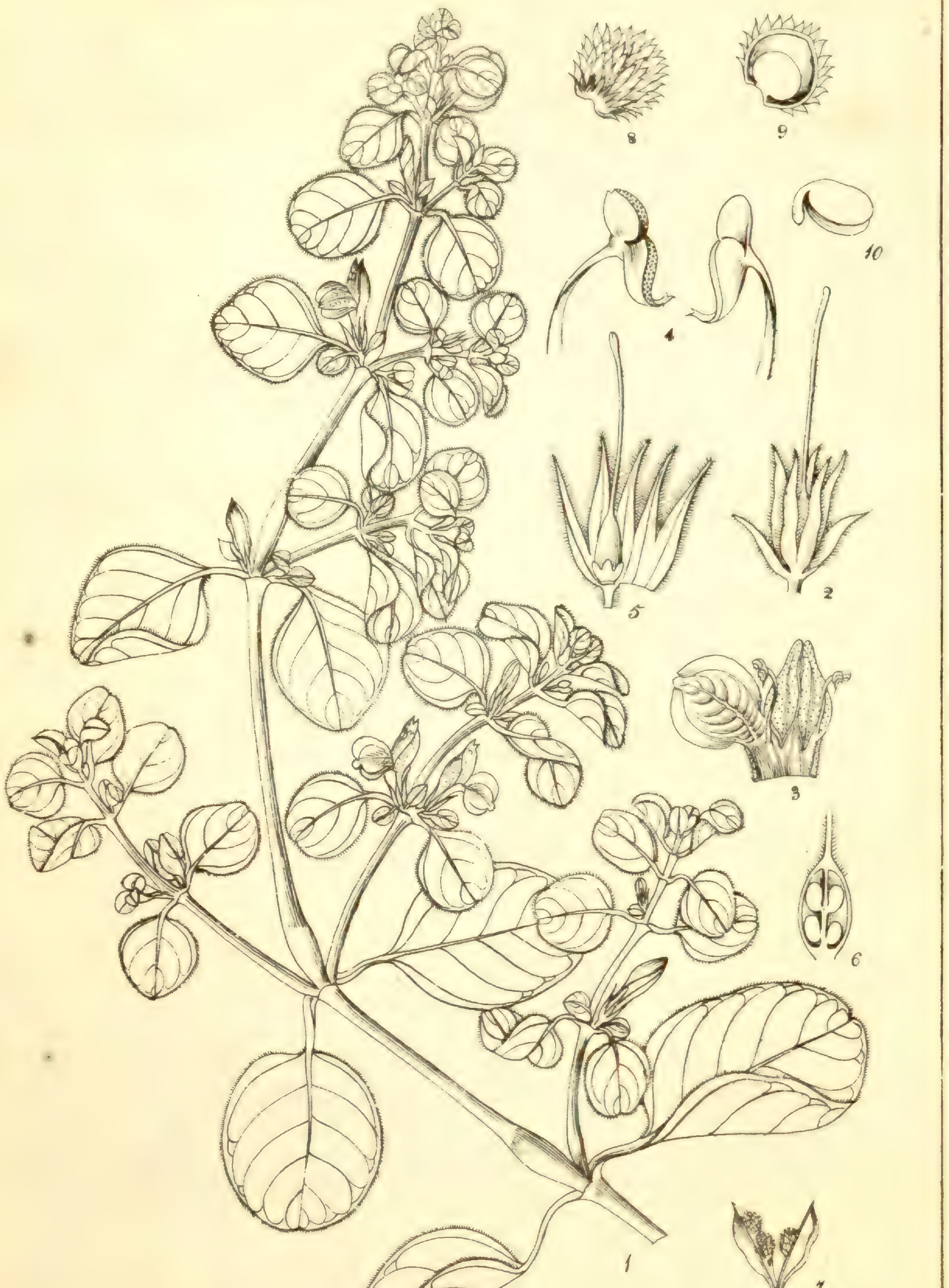
Dilivaria ilicifolia. (Juss.)

Dumphy, Lith.

Crossandra axillaris (Nees)

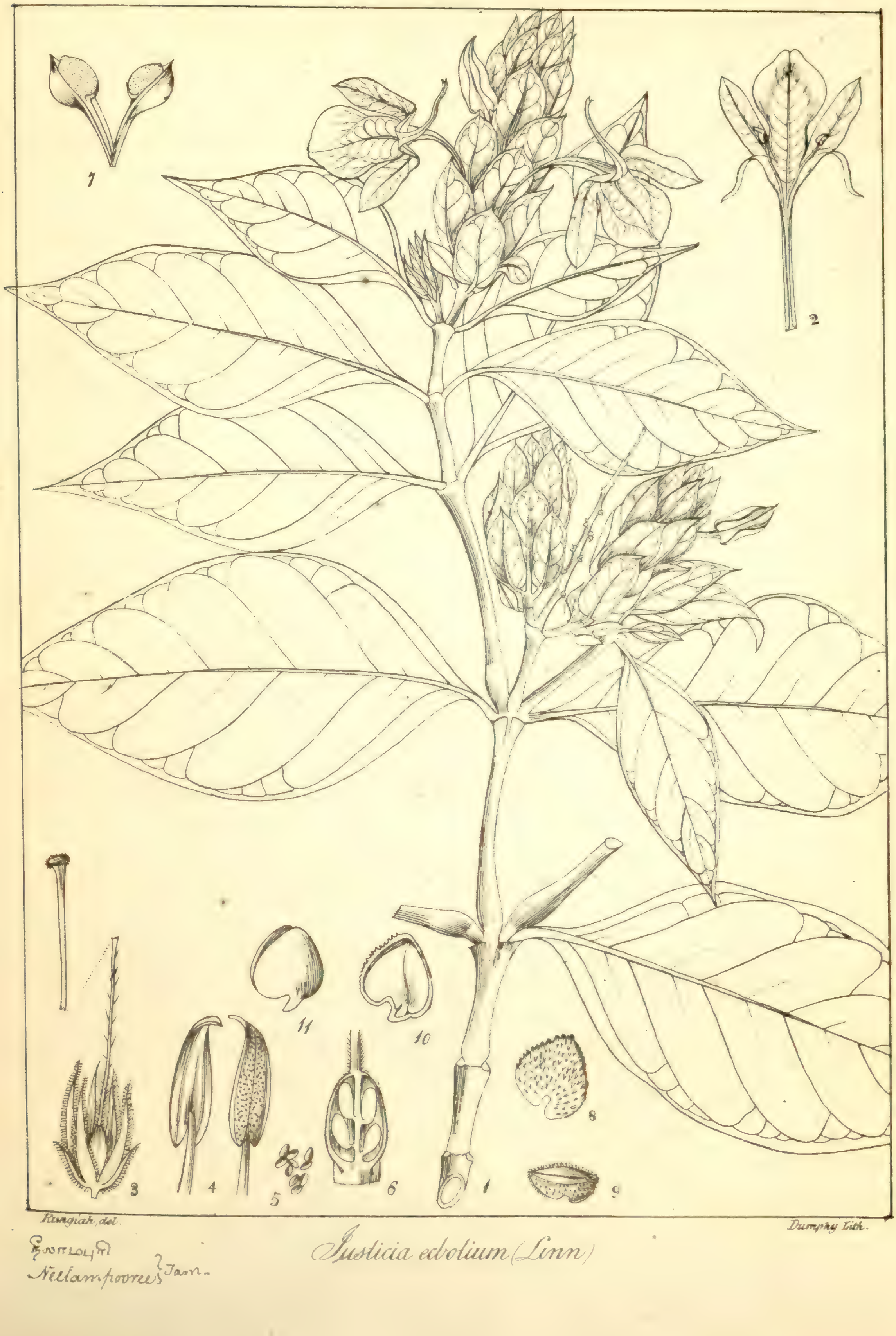
Dumphy, Lith.

Tam. மஞ்சள்பூவரசு Manjalpooveraca poondoo. *Crossandra infundibuliformis. Nees.*



தவுச் (முளையைபுணை)
Thavusmoorungai } Jam
Proondoo

Gendarussa hanguebarensis (Nees)



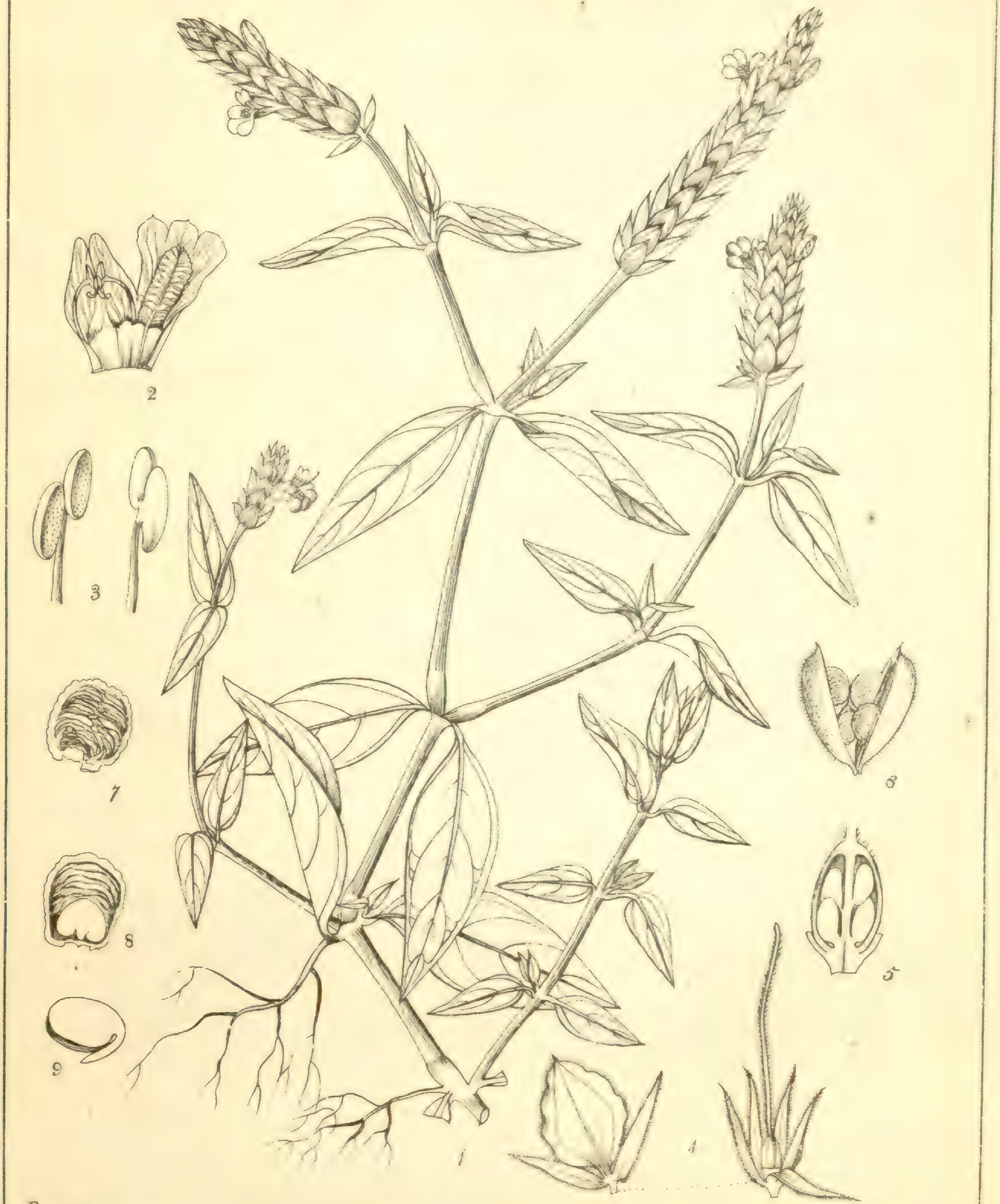
Rungiah, del. Dunphy Lith.

Justicia ecbolium (Linn)

Poottloli
Nellampoovree } Tam.

Rhinacanthus communis (Nees)

ನಾಗಮಲ್ಲಿಗೆ = ನಾಗ
Nagamalligi = Jam.
Shadu



கானைசுகொடுபூலை
Caresay codoo lie } Jam.

Rungia repens. Nees

Kaiyoonnee
Nellamoolee } Jam.

Eranthemum montanum var. a (Nees)

Andrographis echioides Nees.

Tabernæmontana longiflora Jam
Tabernæmontana longiflora Jam

Fundrith del. Dunphy Lith.

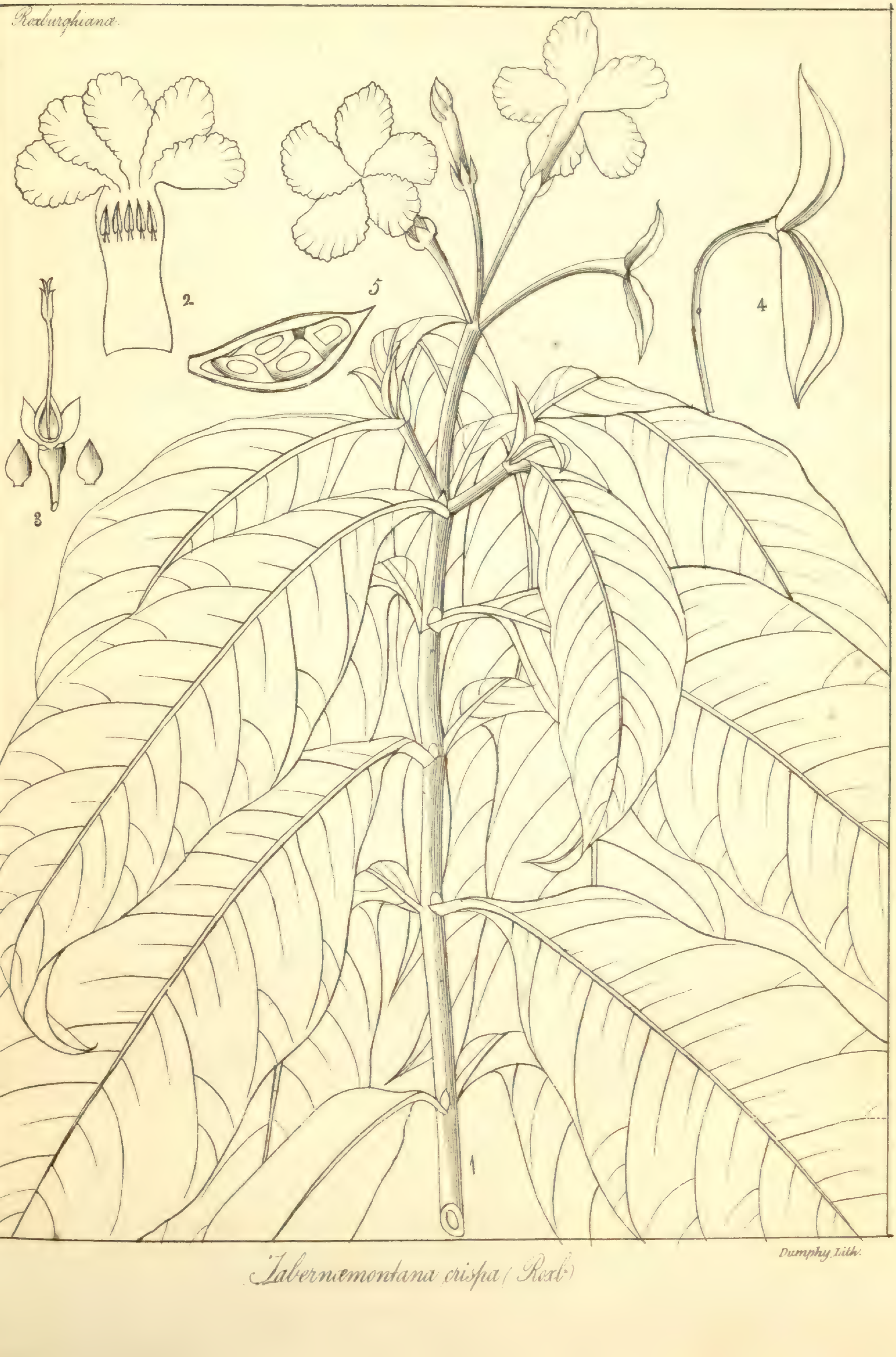
Gendarussa vulgaris (Nees)

Roxburghiana.

Dumphy Lith.

Cordia serrata (Roxb.)

Roxburghiana.



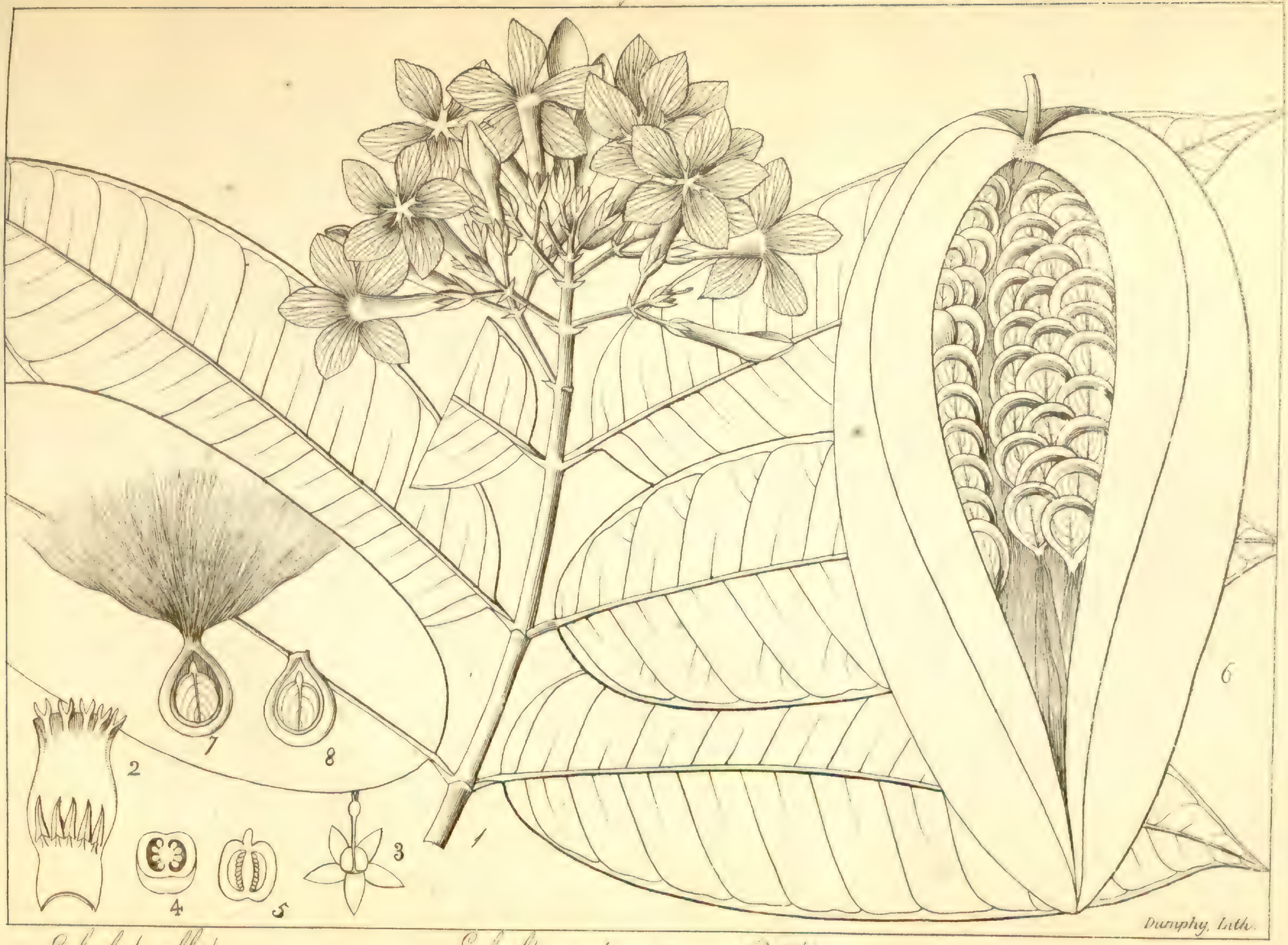
Dumphy, Lith.

Tabernaemontana crispa (Roxb.)

Roxburghiana

Dunphy, Lith.

Plumeria acuminata. (Aiton)



Echalut-selhit.

Echaltium piscidium (R. W.)
Nerium piscidium (Roxb)

Roxburghiana

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Dumphu Lith.

Urceola elastica (Roxb.)

Curtis's Botanical Magazine.

4

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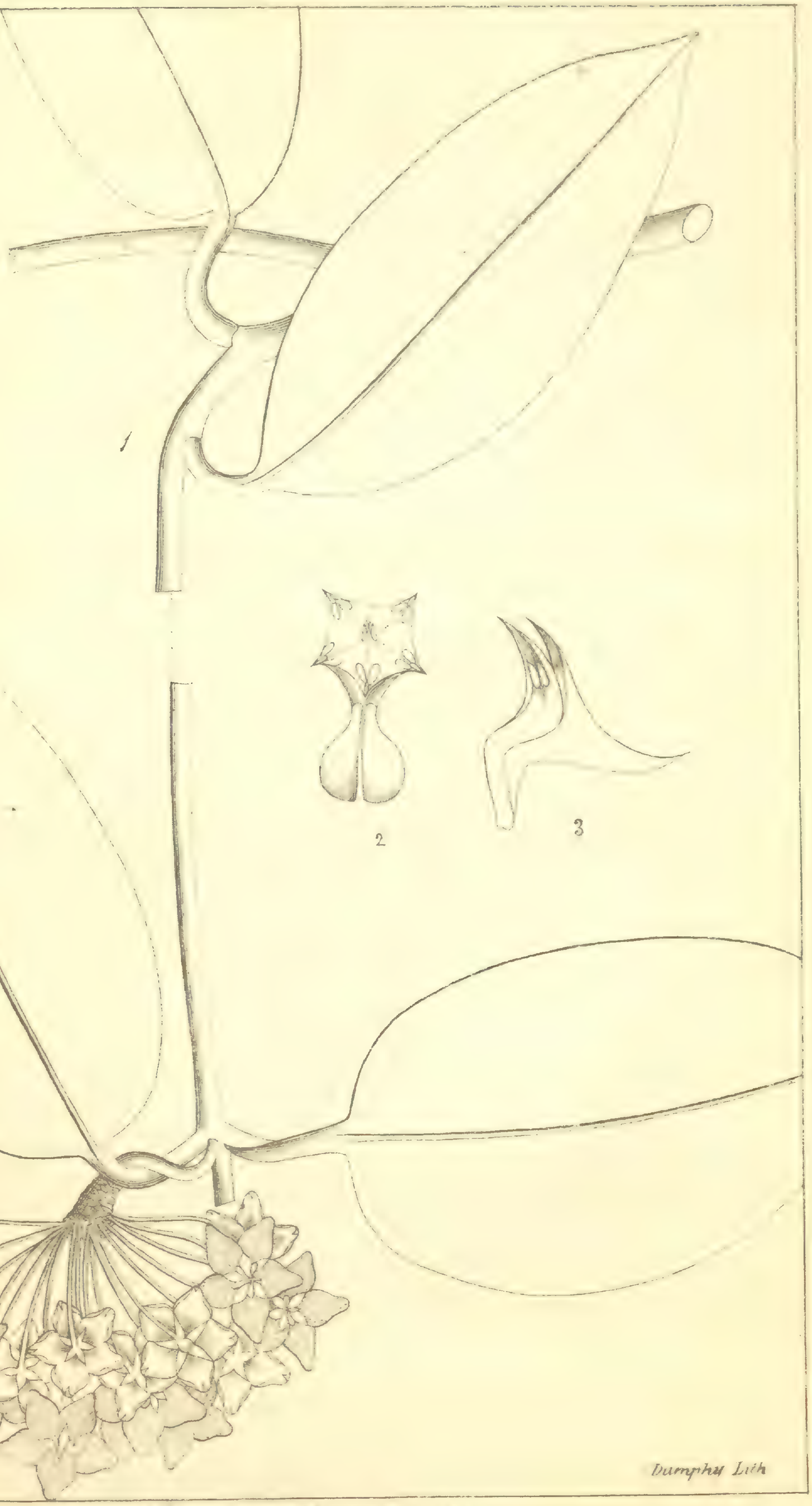

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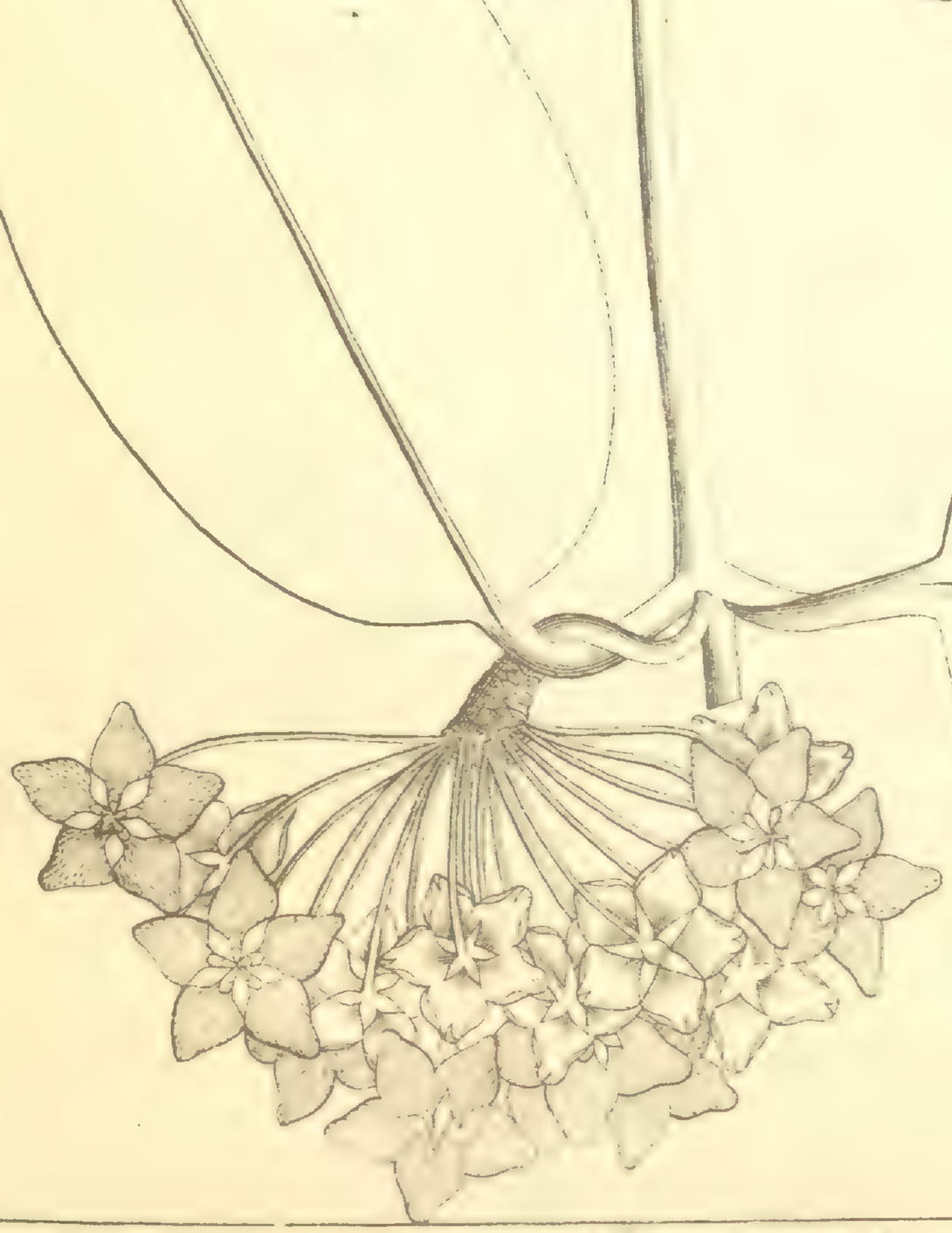


Dumphry Lith

Aloe pendula. H. K. f.

Gasteria pendula. Kerr.

Roxburghiana

Ixocarpus Roxburghii (W. & A.)
Asclepias longistigma (Roxb.)

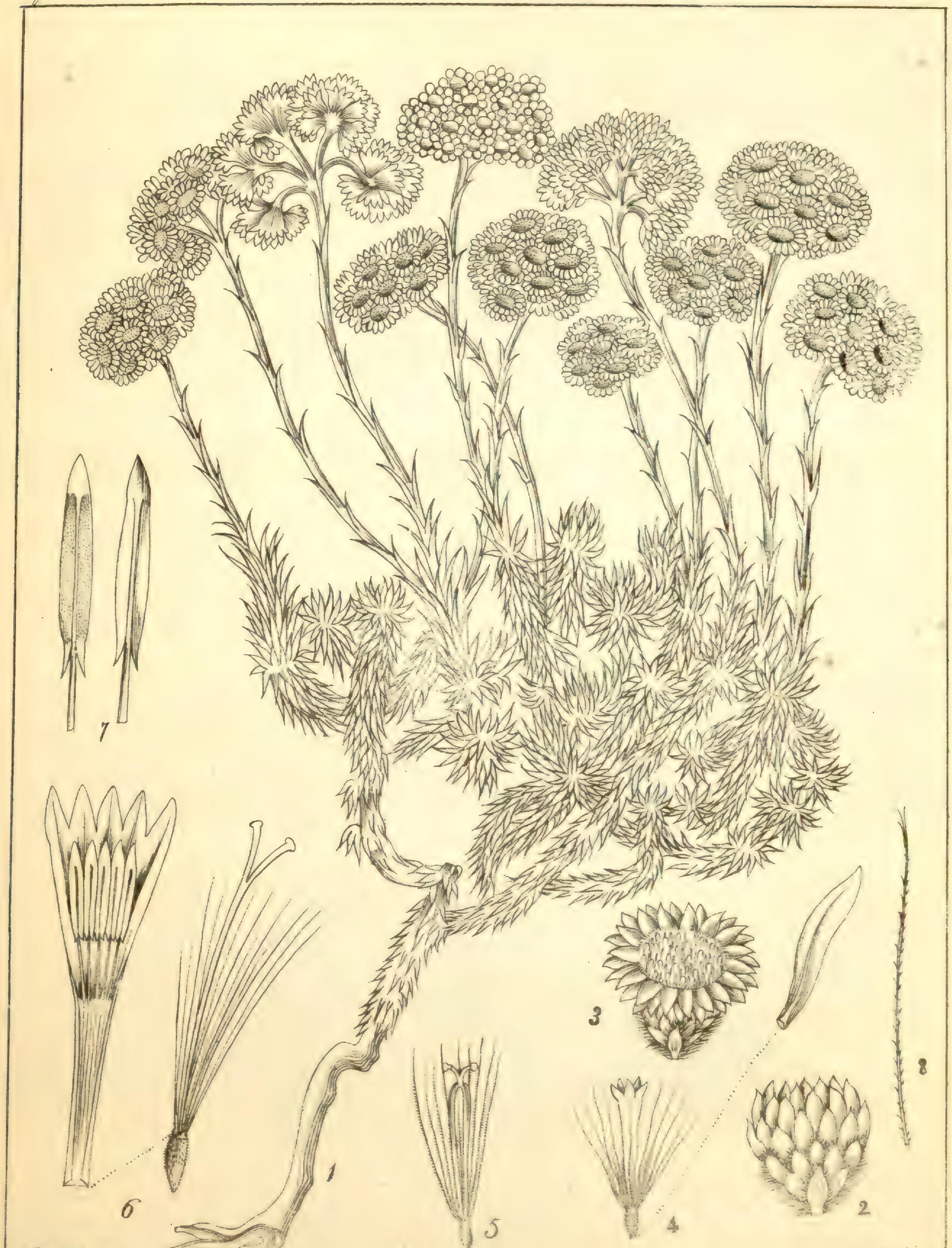
Roxburghianæ.

Dumphy, Lith.

Tabernæmontana recurva, Roxb.

Roxburghiana

Tabernæmontana coronaria R.Br.



Gnaphalis Wightiana D.C.
Gnaph: Wightianum (D.C.) in Wight Icon hib:

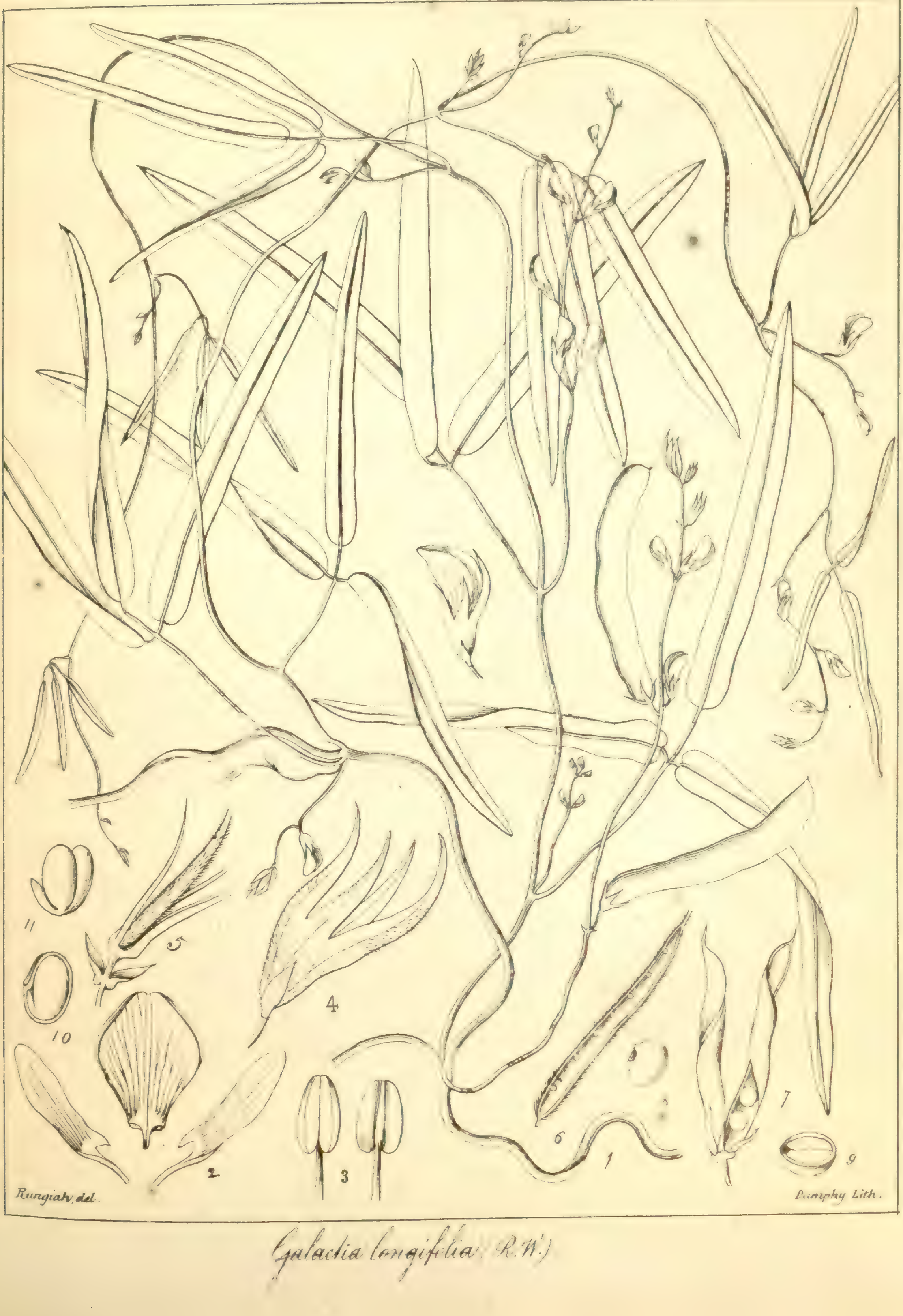
Imberba Indica (D.C.)

அழுவன்னி.
Aloovanee.

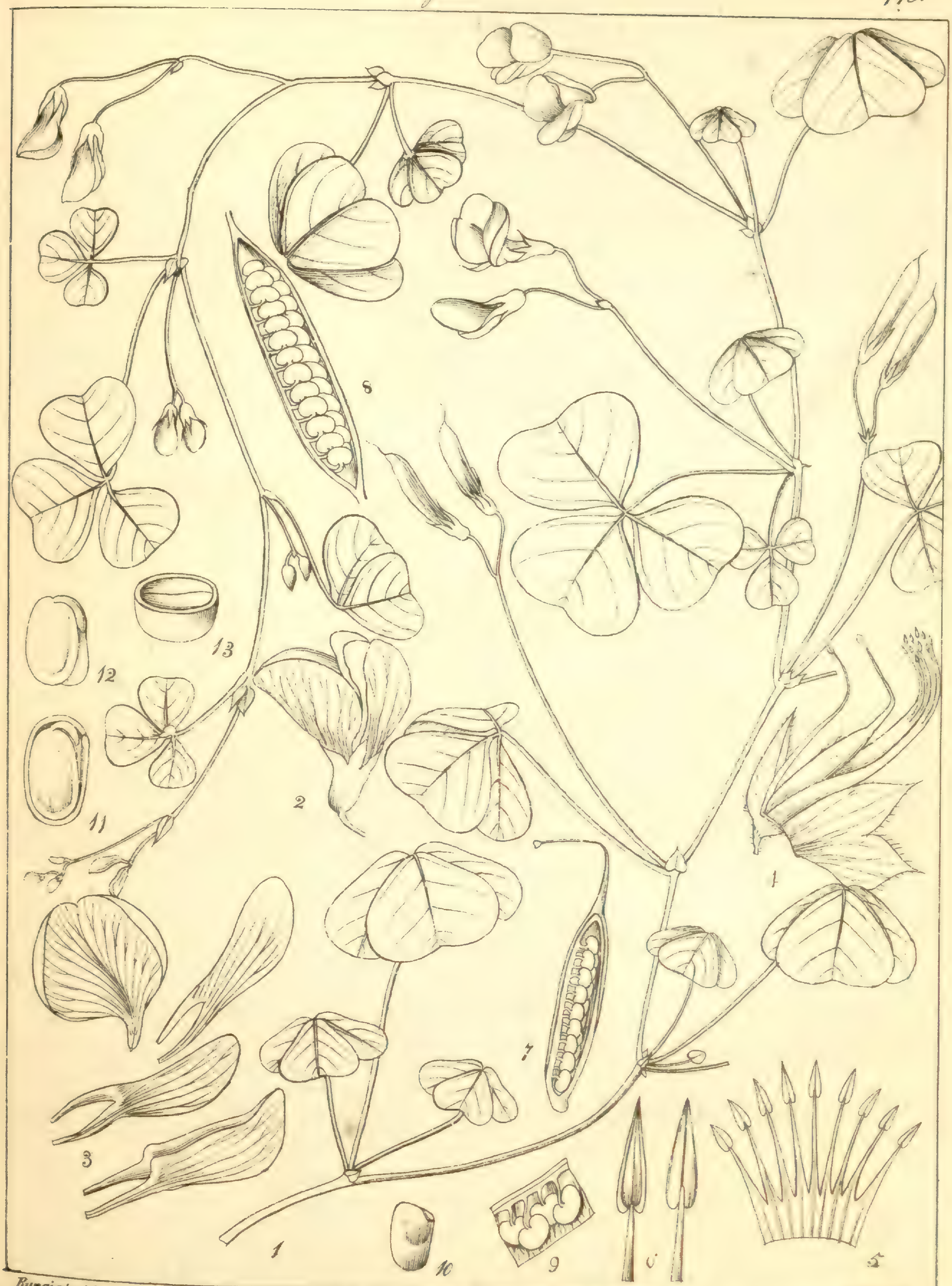
Crotalaria lunulata (Heyne.)

கீலுகீலுபூனை
Keelookeeloopay. Tam.

Crotalaria pulcherrima (Roxb.)



Galactia longifolia (R. W.)

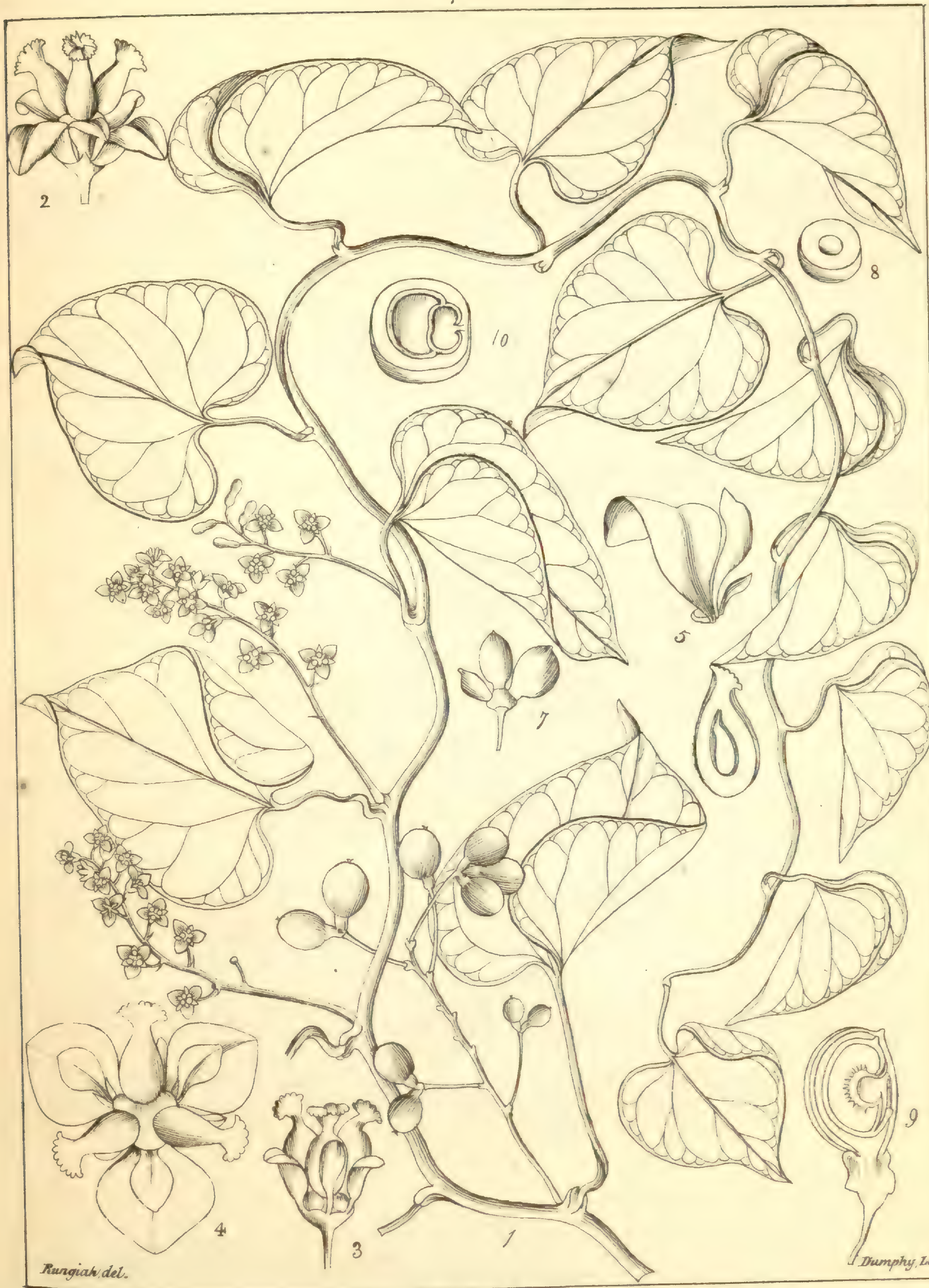


Rungiah, del. Dumphy, lith.

Parochetus major (Don.)

. Sesbania conjugata

Cocculus cordifolius DC.



Coculus cordifolius ? (D.C.)

Sterculia guttata (Roxb.)

Dumphy, Lith.

Byttneria herbacea (Roxb.)

Pterospermum Heyneanum (Wall)

Litmannia. Africana. W & A.

Dumphy, Lith.

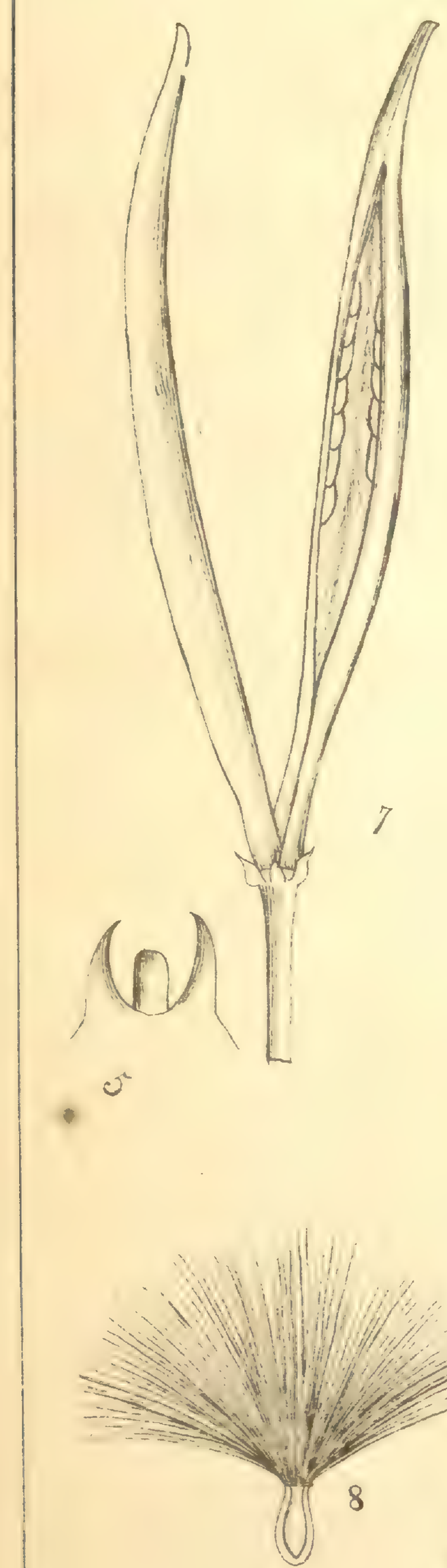
Batatas chrisyana (R. W.).

Caletropis herbacea (Wight)
Asclepias herbacea (Roxb.)

Roxburghiana

Roxburghiana.

Cryptolepis Buchanani (Roem & Sch.)
Nerium reticulatum (Roxb.)



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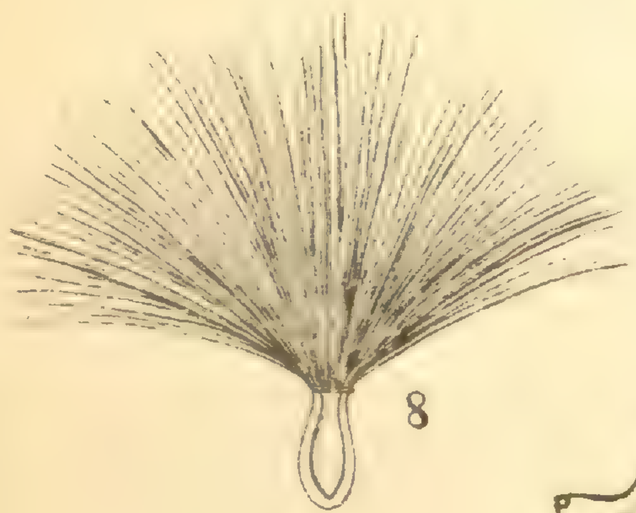

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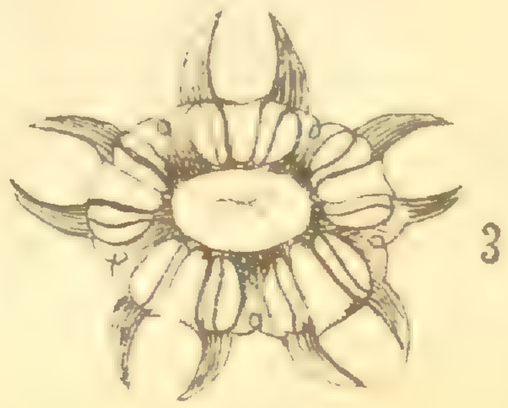

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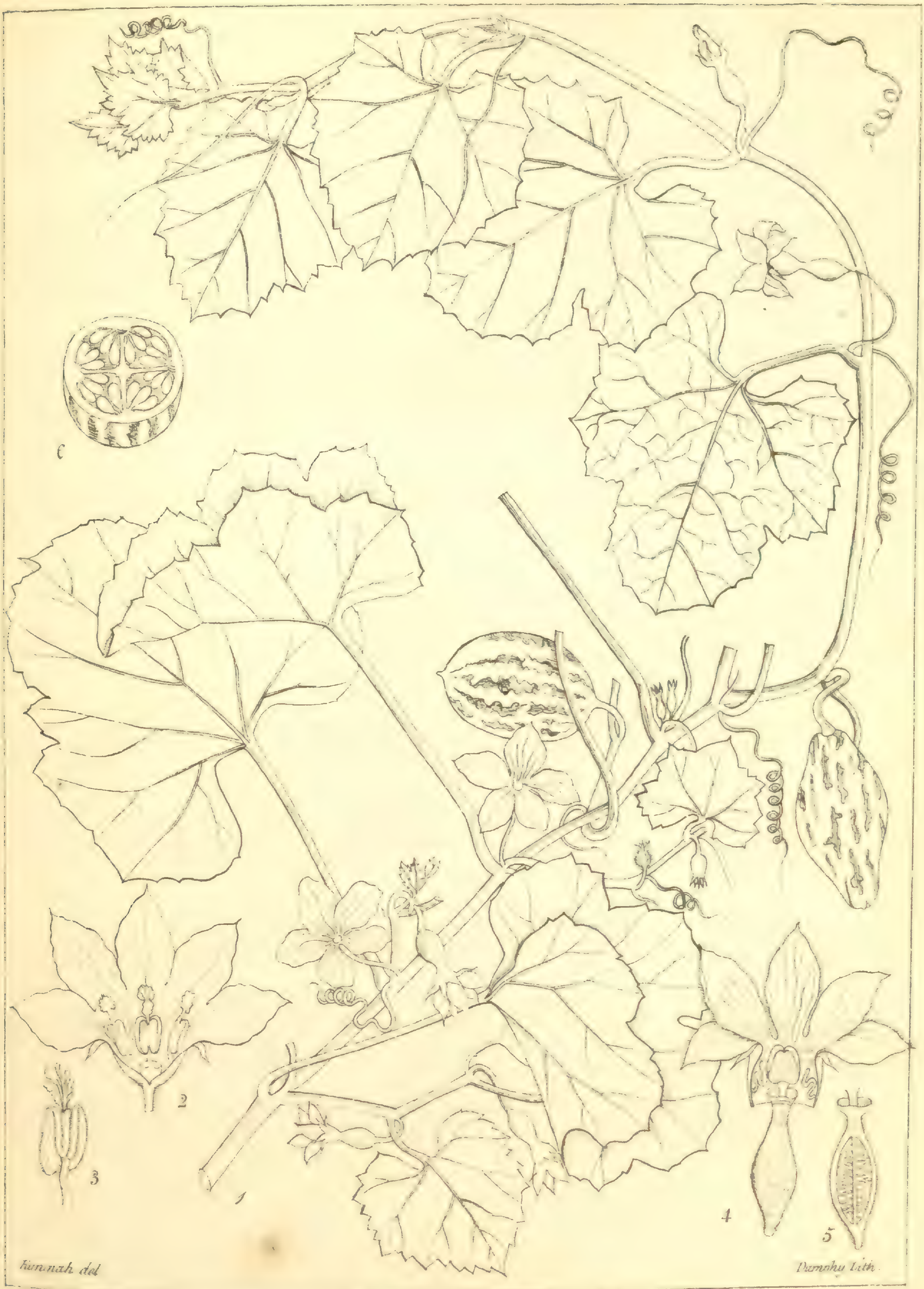
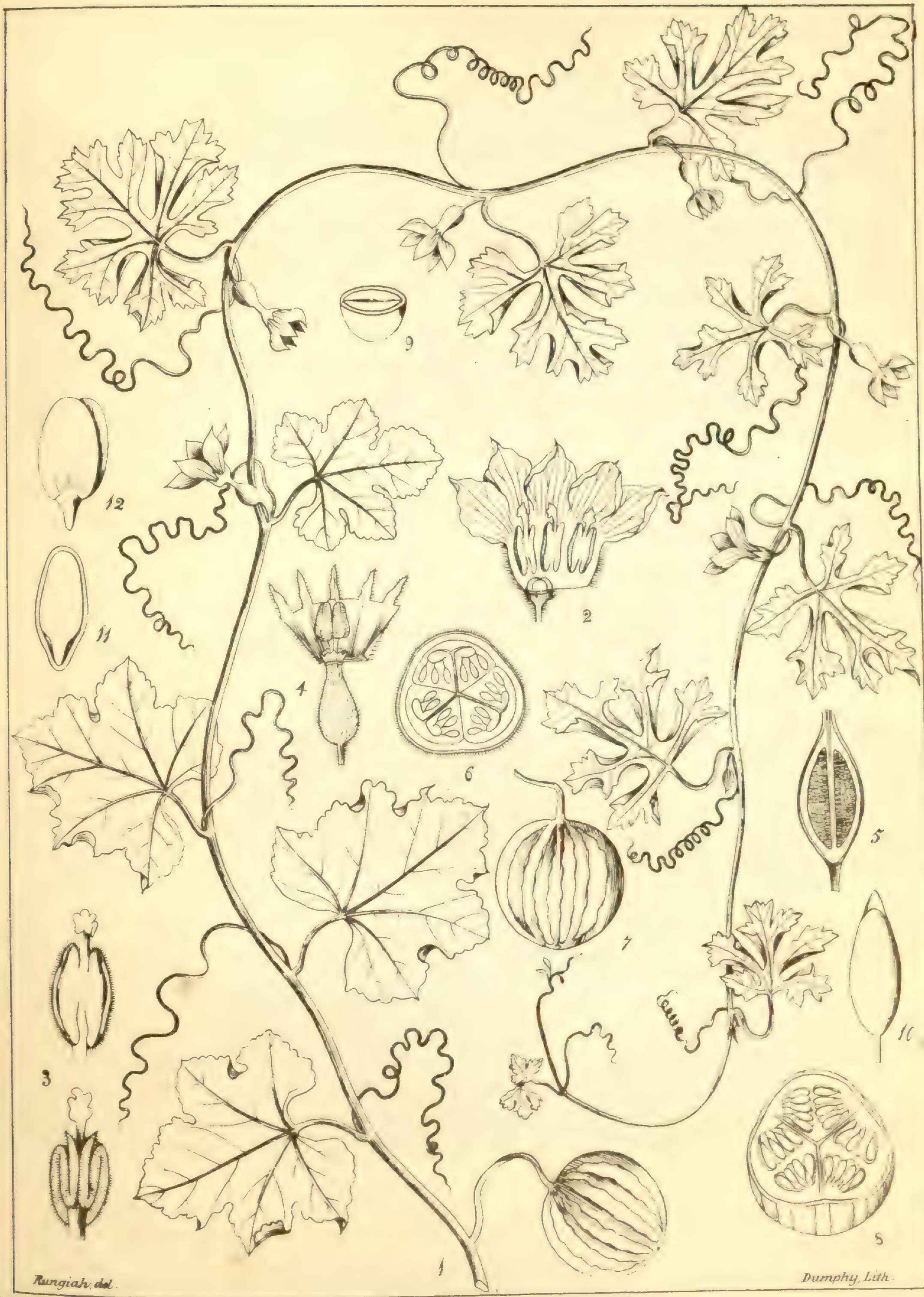
Rungiah, del. Dumphy Lith

Boucerosia umbellata (W&A)



Cucumis pubescens Willd

Thermusee ini } Tam
Boodamacayah } Tel



Pa thoomutte coi } Tam.

Cucumis trigonus (Roxb.)

பேரும்பீரங்கி

Citrullus Colocynthis Schrn
Cucumis Colocynthis Linn

Pay-pooungcodey Tam.

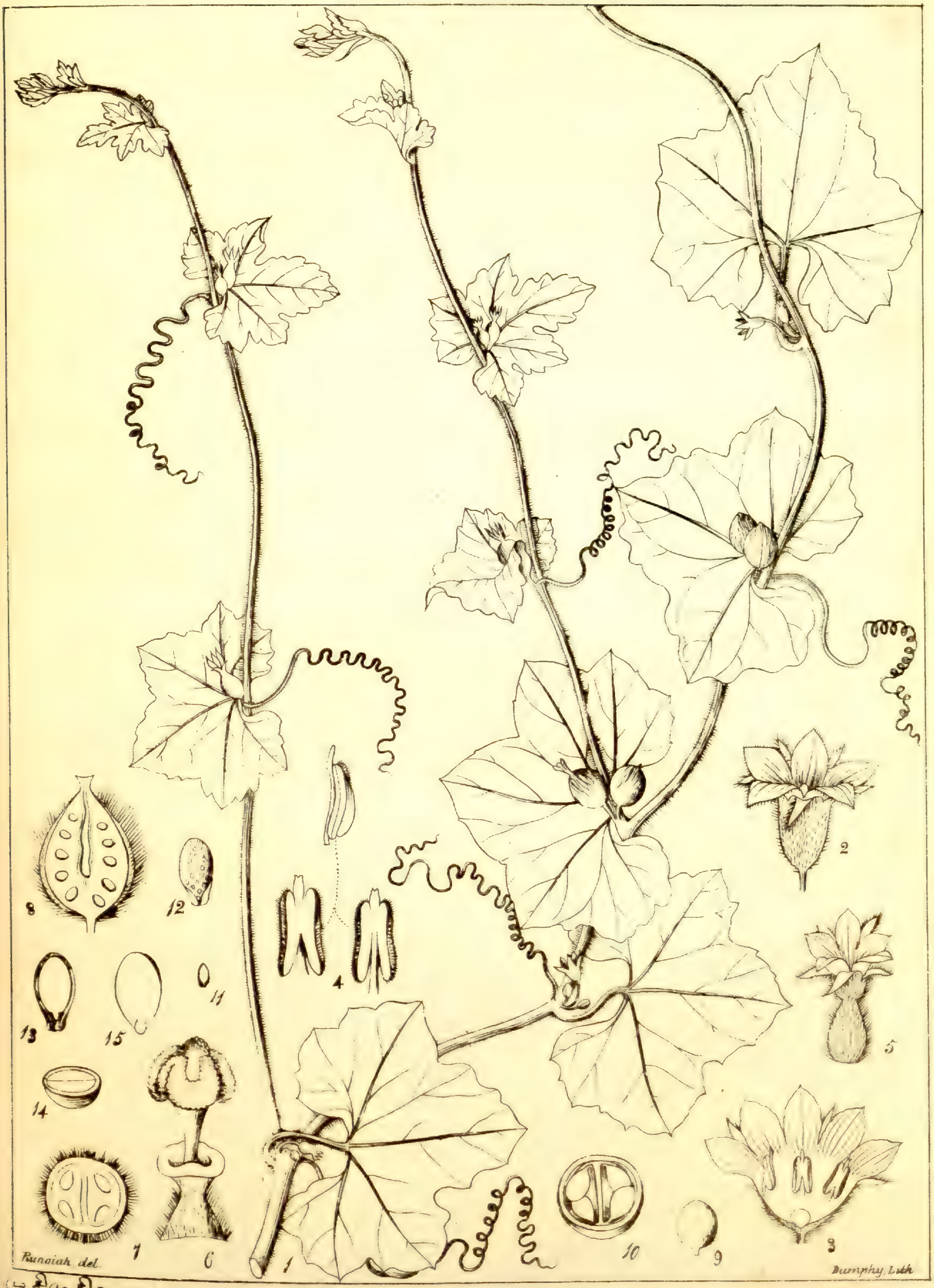
Luffa pentandra Roxl.

Nathee benathega Tel.

ఎ యి వి ర ని కి కా య Tam
Iverleccoi

Bryonia laciniosa (Linn.)

Tungathondacoyah/ Tel.
తొండకాయ



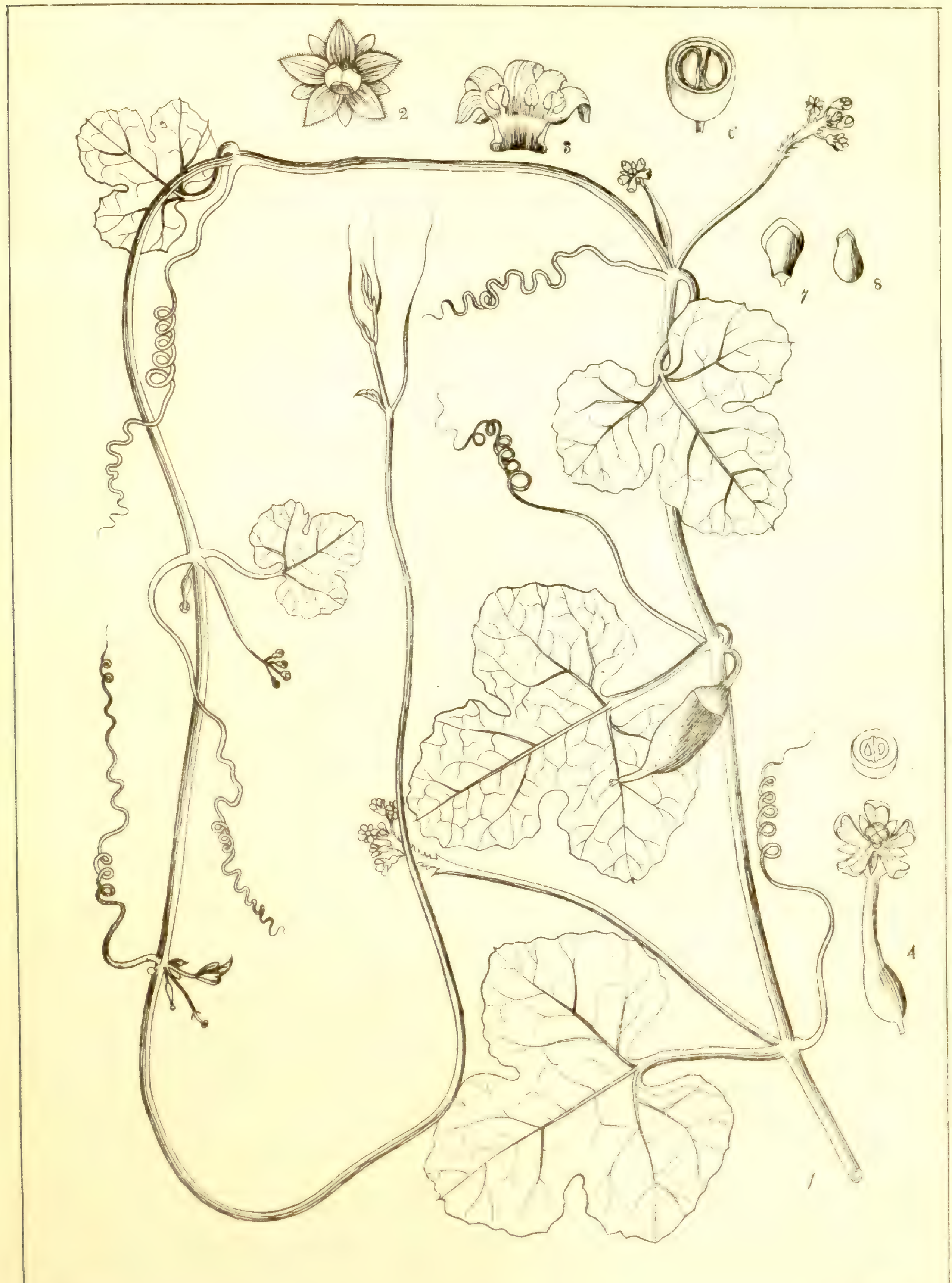
Wiseemovseka. } Tam.

Bryonia scabrella (Linn.)
Mukia (Arnott.)

Rungiah del. Dumphy, Lith.

Ramacovacodee } Tam.

Bryonia amplexicaulis (Sim)
Karivia (Arnott)



கசப்பல மெகி கரணை Tam
Colbumcovy.

Bryonia ciliata (Roth)
Trichosanthes (Jenull)

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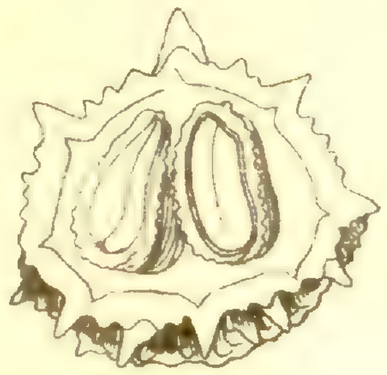

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Rangiah, del.

Dumphy, Lith.

Merpavulcoi Tam.

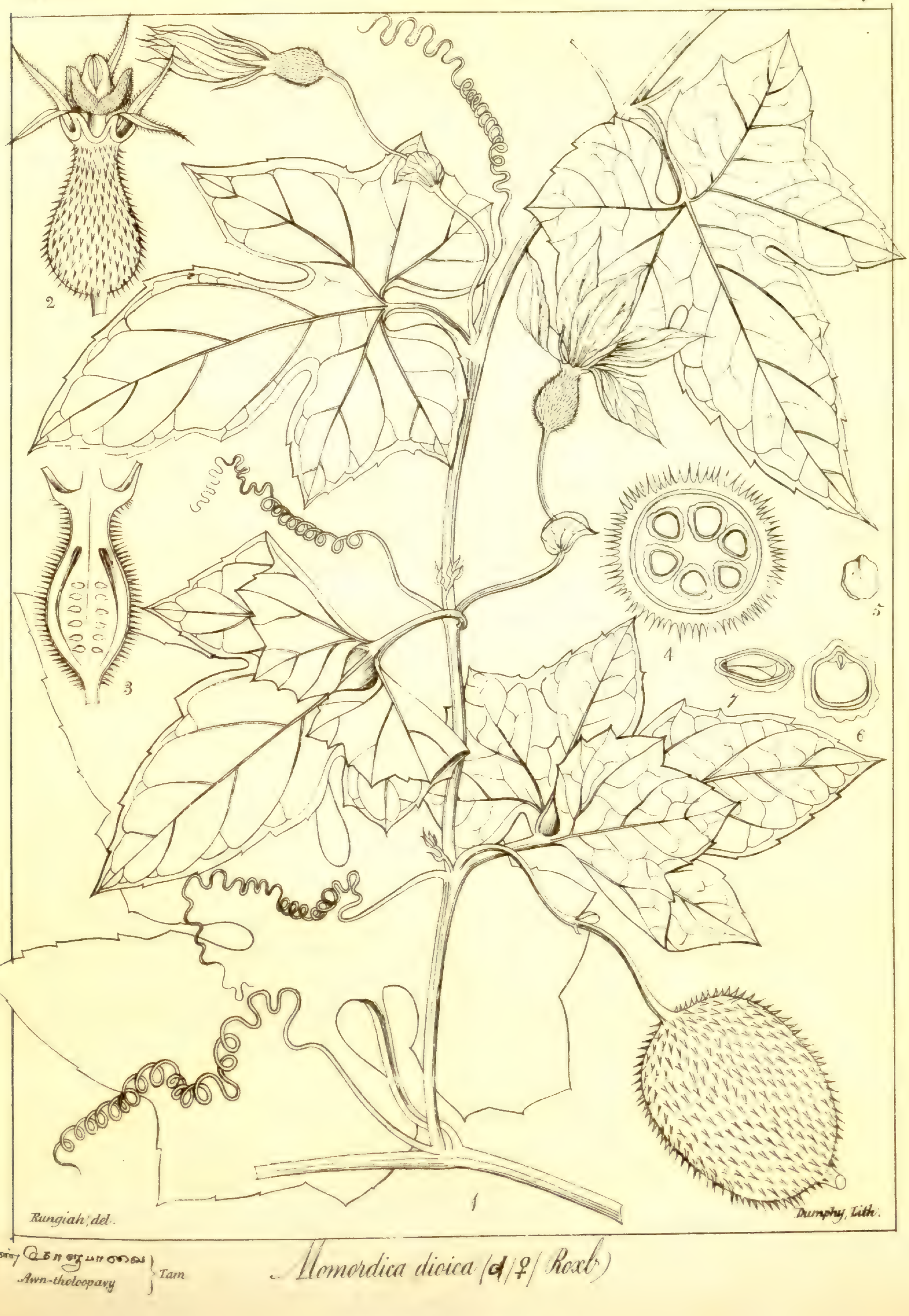
Momordica charantia (Linn.)

Polvecacaracoi Tel.

Rangiah, dd. Dumphy, Lith.

பாகல் Tam.
Thoopavy

Momordica dioica (♂♀) Roxb.



தூணி கொழுபாலை } Tam
Awn-tholoopavy

Momordica dioica (♂/♀) Roxb.

Cucurbita maxima. (Duch)

Ramanath del.

Dunphy. Lith.

Poosha-nuveedoo Tam.

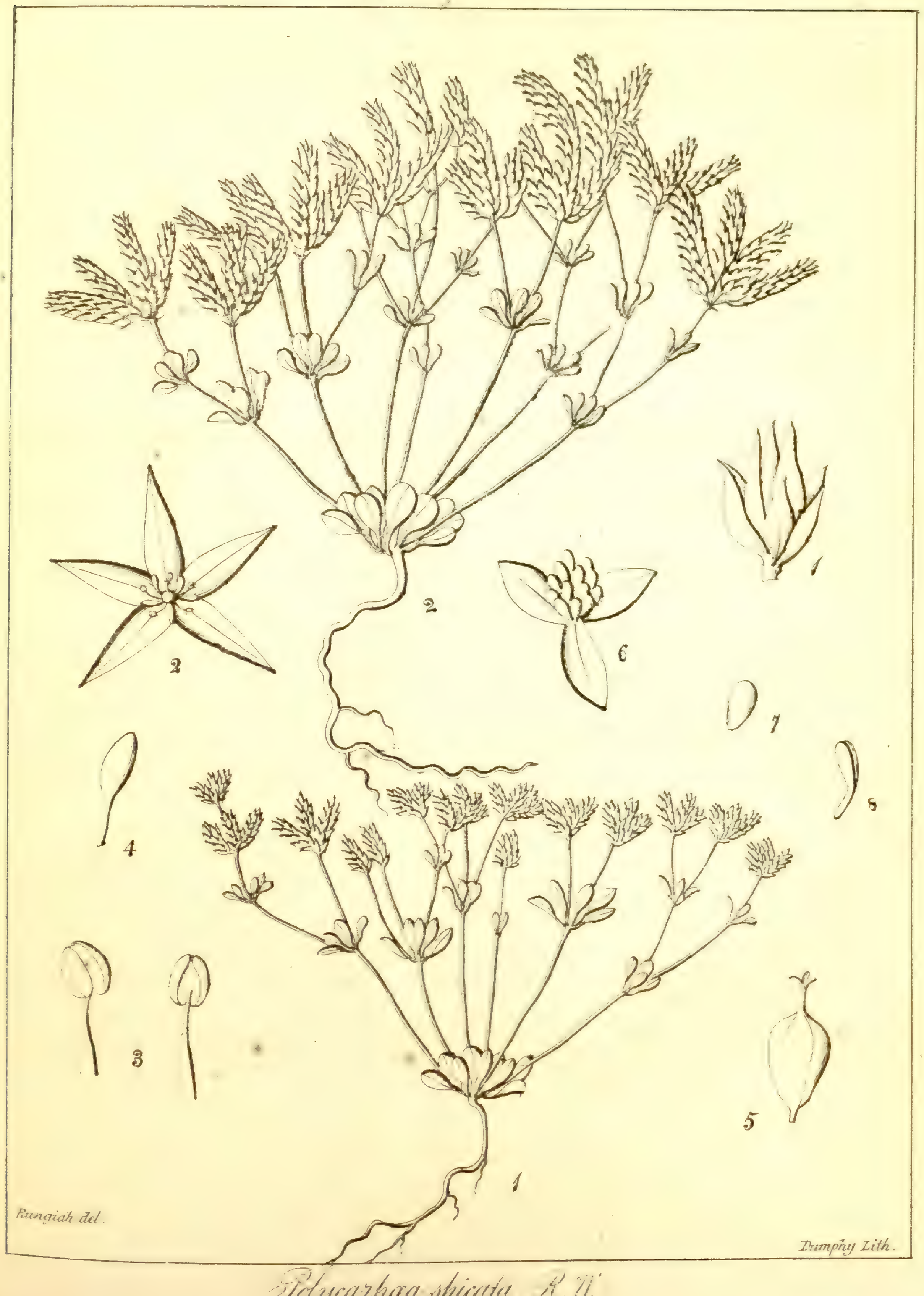
Goomeedeethegay Tel.

மாடகொத்தான் Madacothan } Tam

Cardiospermum Halicacabum Linn

బుడ్డకాకరతీగ Boddah-Cacarathega } Tel

Visenia umbellata (Blume)
Glossospermum velutinum (Wall)



Polycarpaea spicata R. W.

Rungiah del. Dumphy, Lith.

Aglaia odorata (Lour)

Seerookurie

Amaranthus polygonoides (Willd)

Seerookooraku Tel.

(మూలాన్తుకీరా) Moolookerie ——— } Tam

Amaranthus spinosus

ముళ్ళగురాకు Mullagoorakoo ——— } Tel

அனாகத்தீனா Tam
Lunekarre

Amaranthus viridis

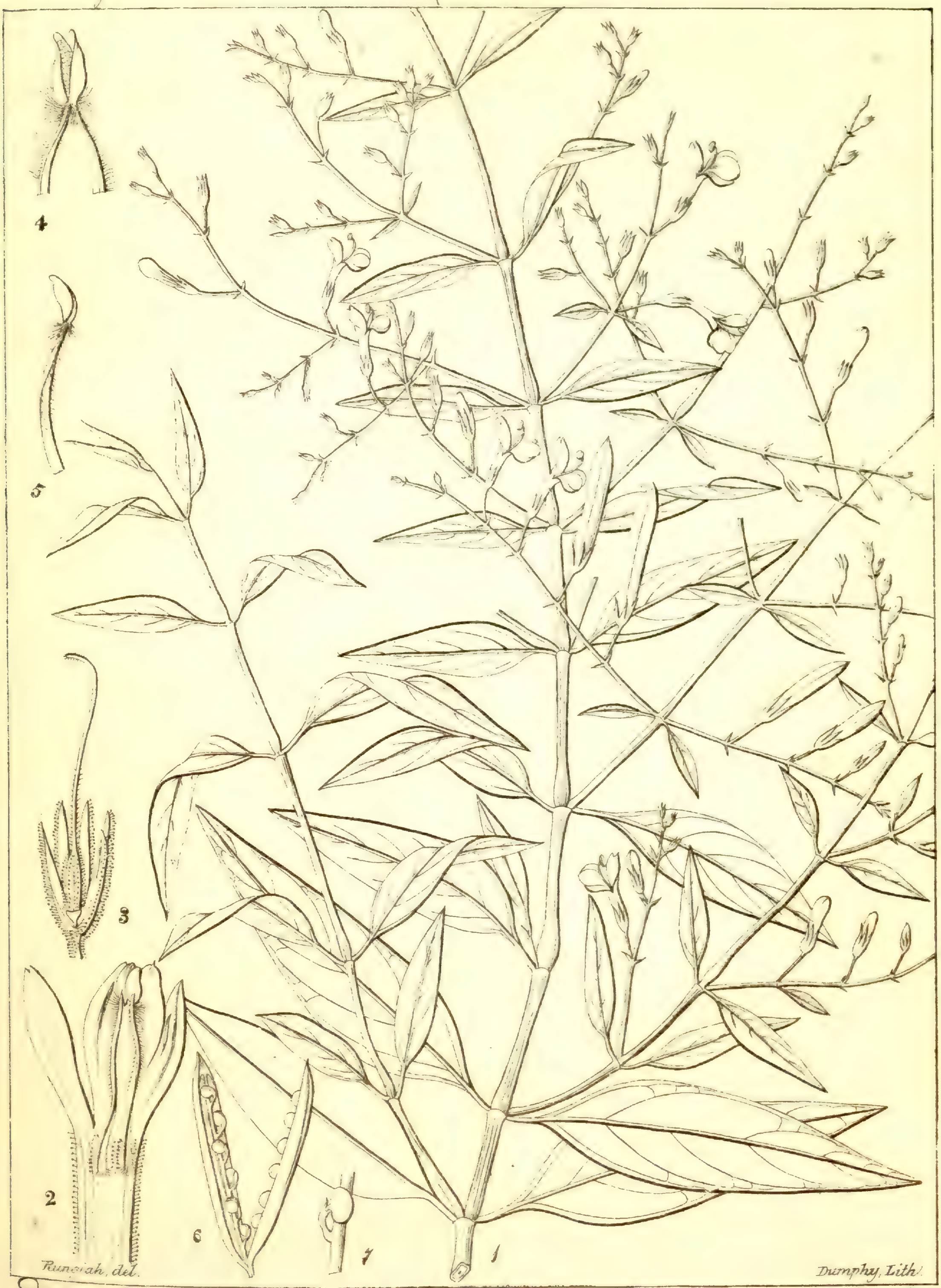
తోటకూరాకు Tel
Tootakooraakoo

Fœniculum vulgare (Gærtn.)

கொத்தமல்லி Koothamullee Tam

Coriandrum sativum (Linn.)

Andrographis serpyllifolia R. W.
Justicia (Lin.) Erianthera Nees.)



நிலவேம்பு Nelievameboo } Tam.

Andrographis paniculata.

Nochecleshadee. ? } Tam

Vitex negundo (Linn)

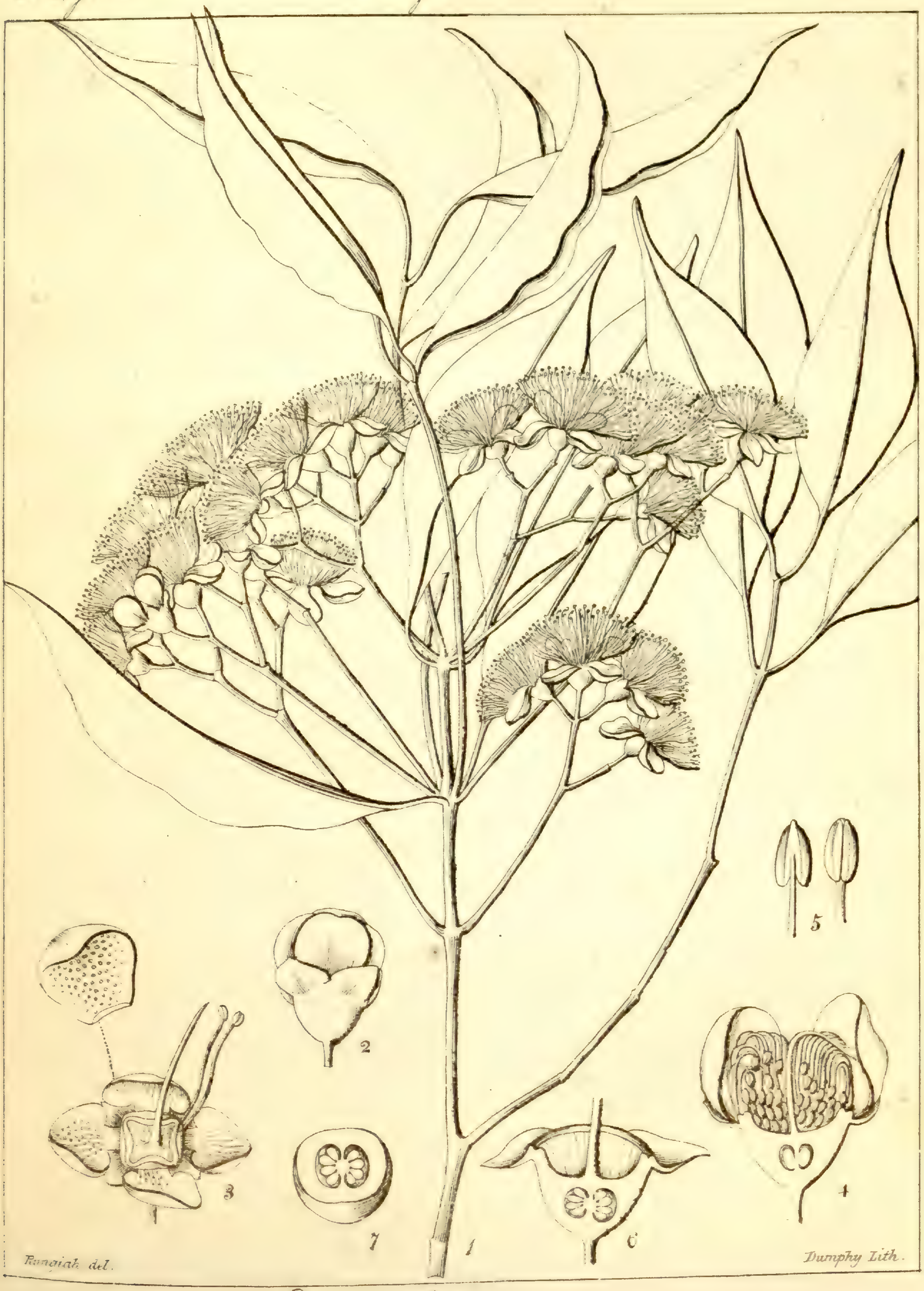
Bragantia Wallichii (R Br.)

Nelitris paniculata (Lind)

Myrtus tomentosa (Aiton)

Jossinia Indica R W.

Monoxora spectabilis (R.W.)



Eugenia Jambolana

Eugenia / I. pauciflora

Eugenia / P / cylindrica

Eugenia (A.) leptantha (R. W.)

Eugenia (A.) Wightiana.

Rungiah, del. Dumphy, Lith.

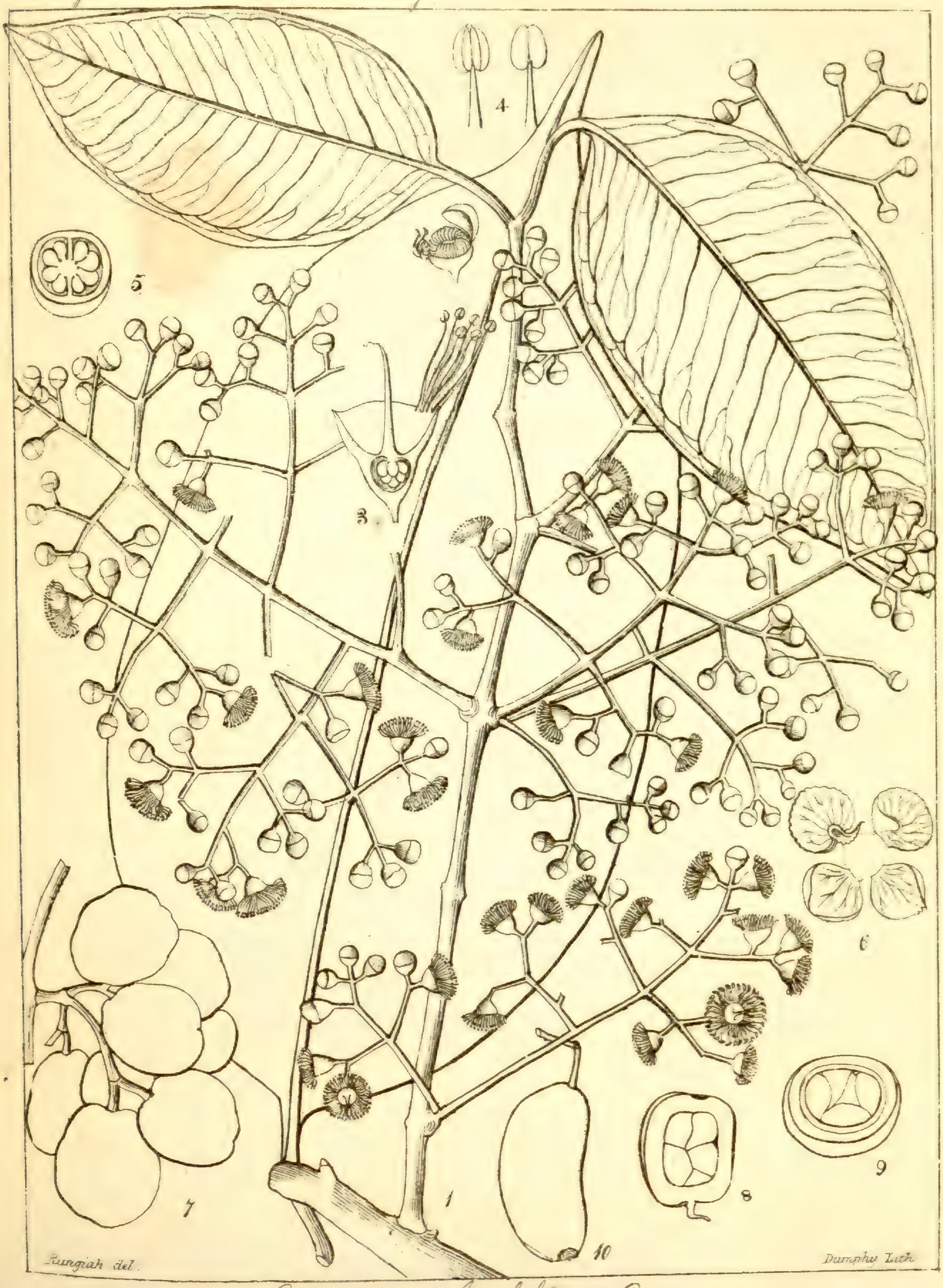
Eugenia (A.) lanceolata (Lam.)
Lygiy. lanceolatum (W. & A.)

Eugenia (A.) bracteolata (R.W.)

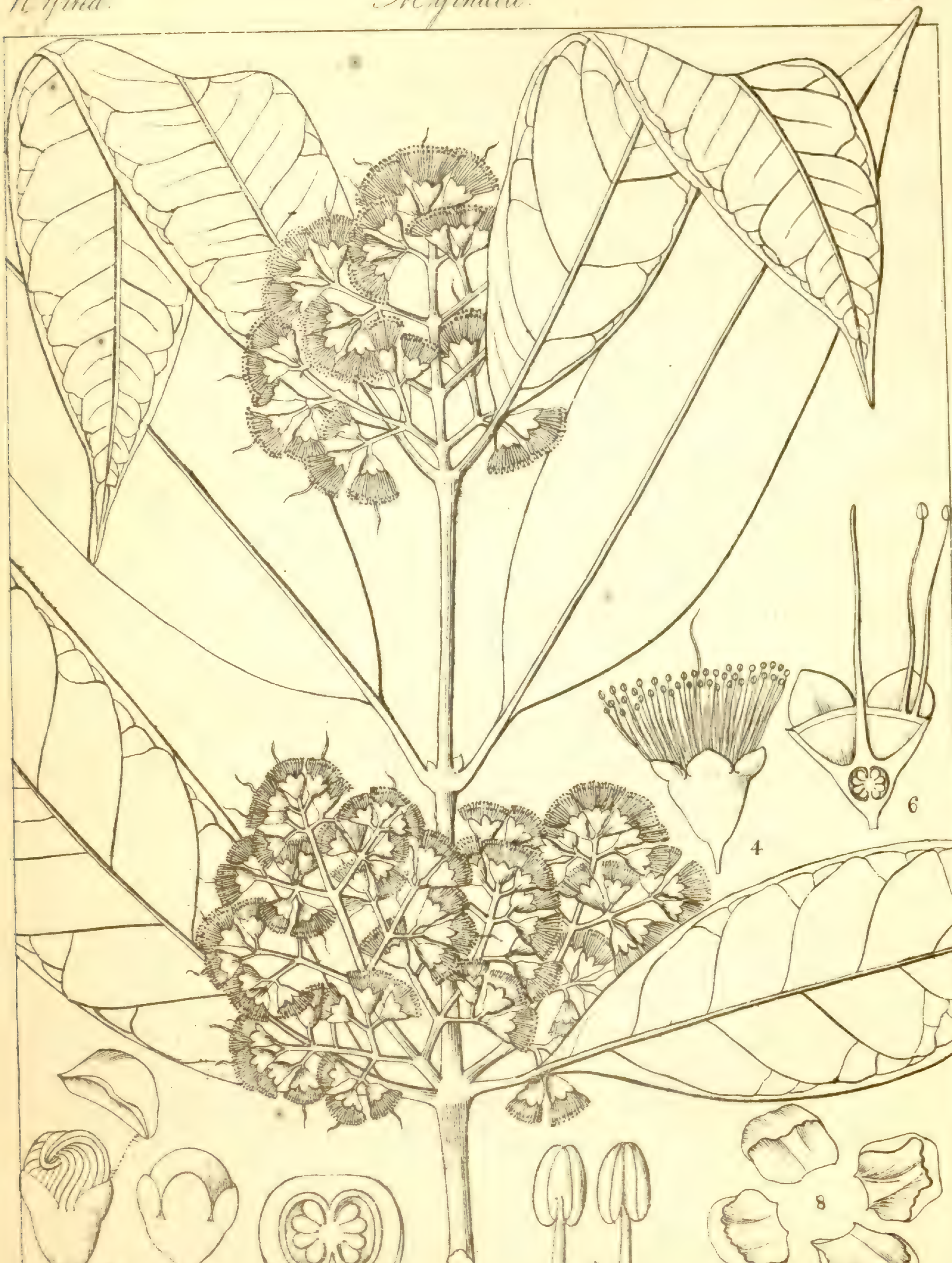
Eugenia (S.) sylvestris, Moon.

Eugenia (S.) Neesiana, Arnott.

Eugenia (S.) revoluta (R. W.)

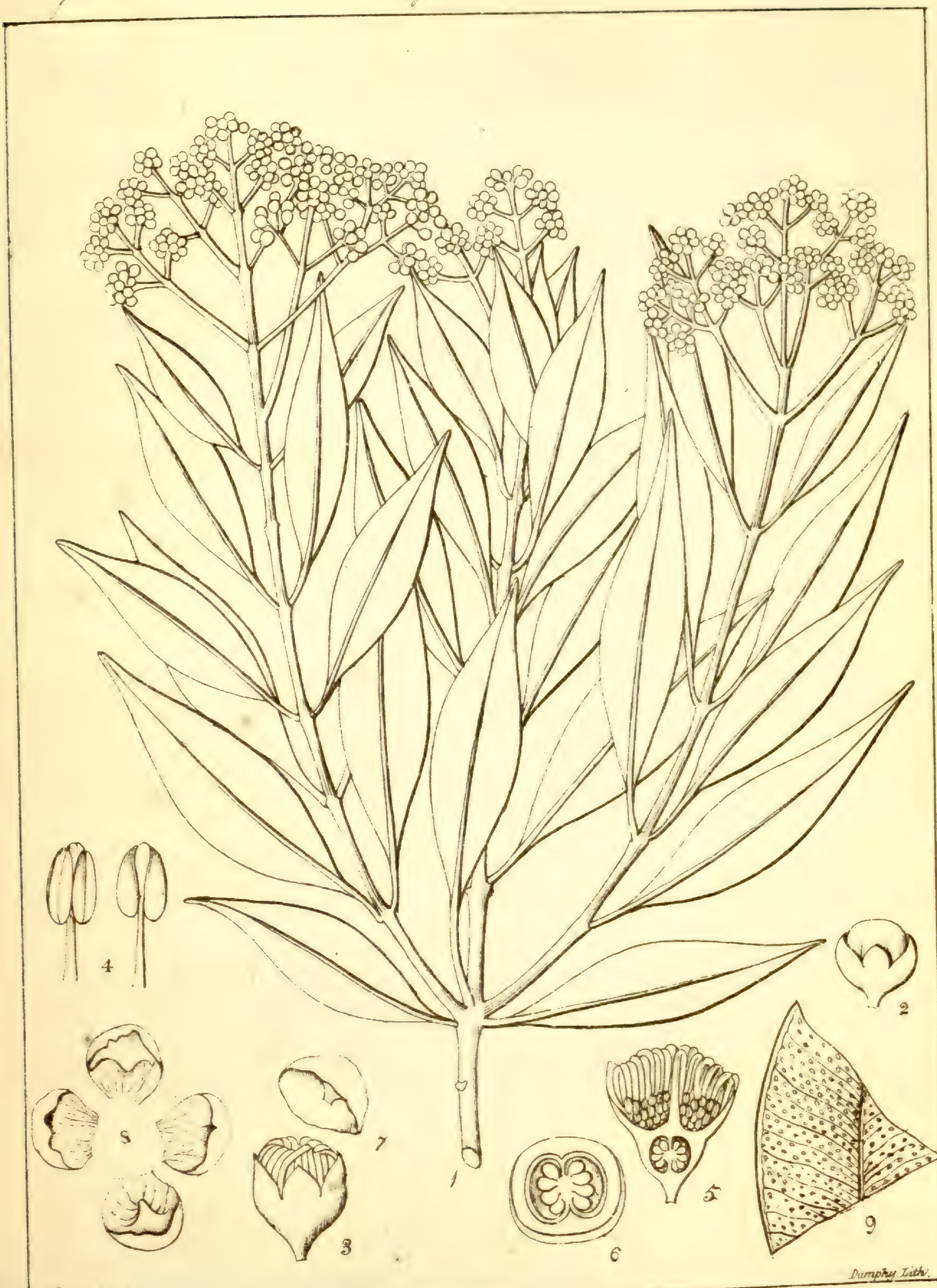


Eugenia (S) Jambolana (Lam)



Eugenia ? Wallichii W. & A.

Eugenia (S) alternifolia (R.W.)



Eugenia (S.) rubicunda (R.W.)
E. rubicundum W. & A.

Eugenia (S.) salicifolia (R.W.)
E. salicifolium, Graham Bombay plants.

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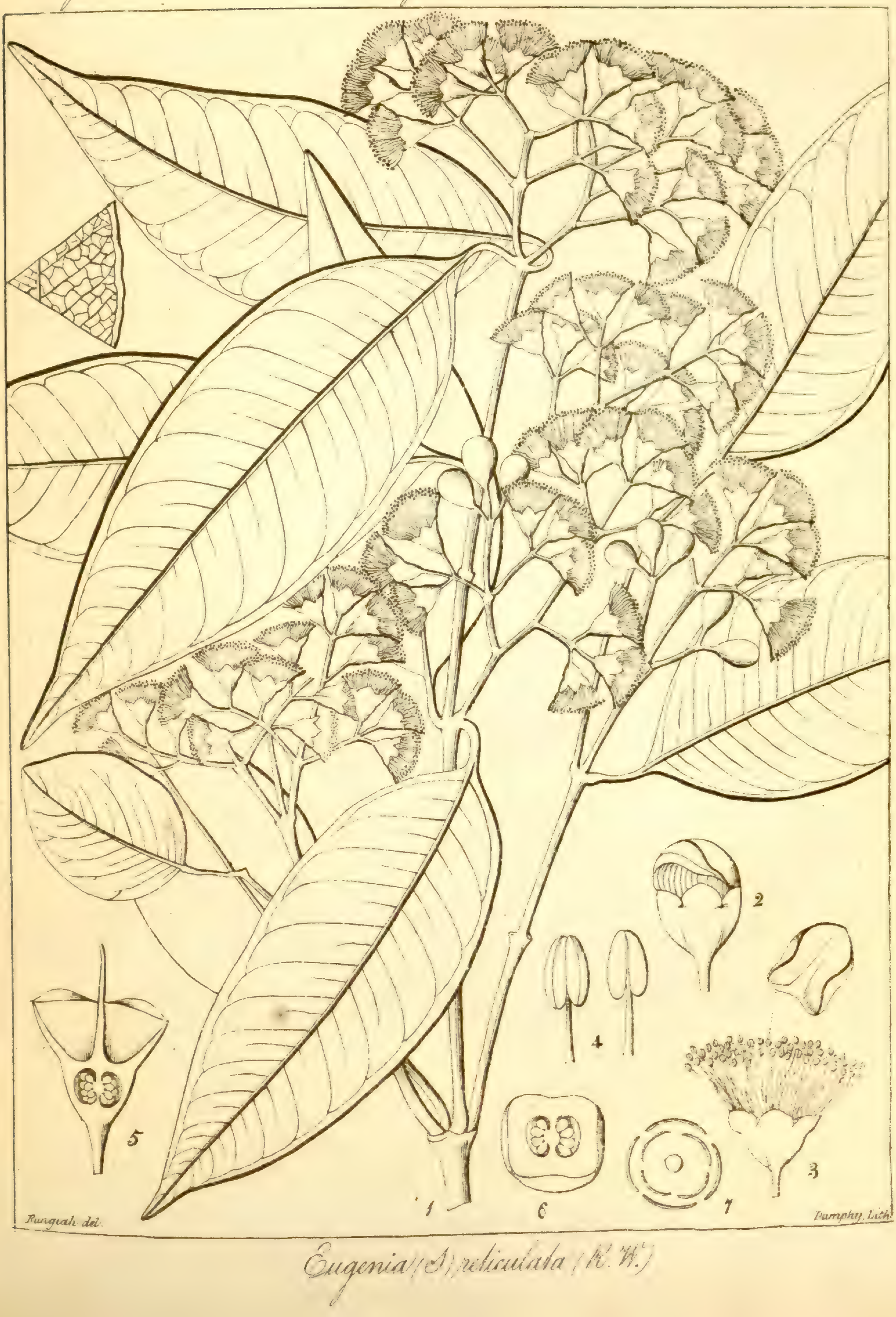
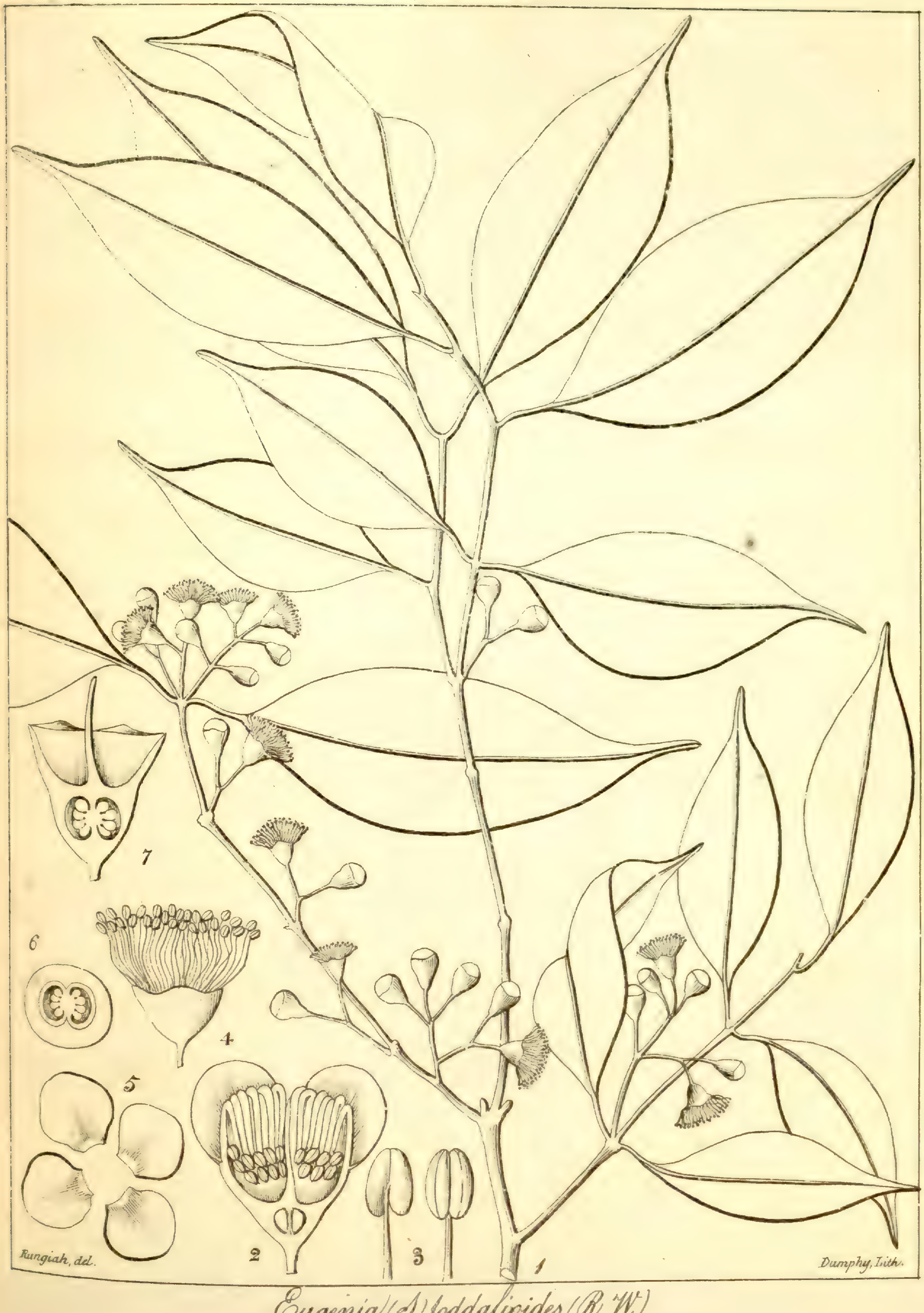
Rungiah del
Eugenia (S.) Caryophyllaea.

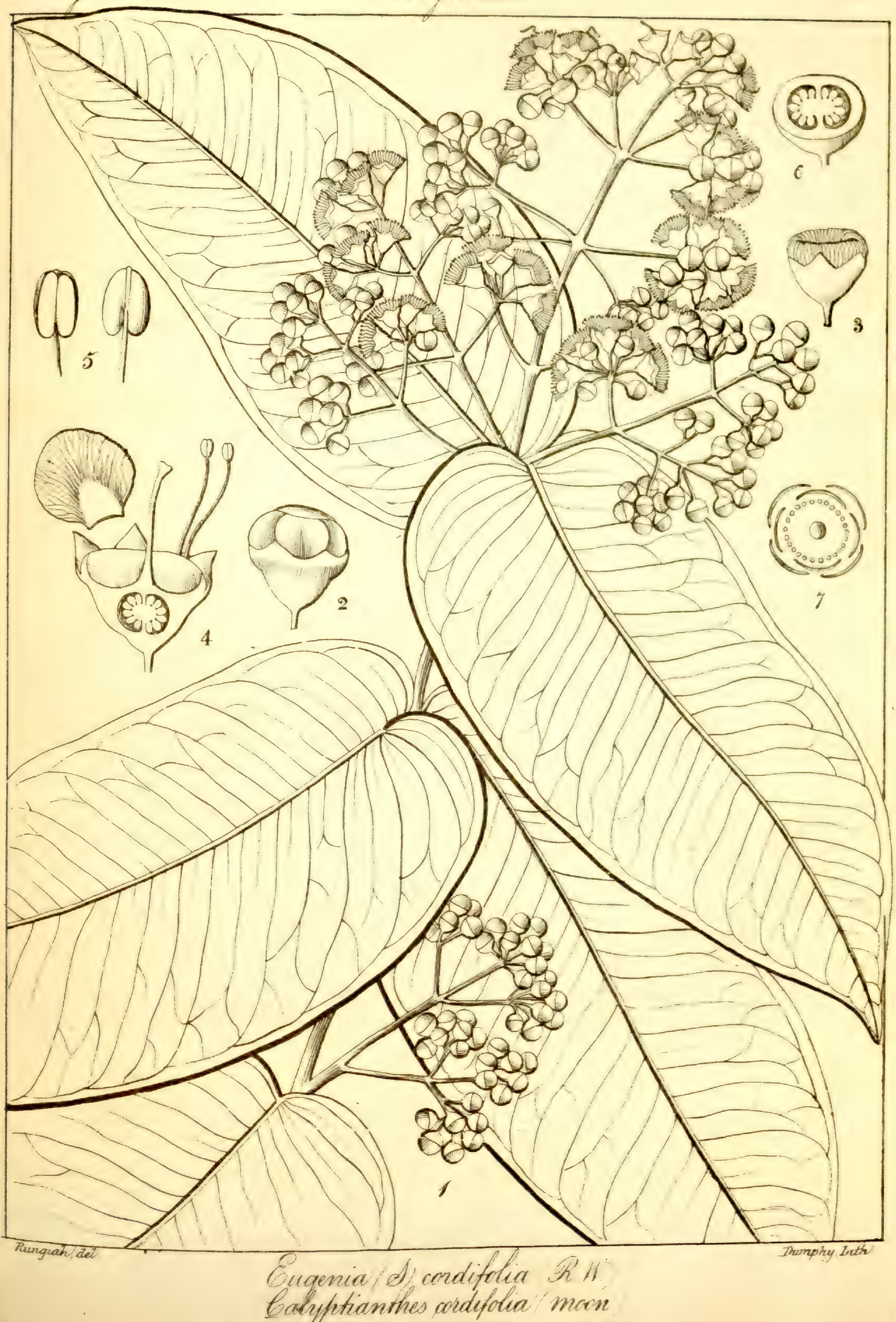


Eugenia (S.) reticulata (R. W.)



Eugenia (S.) toddalioides (R. W.)

Eugenia? S. polyanthaR. W.



Rungiah del. Dunphy Lith.

Eugenia (S.) cordifolia R. W.
Calyptianthes cordifolia (moon

Eugenia (E.) Willdenowii.

Eugenia (S.) Munroniï.

Barringtonia speciosa.

Roxburghiana.

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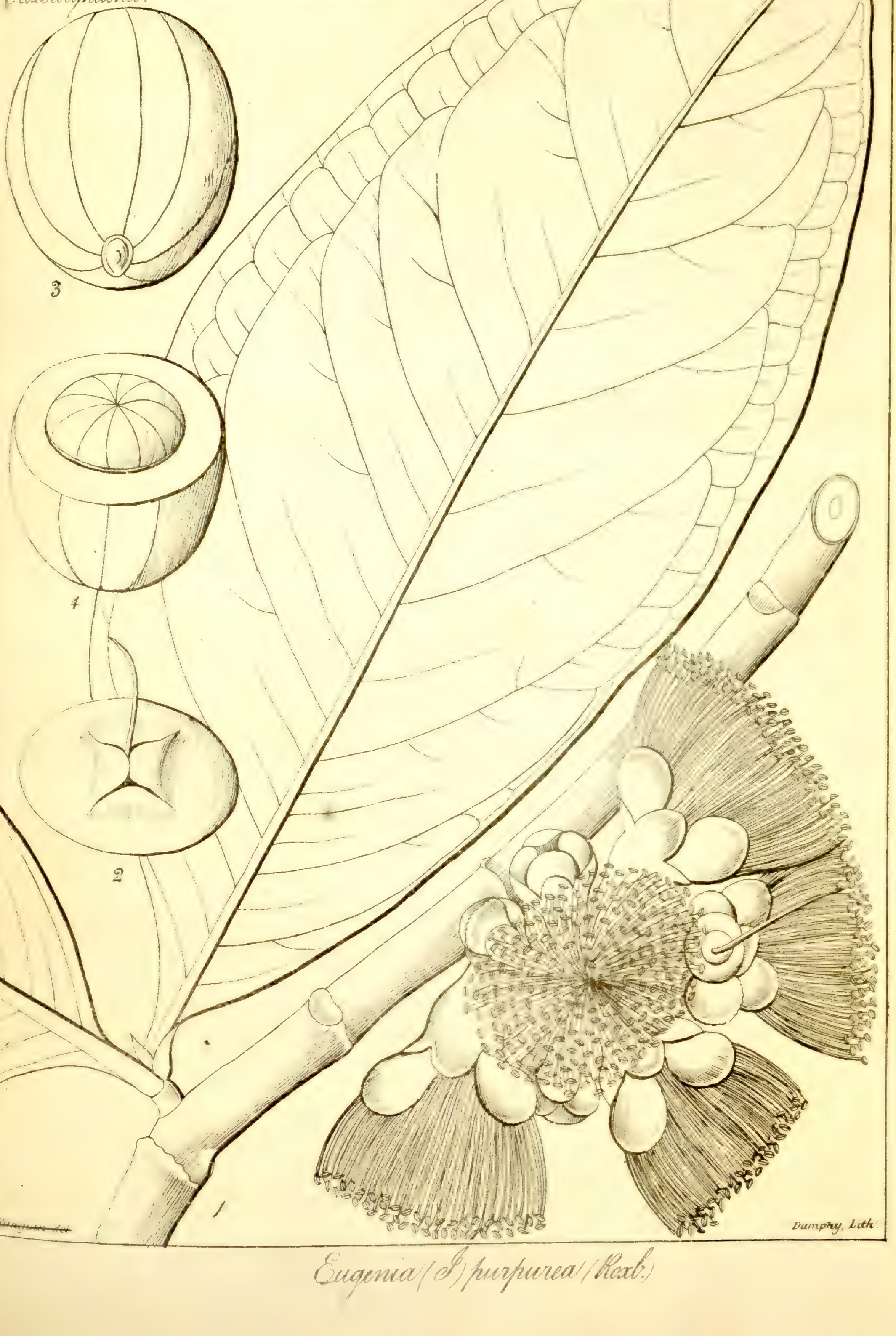
Punniah del.

Dumphy, Lith.

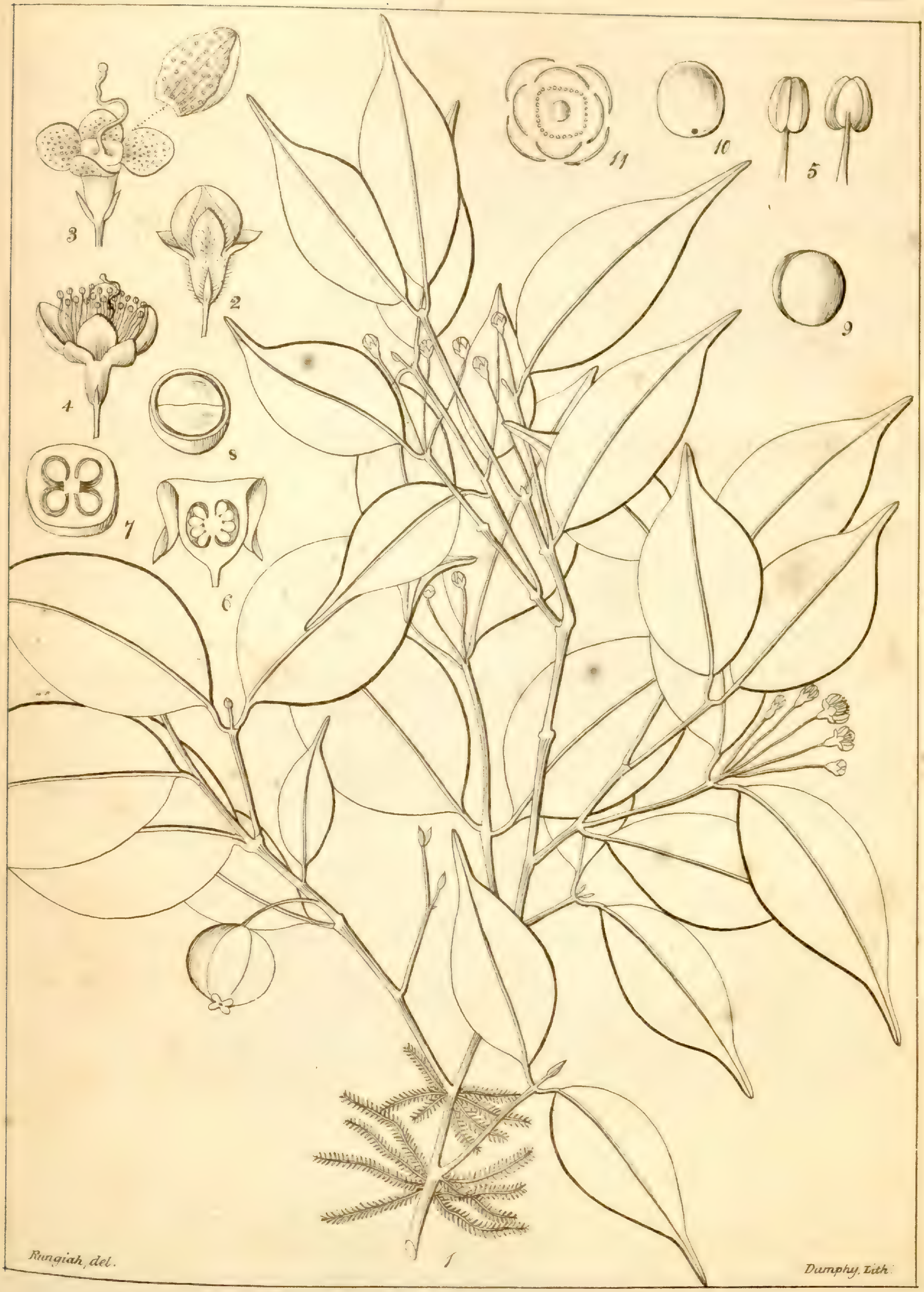
Eugenia (S) alba (Roxb)

Roxburghiana.

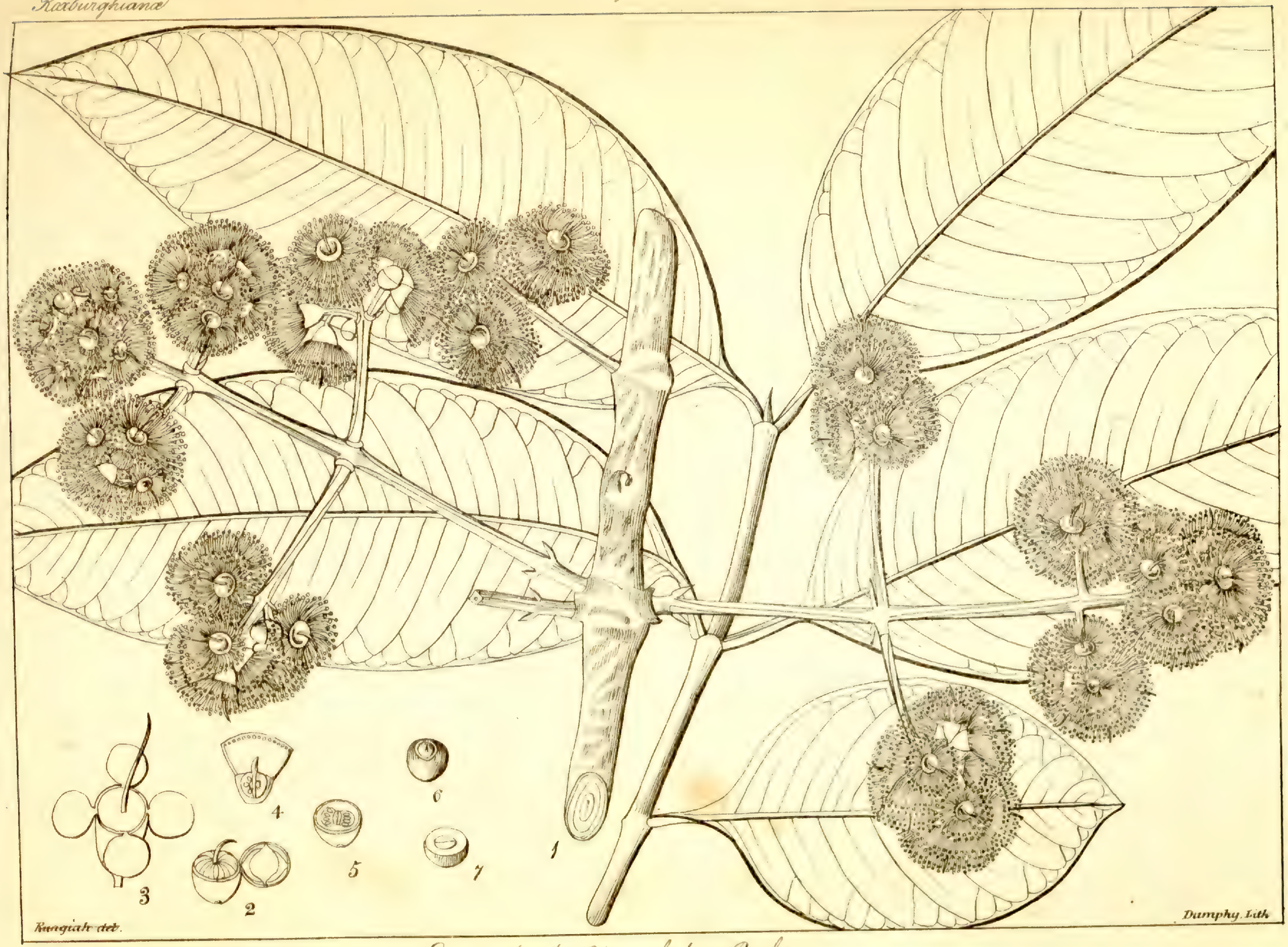


Eugenia (S.) purpurea (Roxb.)

(Eugenia) (P.) aquea (Roxb.)



Eugenia (E.) Mooniana (R.W)



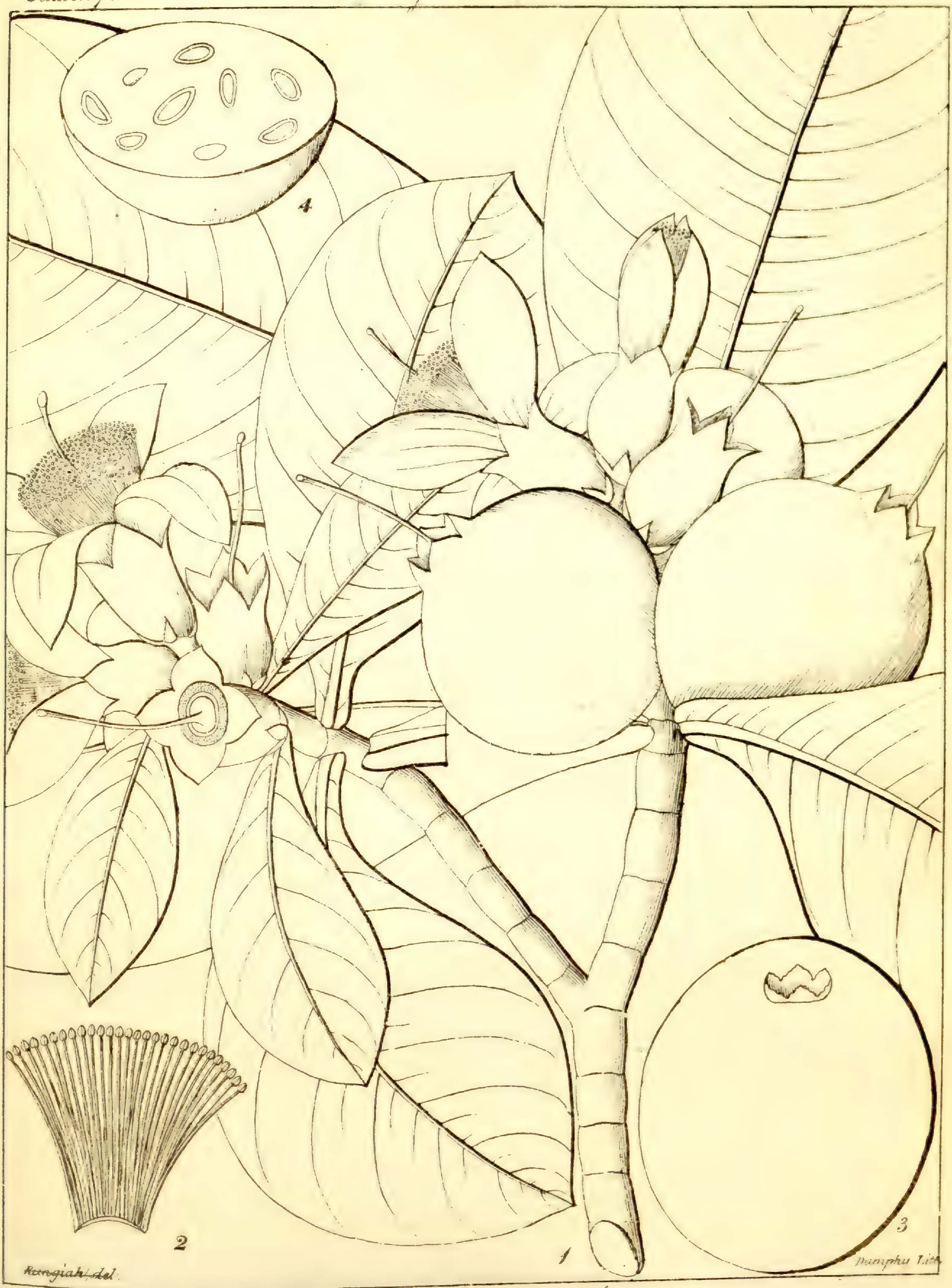
Eugenia (S.) Operculata (Roxb.)
Syzygium Nervosum (D.C.)

Roxburghiana

Eugenia (S) caryophyllefolia (Roxb.)
E. (S) Jambolanum?
var: microcarpa.

Eugenia (S.) ferruginea (R.W.)

Eugenia (S. cymosa (Lam.)



Careya sphærica (Roxb.)

Careya herbacea (Roxb.)

Roxburghiana

Semecarpus Anacardium (Linn.)

Semecarpus Cassuvium (Roxb)

Roxburghianæ.

Rhus succedaneum (Linn.)

. Portughianæ.

Rhus Buckii-amela (Roxb.)
Rhus semialata var γ Roxburghii (DC.)

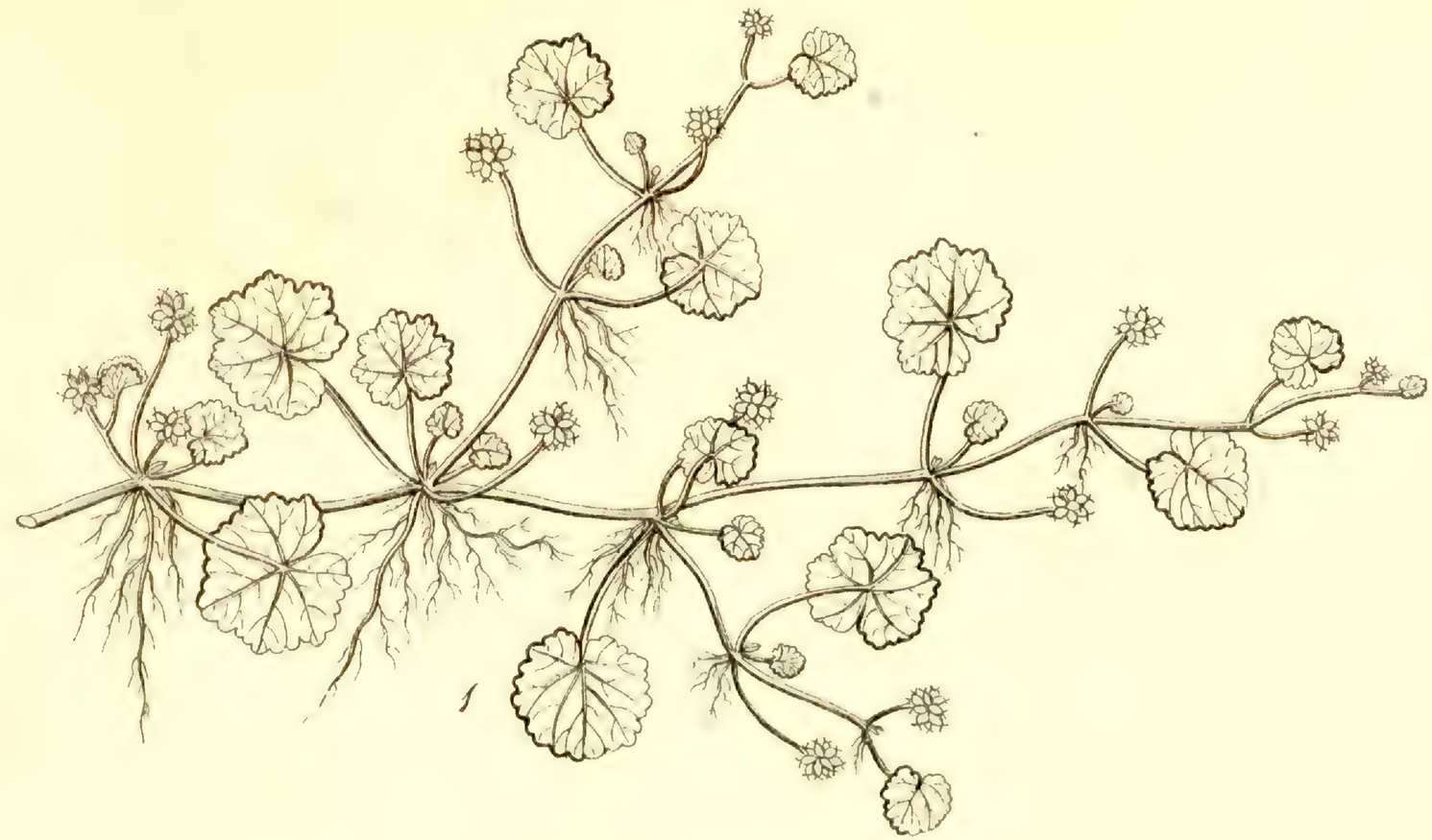
Roxburghianæ

Runguth, del. Dunphy, Lith.

Vahlia Oldenlandioides (Roxb)

Vahlia viscosa (Roxb.)

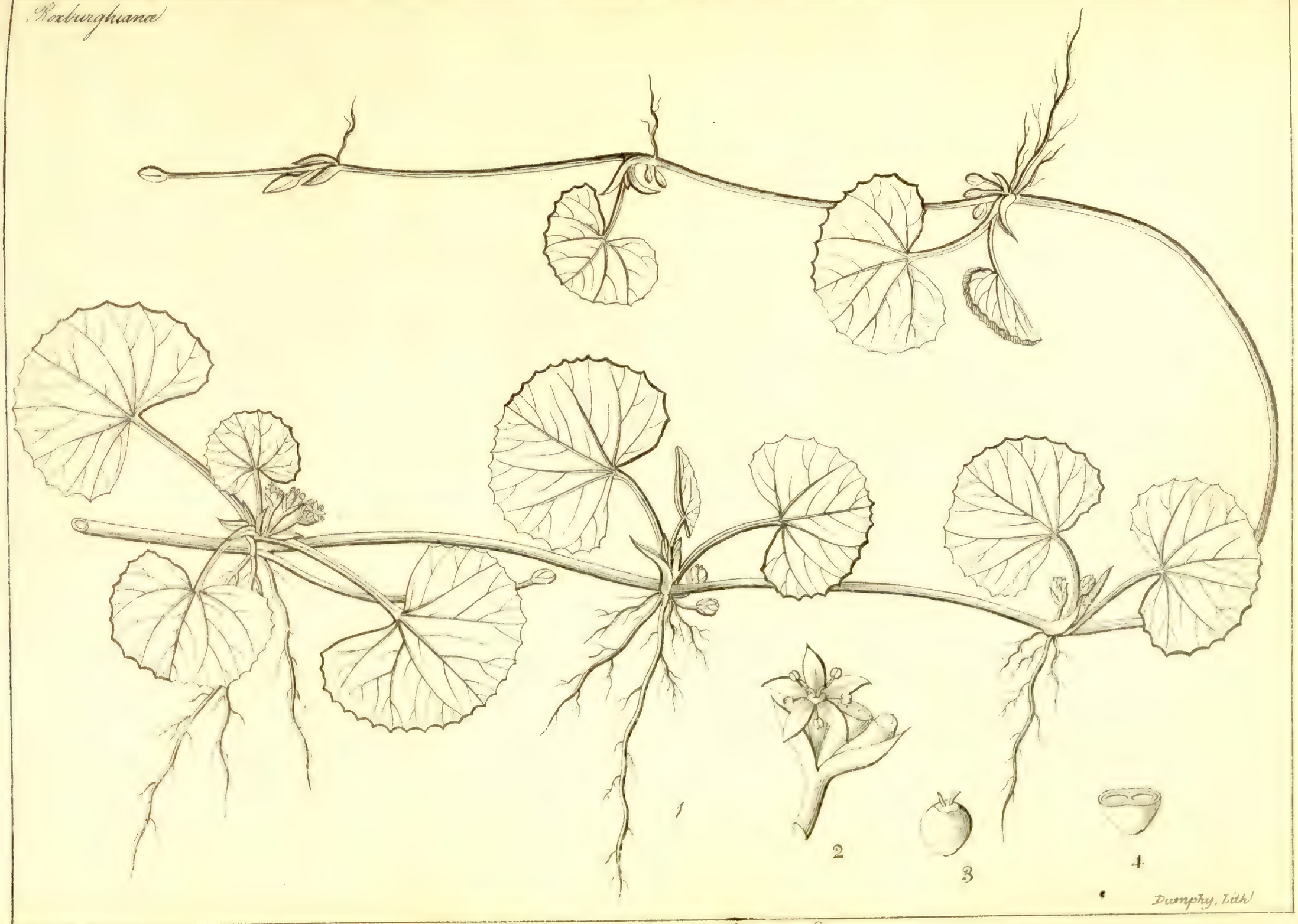
Roxburghiana



Dunphy, Lith.

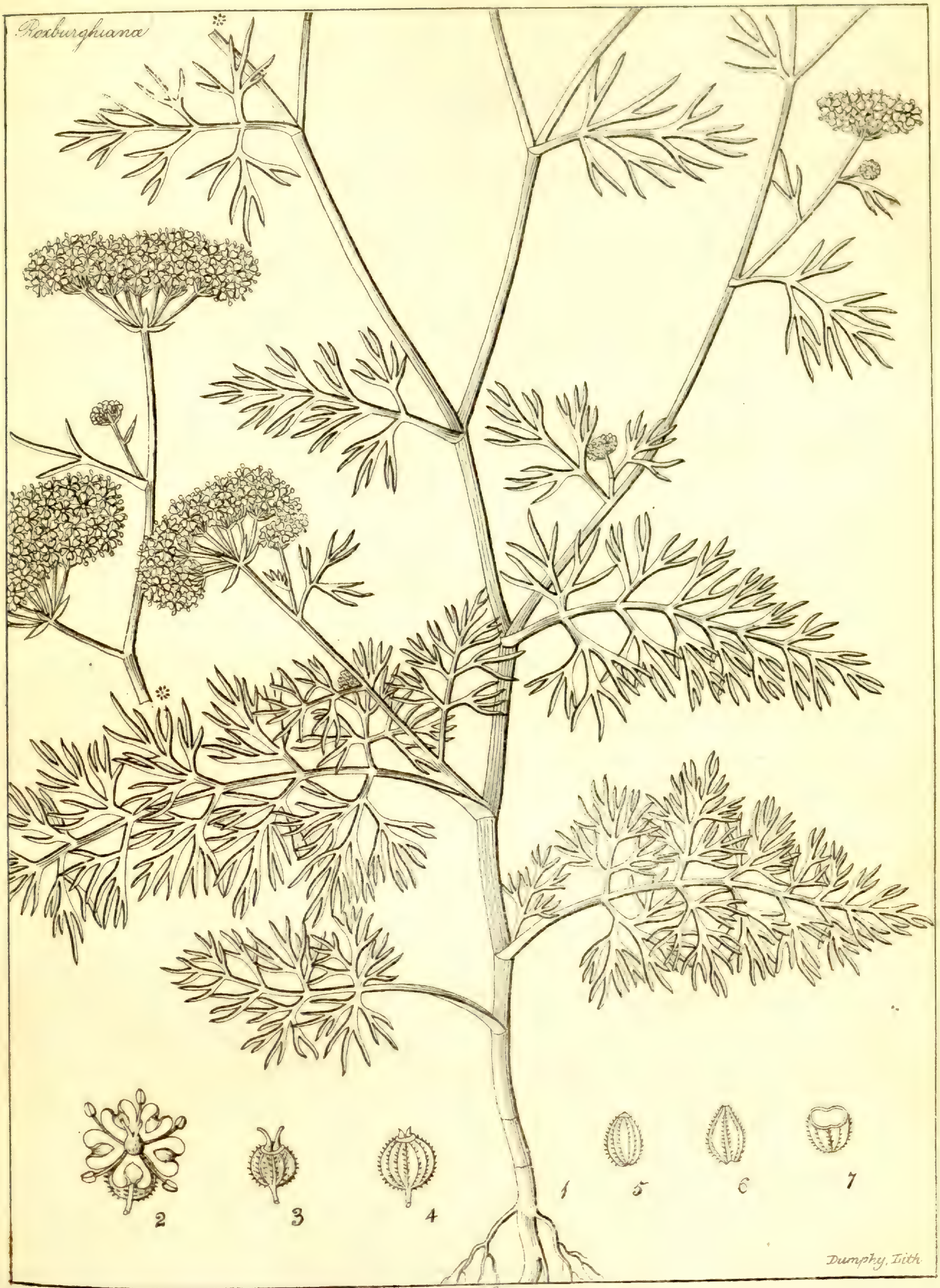
Hydrocotyle rotundifolia (Roxb.)

Roxburghiana



Hydrocotyle Asiatica, Linn.

Roxburghianæ



Ptychotis Ajowan (D.C.)
Ligusticum Ajowan (Roxb)

Portugheanæ.

Dumphy, Lith.

Apium involucratum (Roxb.)
Vix Pimpinella involucrata ? (Wt. 4)

Roxburghianæ

Dasyloma Bengalense (R. C.
Seseli Bengalense (Roxb.

Roxburghianæ

Cnidium diffusum, D.C.
Ligusticum diffusum, Roxb.

Tab. Syst.

Tanicalum Pannonicum (D.C.)
Anethum Pannonici (Rexb.)

Roxburghianæ

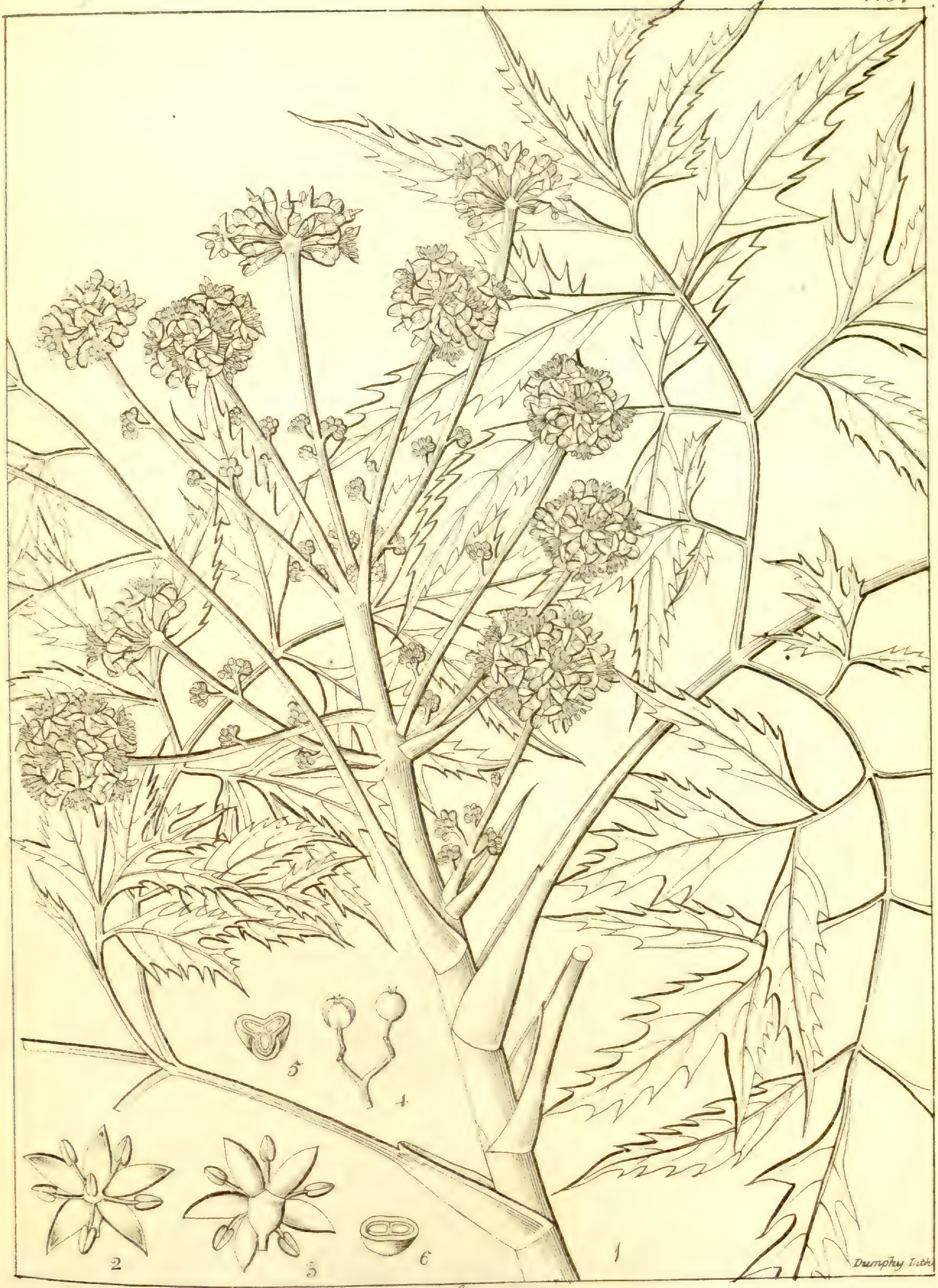
Oenanthe stolonifera (D.C.)
Phellandrium stoloniferum (Roxb.)

Roxburghianæ

1 2 3 4 5 6

Dumphy Lith

Anethum Sowa (Roxb)



Panax fruticosum (Linn)

Roxburghianæ

Dumphy, Lith

Gardenia enneandra (Koen)
Gardenia latifolia (Roxb.)

Dunphy, Lith.

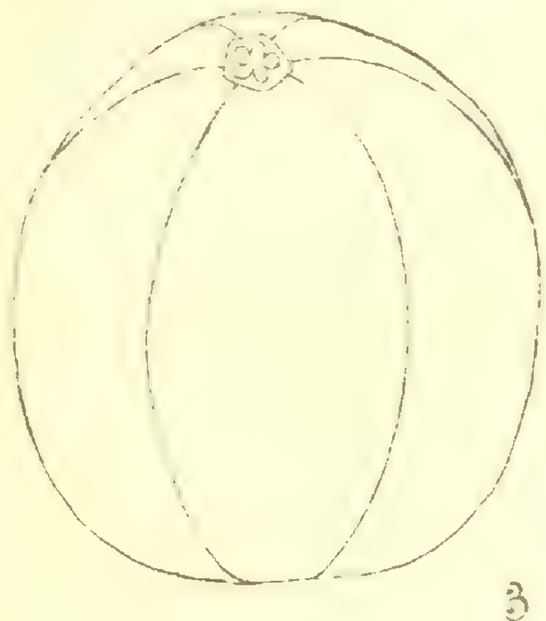
Gardenia lucida, Roxb.

Dumphy. Lith

Gardenia gummifera (Linn)
Gardenia arborea (Roxb)

Gardenia montana (Roxb.)

Roxburghianæ



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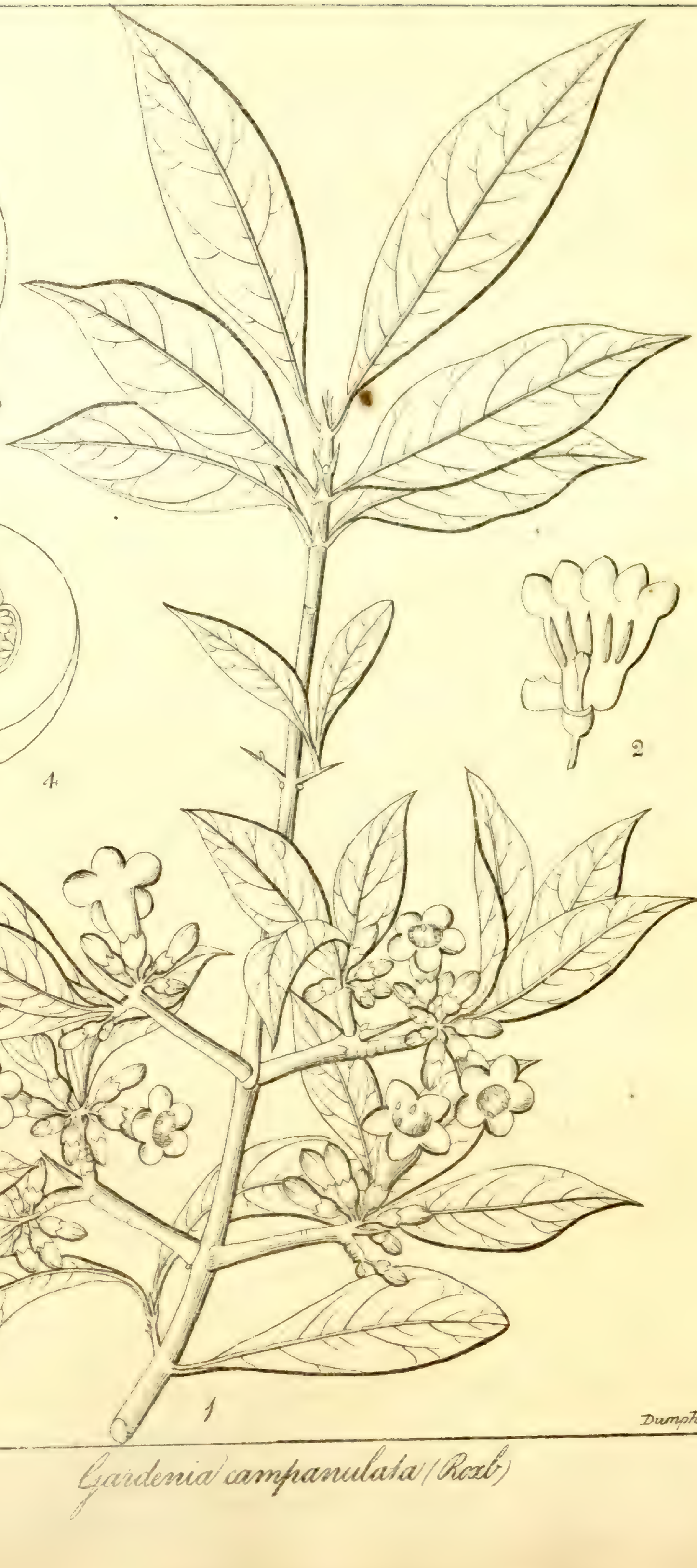
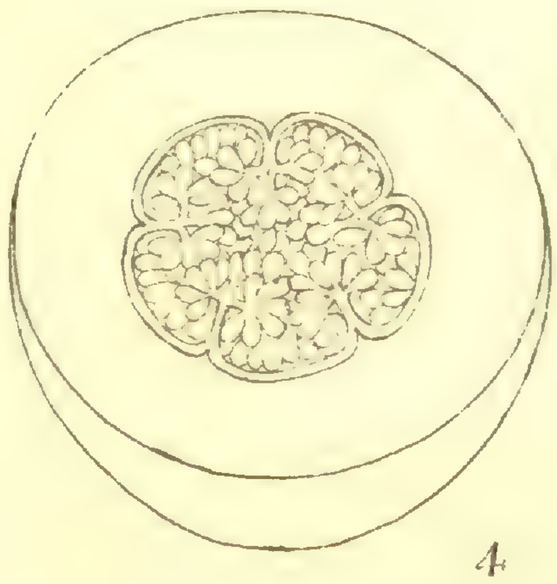




4

2

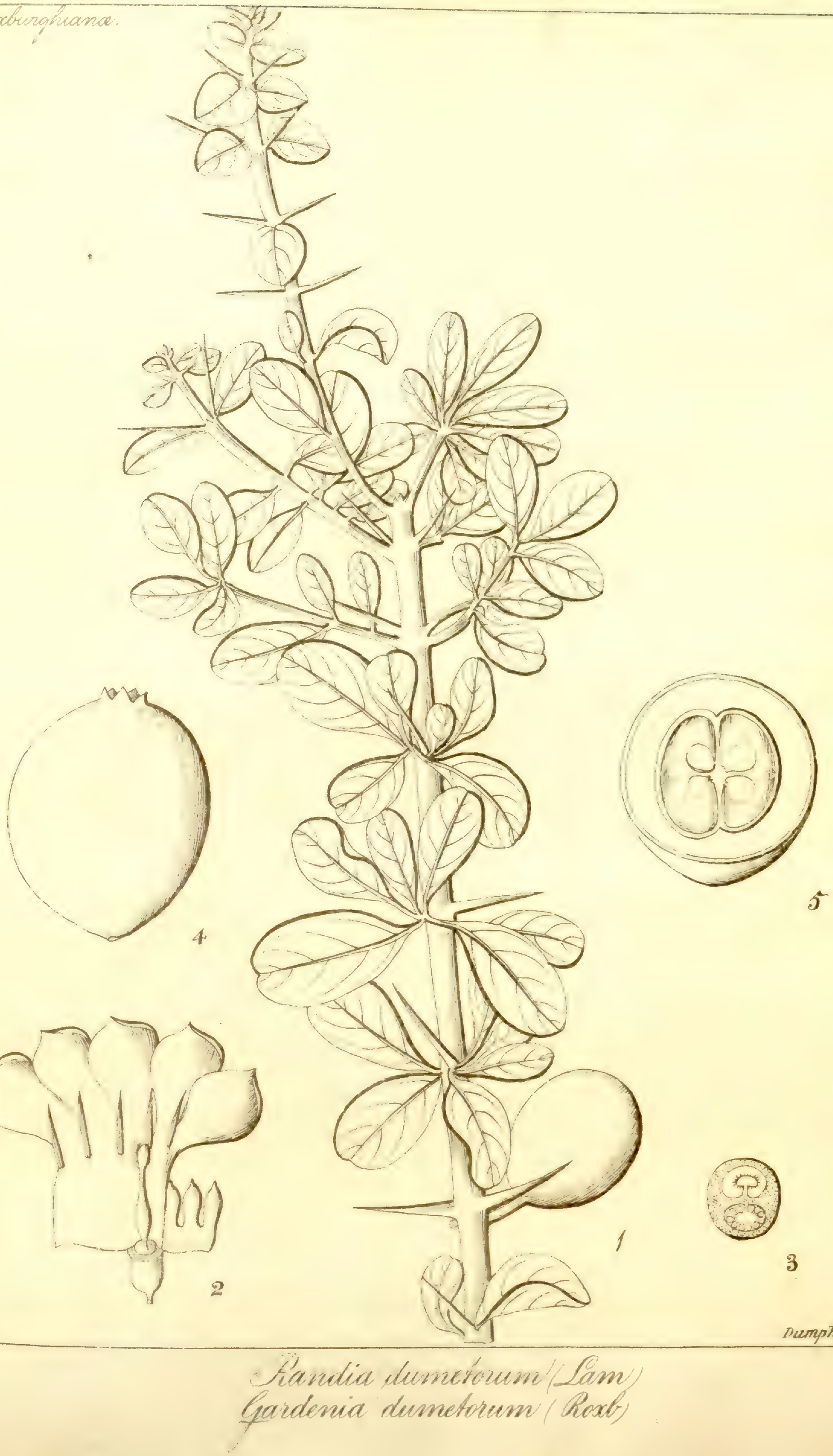
1

Dumphy Lith

Gardenia campanulata (Roxb)

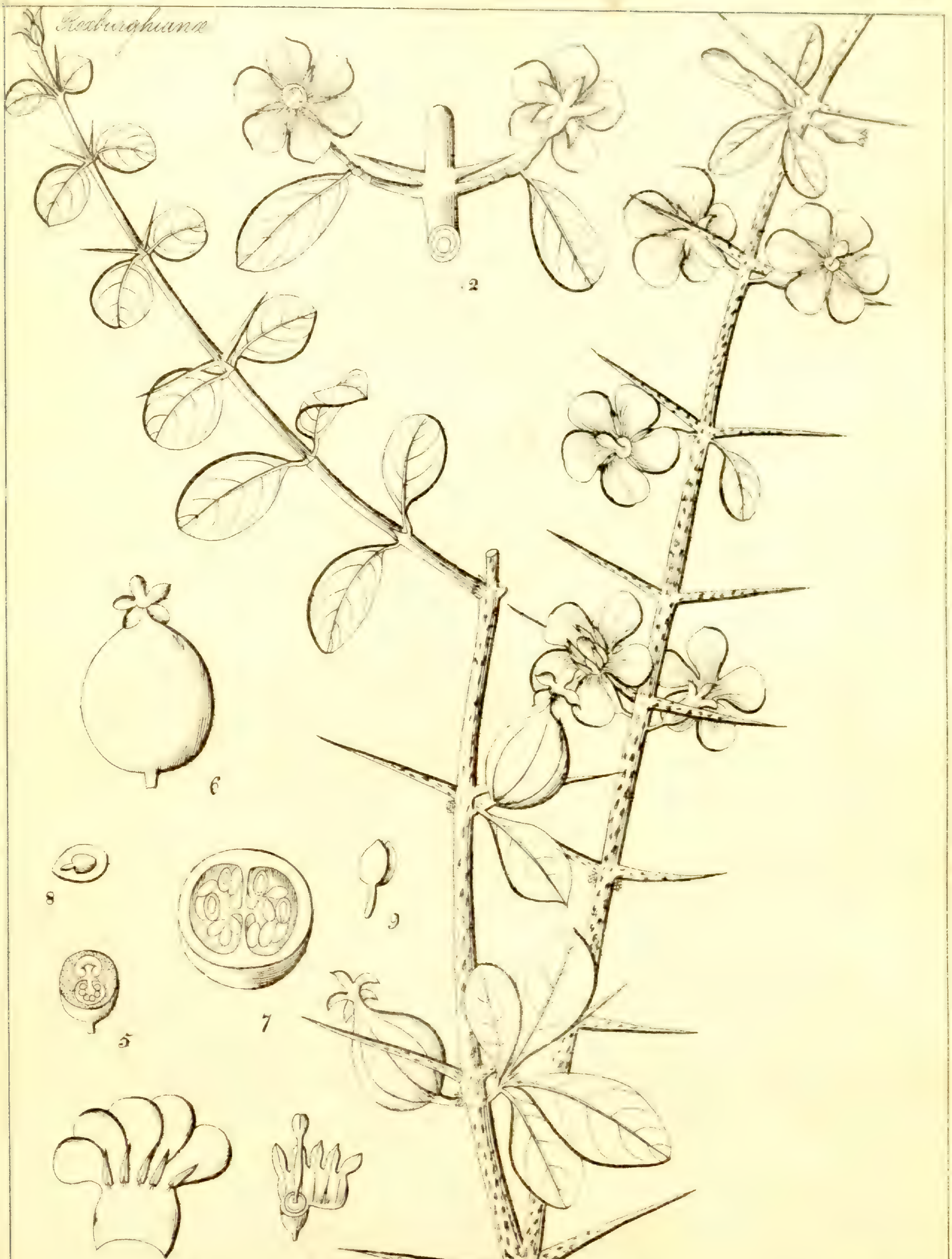
Gardenia turgida (Roxb)

Roxburghianæ.



Randia dumetorum (Lam)
Gardenia dumetorum (Roxb)

Roxburghianæ



Randia nutans (D.C.)
Benqueria nutans Roxb.

2

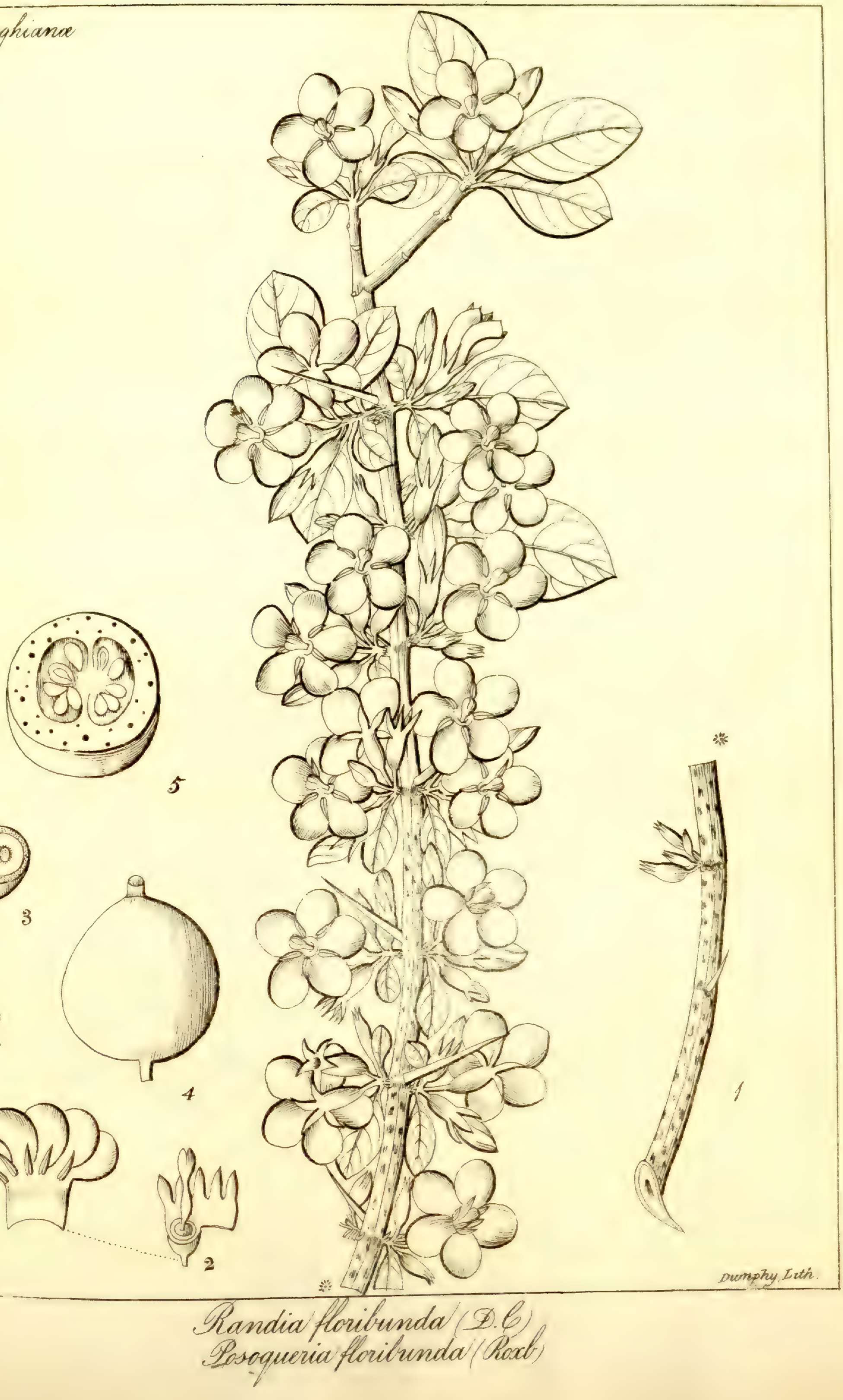
4

3

Dumortier, Edith

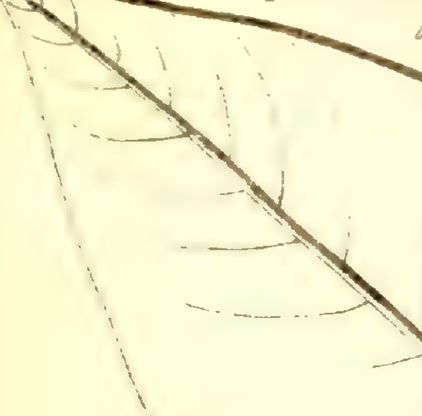
Randia longispina (D. C.)
Gardenia longispina (Roxl.)

Roxburghianæ



Randia floribunda (D.C)
Posoqueria floribunda (Roxb)

Roxburghianæ



3

4

1 2

Dunphy Lith.

Stylocoryne Webera (A. Rich.)
Webera corymbosa (Roxb.)

Roxburghianæ

Pergularia pallida (W & A)
Asclepias pallida (Roxb)

Hoya viridiflora (R. Br.)
Asclepias volubilis (Roxb)

Hoya parasitica (Wall)
Asclepias parasitica (Roxb)

Roxburghiana.

2

1

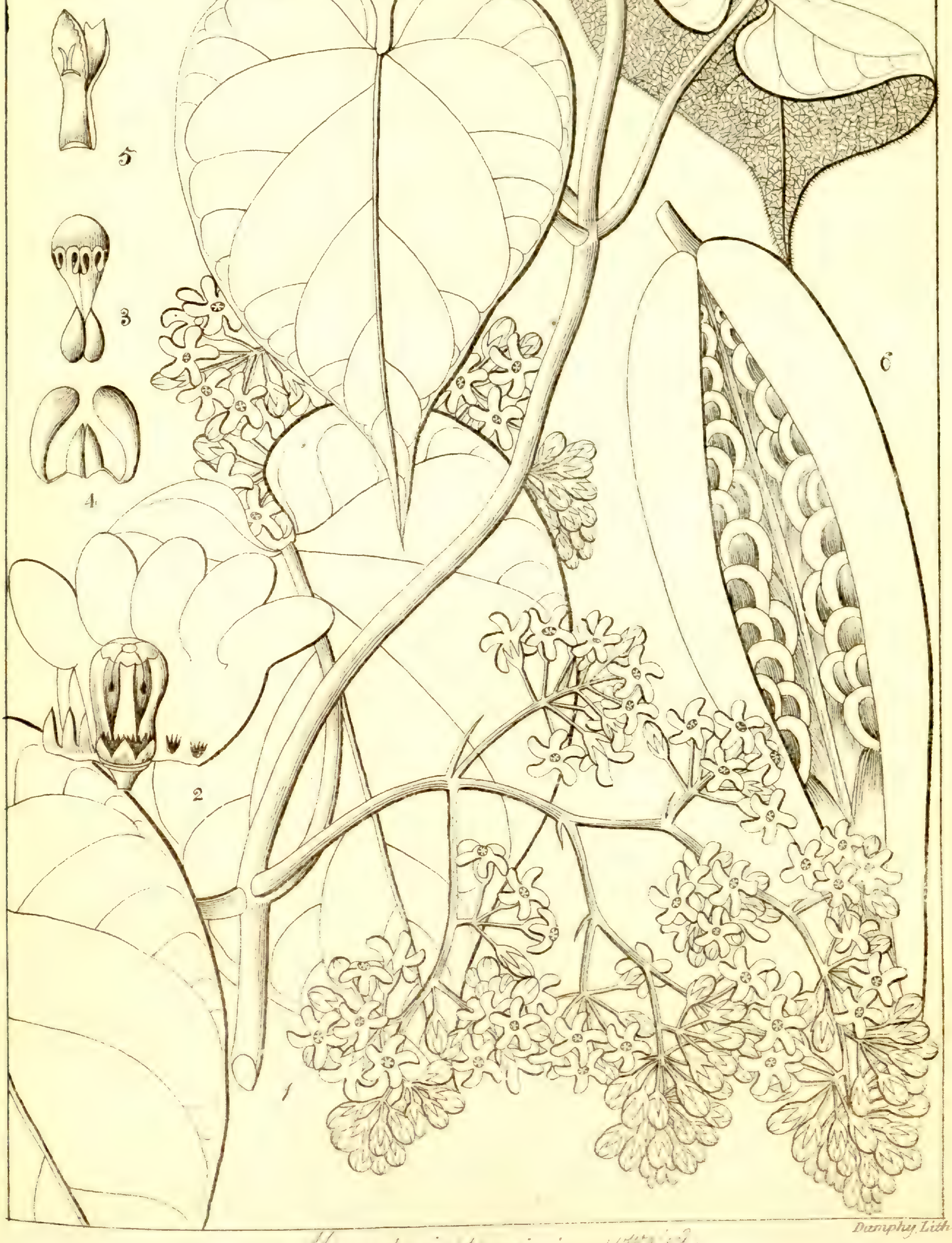
Dumphy, Lith

Tylophora tenuissima (W & A.)
Asclepias tenuissima (Roxb.)

Dumphy, Lith.

Marsdenia tinctoria (R Br.)
Asclepias tinctoria (Roxl.)

Roxburghianæ.



Dumphy, Lith

Marsdenia tenacissima (Wight)
Asclepias tenacissima Roxb.

Roxburghianæ.

Dunphy, Lith

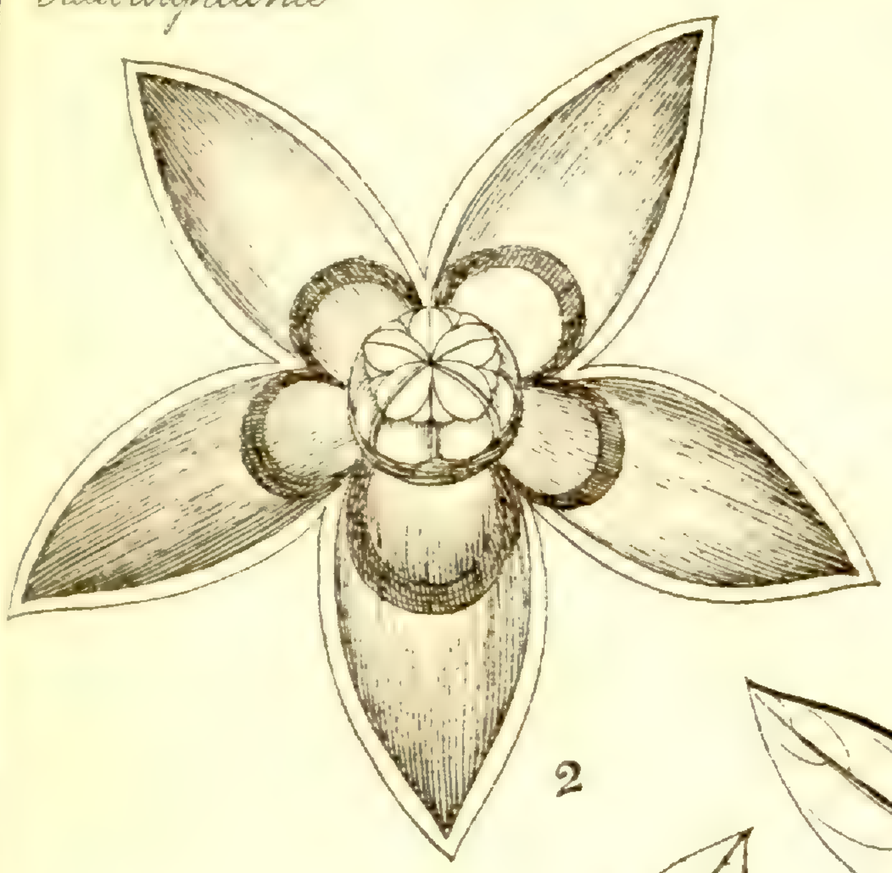
Cosmostigma racemosa (R.W.)
Asclepias racemosa (Roxb)

Gymnema lingens (W & A)
var ovallifolia
Asclepias montana (Roxb)

Roxburghiana

Gymnema lingens (W. & A.)
var cordifolia
Asclepias lingens, Roxb.

Roxburghianæ



2

4

3

1

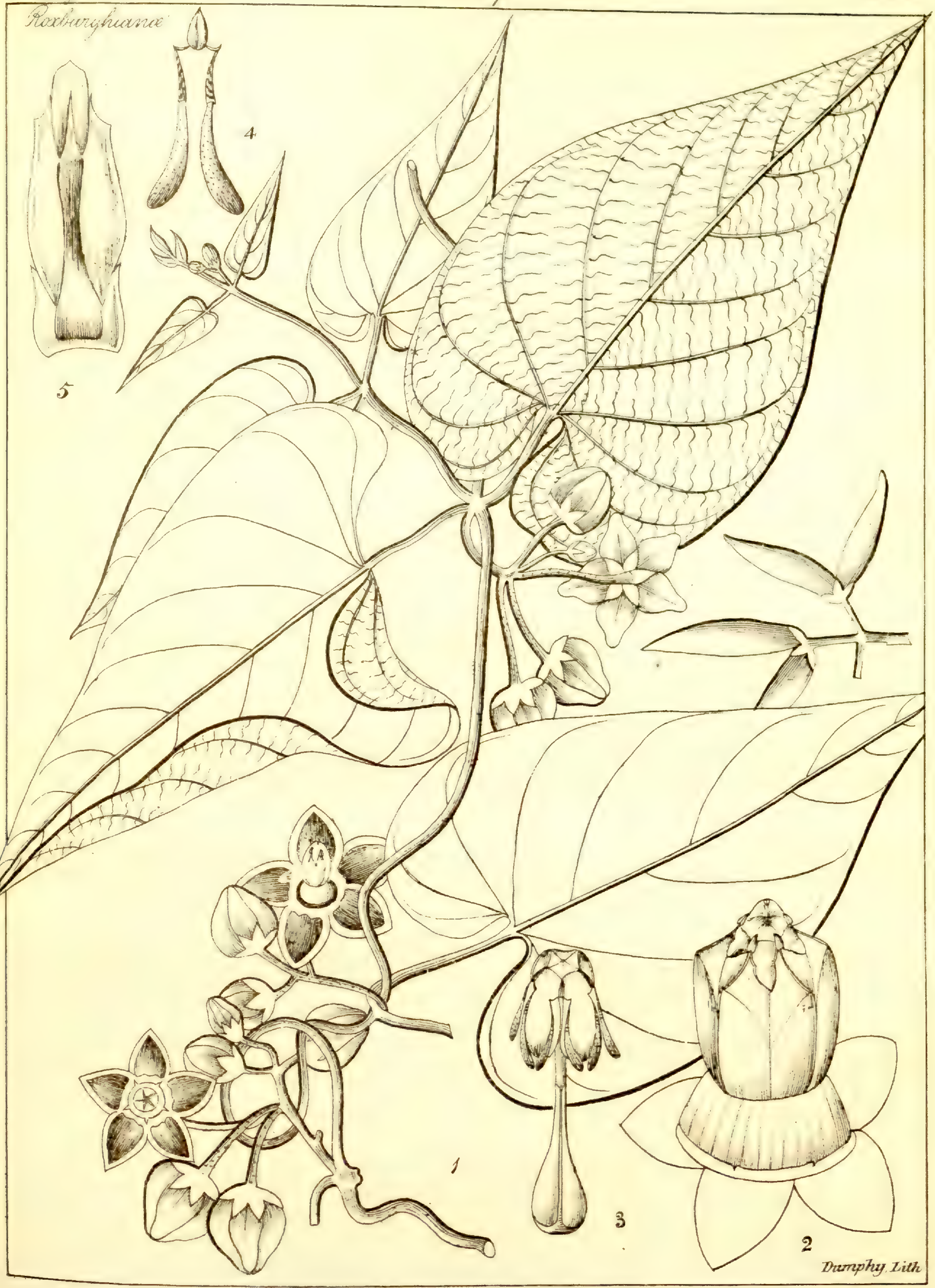
Dumphy Lith.

Hemidesmus Indicus (R. Br
Asclepias pseudosarsa (Roxb.)

Sarcostemma brevistigma? (W. & A.)
Asclepias acida (Roxb.)

Roxburghiana

Dæmia extensa (R.B.)
Asclepias echinata (Roxb.)



Holostemma Rheedii (Spr)
Asclepias annularia

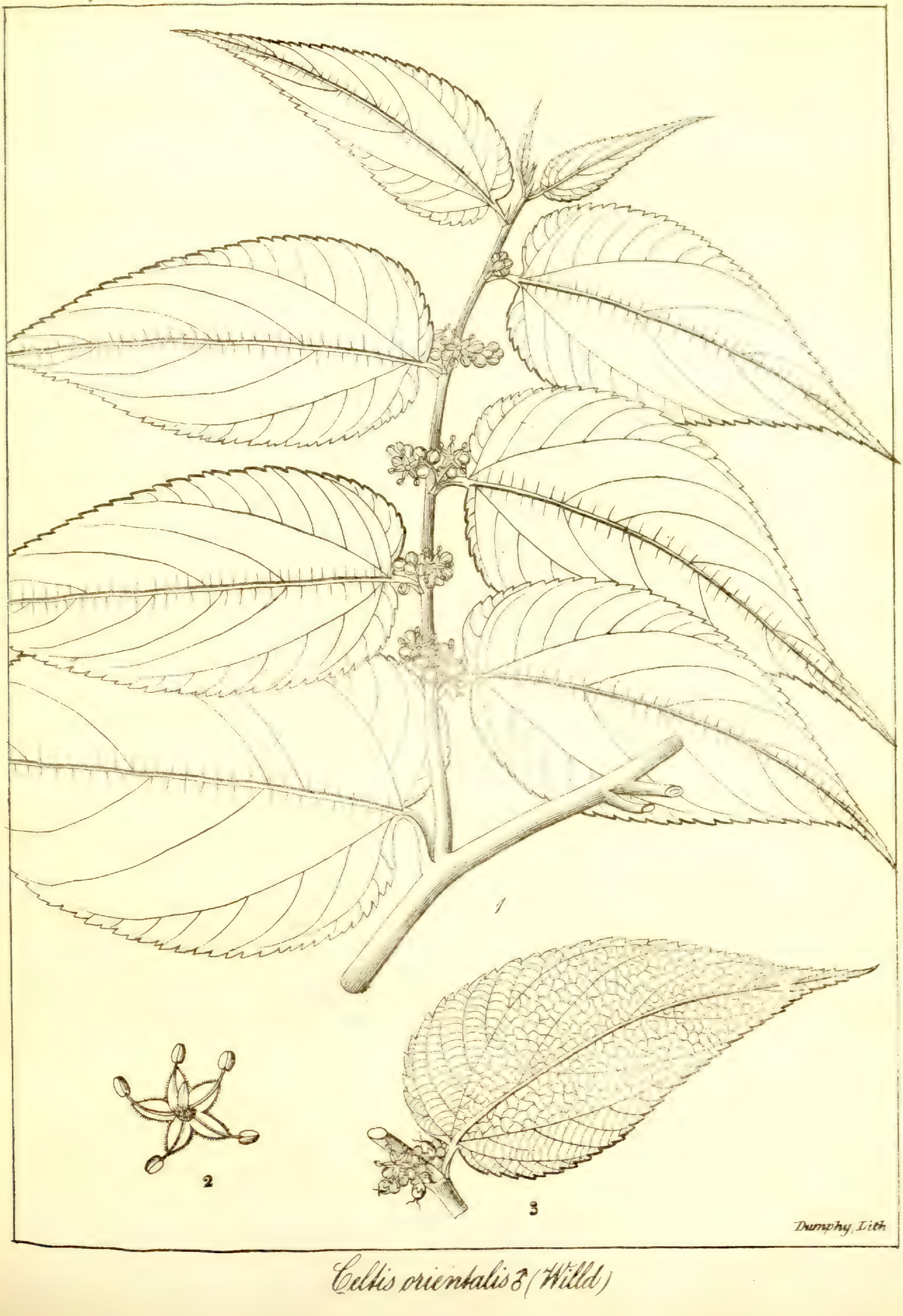
Toxocarpus laurifolius (R. W.)
Asclepias laurifolia (Roxb.)

Strophanthus dichotomus (D.C)
Nerium caudatum (Roxb)

Roxburghianæ.

Adenema hyssopifolium (G. Don.)
Gentiana verticellata (Roxb.)

Hydrolea zeylanica (Linn.)
Nama zeylanica (Roxb.)



Celtis orientalis β (Willd)

Celtis orientalis ♀ (Willd)

Carallia lanceæfolia (Roxb)

Carallia lucida (Roxb)

Dumphy, Lith.

Roxburghiana

Dumphy, Lith.

Eugenia Aylaviflora Roxb.

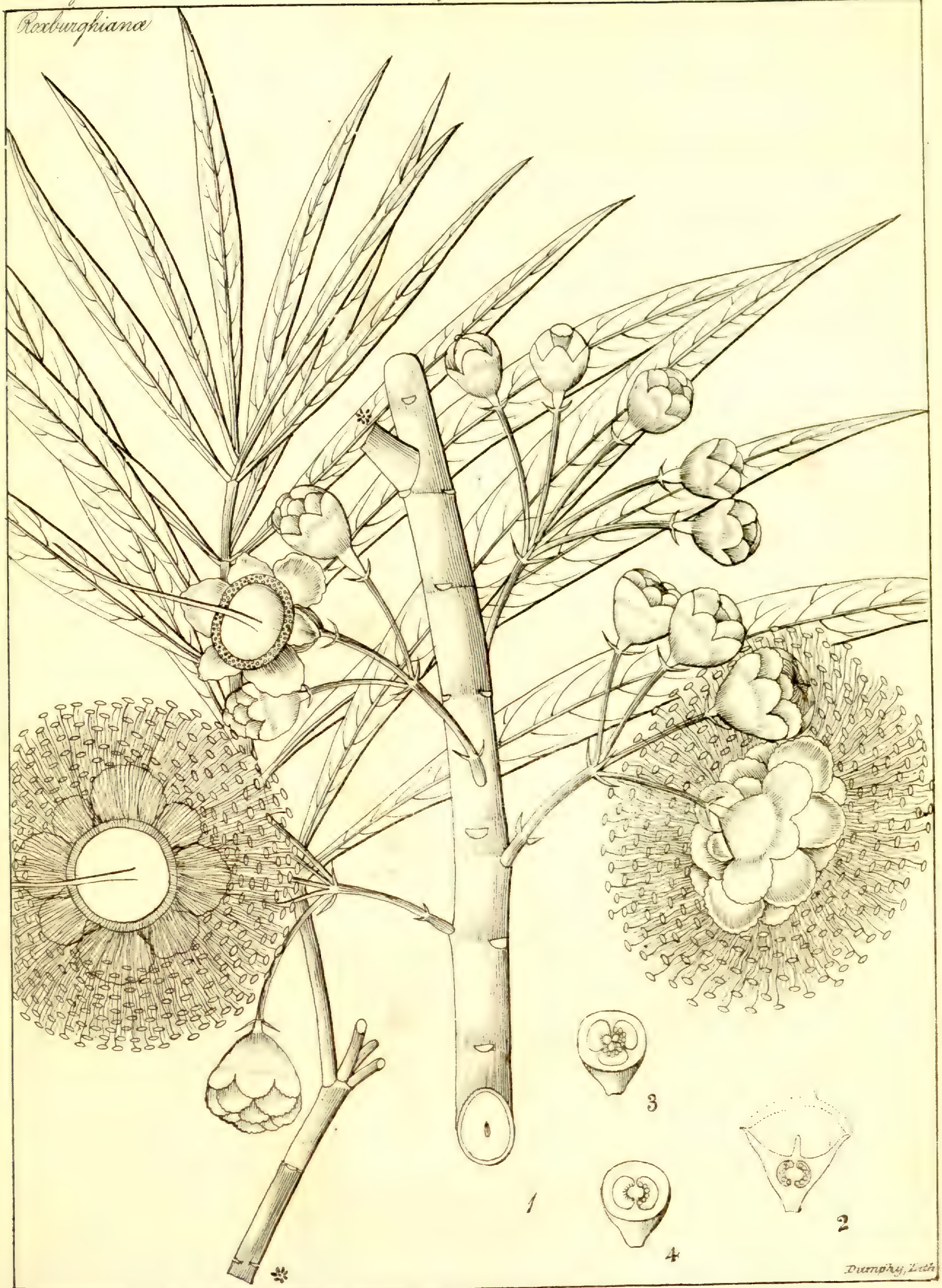
Roxburghianæ.

Eugenia ? ? acumenata (Roxb).

Eugenia, S. amplexicaulis, Roxb.

Eugenia? J. laurifolia Roxb.

Roxburghianæ



Eugenia / I / polypetala / Wall /
E. angustifolia / Roxb. non Lam. /

Roxburghianæ

Eugenia (J.) ternifolia (Roxb.)

Roxburghianæ

1

2

3

4

Dumphy, Lith.

Eugenia (S.) macrocarpa (Roxb.)

Eugenia (Malaccaria) Roxb.

Roxburghianæ

Eugenia (?) grandes (R.W. Illust.)
Eugenia cymosa (Roxb- non Lam)

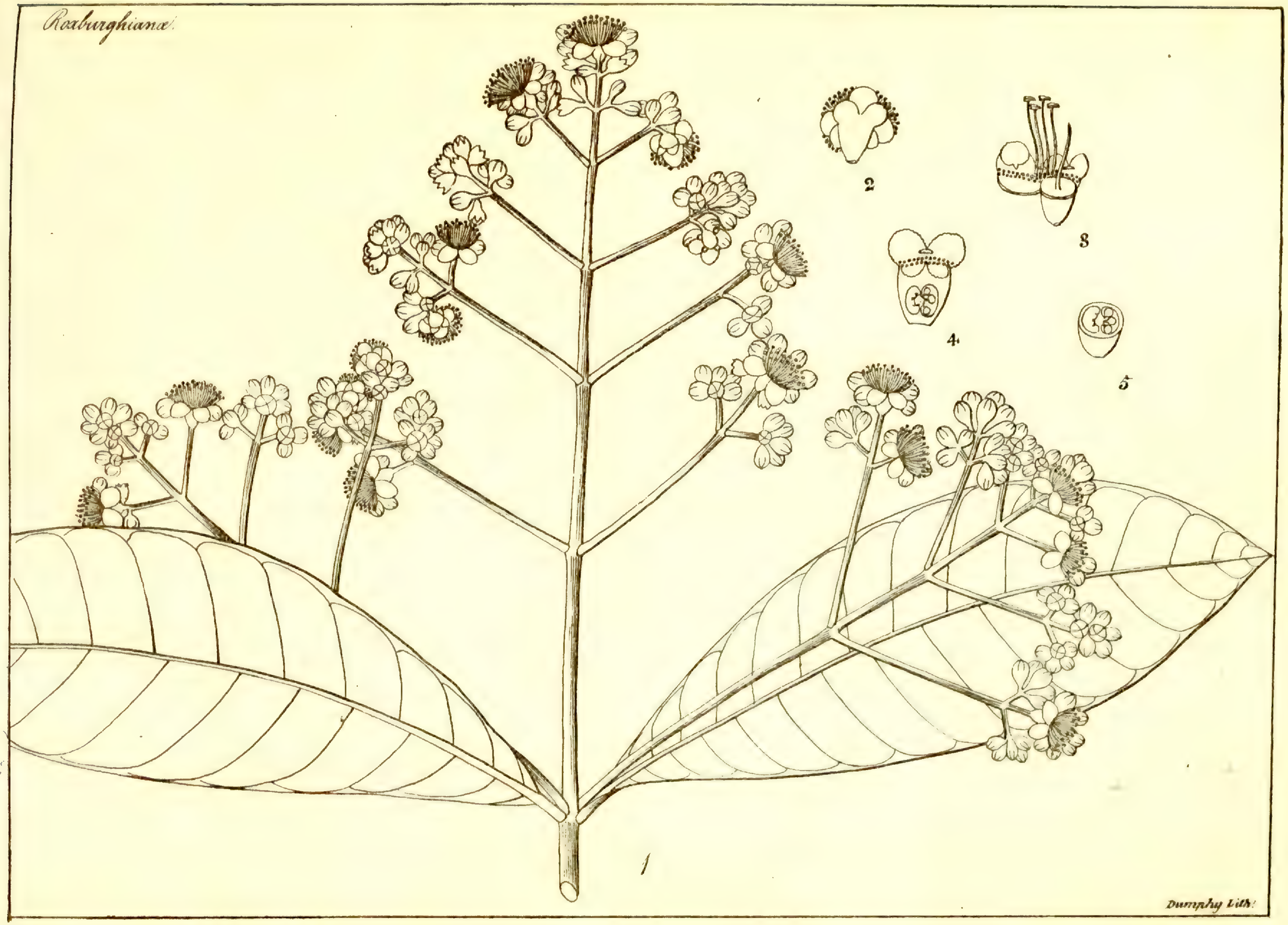
Eugenia (S.) cerasoides (Roxb.)

Roxburghiana.

Dumphy, Lith.

Eugenia (?) Puniala (Roxb.)

Roxburghianæ.



Eugenia (S) Thumra (Roxb)

Roxburghianæ

Eugenia (S) myrtifolia (Roxb)

Eugenia (S) præcox (Roxb)

Eugenia (S) obtusifolia (Roxb)

Roxburghianæ

Eugenia (S) lanceæfolia (Roxb)

Roxburghiana.

Eugenia (Syzygium) oblata (Roxb.)
Syzygium oblatum? Wall.)

Roxburghianæ

2

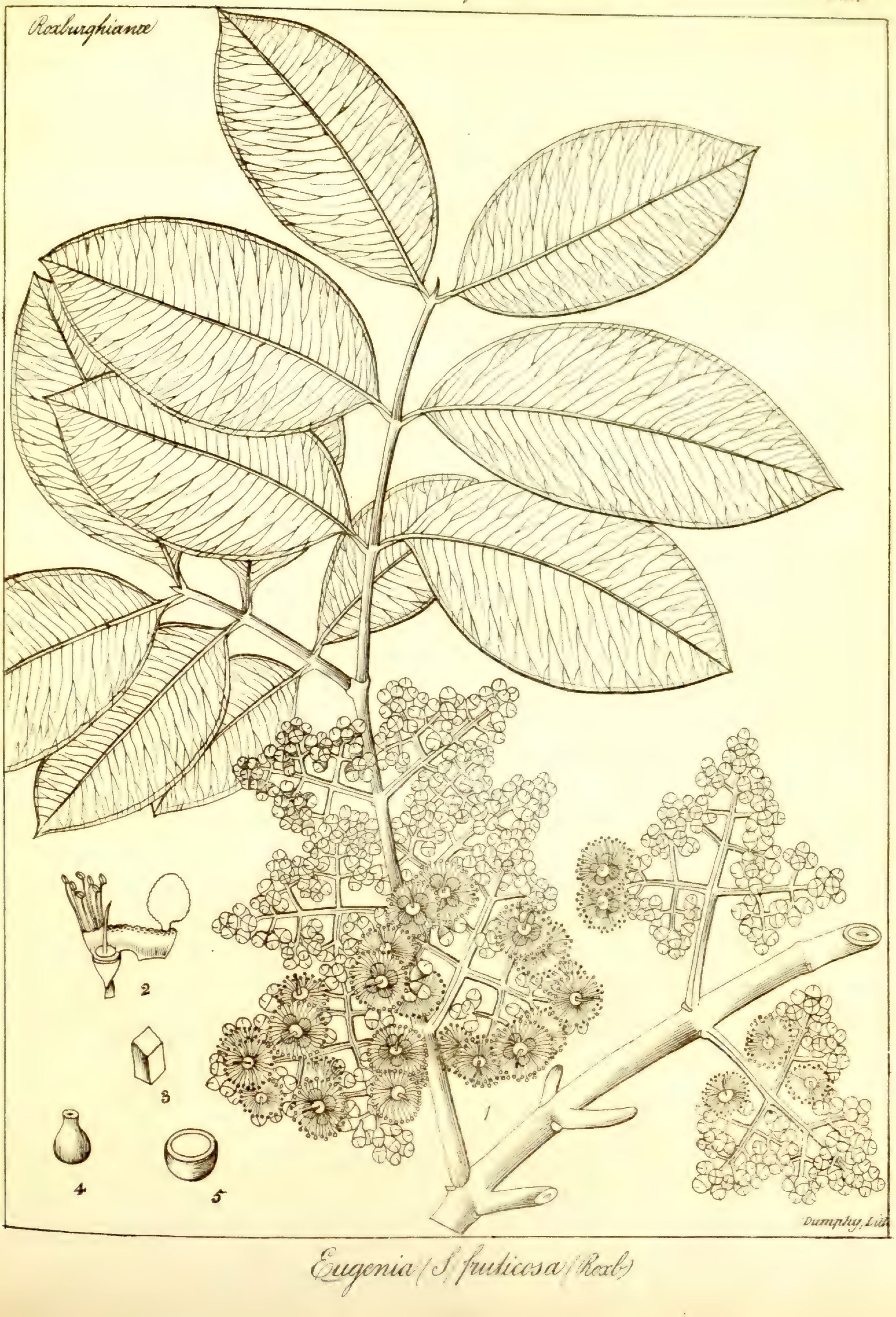
4

5

3

Eugenia (?) inophylla (Roxb.)

Roxburghianæ



Eugenia (S. fruticosa (Roxb.)

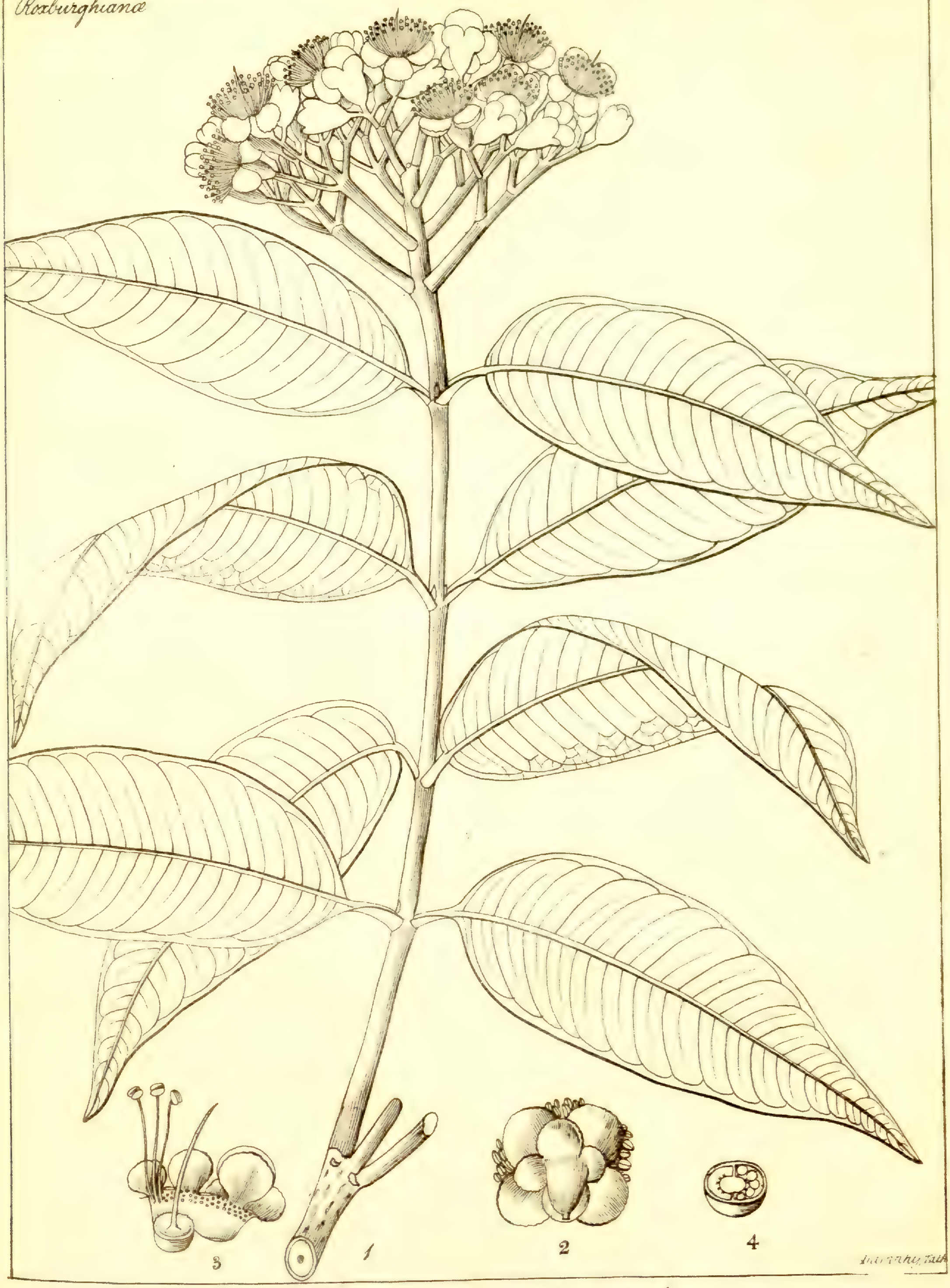
Roxburghianæ.

Eugenia (S. venusta Roxb.)
Eugenia cymosa? Lam.)

Roxburghianæ

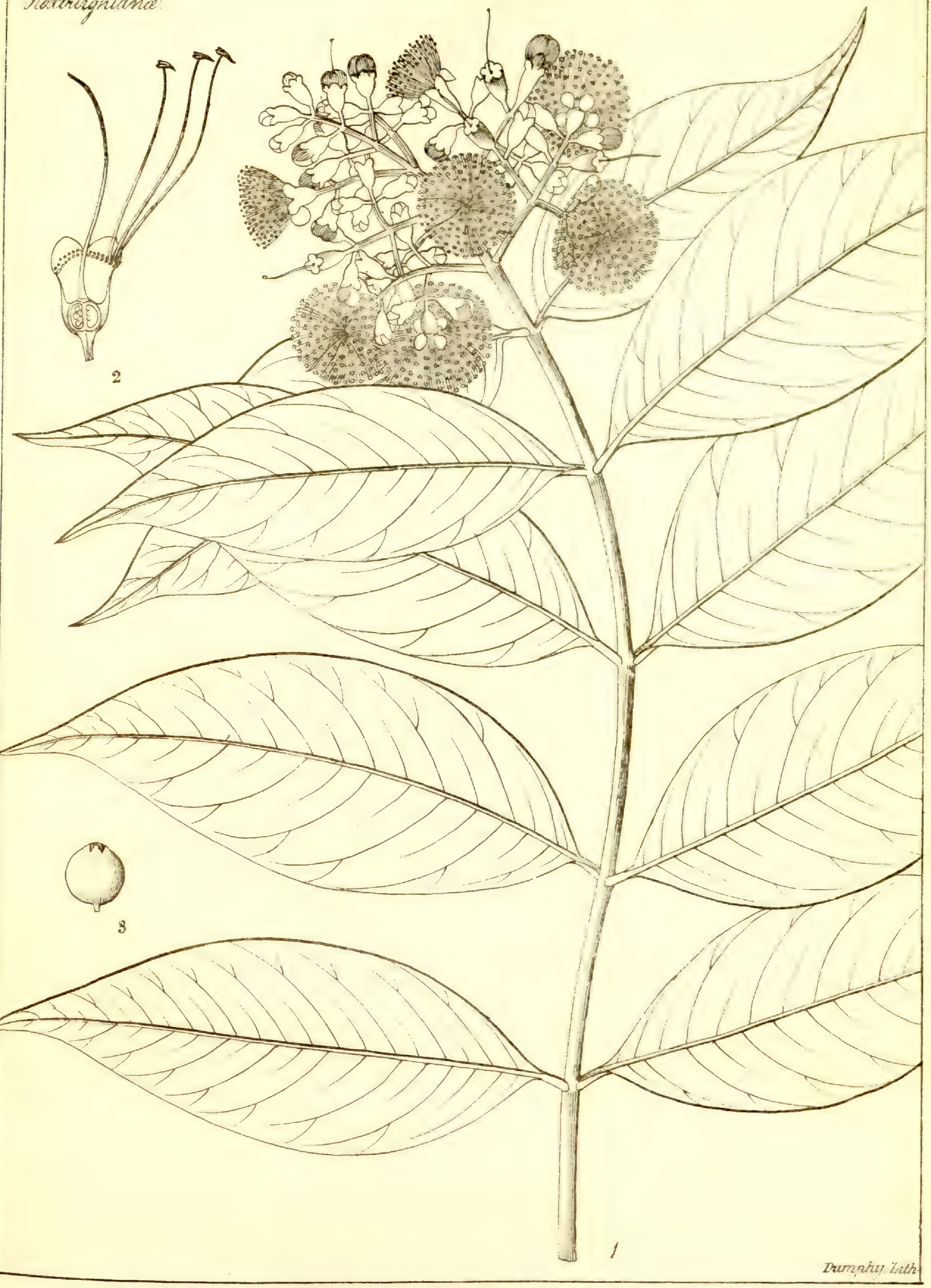
Eugenia /S/ brachiata /Roxb:/

Roxburghianæ



Eugenia (S.) corymbosa (Roxb.)

Roxburghianæ.



Eugenia / S/ pulchella / Roxb/

Roxburghianæ.

Eugenia / S / glandulifera / Roxb. /

Eugenia /S/ rubens. /Roxb./

Dumphy, Lith.

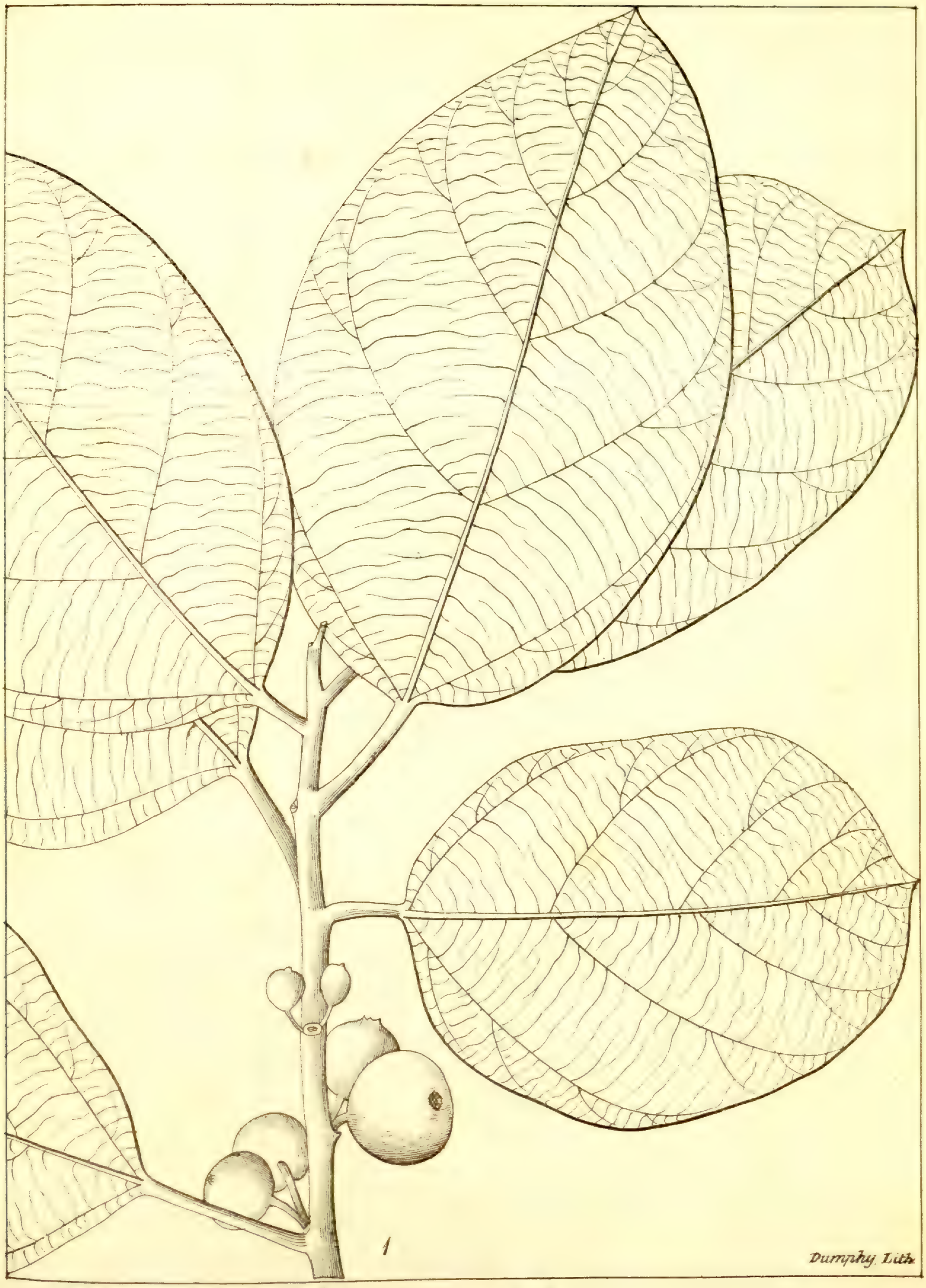
Pterospermum acerifolium (Lam)

Roxburghianæ

1

Dumphy Lith.

Ficus polycarpa. / Roxb. /



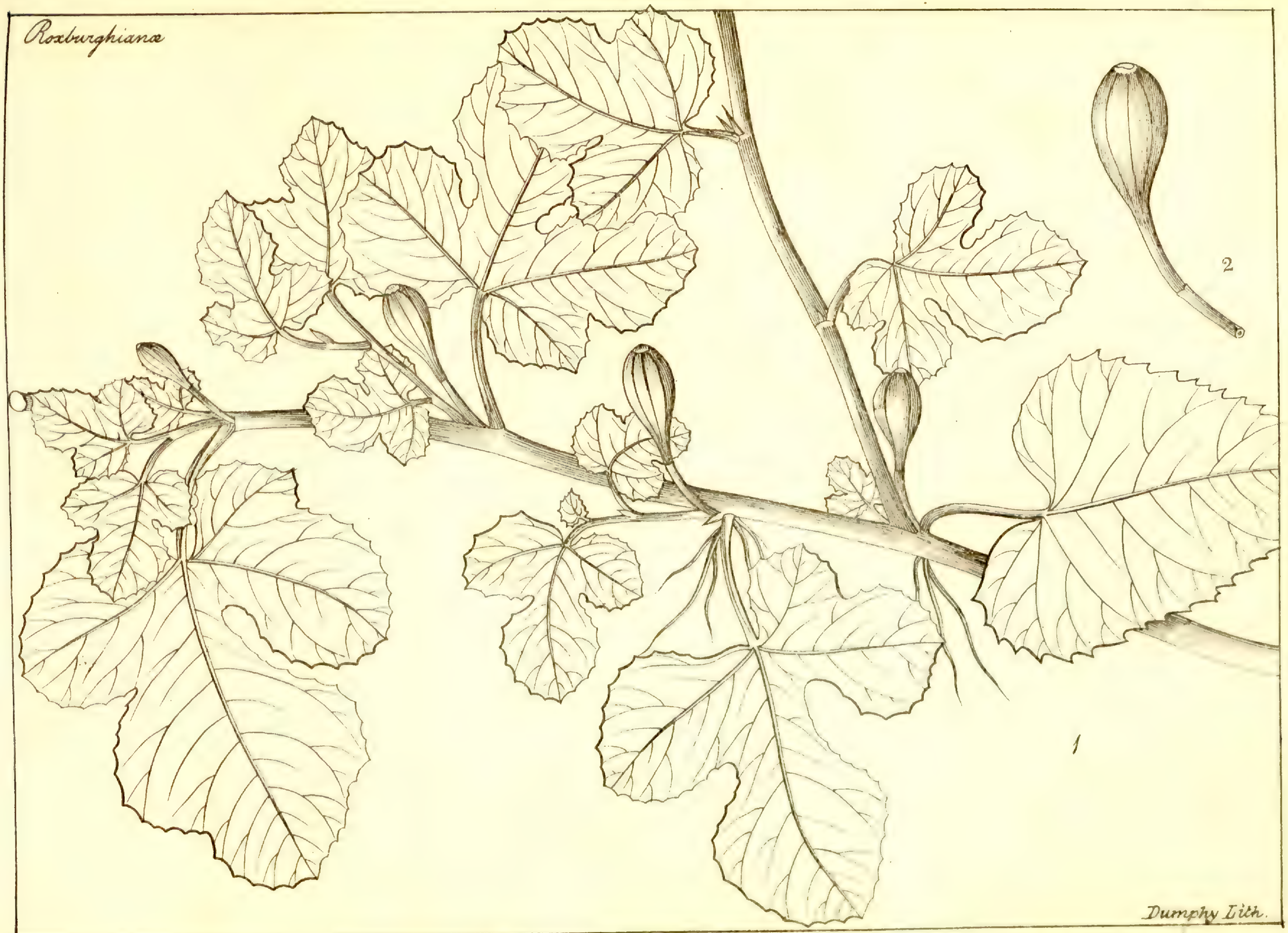
Ficus asperima (Roxb)

Roxburghianæ.

Ficus caricoides / Roxb. /

Roxburghiana.

Ficus humilis / Roxb. /



Ficus repens (Roxb.)

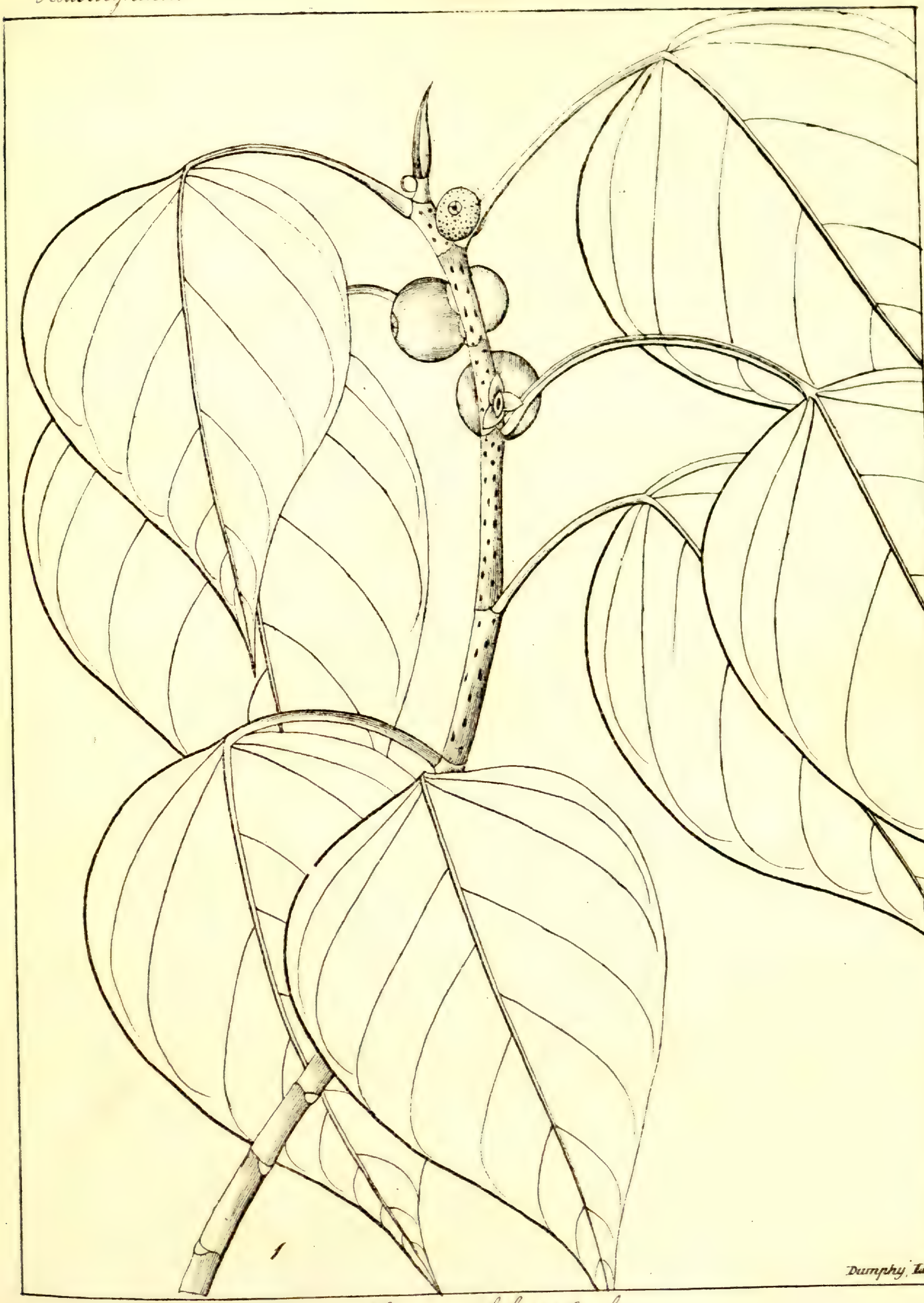
Ficus rasiformis (Roxb.)

Ficus oppositifolia (Roxl.)

1

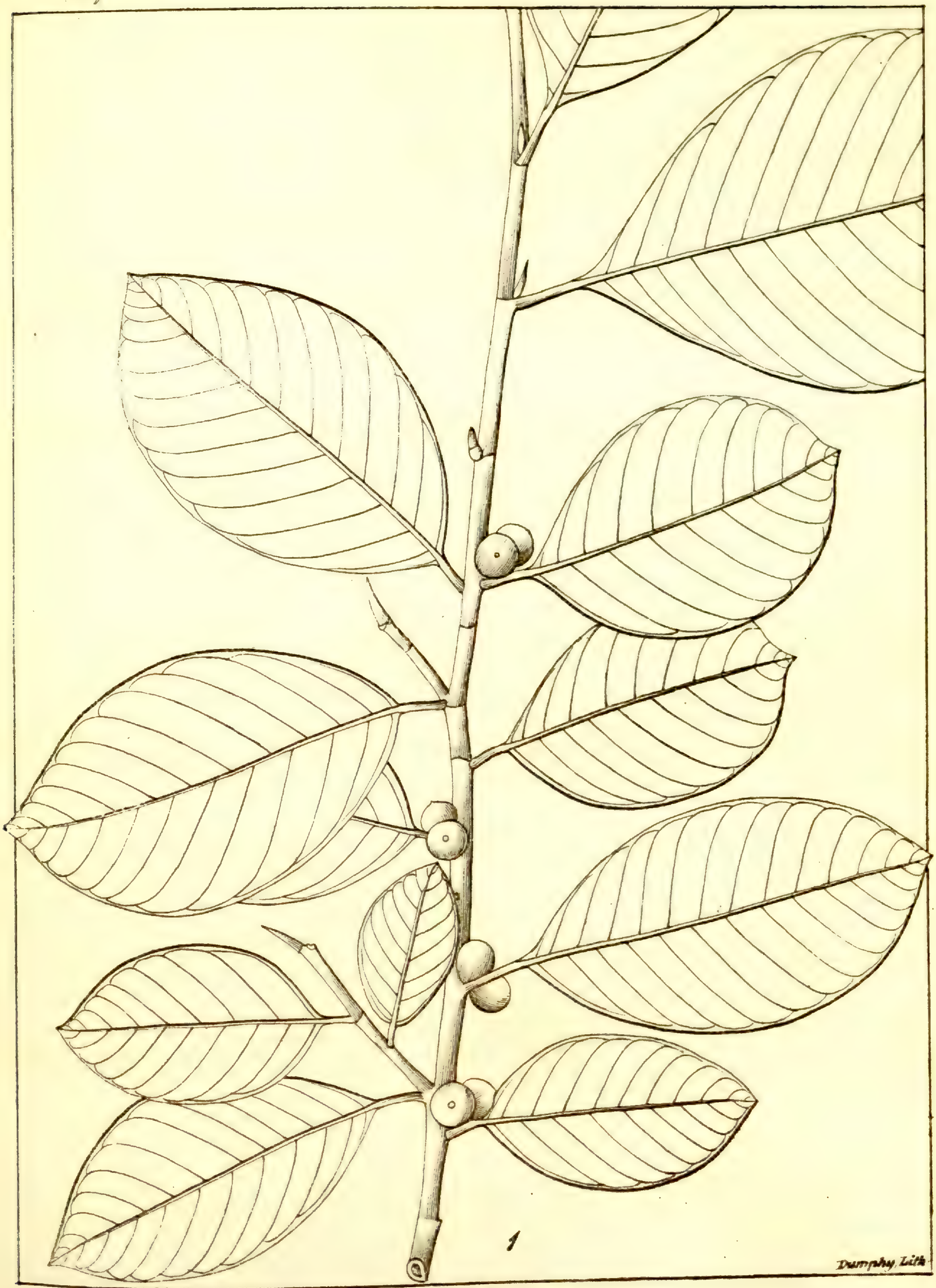
Dumphy, Lith.

Ficus racemifera (Roxb.)

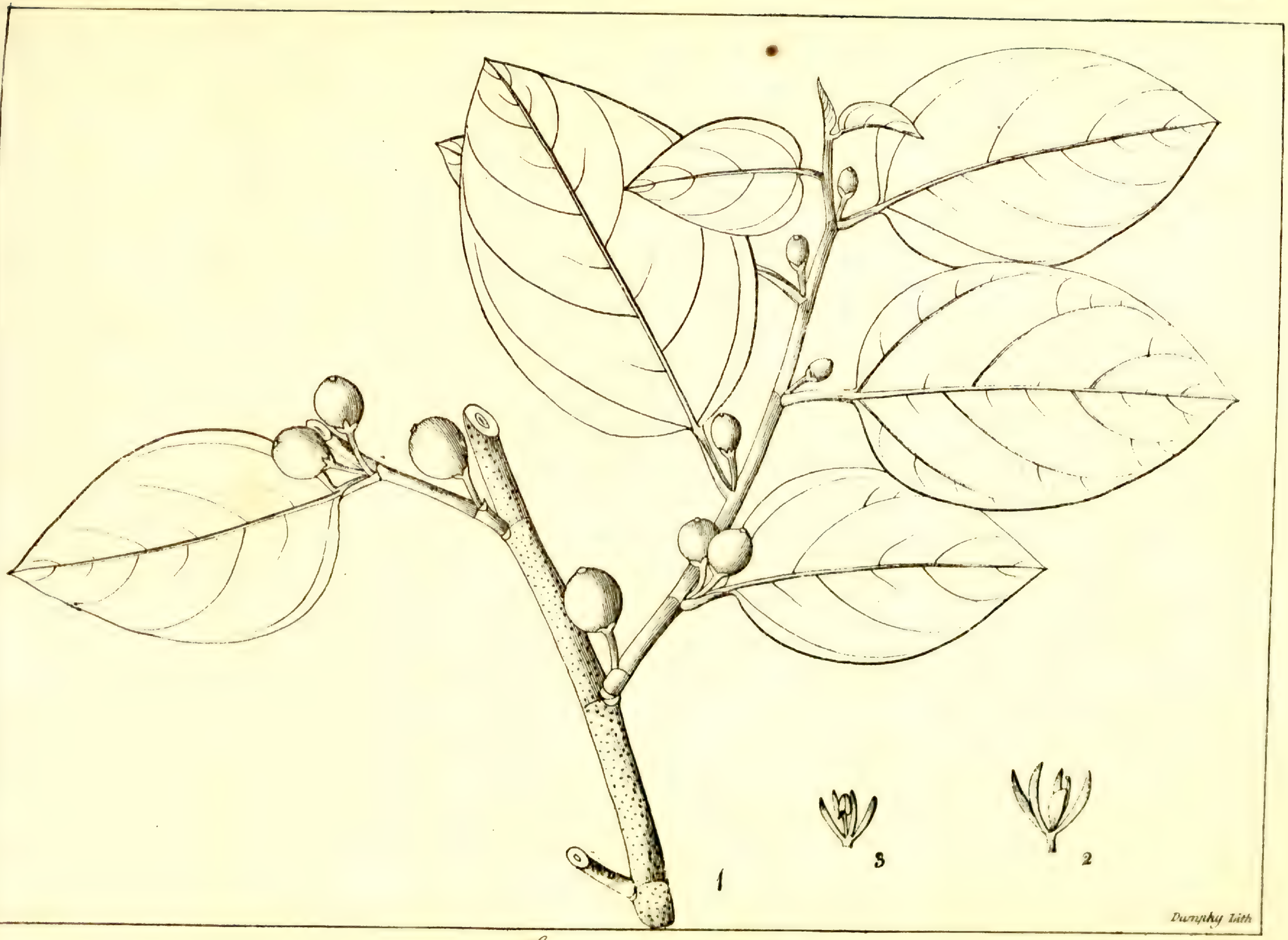


Ficus cordifolia (Roxb.)

Ficus daemona (Roxb.)



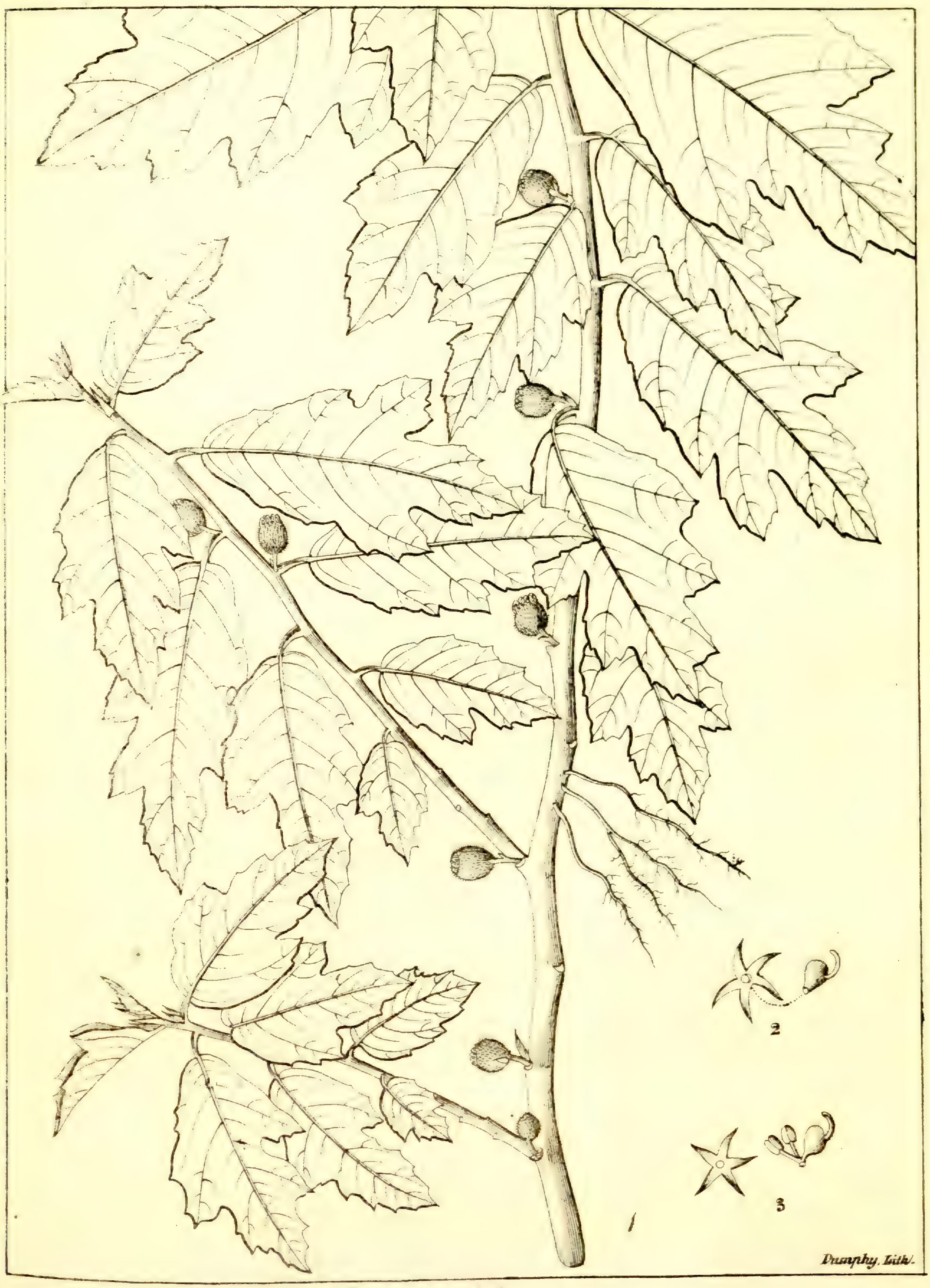
Ficus nitida (Roxb)



Ficus scandens (Roxb)

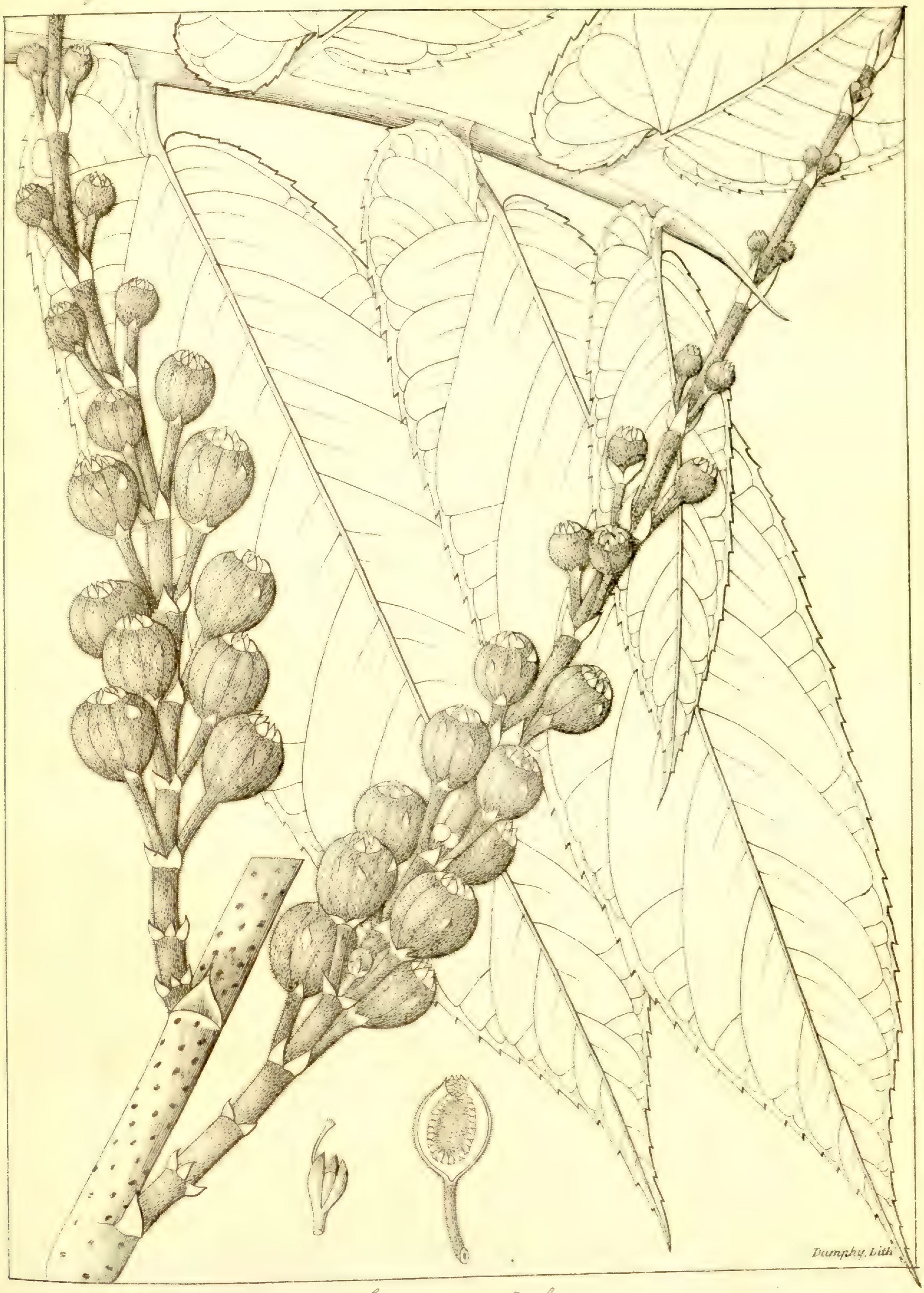
Ficus congesta (Roxb.)

Ficus lanceolata (Roxb.)

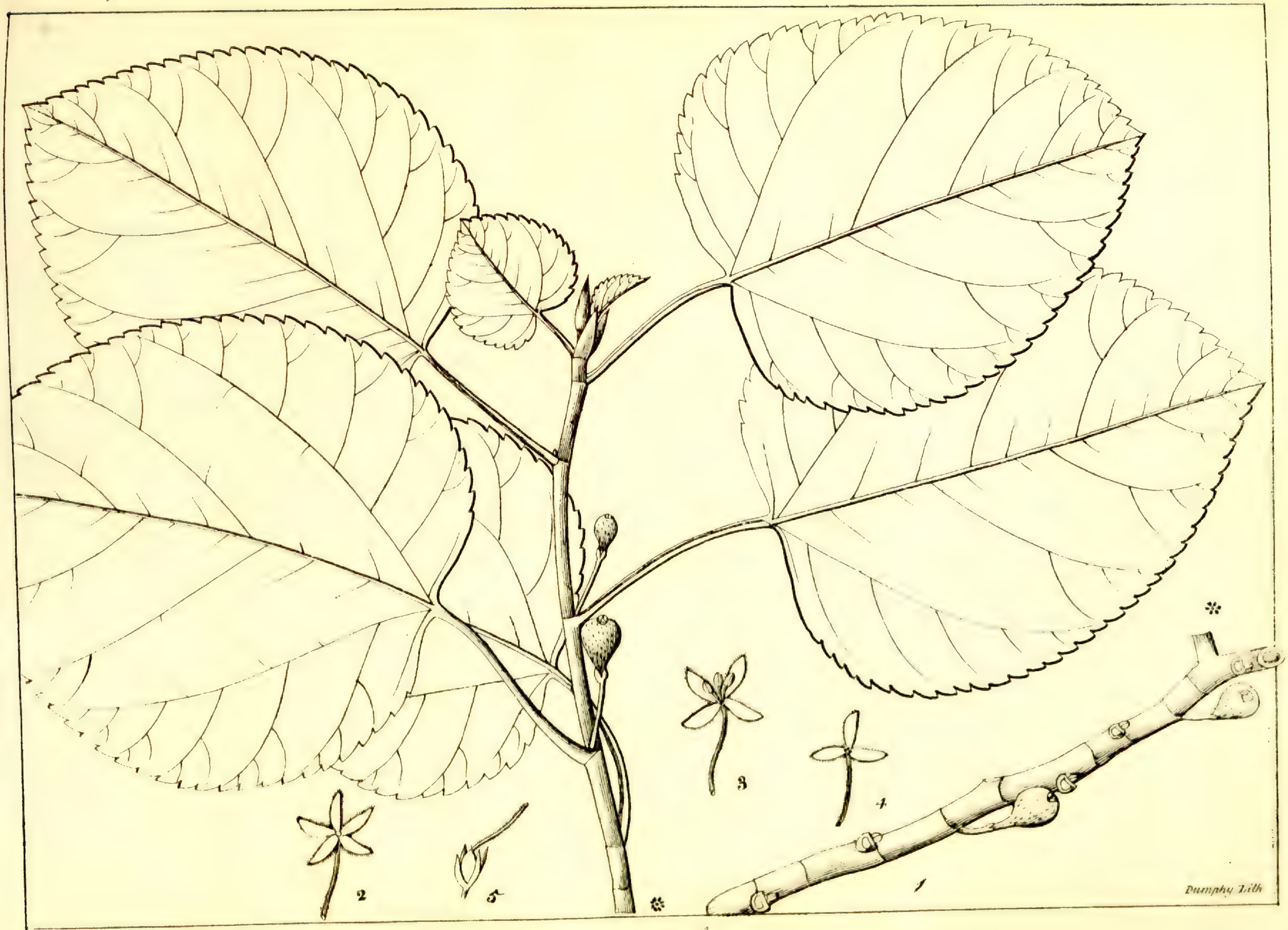


Ficus quercifoliæ. (Roxb)

Ficus tomentosa (Roxb.)



Ficus cunea (Roxb.)



Ficus virgata (Roxb.)

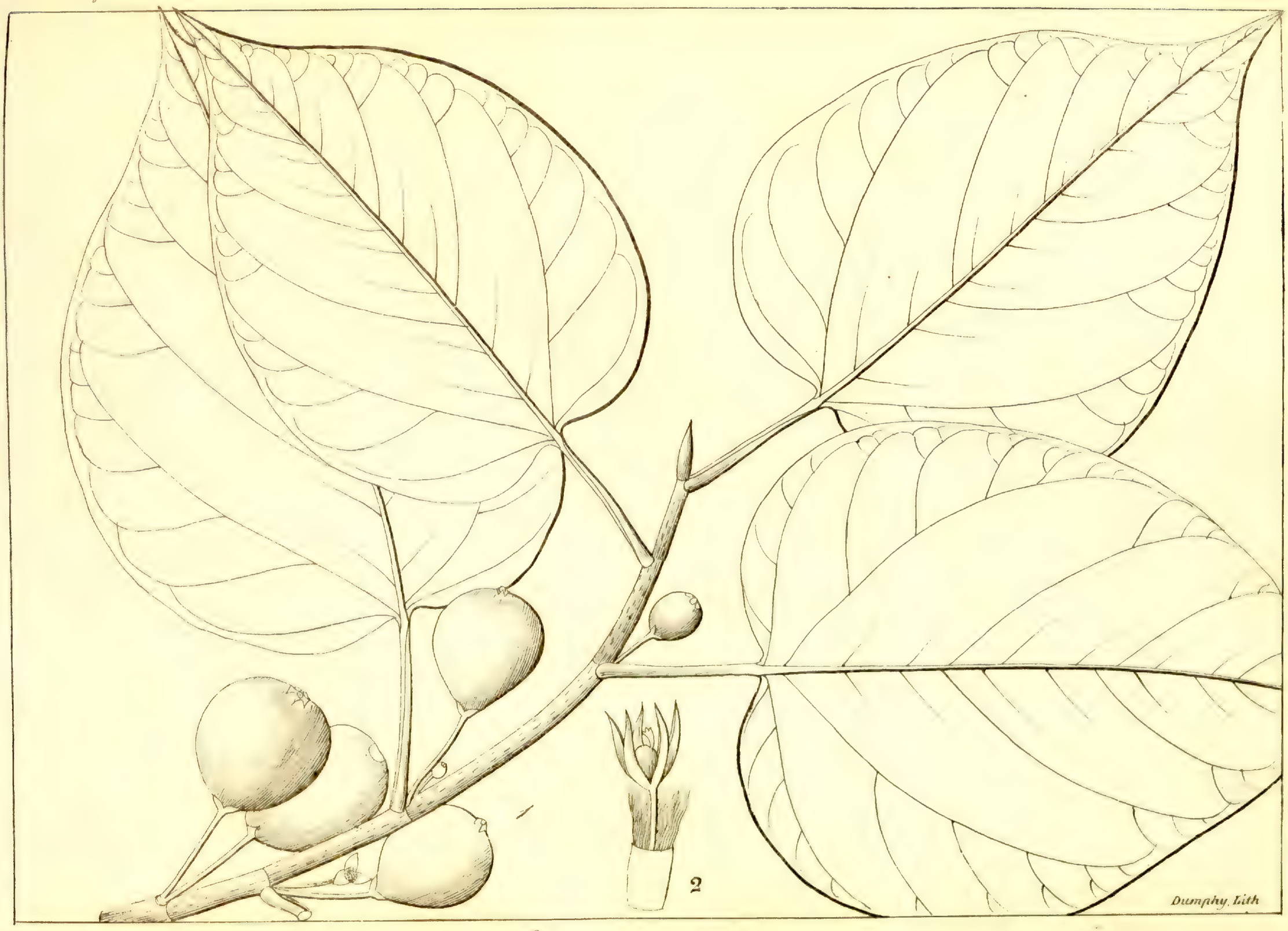
Ficus Allamcraloo (Roxb)
F. excelsa Vahl -

Ficus tuberculata, Roxb.

Ficus ampelos (Roxb.)

Ficus hederacea (Roxb) ...

Ficus fruticosa (Roxb.)



Ficus vagans (Roxb)

Ficus laccifera (Roxb.)

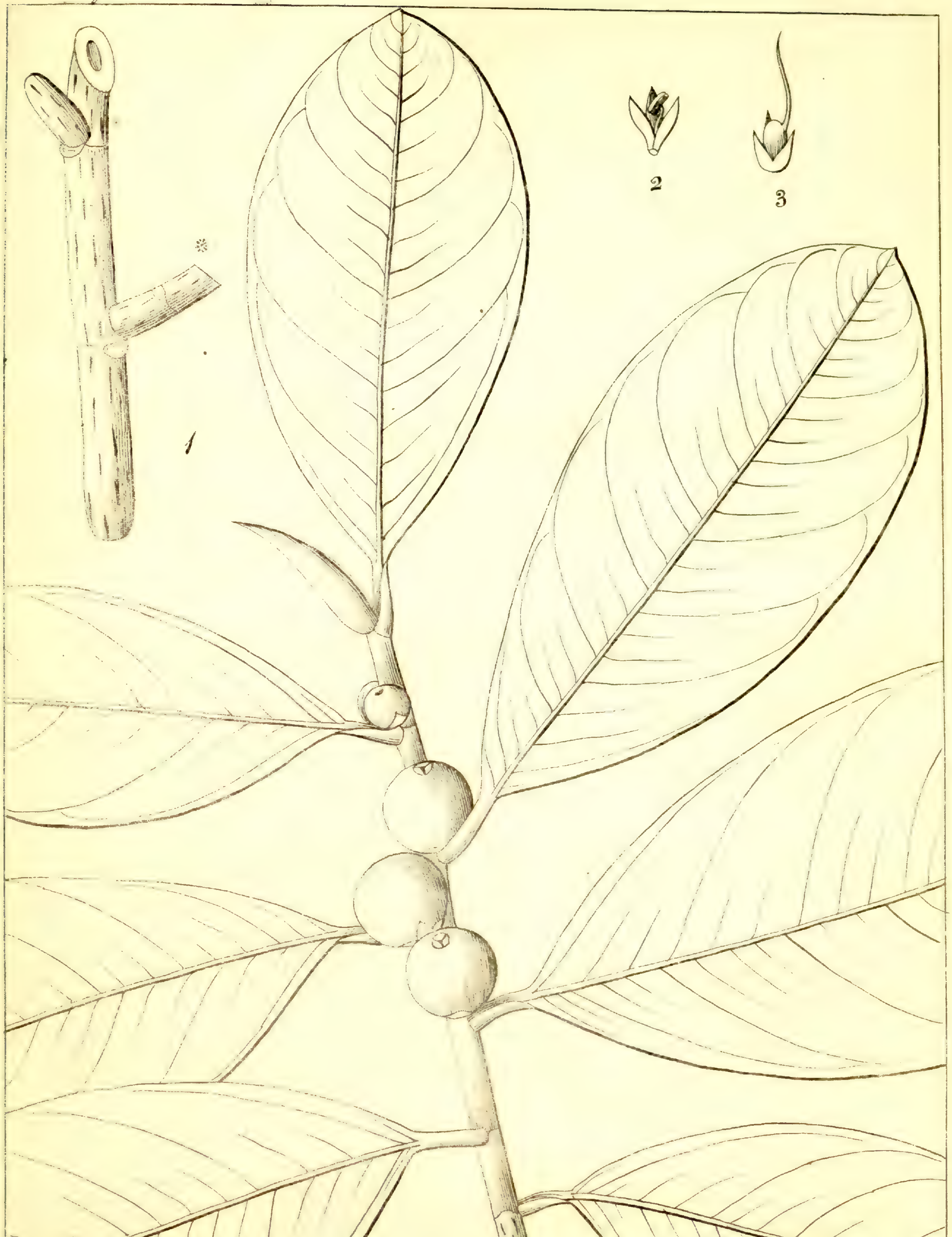
Ficus ramentacea. (Roxb.)

Ficus comosa (Roxb.)

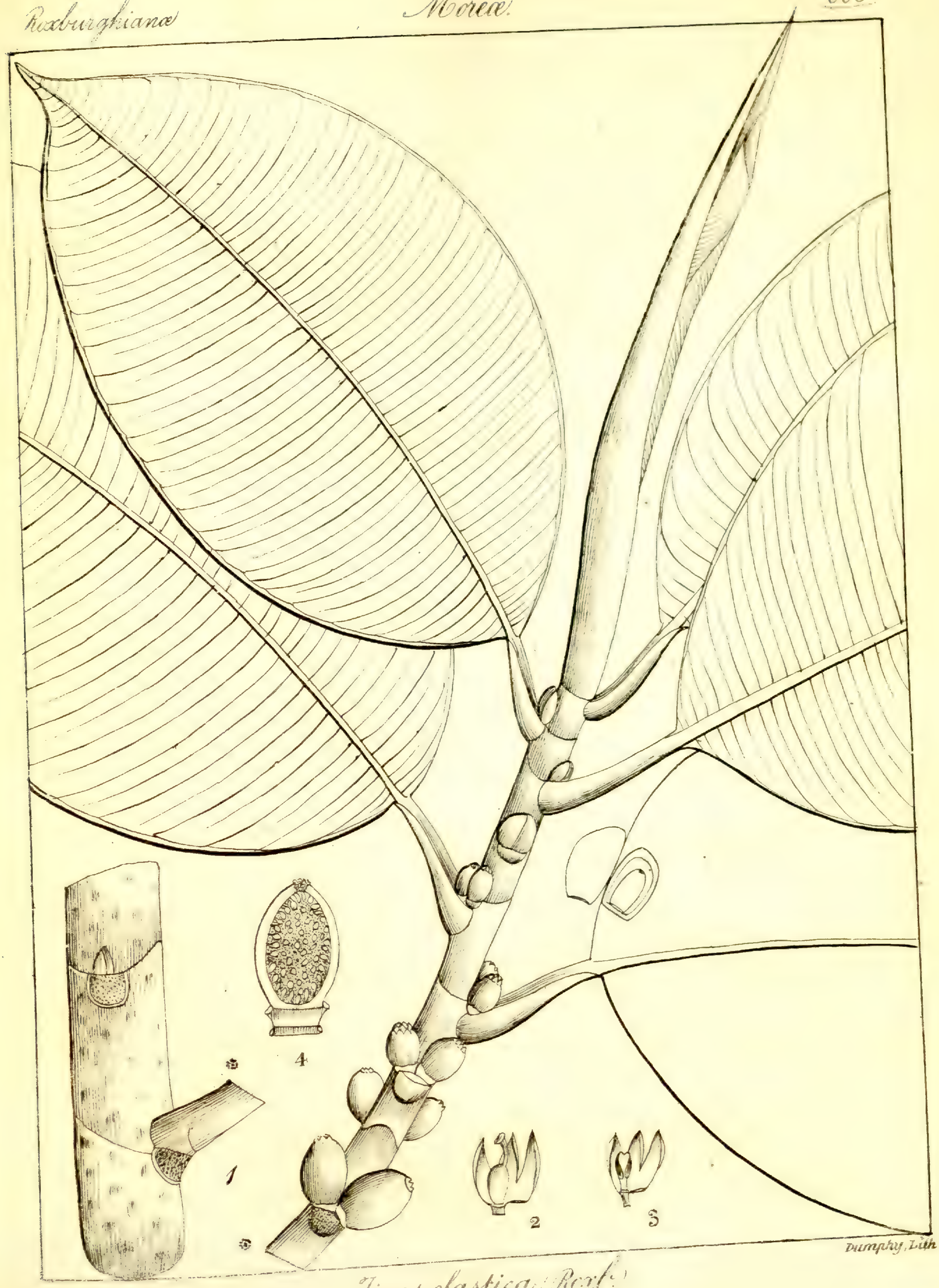
Ficus heterophylla (Roxb.)

Ficus angustifolia (Roxb)

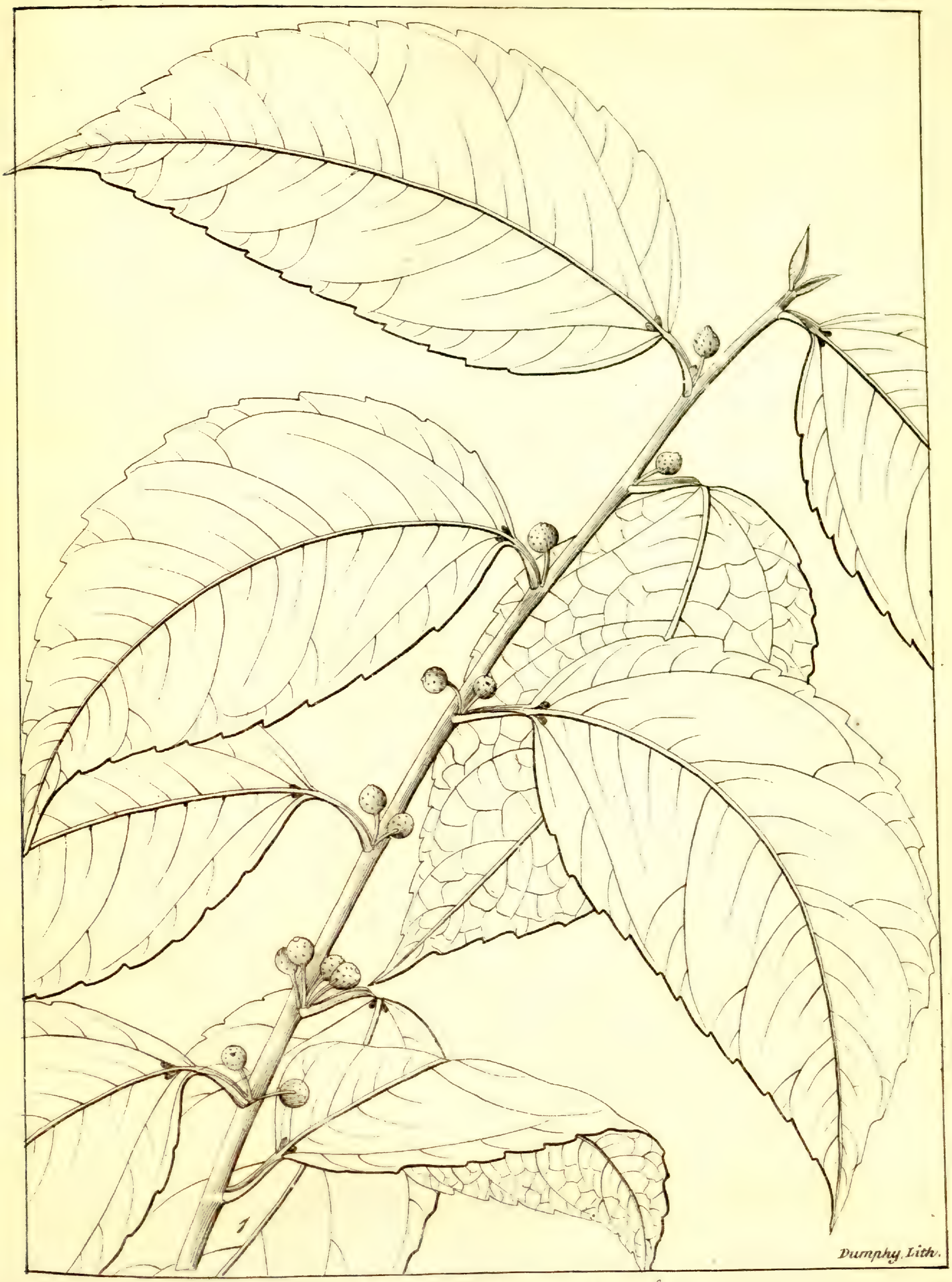
Ficus scabrella (Roxb.)



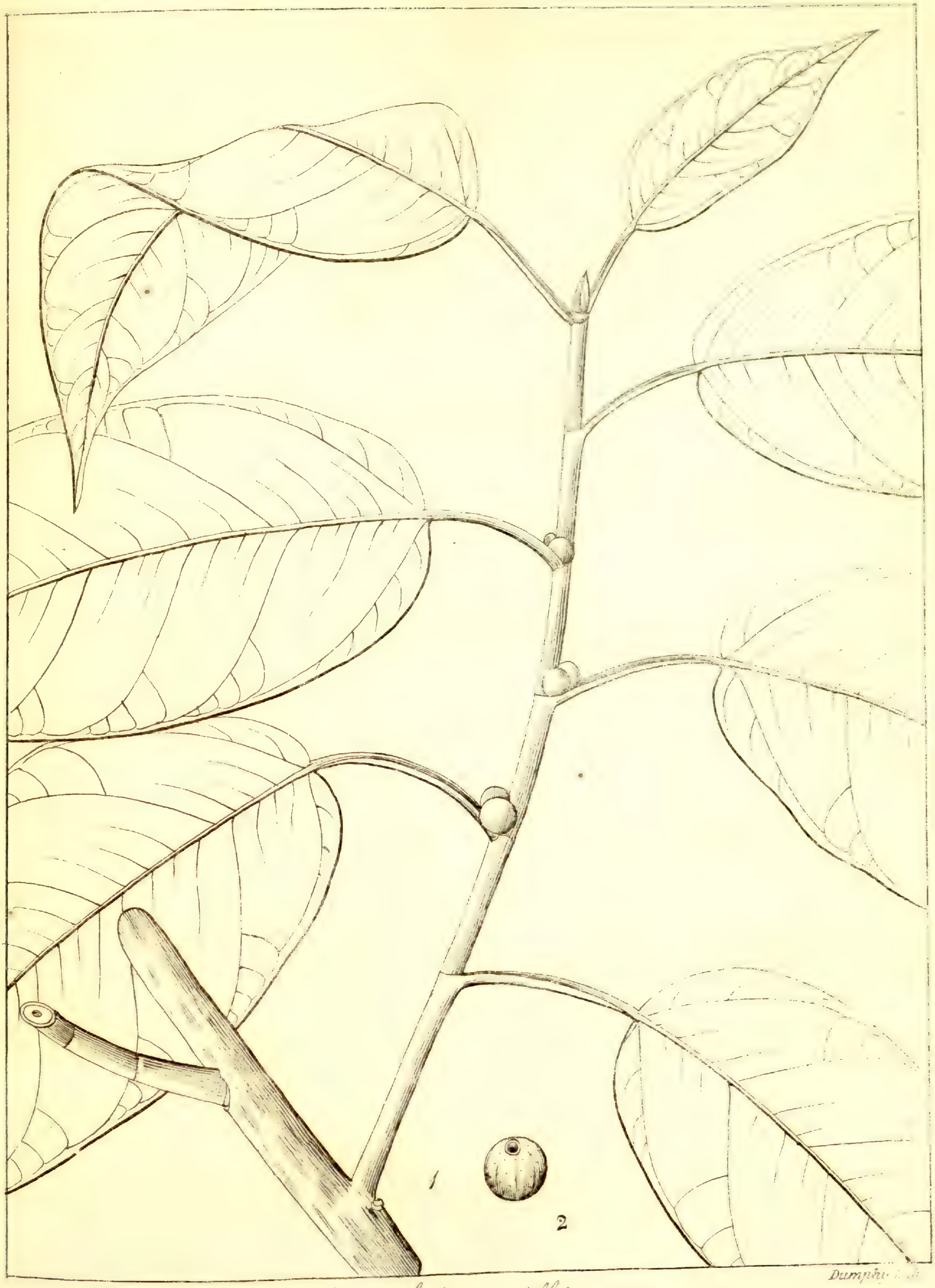
Ficus obtusifolia / Roxb.



Ficus elastica (Roxb.)



Ficus exasperata (Roxb.)



Ficus infectoria (Willd.)

Dumphy, Lith.

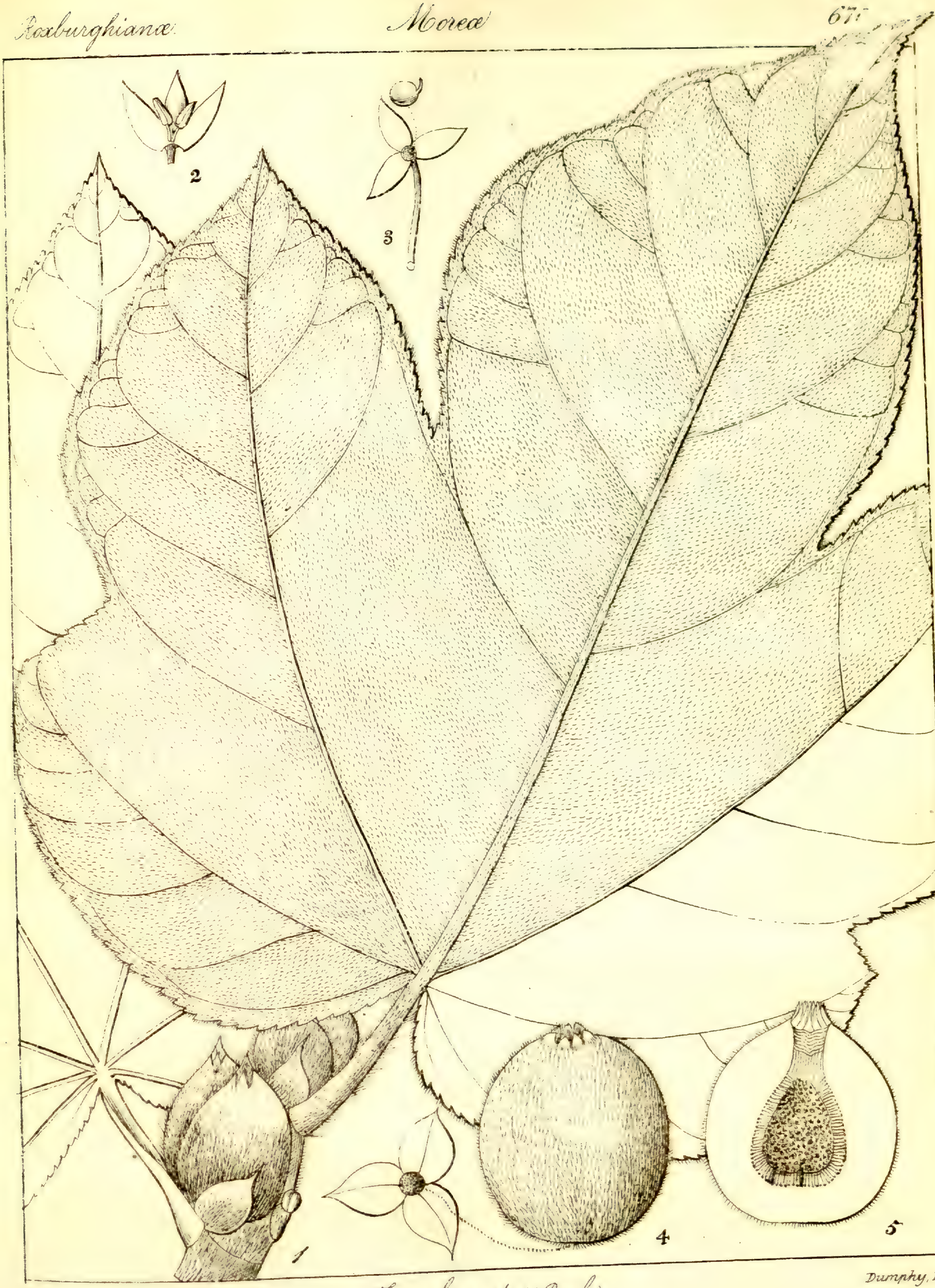
Ficus Wassir (Roxb.)

Ficus glomerata (Roxb.)

Ficus Tsiala (Roxb)

Dumphy, Lith.

Ficus conglomerata (Roxb.)

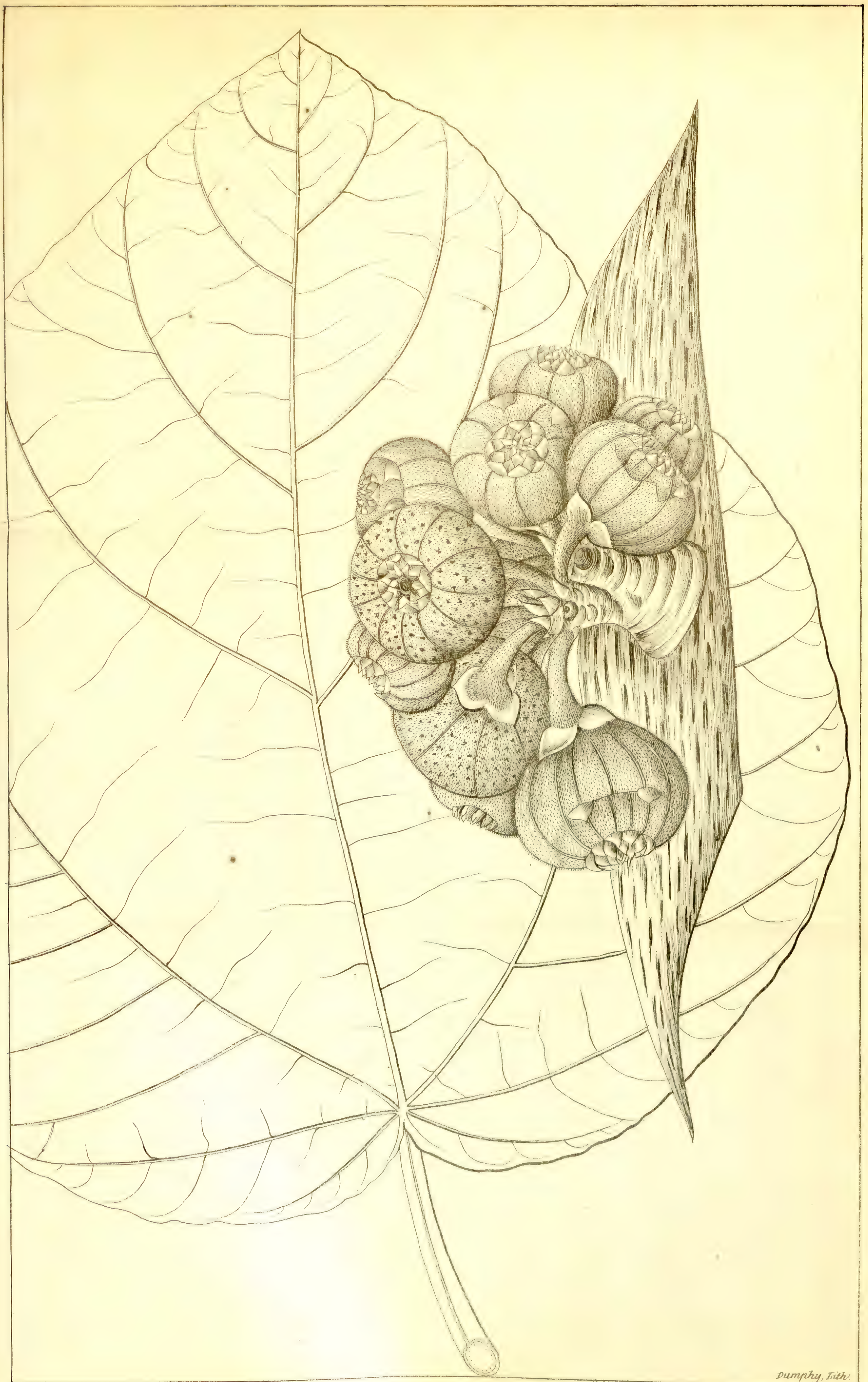


Dumphy, Lith.

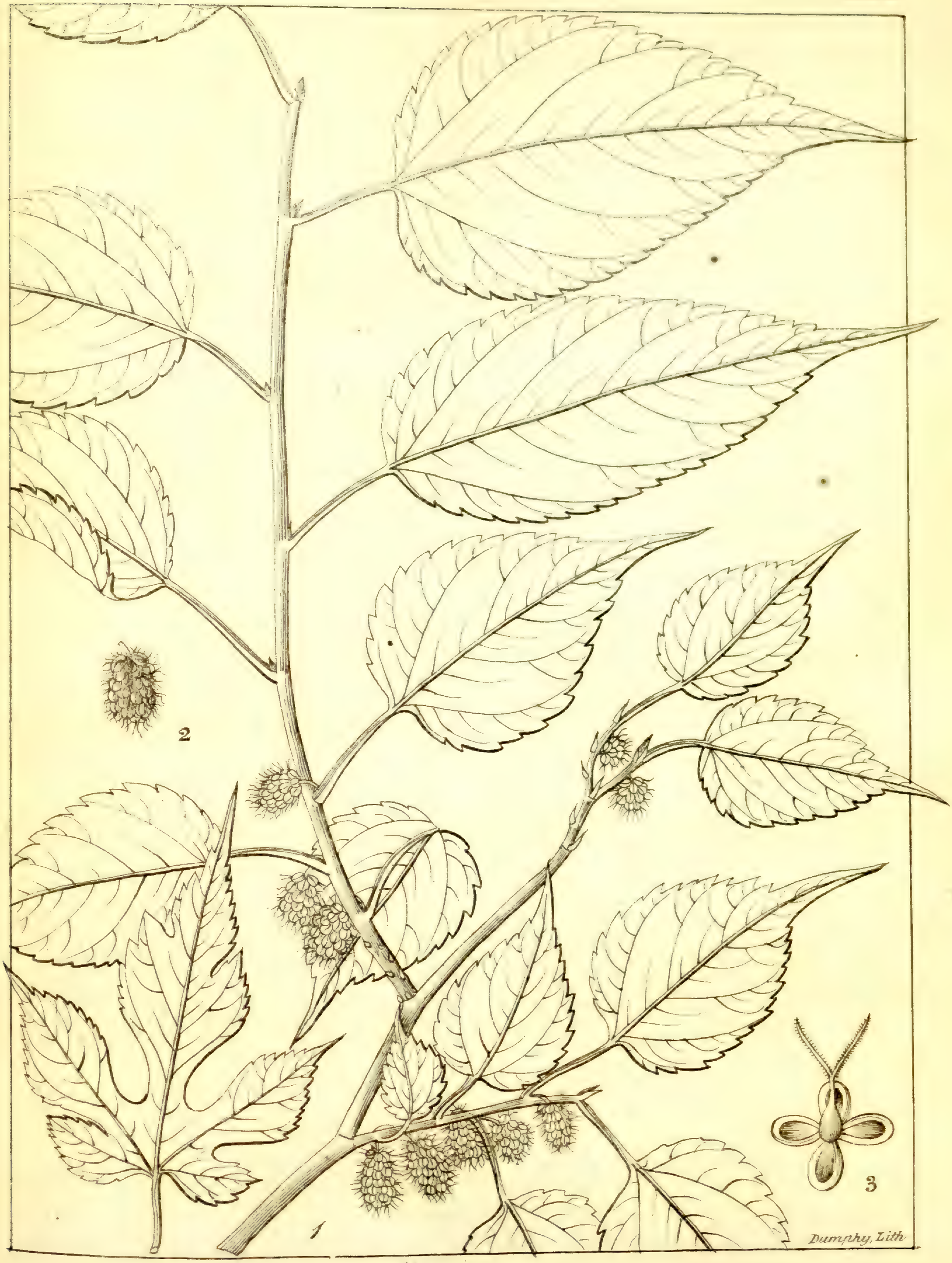
Ficus hirsuta (Roxb.)

Ficus radicans, Retz.

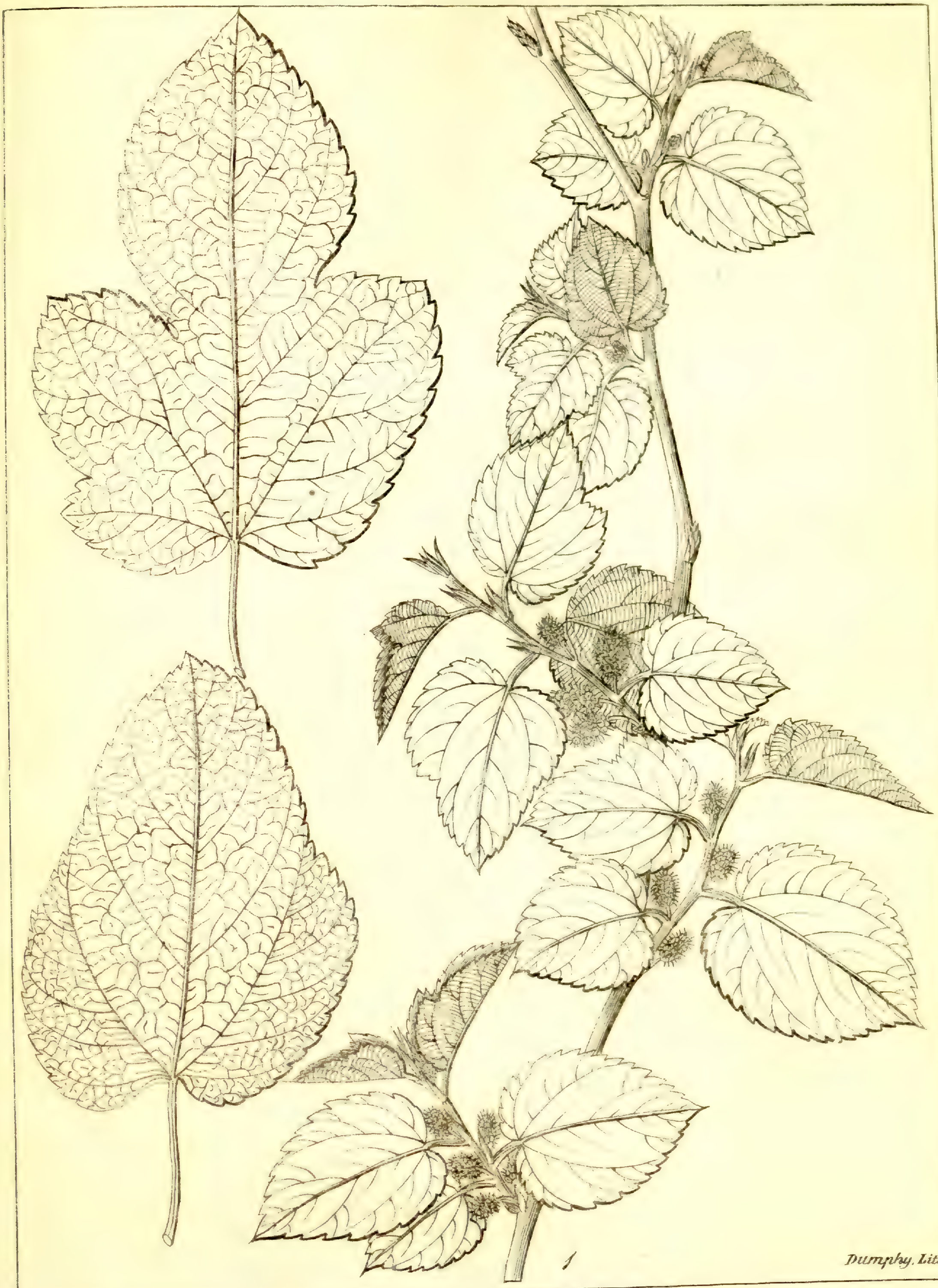
Ficus hirta (Roxb.)



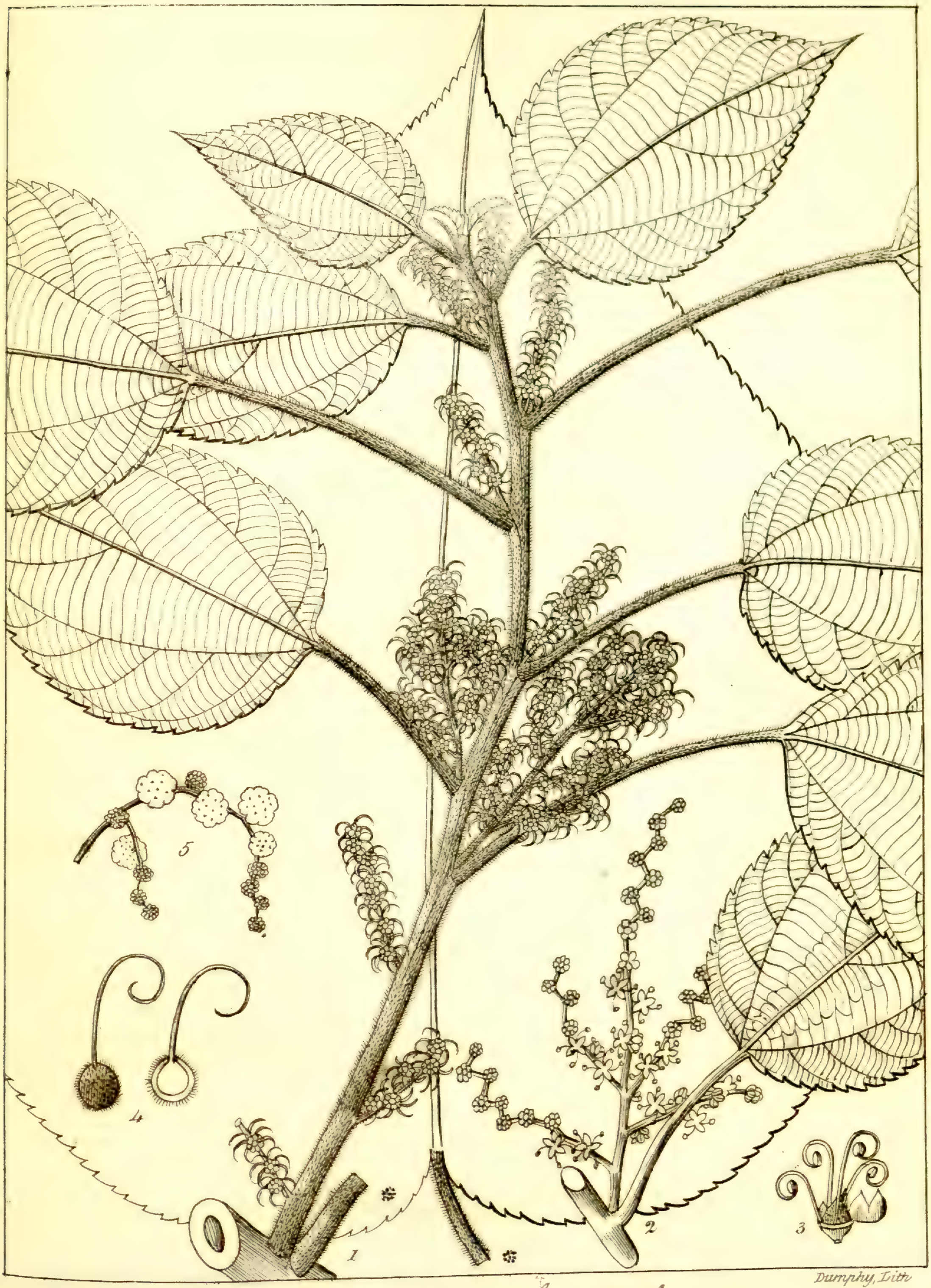
Ficus macrophylla (Roxb)



Morus indica.



Morus tartarica

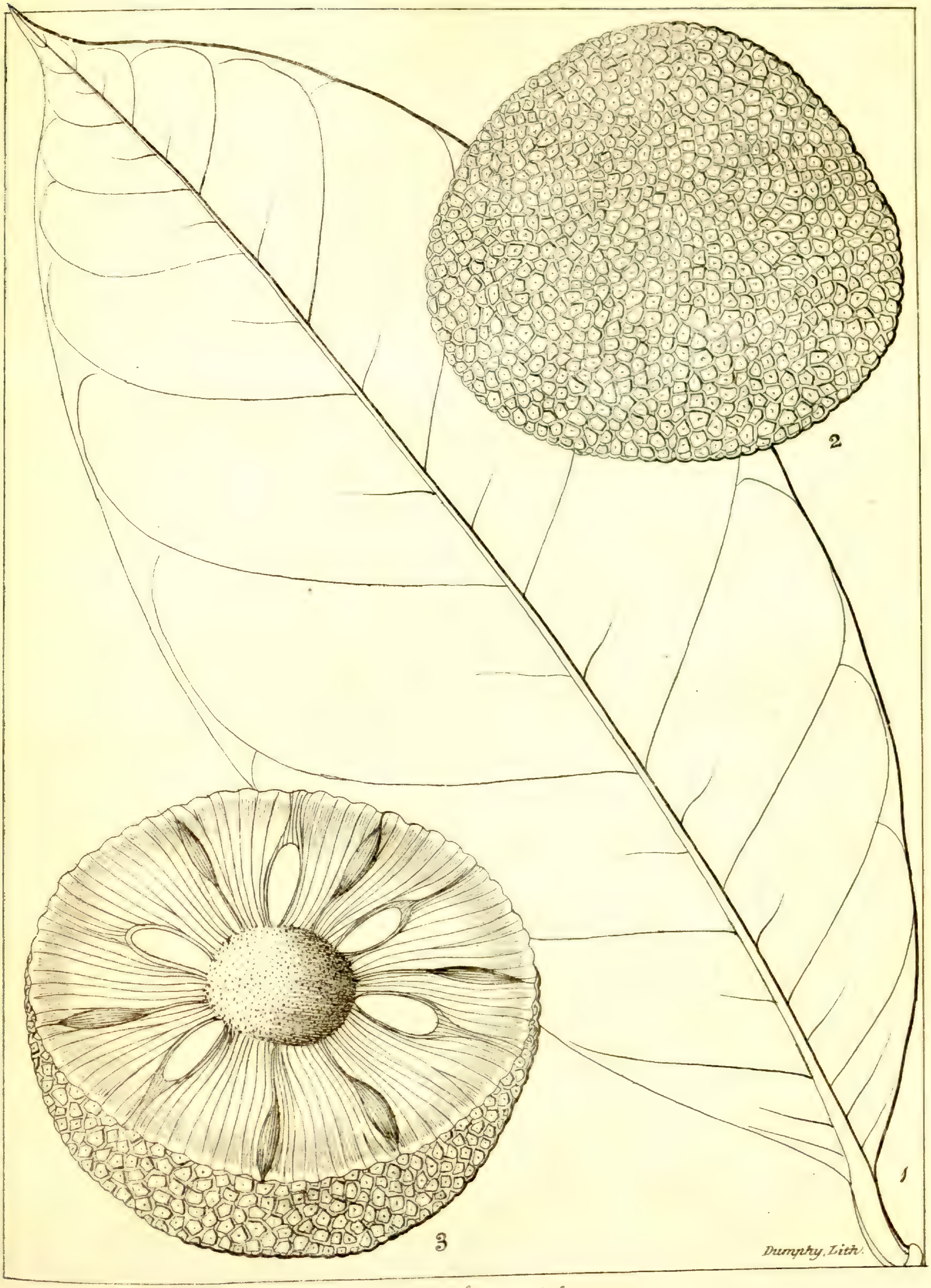


Morus paniculata (Roxb.)

Morus atropurpurea (Roxb.)

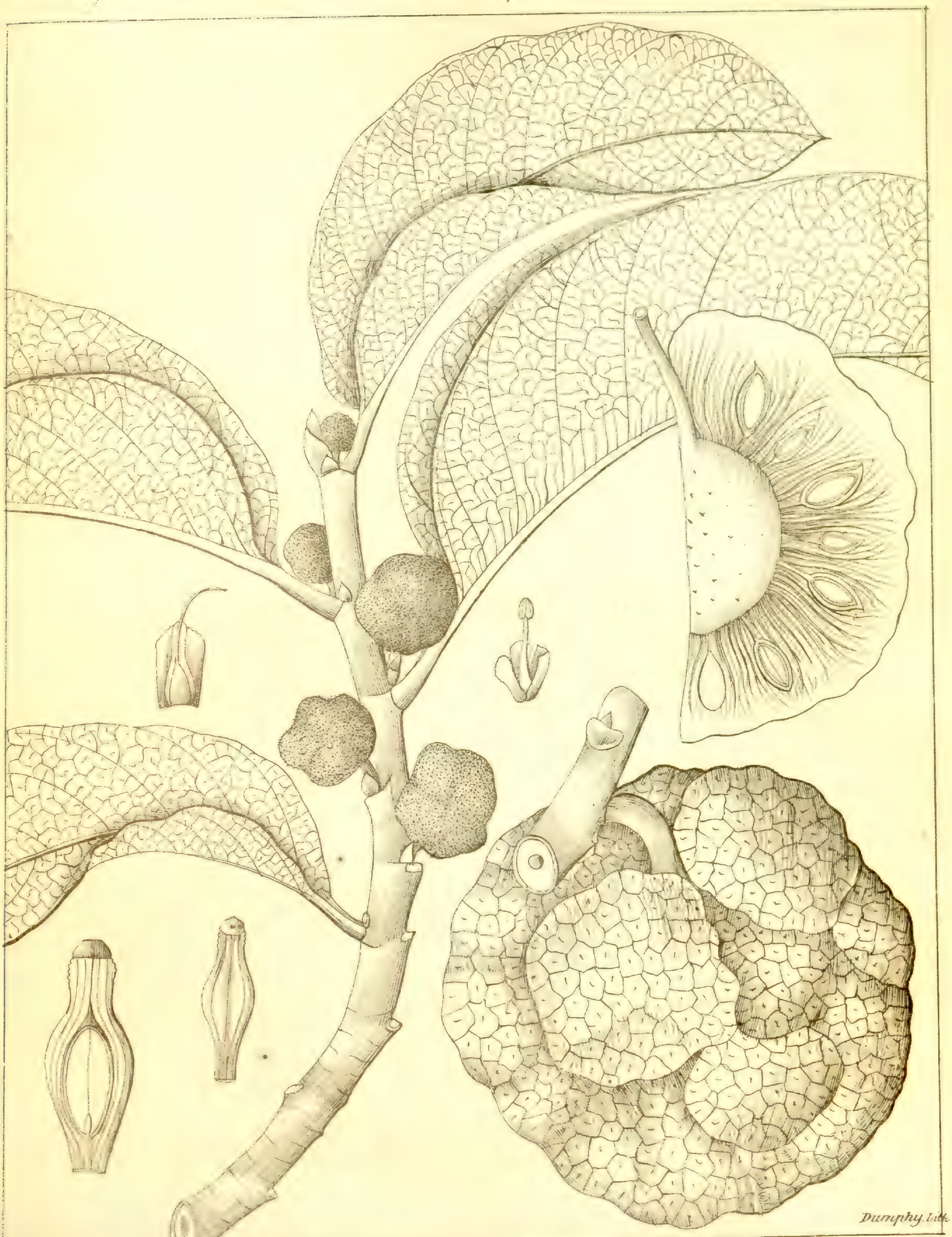
Dumphy, Lith.

Artocarpus integrifolia (Lin. fil)

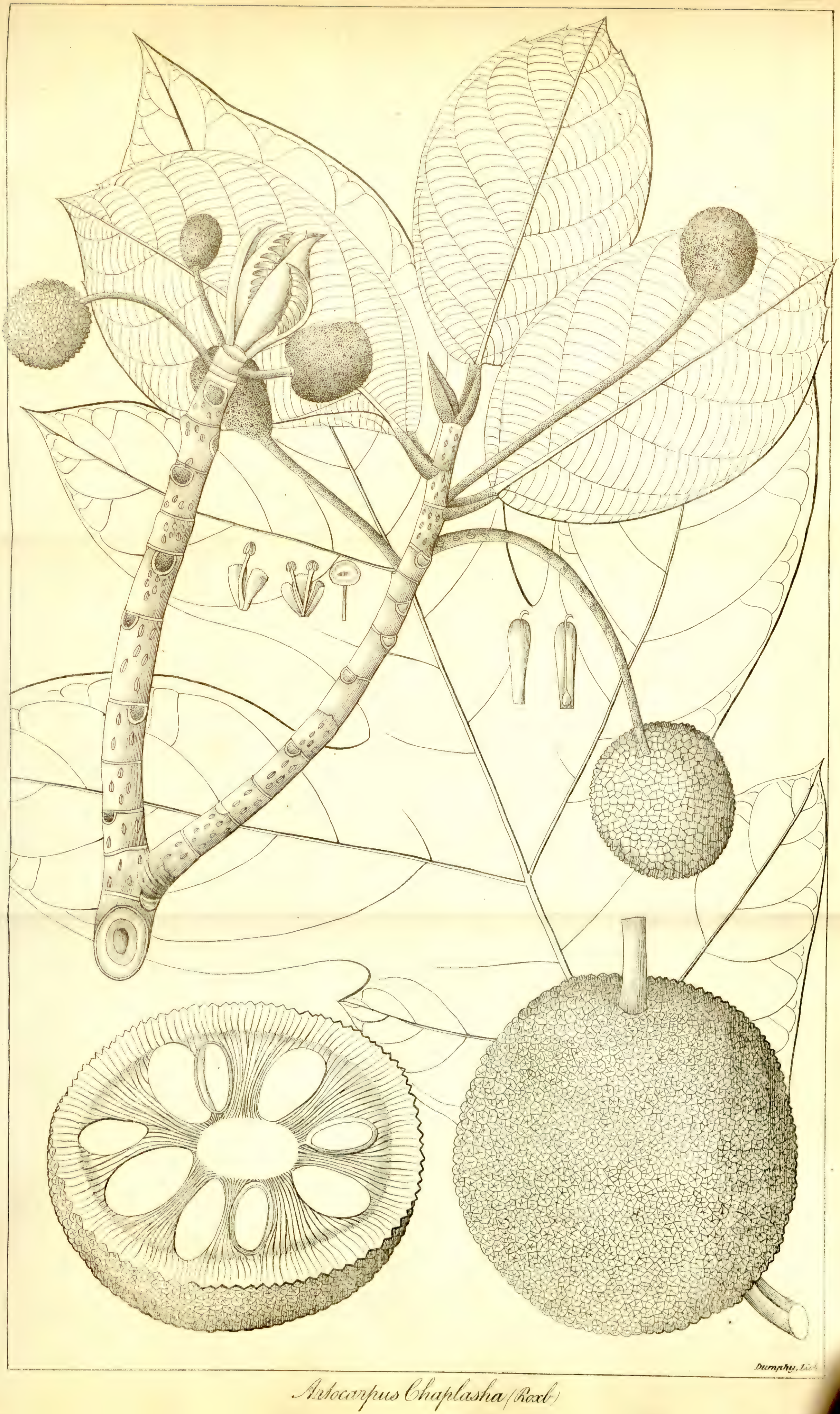


Artocarpus lanceæfolia (Roxb)

Artocarpus echinata, Roxb.

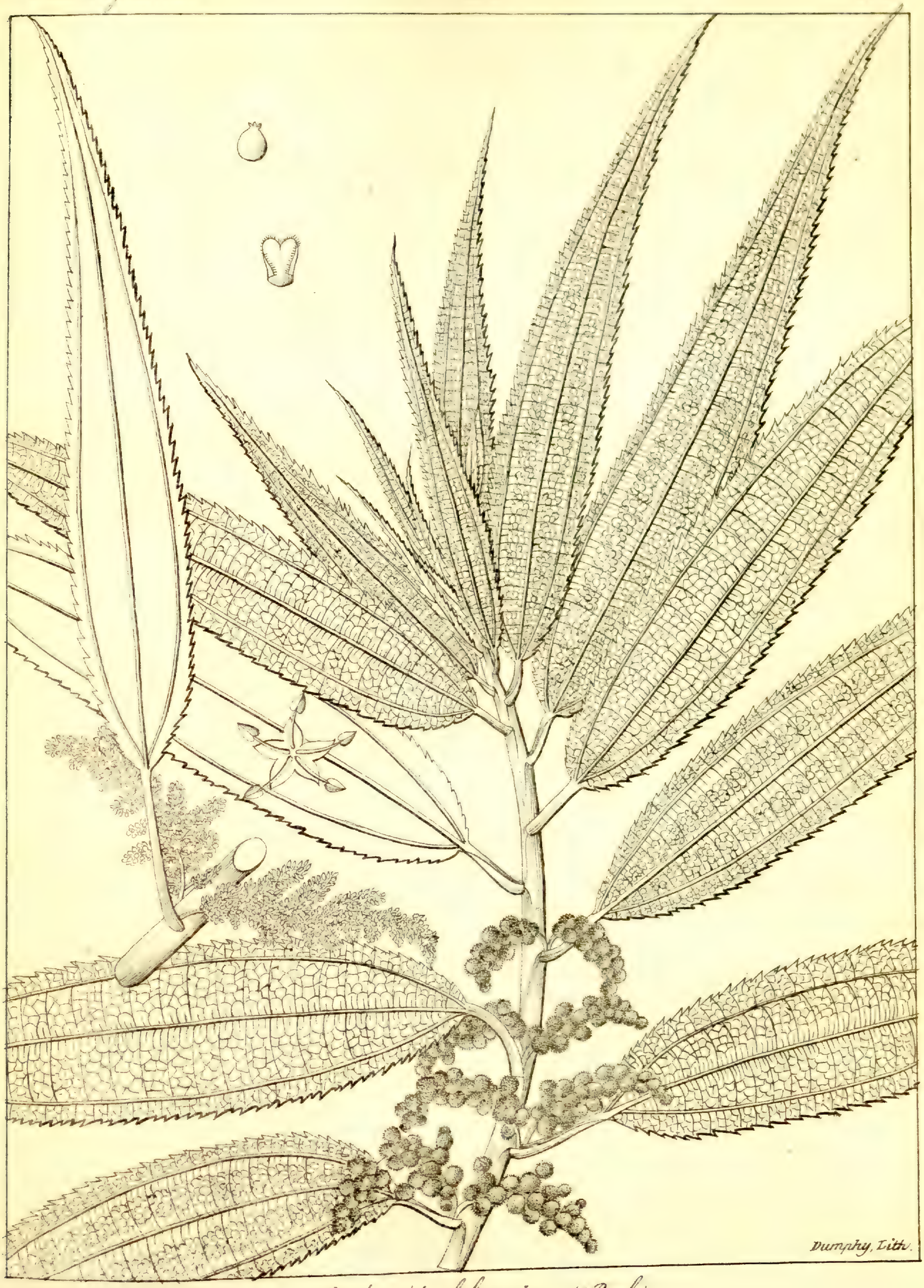


Artocarpus Lacucha (Roxb)



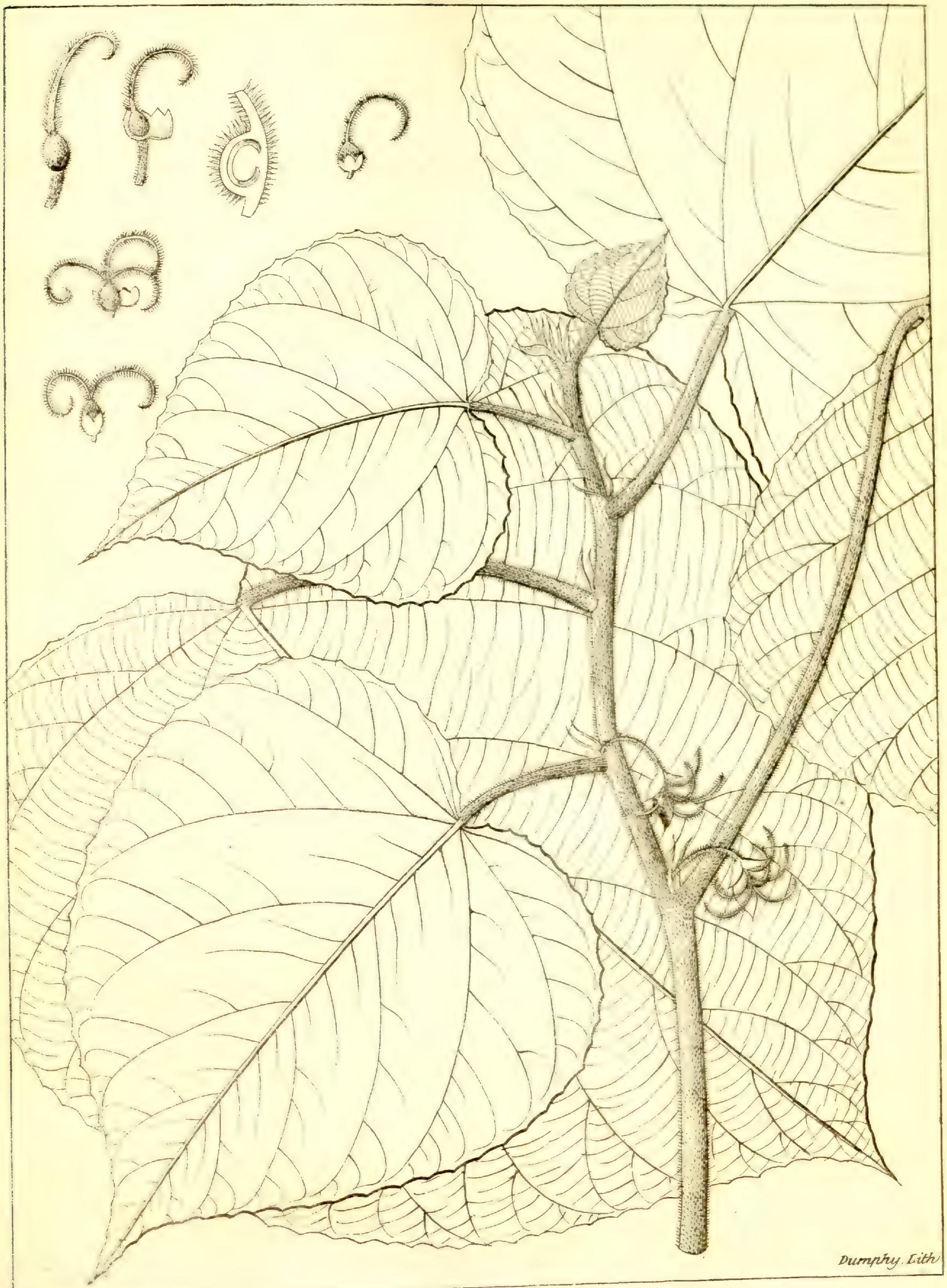
Dumphy, Lith.

Artocarpus Chaplasha (Roxb)



Urtica pulcherrima (Roxb.)

Urtica mauleiflora (Roxb)



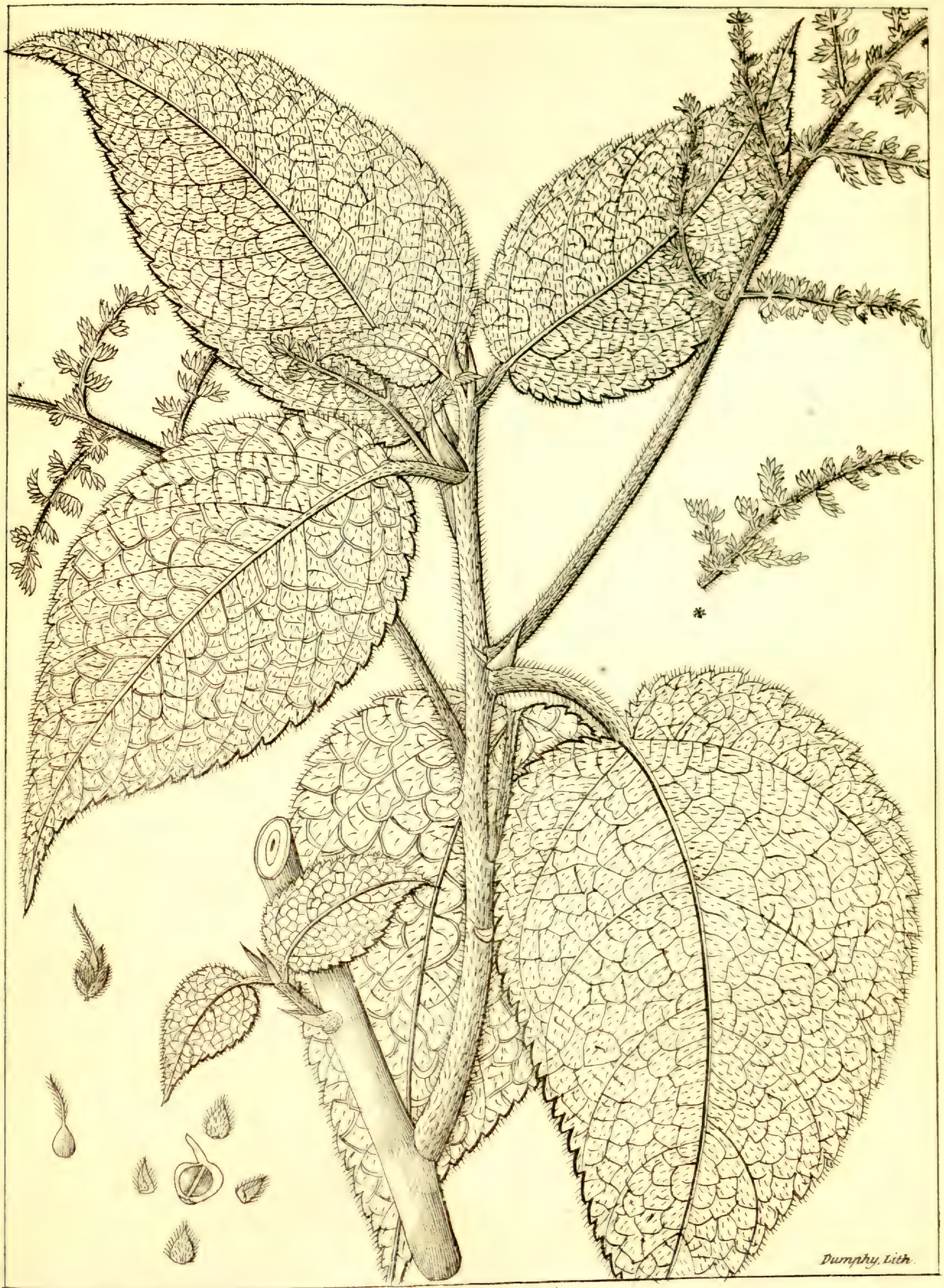
Urtica involucrata (Roxb.)

Dumphy, Lith

Urtica crenulata (Roxb.)

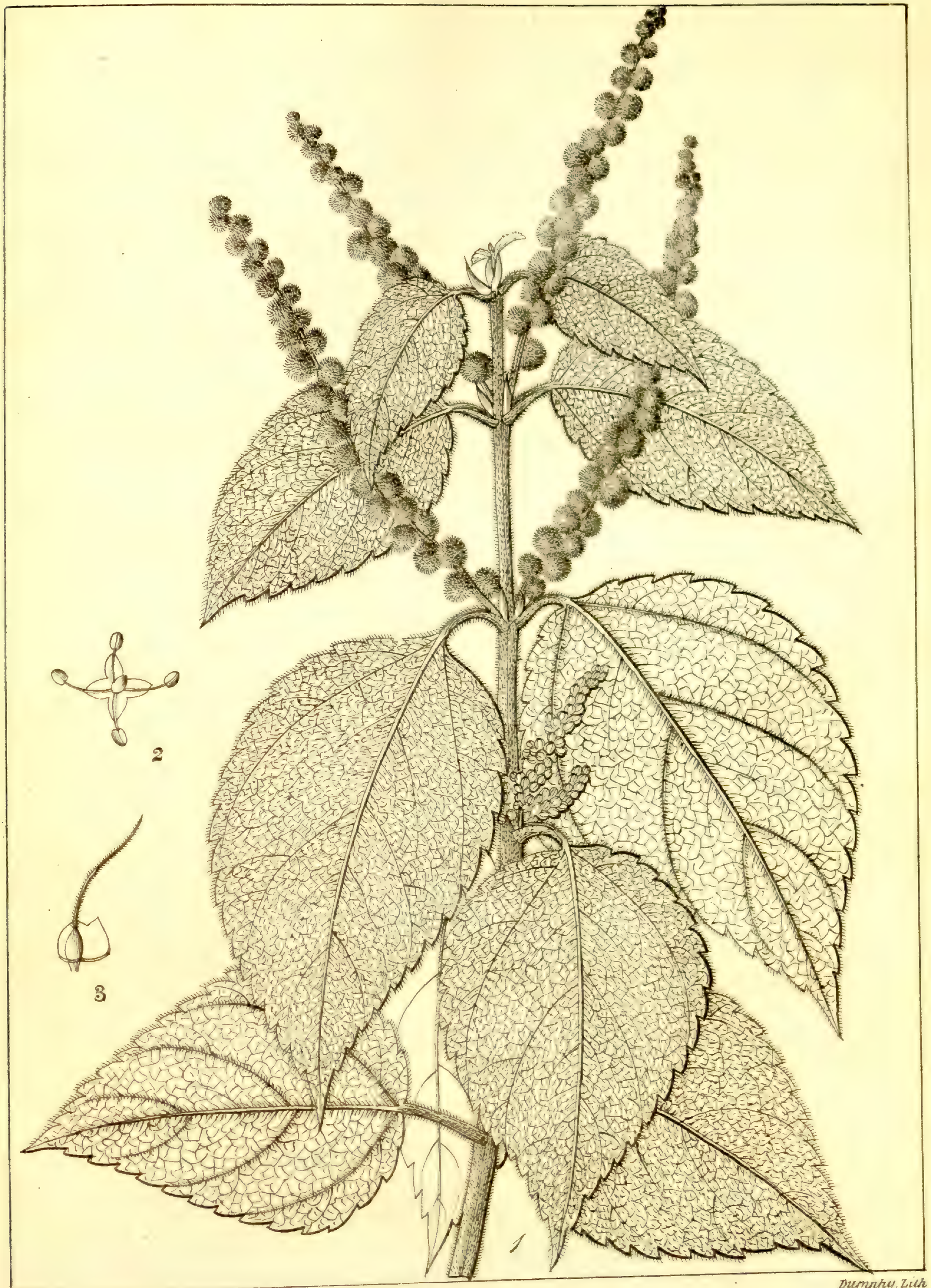
Urtica heterophylla (Roxb- Vahl?)

Urtica tenacissima. Roxb.



Urtica decumana (Rumph.)

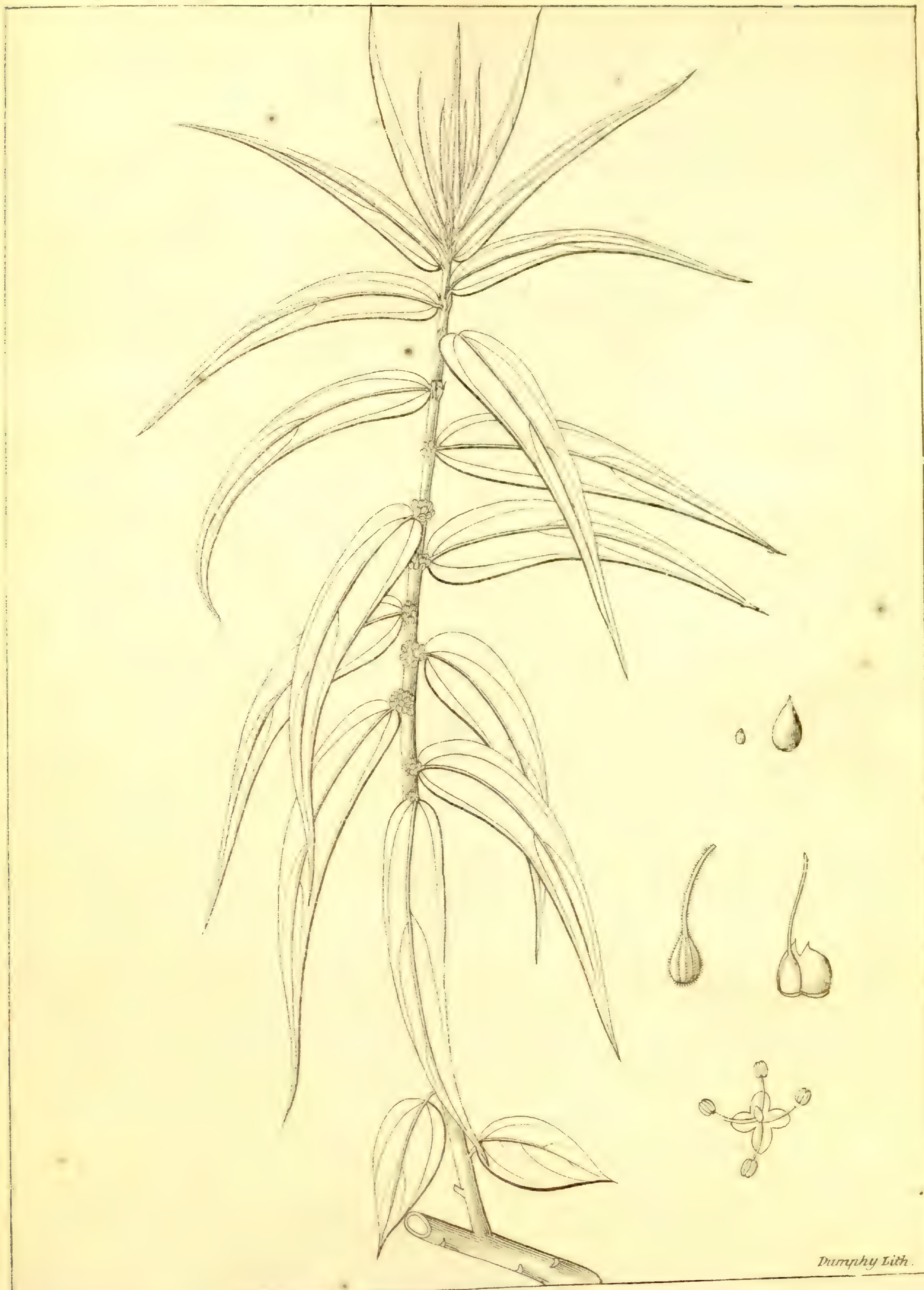
Urtica parviflora (Roxb)



Urtica scabrella (Roxb)

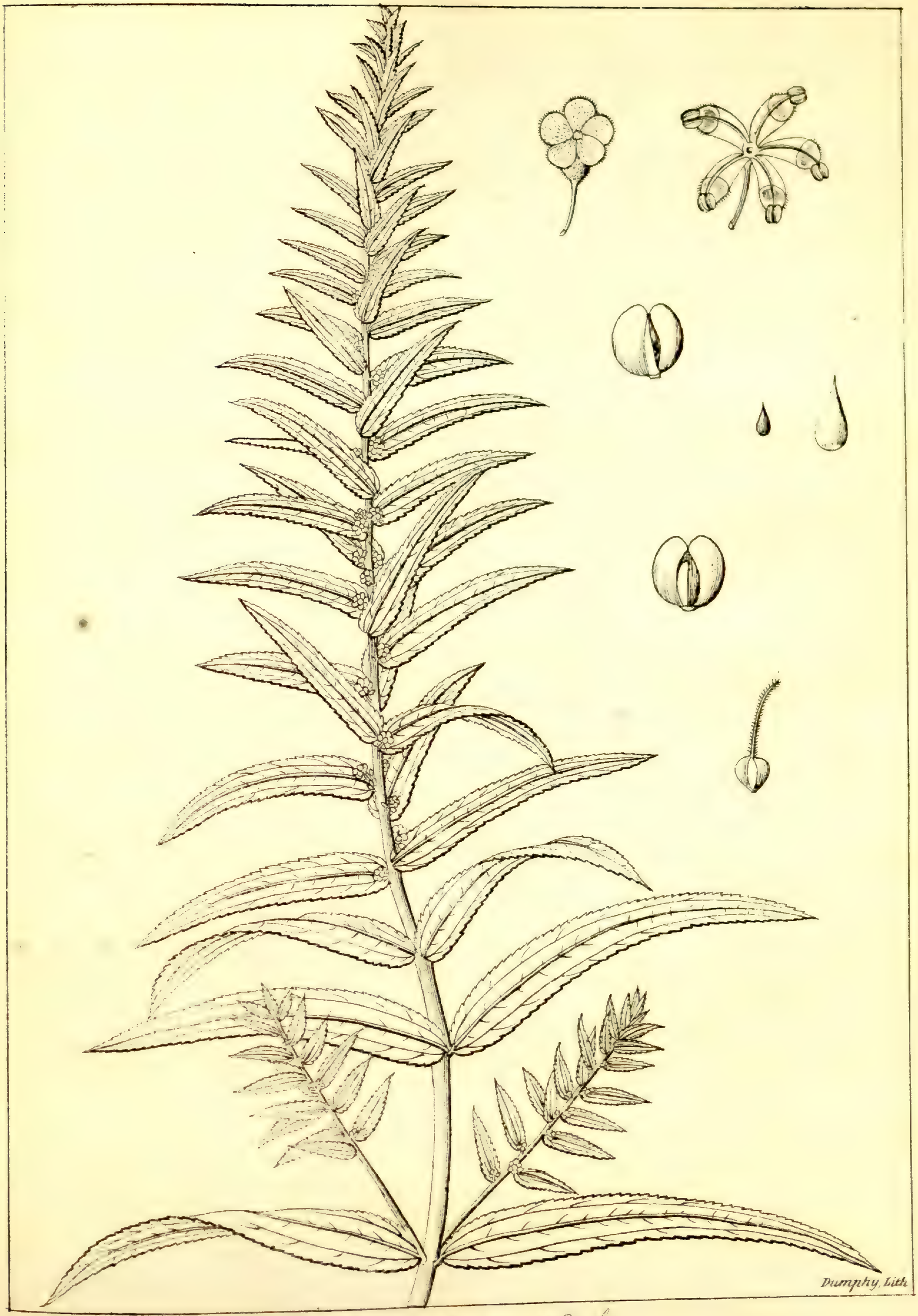
Urtica interrupta (Roxb)

Urtica alienata (Roxb.)

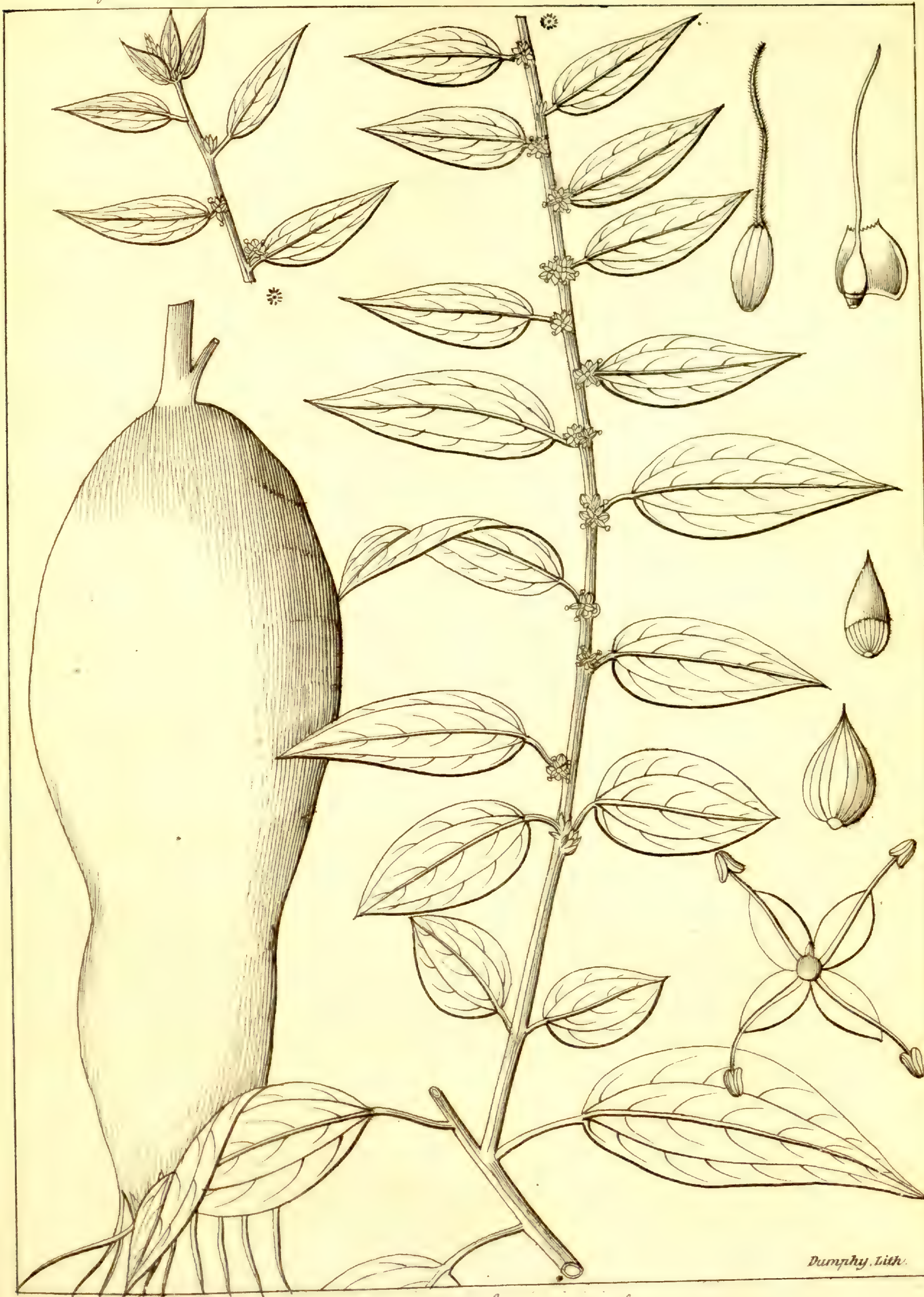


Urtica fruticosa (Roxb.)

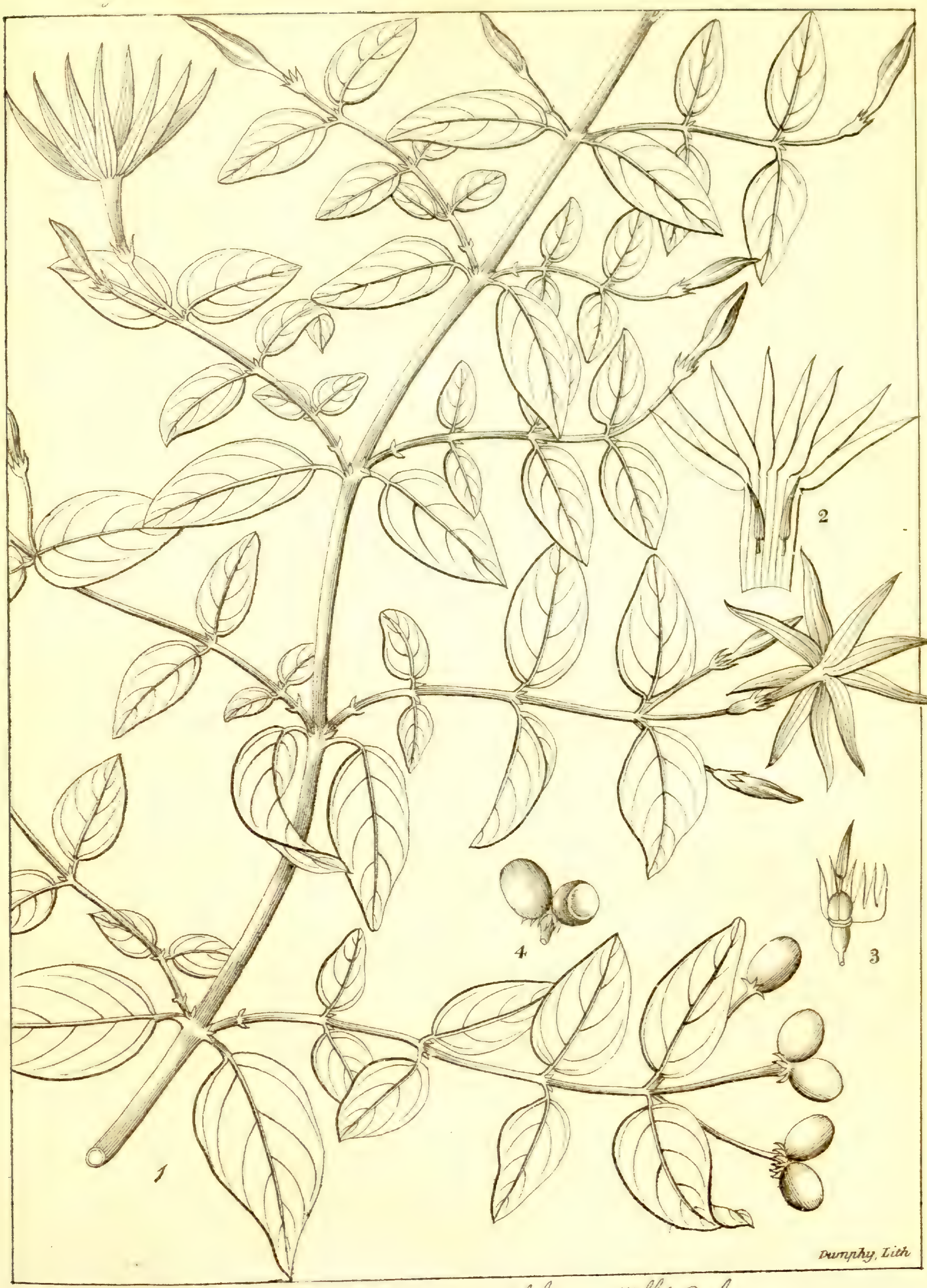
Urtica vesicaria (Roxb)



Urtica pentandra (Roxb.)



Urtica tuberosa (Roxb)



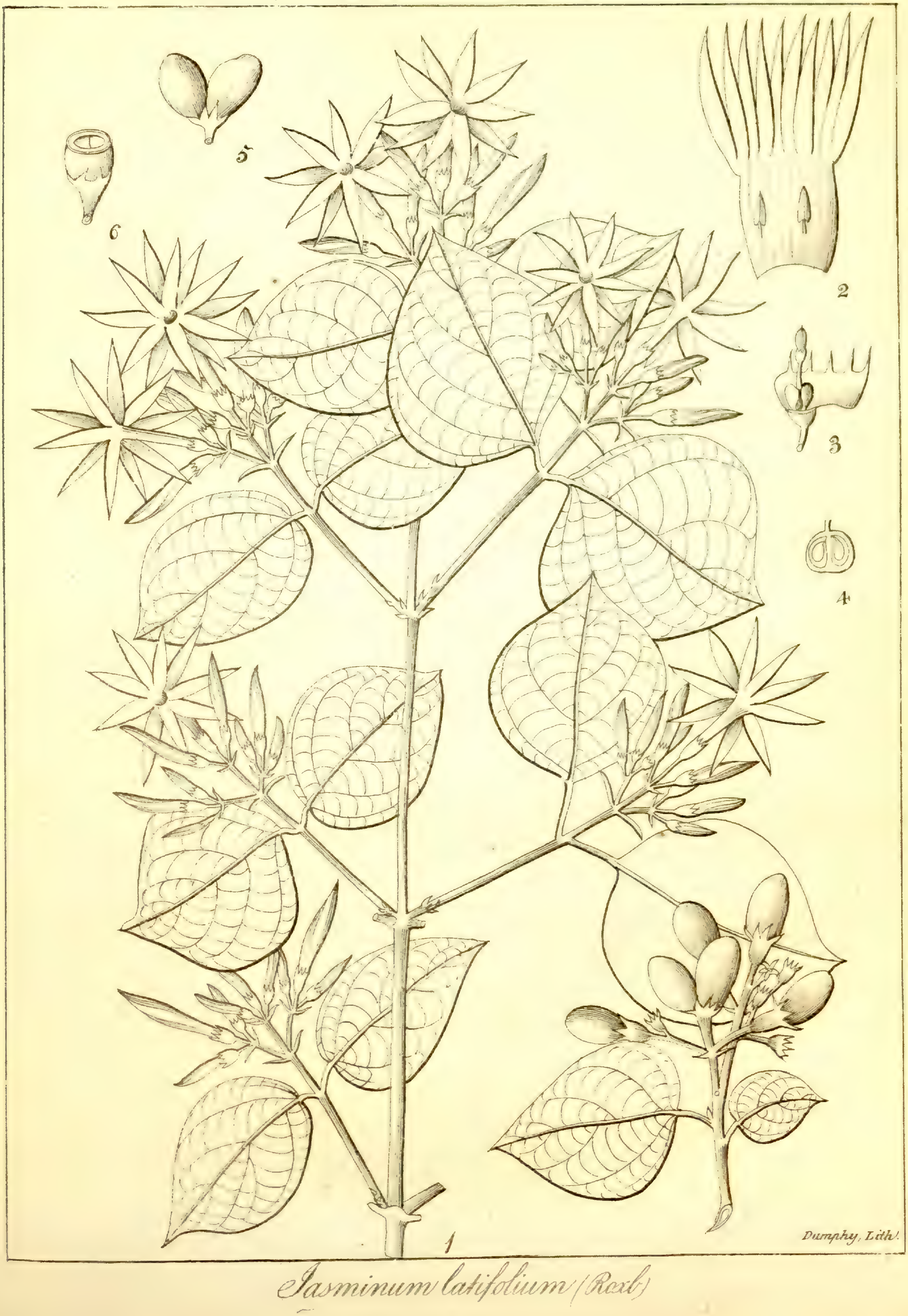
Jasminum angustifolium (Willd Roxb)
Nyctanthes angustifolium (Linn)

Jasminum arborescens (Roxb)

Jasminum auriculatum (Vahl. Roxb)

Jasminum elongatum (Lin. Roxb.)

Jasminum hirsutum (Lin Sm)
Jasminum pubescens (Willd Roxb)



Jasminum latifolium (Roxb)

Jasminum sambac (L. Aiton. Roxb.)

Jasminum simplicifolium (Forst.-Roxb.)

Ixora acuminata (Roxb.)

Roxburghiana.

Dumphy. Lith.

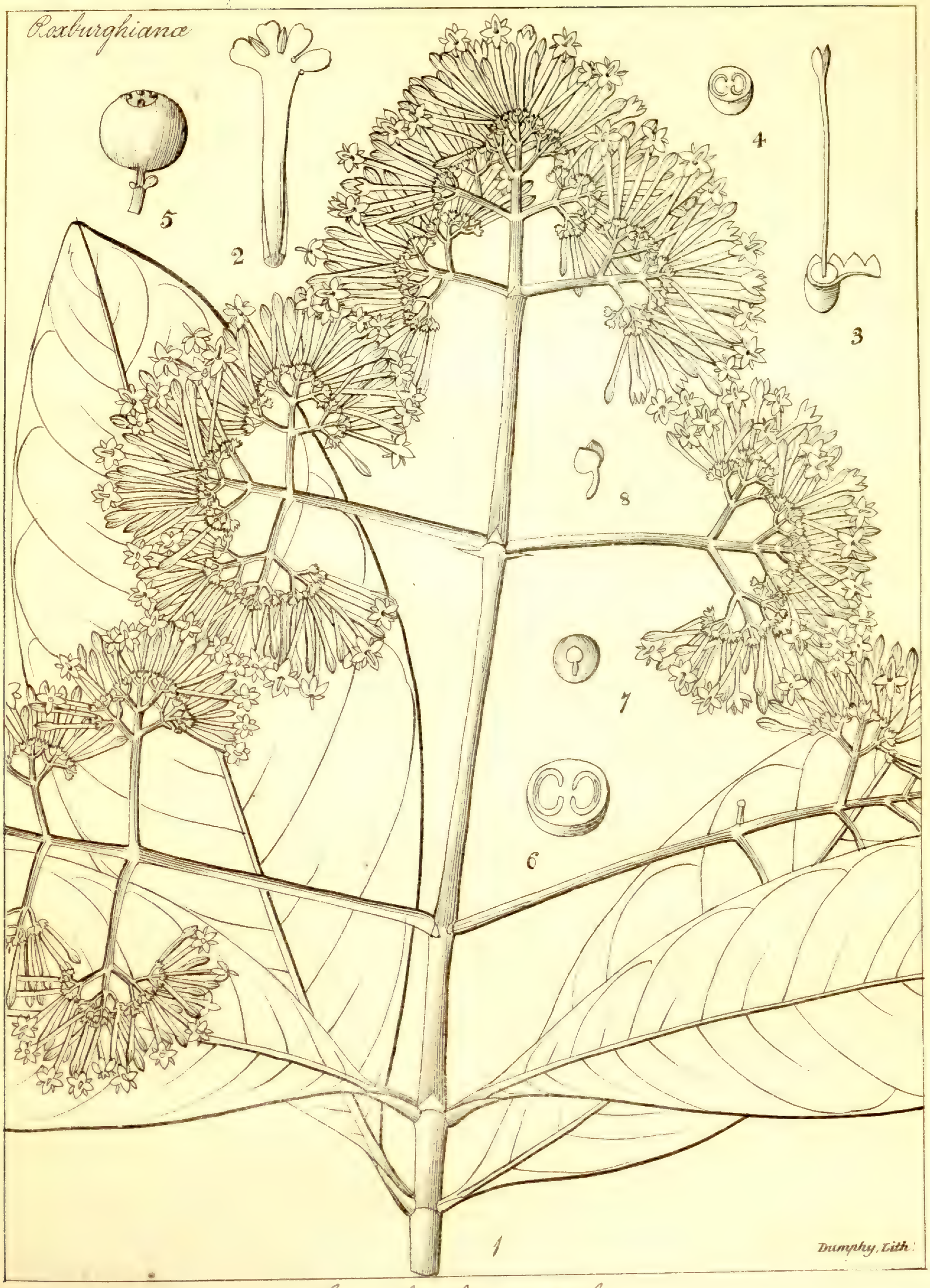
1. Ixora alba (Roxb.)
2. I. stricta (var Roxb.)

Roxburghianæ.

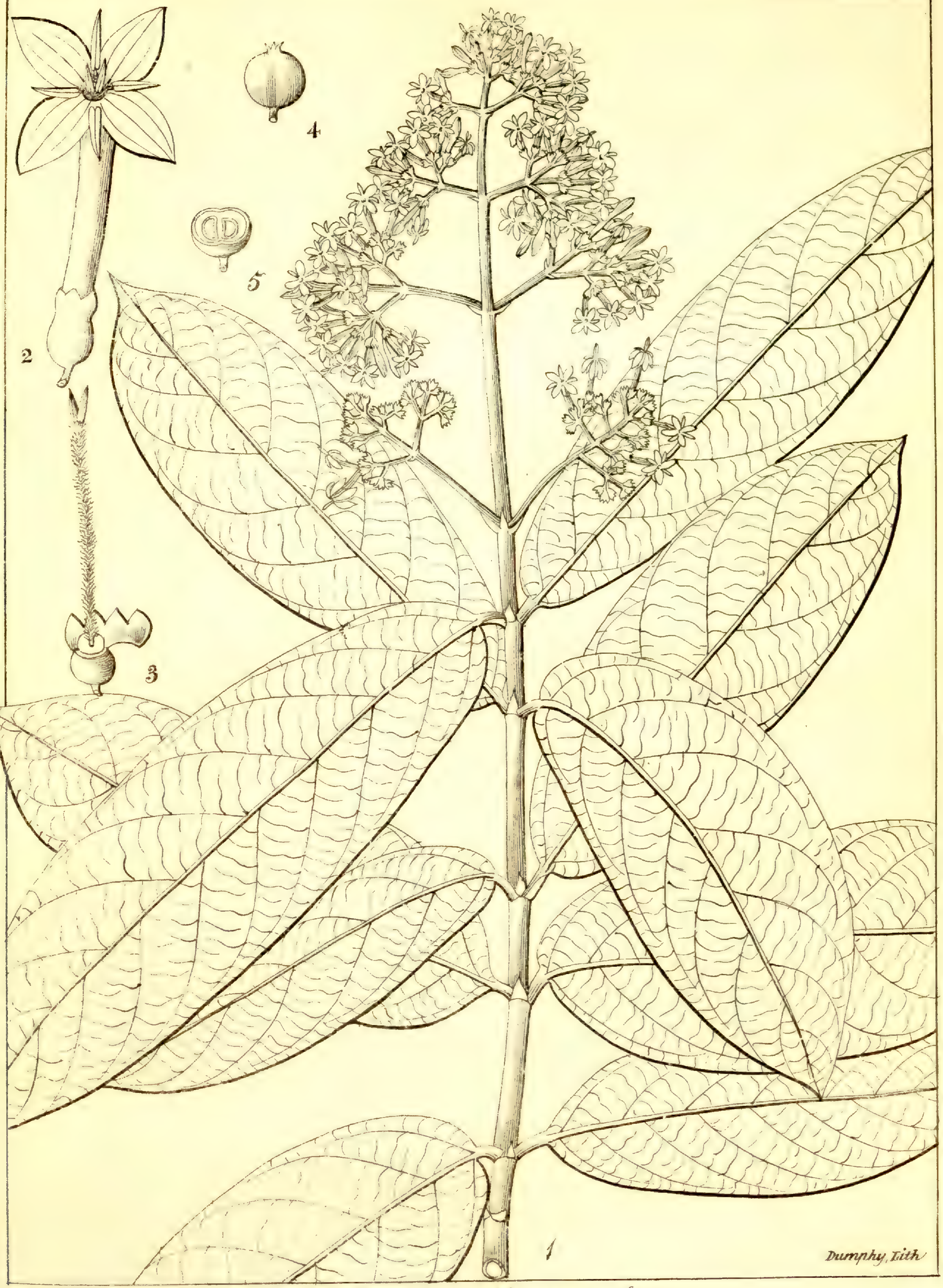
Ixora undulata (Roxb)

Ixora cuneifolia (Roxb.)

Roxburghianæ



Ixora brachiata (Roxb.)



Ixora parviflora (Roxb.)

Roxburghianæ

Polycarpæa corymbosa (Lam:)

Roxburghianæ

4

3

2

1

Dumphy, Lith.

Amarantus tristis (Lin- Roxb.)

Amarantus polygamus (Lin-Roxb)

Roxburghianæ.

Amarantus oleraceus (Lin. - Roxb.)

Roxburghianæ

2

3

4

1

Dumphy, Lith.

Amarantus lanceolatus (Roxb.)

Roxburghianæ

Dunphy, Lith.

Amarantus fasciatus (Roxb.)

Roxburghiana!

Amarantus tenuifolius (Willd R.)

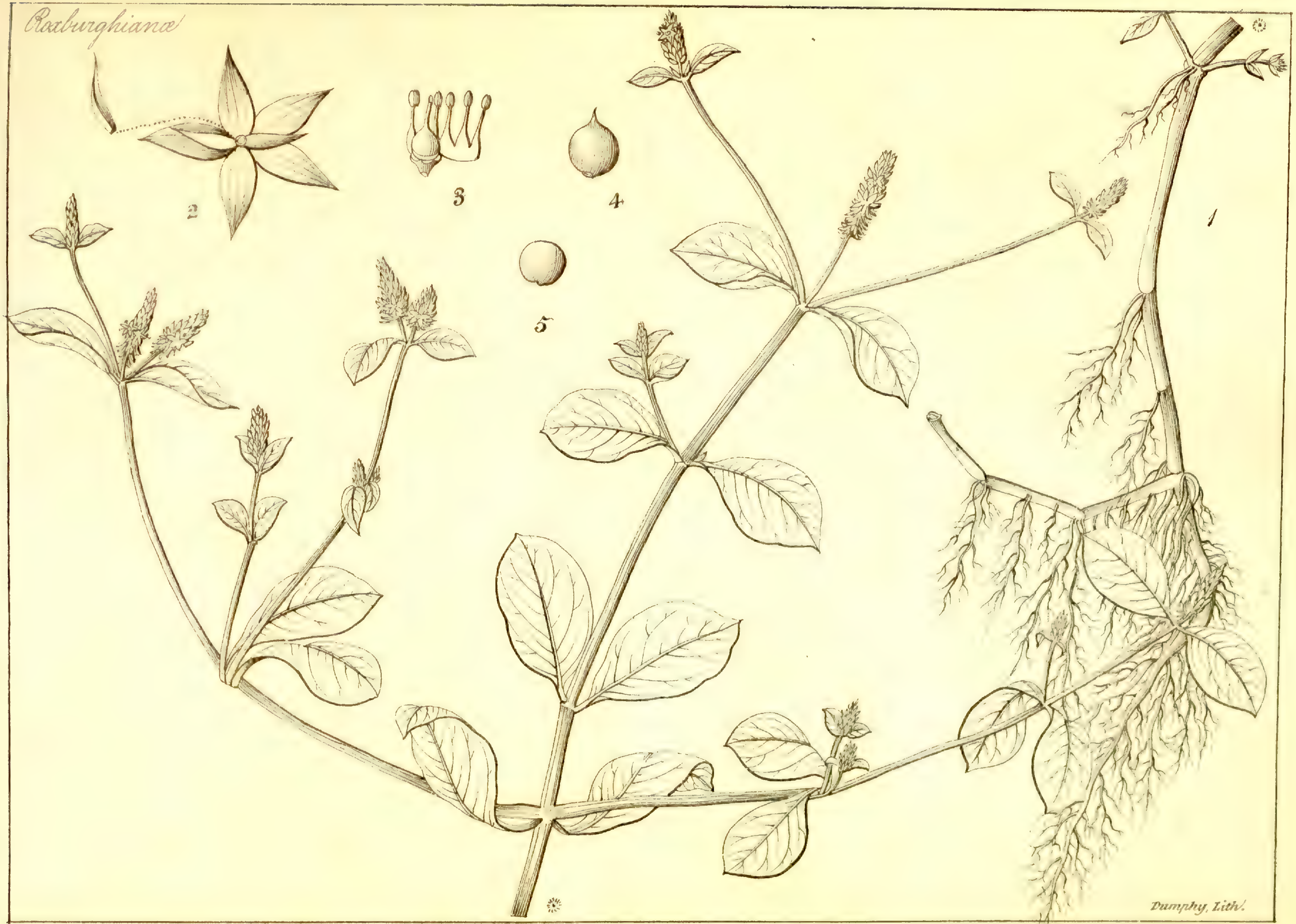
Amaranthus polygonoides (Lin. Roxb.)

Roxburghiana

Murphy, Delt.

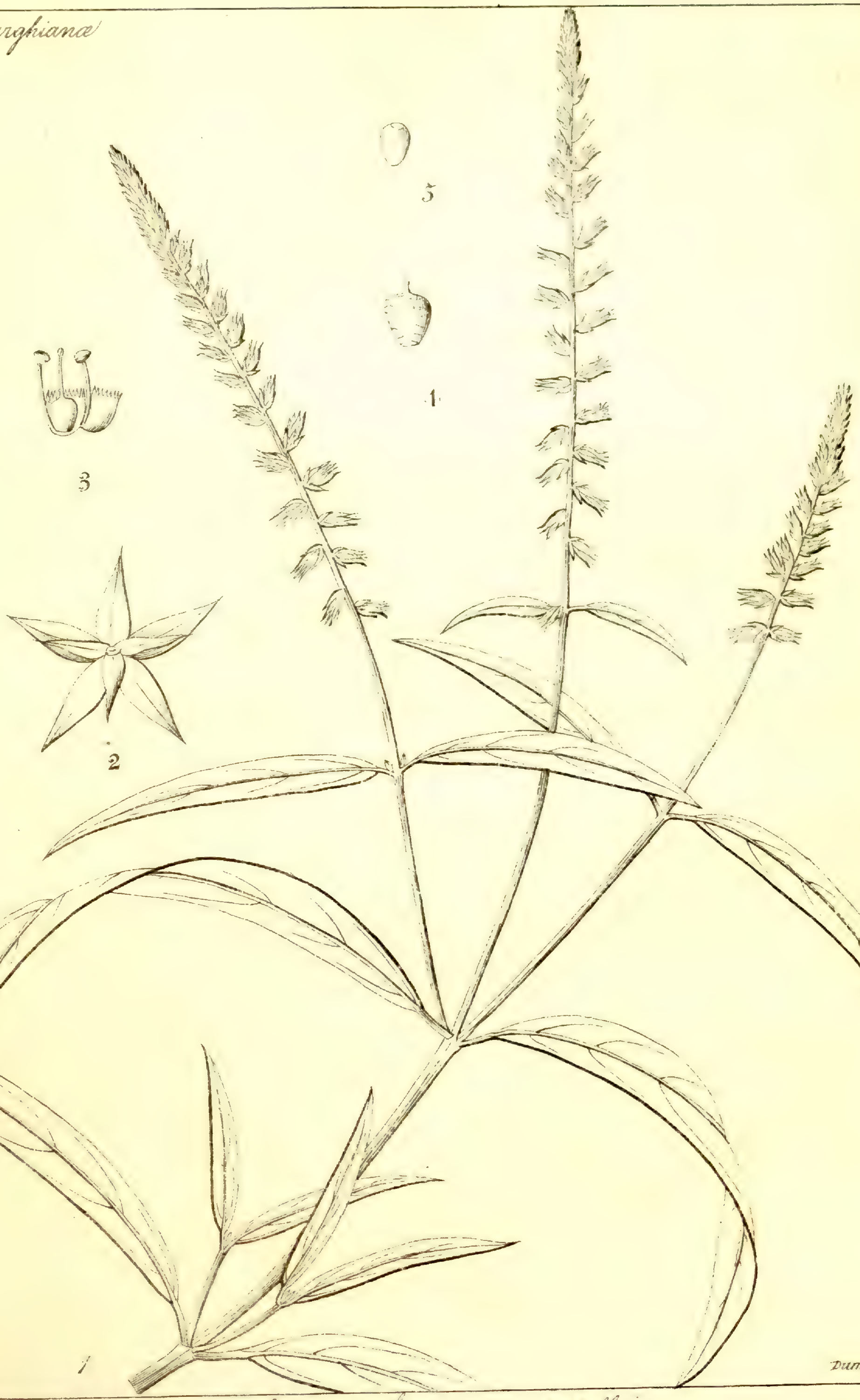
. Amarantus frumentaceus Buch-Roxb.

Roxburghianæ



Leiospermum ferrugineum (Wall.)
Achyranthes ferruginea (Roxb.)

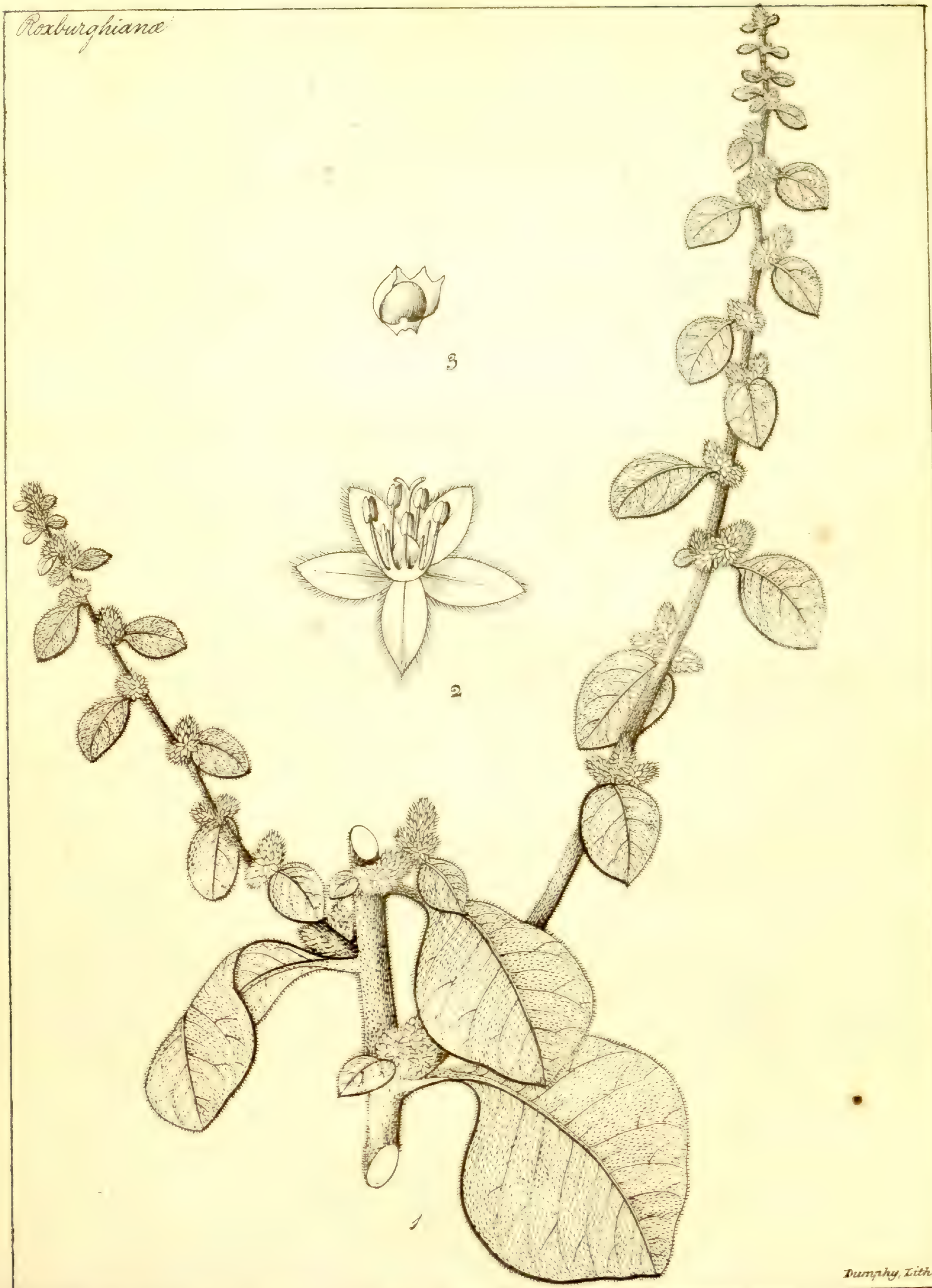
Roxburghianæ



Dumphy, Lith

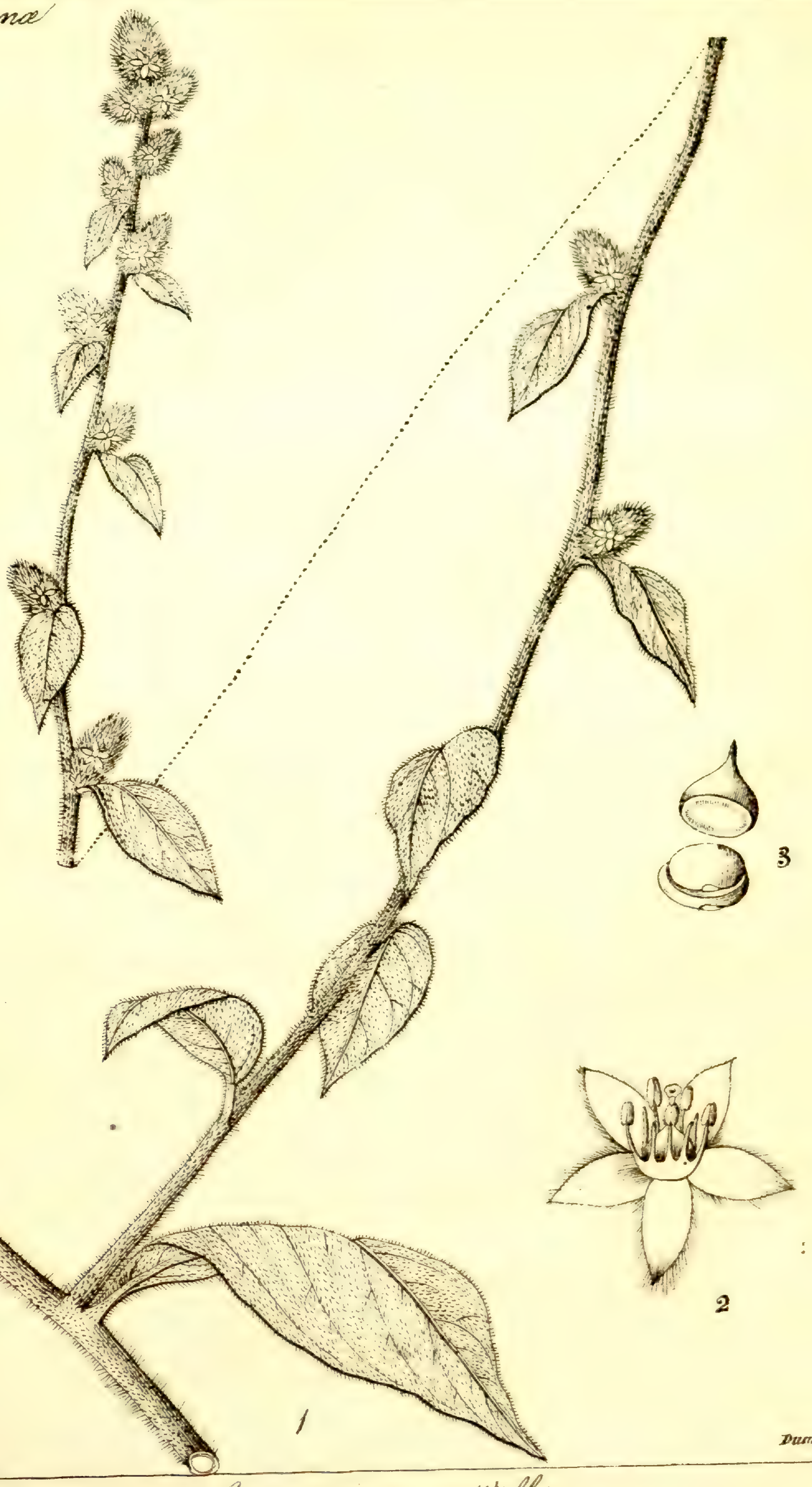
Centrostachys diandra (Wall.)
Achyranthes diandra (Roxb.)

Roxburghianæ



Acnua lanata (Juss)
Achyranthes lanata (Lin)

Roxburghianæ

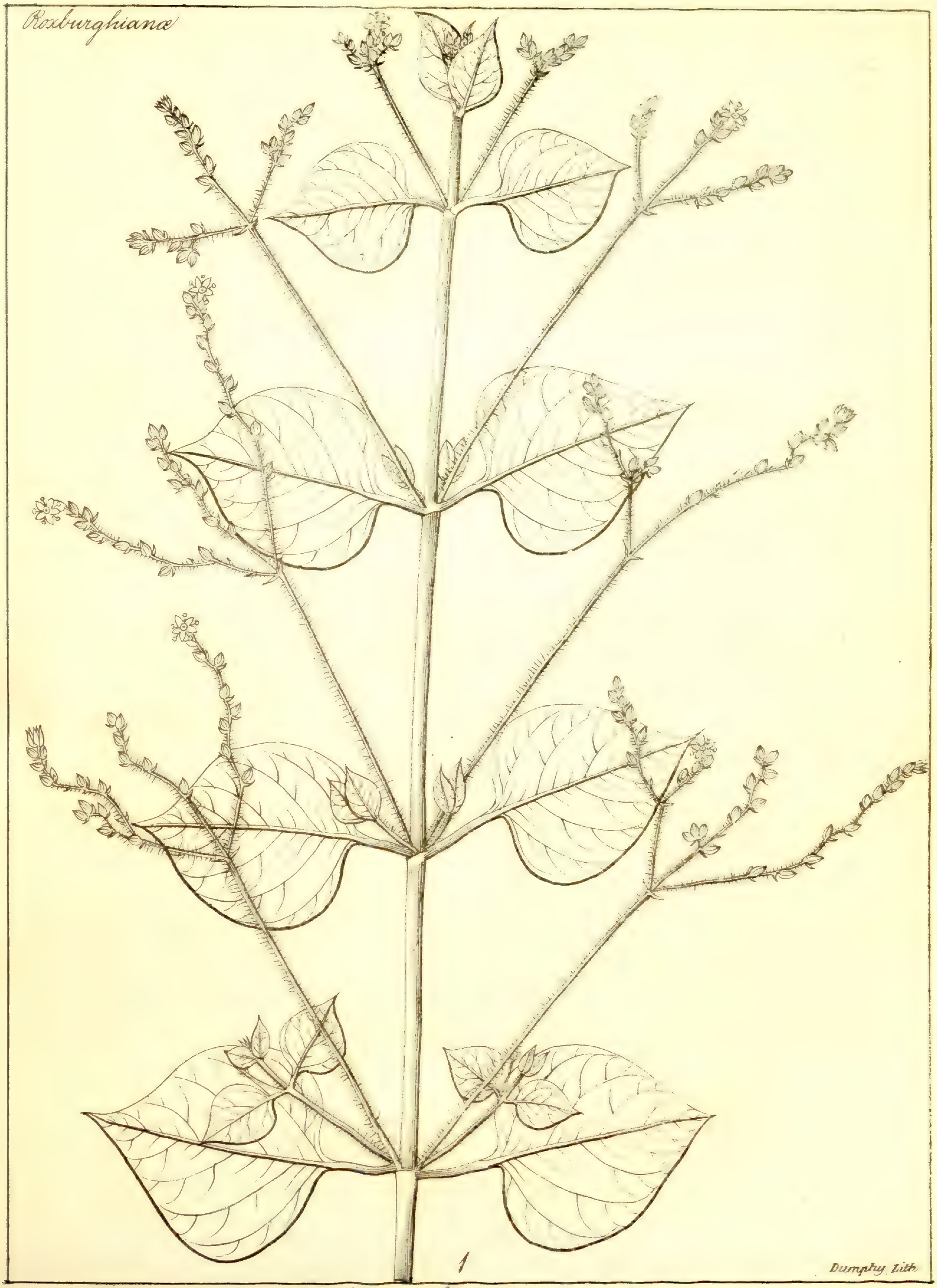


Aerua scandens (Wall.)
Achyranthes scandens (Roxb.)

Roxburghiana.

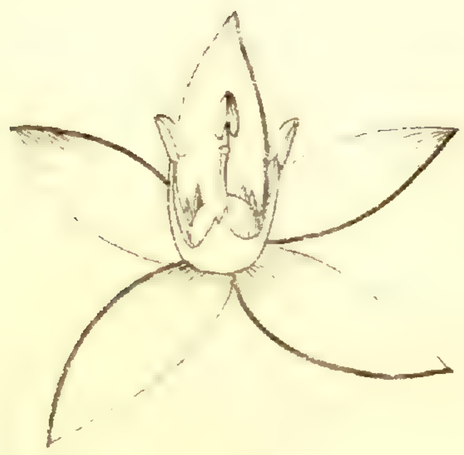
Aerua monsonea (Mart)
Achyranthes monsonea (Pers)

Roxburghianæ



Achyranthes sericea (Koen. Roxb.)

Roxburghianæ



Dumphy, Lith.

Alternanthera sessilis (R. B.)
Achyranthes triandra (Roxb.)

Roxburghianæ.

Dumphy, Lith.

Deeringea celosioides (Brown Roxb.)
Celosia baccata (Koen (R. M. S. S.)

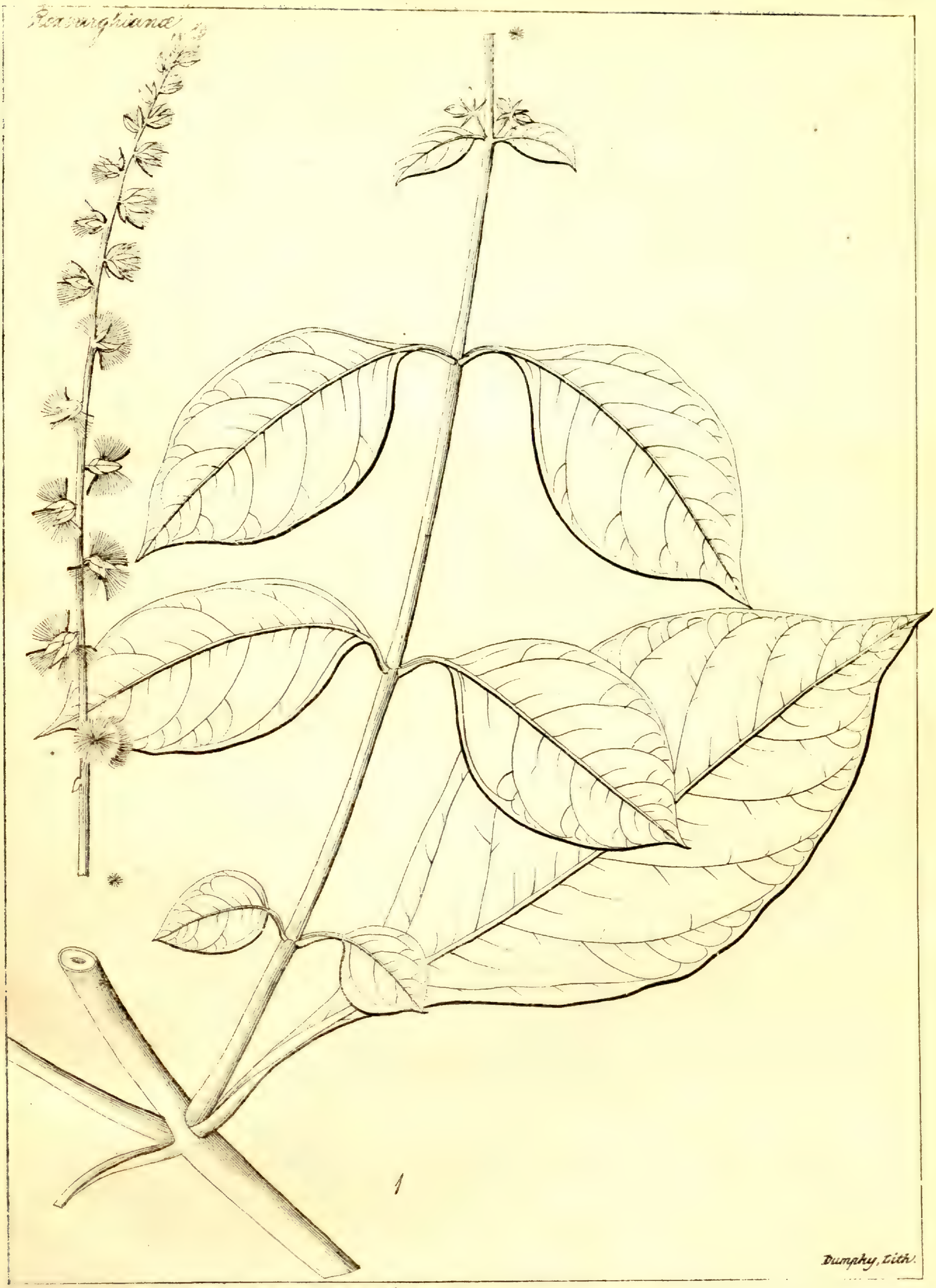
Roxburghianæ

Doeringea tetraquna (Roxb. Fl. Ind.)
Celosia tetragyna (Roxb. MSS.)

Roxburghianæ

Celosia Cernua / Roxb.)

Roxburghiana



1

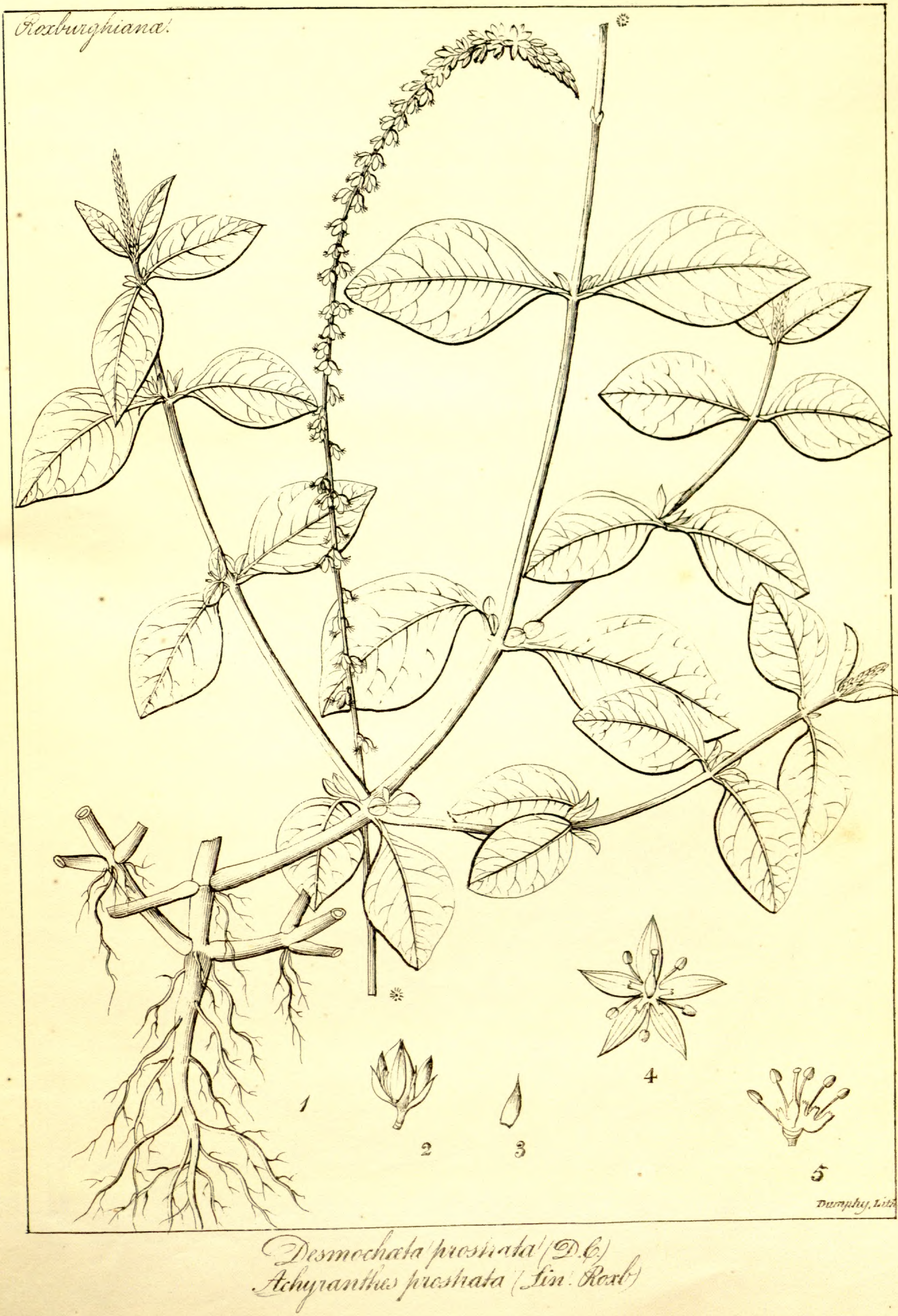
Dumphy, Lith.

Desmochæta atropurpurea (D.C)
Achyranthes lappacea (Lin - Roxb)

Roxburghianæ

Desmochæta muricata (D.C.)
Achyranthes muricata (Lin. Roxb)
Sericocoma pungens (Lam: Roxb. H. Ind)

Roxburghianæ.



Desmochæta prostrata (D.C.)
Achyranthes prostrata (Lin. Roxb.)

Roxburghianæ

Chionanthus ramiflora (Roxb)

Roxburghiana

3

2

1

Dumphy, Lith!

Olea Roxburghii (R. & Sch.)
Olea paniculata (Roxb. non R. Br.)

Roxburghianæ.

5

6

4

3

2

1

Drumphy. Lith.

Olea clanata (G. Don)
Phillyrea paniculata (Roxb)
P. terminalis affinas (Roxb M.S.S)