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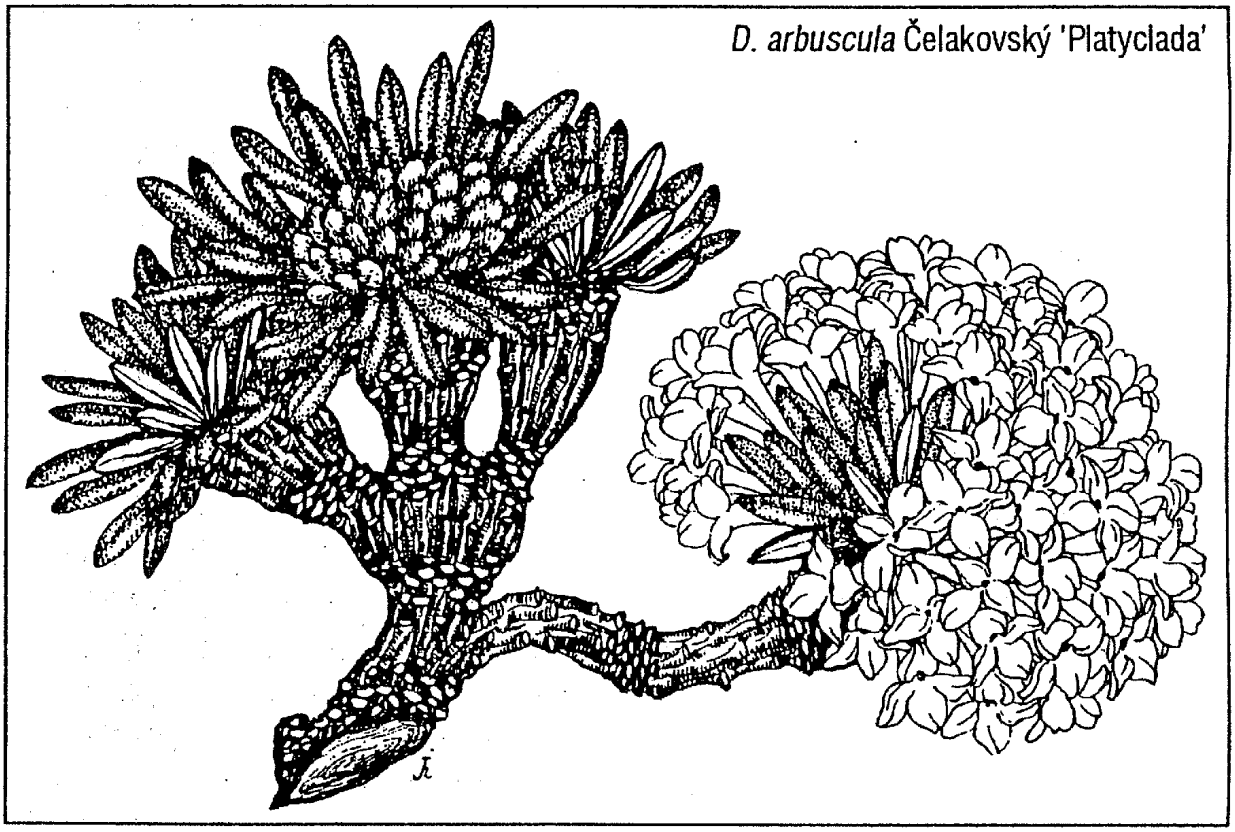

Josef J. Halda: Some taxonomic problems in the genus *Daphne* L.

Josef J. Halda, Ladislav Horáček: New descriptions and combinations

Some taxonomic problems in the genus *Daphne* L. II.

Některé taxonomické problémy v rodu Daphne II.

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Abstract. The genera *Diplomorpha* Meisner, *Rhamnoneuron* Gilg and *Wikstroemia* Endlicher belong to the genus *Daphne* L. and are united in this work as subgenera. The subgenus *Wikstroemia* is divided into several sections. Many new combinations and new mames are made.

Keywords: Daphne, taxonomy, system.

Introduction

The genera *Daphne* and *Wikstroemia* (including *Diplomorpha* and *Rhamnoneuron*) are recognized as having leaves generally alternate (*Daphne*) or leaves generally opposite (*Wikstroemia*), but these both possibilities are frequent in both genera. Styles are mentioned as very short or none in *Daphne*, short to very short in *Wikstroemia*, but again both possibilities exist in both genera. Only the shape of hypogynous disc has been regarded as an important diagnostic feature - "typical" daphnes have mostly an annular or cup-shaped disc (but for example disc of *D. aurantiaca* is very irregular, variable and the shape is quite gradual from the annular rings to the scaly discs. "Typical" wikstroemias have mostly scaly, subulate or claper-shaped discs, but in each group is not so difficult to find a cup-shaped form, a feature which obstructs sharp separation of these two genera.

Endlicher's generic diagnosis of "*Wickstroemia*" (1833) runs as follows: "Perigonium corollinum, infudibuliforme, medio ventricosum, limbo quadrifido, fauce nuda. Stamina 8, inclusa. Ovarium squamis linearibus quatuor cinctum. Stylus terminalis brevissimus. Ragma capitatum. Drupa baccata, monosperma.- Folia opposita. Sticemus terminalis". The name was given to honour Professor J. E. Wikstrom, the Swedish botanist and monographer of *Thymelaeaceae*. Endlicher had no right to spell the name *Wickstroemia*. In Genera Plantarum (1836-40) he also wrote *Wickstroemia*, but Enchiridion botanicum (1841) has *Wikstromia* on p. 209 and *Wickstromia* in the index (p. 762). Many authors continued to use the wrong spelling, among them Wawra and Rock, but the principal systematic handbooks, Meisner, Bentham & Hooker, Engler & Prantl, etc. use the correct form. Meisner (1856) distinguished two sections:

1) *Euwikstroemia* with 14 species; the characters given were: "Bacca succosa, nuda. —Folia omnia opposita", and 2) *Diplomorpha* with 5 species: "Nucula crustacea sicca ——. Semen albuminosum. — Folia sparsa vel passim — opposita". The name *Diplomorpha* was, as we have seen, taken up by Heller because the name *Wikstroemia* had been used by Schrader (1821) in a different sense.[*Wikstroemia* Schrad. = *Laplacea* H. B. K. (*Theaceae*)]. Gilg (1894) brought *Wikstroemia* to tribe *Daphneae*, which lacks petaloid scales and has two whorls of stamens; this includes five subtribes of which two interest us here, *Wikstroemiinae* and *Daphninae*, the former with, the latter without, what Gilg calls "Receptaculareffigurationen". As has been convincingly shown by several authors Gilg's receptacle is a hypanthium, but even if it be true that we cannot speak of disc effigurations in *Daphne*, the cup in this genus is homologous with the disc scales in *Wikstroemia*, often very similarly shaped. Gilg retains Meisner's two sections of *Wikstroemia*: *Euwikstroemia* is said to have, as a rule, a glabrous tube and a drupe while *Diplomorpha* has a sericeous tube and a dry fruit. Domke's system agrees in the main with Gilg's: *Daphneae-Wikstroemiinae*, but limited to *Wikstroemia*. He is of the opinion (1934) that *Euwikstroemia* is closely related to the genus *Phaleria* Jack: "Zahlreiche Arten der Untergattung *Euwikstroemia*— erinnern im Charakter der Inflorescenz, der Blater und Blattstellung so stark an *Phaleria*, dass beide Gattungen nur durch den Diskus und den Bau des Fruchtknotens getrennt sind. Diese Unterschiede verlieren noch an Wert, wenn mann bedenkt dass bei *Phaleria* die Diskusmanschette tief gelappt sein kann (Fig. 36h), und zuweilen nur ein Fruchtknotenfach (*Phaleria Perotteiana*) zur Entwicklung gelangt". — In opposition to all later authors, Hamaya (1959) has reestablished *Diplomorpha*: "Fruit succulent. Peduncles persistent. Leaves opposite" in *Wikstroemia*; "Fruits dry. Peduncles falling together with the upper parts of branchlets. Leaves opposite or alternate" in *Diplomorpha*. — With regard to the difference between *Wikstroemiinae* and *Daphninae*, Domke regarded the form or the disc as distinctive in the latter. (Skottsberg 1972).

Daphne L. subg. *Wikstroemia* (Endl.) J. J. Halda stat. nov.

[bas: genus *Wikstroemia* Endl., Prod. Fl. Norfolk. 47 (1833), as *Wickstroemia*, nec Schrader 1821 (*Theac.*), nec Sprengel 1821 (*Comp.*), nom. gen. cons.; Gen. Pl. 332 (1837), Suppl. 4:68 (1847); Domke, Bibl. Bot. 111:124, t.4 f.36 r & s, map 6, excl. syn. *Stellera* L. n. 2 - *Capura* Linne, Mant. Pl. 2:149 (1771), nom. gen. rejic.; sect. *Euwikstroemia* Meisn. in DC Prodr. 14:543 (1857); subgen. *Euwikstroemia* Domke, Bibl. Bot. 111: tab. facing p.58 (1934)].

Type species: *D. endlicheriana* J. J. Halda [*Wikstroemia australis* Bauer ex Endl.].

Bacca succosa, nuda. Semen exalbuminosum. Folia opposita vel subopposita (raro passim subsparsa). Flores capitati vel fasciculati vel breviter racemoso-spicati.

Shrubs or undershrubs, sometimes trees. Leaves opposite or decussate, very rarely ternate, of various texture and shapes. Inflorescences terminal and/or axillary, fascicled or solitary, spicate, racemose, umbelliform or capitate, often ebracteate. Flowers subsessile or distinctly pedicelled, 4- or 5-merous; pedicel articulated. Floral tube cylindric or tubular, sometimes slightly funnel-shaped, usually caducous after anthesis, rarely persistent for some time. Petaloid

appendages O. Hypanthium-lobes usually in two pairs, imbricate, the external ones cucullate and usually slightly longer than the thinner ones. Stamens sessile or filamentous, twice as many as the lobes, included, in two distinct series, usually both free from the upper half of the tube; anthers oblong, basifixed. Disk membranous, cup-shaped and slightly crenate or dentate, deeply lobed, or free and scale-like. Pistil sessile, rarely short-stiped, included. Ovary usually ellipsoid, glabrous or hairy at the top, 1-celled; style terminal, short, distinct or obscure; stigma large, capitate or disciform, rarely cylindric to ovoid. Fruits drupaceous, sometimes surrounded by the dried remains of the floral tube; pericarp fleshy or membranous. Seeds of the same shape as the fruit; embryo with thickened or flattened cotyledons and short or slightly elongated hypocotyl.

Fig. 1: *D. endlicheriana* J. J. Halda [Endlicher (1840)].

Daphne subgen. *Wikstroemia* (Endl.) J. J. Halda sect. *Wikstroemia*.

As above.

Type species: *D. endlicherianaJ.* J. Halda.

Subgen. *Wikstroemia* sect. *Brachystachyae* (S. C. Huang) J. J. Halda stat. nov.

[bas: genus *Wikstroemia* ser. *Brachystachyae* S. C. Huang in Acta Bot. Yunn. 7(3):282 (1985)].

Inflorescentia initio subcapitata post anthesin in spicam brevem elongata; perianthium 4-raro 5-lobatum.

Type species: *D. hainanensis* Merr.

Subgen. *Wikstroemia* sect. *Micranthae* (S. C. Huang) J. J. Halda stat. nov.

[bas: genus *Wikstroemia* ser. *Micranthae* S. C. Huang in Acta Bot. Yunn. 7(3):282 (1985)].

Inflorescentia in paniculam axillaris vel terminalis disposita; perianthium 4-raro 5-lobatum.

Type species: *D. micrantha* (Hemsl.) J. J. Halda

Daphne L. subgen. *Diplomorpha* (Meissn.) J. J. Halda stat. nov.

[bas: genus *Diplomorpha* C. A. Mey. in Bull. Acad. St. Petersb. 4:4 (1843); genus *Wikstroemia* Endl. sect. *Diplomorpha* (C. A. Mey.) Meissn. in Denkschr.Regensb. Ges. 3:289 (1841)].

Flores hermaphroditi, 4-meri. Folia opposita vel subopposita. Nucula crustacea sicca, a calyce demum hinc fisso tarde denudata. Semen albuminosum. Embryo axilis. Folia sparsa vel passim opposita. Flores spicati vel racemosi.

Type species: *D. chamaedaphne* (Bunge) J. J. Halda.

Subgen. *Diplomorpha* sect. *Haoianae* (S. C. Huang) J. J. Halda stat. nov.

[bas: genus *Wikstroemia* ser. *Haoianae* S. C. Huang in Acta Bot. Yunn. 7(3):290 (1985)].

Paniculae terminales vel axillares, densae vel laxae, vel raro e spicis terminalibus ad apicem ramulorum compositae, perianthia 4-raro 5-lobata.

Type species: *D. haoii* (Domke) J. J. Halda

Subgen. *Diplomorpha* sect. *Lichiangense* (S. C. Huang) J. J. Halda stat. nov.

[bas: genus *Wikstroemia* sect. *Diplomorpha* Meisn. ser. *Lichiangense* S. C. Huang in Acta Bot. Yunn. 7(3):284 (1985)].

Inflorescentia terminalis vel ad apicem ramuli lateralis, initio subcapitata post anthesin in spicam brevem elongata; perianthium 4-lobatum.

Type species: *D. lichiangensis* (W. W. Smith) J. J. Halda.

Subgen. *Diplomorpha* sect. *Parviflorae* (S. C. Huang) J. J. Halda stat. nov.

[bas: genus *Wikstroemia* sect. *Diplomorpha* ser *Parviflorae* S. C. Huang in Acta Bot. Yunn. 7(3):288 (1985)].

Inflorescentiae axillares vel flores 1-2 ex axilis foliorum summorum prodientes; perianthium 4-raro 5-lobatum.

Type species: *D. parviflora* (S. C. Huang) J. J. Halda

Subgen. *Diplomorpha* sect. *Scytophyllae* (S. C. Huang) J. J. Halda stat. nov.

[bas: genus *Wikstroemia* sect. *Diplomorpha* ser. *Scytophyllae* S. C. Huang in Acta Bot. Yunn 7(3):288 (1985)].

Inflorescentia spicata vel paniculato-spicata conferta, terminalis, initio contracta post demum elongata, rachidibus robustis; perianthium 5-raro 4-lobatum.

Type species: *D. scytophylla* (Diels) J. J. Halda

Daphne L. subgen. *Rhamnoneuron* (Gilg) J. J. Halda stat. nov.

[bas: genus *Rhamnoneuron* Gilg in Engl. & Prantl, Naturl. Pflanzenfam. 3(6a):245 (1894)].

Arbuscula (bi-metralis), ramulis teretibus ad apicem sparse sericeo-pubescentibus, demum glabratis. Folia alterna, subchartacea, integra, nervis pinnatis incurvis utrinque ad 18. Panicula thyrsoidea, terminalis, nutans, ampla, multiflora, tota praesertim superne sericeo-pubescens, bracteis parvulis. Flores ad apicem pedunculorum quaterni, primum bracteolis ovatis. Hypanthium sordide album, extus dense sericeum, tubulosum, utrinque attenuatum, lobis obtusiusculis erectis. Stamina ad apicem perianthii inserta. Disci squamae in cyathum varie lobatum connatae. Ovarium villoso-sericeum; fructus hypanthio inclusus, pericarpio extus villoso sicco; semen brunneum, laeve, lineare-oblongum. Embryo cotyledonibus crassiusculis villosulis.

Type species: *Daphne balansae* (Drake) J. J. Halda

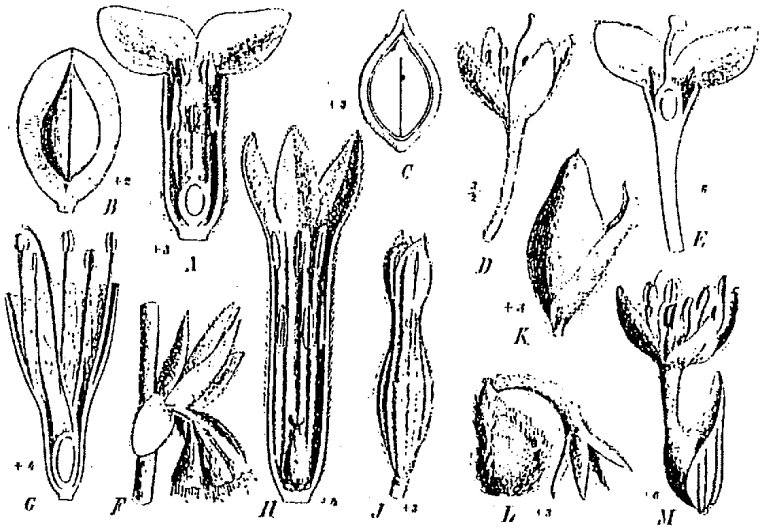

Fig. 76. *A—C Daphne Mezereum* L. *A* Blütenlängsschnitt; *B* Fruchtlängsschnitt; *C* Samenlängsschnitt. — *D, E Osyris Peltu-Pelta* (Hay.) Meisn. *D* ♂, *E* ♀ Bl. — *F, G Daphne palustris* Lion. *F* Habitus; *G* Blütenlängsschnitt. — *H, J Lasiadenia rupestris* Benth. *H* Blütenlängsschnitt; *J* reife Fr., vom Receptaculum umhüllt. — *K Wikstroemia villosa* Hillebr., reife Fr. mit seitlich anhängendem, aufgeplatztem Receptaculum. — *L Stellera Lesserti* C. A. Mey., reifende Fr. mit eben oberhalb des Frkn. abreißendem Receptaculum. — *M Passerina filiformis* L., Bl. mit Bracteole. (Original.)

Fig. 2: Different types of Thymelaeoids [Gilg (1894)].

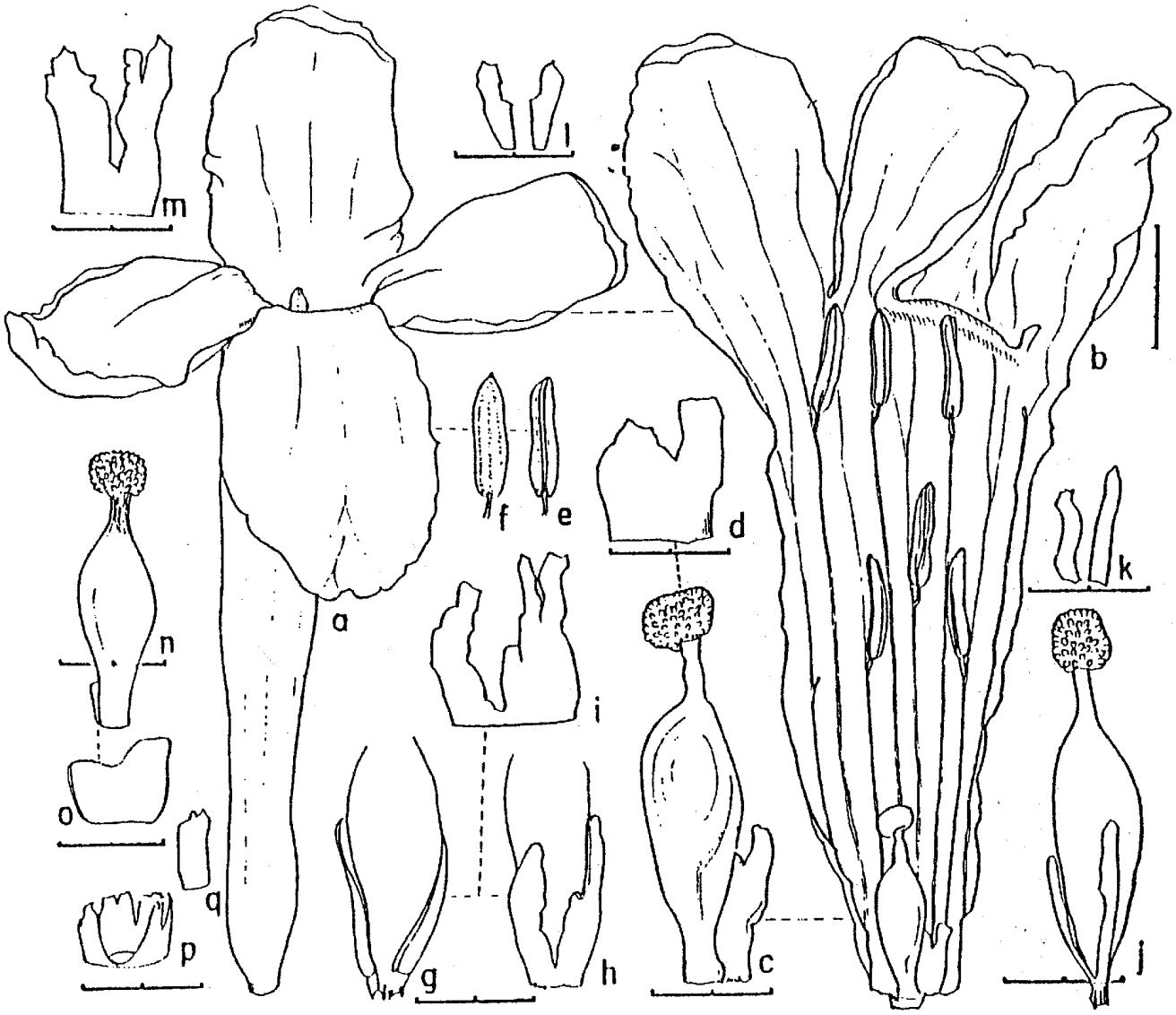

Fig. 1. *Daphne aurantiaca* DIELS. a-f.: FORREST 2115 (lectotype); g-i: FORREST 10033; j: FORREST 10136; k: FORREST 5577; l: ROCK 24822; m: MC LAREN's P. 61; n–o: F. K. WARD 328 (holotype of *D. calcicola*). Flower (a), opened flower (b), pistils (e, g: base of a pistil, h: its opposite side, j, n), hypogynous discs (d, i, k, l, m, o) and stamens (e: dorsal, f: ventral). *Wikstroemia phillyreaefolia* SKOTTSBERG, p: SKOTTSBERG 637; q: SKOTTSBERG 3867. Discs. Notes to the figures: The lines accompanied to this and other figures are drawn on respective scales to 0.5 mm, 1 mm (1-notched) and 2 mm (3-notched). Vertical ones are for most of pictures in every figure. Pictures connected with broken lines are from the same flowers. All figures drawn or photographed by HAMAYA.

Fig. 3: *D. aurantiaca* Diels and *D. phillyreaefolia* (Skottsberg) J. J. Halda. [Hamaya (1963)].

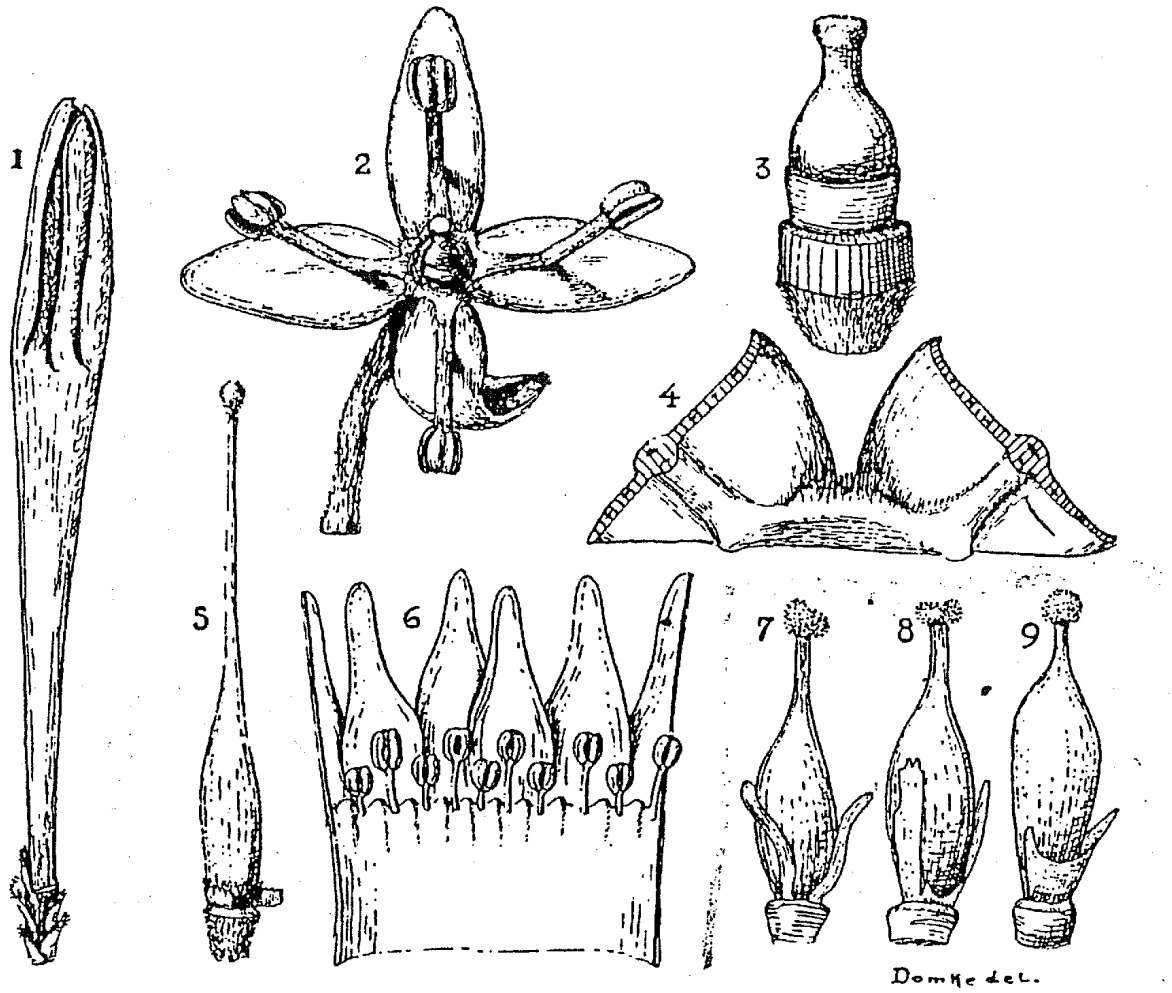

Fig. 8. 2—4: *Schoenobiblus coriaceus*. 2: Blüte, ca. 6,5:1. 3: Fruchtknoten mit Diskus, ca. 12,5:1. 4: behaarte Membran am Grunde der Kelchbucht. ca. 16:1. — 1, 5, 6: *Craterosiphon beniense*. 1: Blütenknospe mit Pedicellus. ca. 5:1. 5: Fruchtknoten mit der zum Teil abgehobenen Diskusmanschette. ca. 6,5:1. 6: oberer Teil des Kelchtubus mit den Petalenschüppchen zwischen den Filamenten, ca. 4:1. — 7—9: *Wikstroemia aurantiaca*. 3 Fruchtknoten mit verschiedenen Diskusformen. ca. 8,5:1.

Fig. 4: *D. aurantiaca* Diels - three different disc-types (7-9). [Domke (19832)].

New combinations and names

***Daphne abbreviata* J. J. Halda nom. et stat. nov.**

[bas: *Wikstroemia acuminata* Merrill in Journ. As. Soc. Straits 76:99 (1917), non Boiss. & Hohen. ex Stocks (1852)].

***Daphne alba* (Hand.-Mazz.) J. J. Halda stat. nov.**

[bas: *Wikstroemia alba* Hand.-Mazz. in Anz. Akad. Wiss. Wien, Math.-Nat. 58:180 (1921)].

***Daphne alba* (Hand.-Mazz.) J. J. Halda subsp. *anhuiensis* (D. C. Zhang et X.P.Zhang) J. J. Halda stat. nov.**

[bas: *Wikstroemia anhuiensis* D. C. Zhang et X. P. Zhang in Acta Phytotaxonomica Sinica 28(2):159 (1990)].

***Daphne alternifolia* (Batalin) J. J. Halda stat. nov.**

[bas: *Wikstroemia altemifolia* Batalin in Acta Hort. Petrop. 13:99 (1893)].

***Daphne androsaemifolia* (Decne) J. J. Halda stat. nov.**

[bas: *Wikstroemia androsaemifolia* Decne in C. A. Meyer, Ann. Sci. Nat. Bot. ser. 2(20):50 (1843)].

***Daphne angustissima* (Merrill) J. J. Halda stat. nov.**

[bas: *Wikstroemia angustissima* Merrill in Philipp. Journ. Sc., Bot. 7:92 (1912)].

***Daphne baimashanensis* (S. C. Huang) J. J. Halda stat. nov.**

[bas: *Wikstroemia baimashanensis* S. C. Huang in Acta Bot. Yunn. 7(3):286 (1985)].

***Daphne balansae* (Drake) J. J. Halda stat. nov.**

[bas: *Wikstroemia balansae* Drake in Morot, Journ. Bot. 3:227 (1889)].

Daphne bicornuta (Hillebr.) J. J. Halda stat. nov.
[bas: *Wikstroemia bicornuta* Hillebr., Fl. Haw. Isl. p.387 (1888)].

Daphne brachyantha (Merrill) J. J. Halda stat. nov.
[bas: *Wikstroemia brachyantha* Merrill in Philipp. Journ. Sc. Bot. 13:313 (1918)].

Daphne brevipaniculata (Rehder) J. J. Halda stat. nov.
[bas: *Wikstroemia brevipaniculata* Rehder in Sarg. Pl. Wils. 2:532 (1916)].

Daphne canescens Wall. subsp. _capitato-racemosa_ (S. C. Huang) J. J. Halda stat. nov.
[bas: *Wikstroemia capitato-racemosa* S. C. Huang in Acta Bot. Yunn. 7(3):287 (1985)].

Daphne capitata (Rehder) J. J. Halda stat. nov.
[bas: *Wikstroemia capitata* Rehder in Sarg. Pl. Wils. 2:530 (1916)].

Daphne capitellata (Hara) J. J. Halda stat. nov.
[bas: *Wikstroemia capitellata* Hara in Journ. Jap. Bot. 13:178 (1937)].

Daphne chamaedaphne (Meisn.) J. J. Halda stat. nov.
[bas: *Wikstroemia chamaedaphne* Meisn. in DC. Prodr. 14:547 (1857)].

Daphne chuii (Merrill) J. J. Halda stat. nov.
[bas: *Wikstroemia chuii* Merrill in Lingnan Sc. Journ. 9:41 (1930)].

Daphne cunninghamii (Meissn.) J. J. Halda stat. nov.
[bas: *Wikstroemia cunninghamii* Meissn. in DC Prodr. 14:545 (1857)].

Daphne delavayi (Lecomte) J. J. Halda stat. nov.
[bas: *Wikstroemia delavayi* Lecomte, Not. Syst. 3:129 (1915)].

Daphne dolichantha (Diels) J. J. Halda stat. nov.
[bas: *Wikstroemia dolichantha* Diels in Notes Roy. Bot. Gard. Edinb. 5:286 (1912)].

Daphne dolichantha (Diels) J. J. Halda var. *effusa* (Rehd.) J. J Halda stat. nov.

[bas: *Wikstroemia effusa* Rehder in Sarg. Pl. Wils. 2:538 (1916)].

Daphne endlicheriana J. J. Halda nom. et stat. nov.

[bas: *Wikstroemia australis* Endl. Prodr. Fl. Norf. p.47 (1833), non *Daphne australis* Cyrill.].

Daphne forbesii (Skottsb.) J. J. Halda stat. nov.

[bas: *Wikstroemia forbesii* Skottsb. in Svensk Bot. Tidskr. 58:180 (1964)].

Daphne furcata (Hillebr.) J. J. Halda stat. nov.

[bas: *Wikstroemia sandwicensis* Meisn. var. *furcata* Hillebr., Fl. Haw. Isl.386 (1888); *Wikstroemia furcata* (Hillebr.) Rock, Indig. Trees Hawaiian Isl. p.319 (1913)].

Daphne ganpi (Sieb. et Zucc.) J. J. Halda stat. nov.

[bas: *Passerina ganpi* Sieb. et Zucc. Fl. Japan Fam. Nat. 2, 4:200 (1846); *Wikstroemia ganpi* (Sieb. et Zucc.) Maxim. in Mel. Biol. 12:540 (1886)].

Daphne glabra (Cheng) J. J. Halda stat. nov.

[bas: *Wikstroemia glabra* Cheng in Contrib. Biol. Lab. Sc. Soc. China, Bot. Ser. 6:69 (1931)].

Daphne glabra (Cheng) J. J. Halda f. *purpurea* (Cheng) J. J. Halda stat. nov.

[bas: *Wikstroemia glabra* Cheng f. *purpurea* Cheng in Acta Bot. Yunnanica 7(3):282 (1985)].

Daphne grayana J. J. Halda nom. et stat. nov.

[bas: *Wikstroemia retusa* A. Gray in Journ. Bot. 3:303 (1865), non Maxim.].

Daphne hainanensis (Merrill) J. J. Halda stat. nov.

[bas: *Wikstroemia hainanensis* Merrill in Lingnan Sc. Journ. 14:40 (1935)].

Daphne hanalei (Wawra) J. J. Halda stat. nov.

[bas: *Wikstroemia hanalei* Wawra in Flora p.185 (1875)].

Daphne haoii (Domke) J. J. Halda stat nov.

[bas: Wikstroemia haoii Domke in Notizbl. Bot. Gart. Berlin 13:387 (1936)].

Daphne hemsleyi J. J. Halda nom. et stat. nov.

[bas: *Wikstroemia angustifolia* Hemsley in Journ. Linn. Soc. 26:396 (1891), non *D. angustifolia* C. Koch].

Daphne hemsleyana (Leveille) J. J. Halda stat. nov.
[bas: *Wikstroemia hemsleyana* Leveille in Bull. Geogr. Bot. 25:41 (1915)].

Daphne hillebranti J. J. Halda nom. et stat. nov.
[bas: *Wikstroemia villosa* Hillebr., Fl. Haw. Isl. p. 386 (1888)].

Daphne huidongensis (C. Y. Chang) J. J. Halda stat. nov.
[bas: *Wikstroemia huidongensis* C. Y. Chang in Bull. Bot. Res. North-East Forest Inst. 6(4):145 (1986)].

Daphne indica L. subsp. _linearifolia_ (Elmer) J. J. Halda stat. nov.
[bas: *Wikstroemia linearifolia* Elmer in Leaflets of Philippine Botany 2(39):680 (1910)].

Daphne indica L. subsp. _novae-caledoniae_ (Gandoger) J. J. Halda stat. nov.
[bas: *Wikstroemia novae-caledoniae* Gandoger in Bull. Soc. Bot. France 60:420 (1913)].

Daphne kudoi (Makino) J. J. Halda stat. nov.
[bas: *Wikstroemia kudoi* Makino in Bot. Mag. Tokyo 24(278):50 (1910)].

Daphne lamatsoensis (Hamaya) J. J. Halda stat. nov.
[bas: *Wikstroemia lamatsoensis* Hamaya in Acta Hort. Gotoburg. 26:96 (1963)].

Daphne lanceolata (Merrill) J. J. Halda stat. nov.
[bas: *Wikstroemia lanceolata* Merrill in Philipp. Gov. Lab. Bur. Bull. 29:31 (1905)].

Daphne leptophylla (W. W. Smith) J. J. Halda stat. nov.
[bas: *Wikstroemia leptophylla* W. W. Smith in Notes Roy. Bot. Gard. Edinb. 12:229 (1920)].

Daphne leptophylla (W. W. Smith) J. J. Halda var. _atroviolacea_ (Hand.-Mazz.) J. J. Halda stat. nov.
[bas: *Wikstroemia leptophylla* W. W. Smith var. *atroviolacea* Hand.-Mazz. in Sitzgsanz. Ak. W. Wien 60:135 (1921)].

Daphne liangii (Merrill & Chun) J. J. Halda stat. nov.
[bas: *Wikstroemia liangii* Merrill & Chun in Sunyatsenia 5:140 (1940)].

Daphne lichiangensis (W. W. Smith) J. J. Halda stat. nov.
[bas: *Wikstroemia lichiangensis* W. W. Smith in Notes Roy. Bot. Gard. Edinb. 8:136 (1913)].

Daphne ligustrina (Rehder) J. J. Halda stat. nov.
[bas: *Wikstroemia ligustrina* Rehder in Sarg. Pl. Wils. 2:531 (1916)].

Daphne linoides (Hemsl. ex Forb. & Hemsl.) J. J. Halda stat. nov.
[bas: *Wikstroemia linoides* Hemsl. ex Forb. & Hemsl. in Journ. Linn. Soc. 26:398 (1894)].

Daphne longilobata Turrill subsp. _purpurascens_ (S. C. Huang) J. J. Halda stat. nov.
[bas: *Daphne purpurascens* S. C. Huang in Acta Botanica Yunnanica 7(3):280(1985)].

Daphne meisneriana J. J. Halda nom. et stat. nov.
[bas: *Wikstroemia chinensis* Meisn. in DC Prodr. 14:546 (1857); non *D. chinensis* Spreng.].

Daphne merrilliana J. J. Halda nom. et stat. nov.
[bas: *Wikstroemia crassifolia* Merrill ex Domke in Biblioth. Bot. 27(111):59 (1934), non *Daphne crassifolia* Poir.].

Daphne meyeniana (Warb.) J. J. Halda stat. nov.
[bas: *Wikstroemia meyeniana* Warb. in Perkins, Frag. Fl. Philipp. 3:171 (1905)].

Daphne micrantha (Hemsl.) J. J. Halda stat. nov.
[bas: *Wikstroemia micrantha* Hemsl. in Journ. Linn. Soc. 26:399 (1894)].

Daphne micrantha (Hemsl.) J. J. Halda subsp. _longipaniculata_ (S. C. Huang) J. J. Halda stat. nov.
[bas: *Wikstroemia longipaniculata* S. C. Huang in Acta Bot. Yunn. 7(3):285(1985)].

Daphne micrantha (Hemsl.) J. J. Halda subsp. _lungtzeensis_ (S. C. Huang) J. J. Halda stat. nov.
[bas: *Wikstroemia lungtzeensis* S. C. Huang in Acta Bot. Yunn. 7(3):285(1985)].

Daphne micrantha (Hemsl.) J. J. Halda subsp. _paniculata_ (Li) J. J. Halda stat. nov.

[bas: *Wikstroemia paniculata* Li in Journ. Arn. Arb. 24:448 (1943)].

Daphne monnula (Hance) J. J. Halda stat. nov.

[bas: *Wikstroemia monnula* Hance in Journ. Bot. 16:13 (1878)].

D. monnula (Hance) J. J. Halda var. _vaccinium_ (Leveille) J. J. Halda stat. nov.

[bas: *Lonicera vaccinium* Leveille, Fl. Kouy-Tcheou p. 64 (1914); *Wikstroemia vaccinium* (Leveille) Rehder in Journ. Arnold Arboretum 15:103 (1934)].

D. monnula (Hance) J. J. Halda var. _xiuningensis_ (D. C. Zhang et J. Z. Shao) J. J. Halda stat. nov.

[bas: *Wikstroemia monnula* Hance var. *xiuningensis* D. C. Zhang et J. Z. Shao in Acta Phytotaxonomica Sinica 28(2):162 (1990)].

Daphne mononectaria (Hayata) J. J. Halda stat. nov.

[bas: *Wikstroemia mononectaria* Hayata, Ic. Pl. Formos. 5:179 (1915)].

Daphne nutans (Champ. ex Benth.) J. J. Halda stat. nov.

[bas: *Wikstroemia nutans* Champ. ex Benth. in Hook. Kew Journ. 5:195 (1853)].

Daphne nutans (Champ. ex Benth.) J. J. Halda var. _brevior_ (Hand.-Mazz.) J. J. Halda stat. nov.

[bas: *Wikstroemia nutans* Champ. ex Benth. var. *brevior* Hand.-Mazz. in Sitzgsanz. Ak. W. Wien 58:92 (1921)].

Daphne oahuensis (A. Gray) J. J. Halda stat. nov.

[bas: *Wikstroemia foetida* Hillebr. var. *oahuensis* A. Gray, Seem. Journ. Bot. 3:302 (1865); *Wikstroemia oahuensis* (A. Gray) Rock, Indig. Trees Hawaiian Isl. p. 316 (1913)].

Daphne oahuensis (A. Gray) J. J. Halda var. austrocochinchinensis (Lecomte) J. J. Halda stat. nov.

[bas: Wikstroemia elongata A. Gray var. austrocochinchinensis Lecomte, Notul. Syst. (Paris) 3:130 (1915), nom. nud.].

Daphne ovata (C. A. Mey.) J. J. Halda stat. nov.

[bas: *Wikstroemia ovata* C. A. Mey. in Bull. Phys.-Math. Acad. Petersb. 1:357 (1843)].

Daphne pampaninii (Rehder) J. J. Halda stat. nov.
[bas: *Wikstroemia pampaninii* Rehder in Sarg. Pl. Wils. 2:537 (1916)].

Daphne pampaninii (Rehder) J. J. Halda subsp. _cochlearifolia_ (S. C. Huang) J. J. Halda stat. nov.
[bas: *Wikstroemia cochlearifolia* S. C. Huang in Acta Bot. Yunn. 7(3):290 (1985)].

Daphne pampaninii (Rehder) J. J. Halda subsp. _subcyclolepidota_ (L. P. Liu & Y. S. Lian) J. J. Halda stat. nov.
[bas: *Wikstroemia subcyclolepidota* L. P. Liu & Y. S. Lian in Acta Phytotax. Sin. 34(4):440 (1996)].

Daphne parviflora (S. C. Huang) J. J. Halda stat. nov.
[bas: *Wikstroemia parviflora* S. C. Huang in Acta Bot. Yunn. 7(3):289(1985)].

Daphne paxiana (H. Winkler) J. J. Halda stat. nov.
[bas: *Wikstroemia paxiana* H. Winkler in Fedde Repert. Beih. 12:442 (1922)].

Daphne phillyreaefolia (A. Gray) J. J. Halda stat. nov.
[bas: *Wikstroemia phillyreaefolia* A. Gray in Journ. Bot. 3:304 (1865)].

Daphne poilanei (Leandri) J. J. Halda stat. nov.
[bas: *Wikstroemia poilanei* Leandri in Rev. Bot. Appliq. 29:502 (1949)].

Daphne polyantha (Merrill) J. J. Halda stat. nov.
[bas: *Wikstroemia polyantha* Merrill in Philipp. Journ. Sc., Bot. 10:332 (1915)].

Daphne pseudoretusa (Koidz.) J. J. Halda stat. nov.
[bas: *Wikstroemia pseudoretusa* Koidzumi in Bot. Mag. Tokyo 33:119 (1919); *Wikstroemia retusa* Maxim. in Mel. Biol. 12:538 (1886), non A. Gray].

Daphne pulcherrima (Skottsb.) J. J. Halda stat. nov.
[bas: *Wikstroemia pulcherrima* Skottsb. in Acta Hort. Gotob. 1935, 10:140 (1936)].

Daphne ridleyi (Gamble) J. J. Halda stat. nov.
[bas: *Wikstroemia ridleyi* Gamble in Kew Bull. 1912:200 (1912)].

Daphne rubriflora (C. Y. Wu ex S. C. Huang) J. J. Halda stat. nov.
[bas: *Rhamnoneuron rubriflorum* C. Y. Wu ex S. C. Huang in Acta Bot. Yunnanica 7(3):278 (1985)].

Daphne sandwicensis (Meisn.) J. J. Halda stat. nov.

[bas: *Wikstroemia sandwicensis* Meisn. in DC. Prodr. 14:545 (1857)].

Daphne scytophylla (Diels) J. J. Halda stat. nov.

[bas: *Wikstroemia scytophylla* Diels in Notes Roy. Bot. Gard. Edinb. 5:286 (1912)].

Daphne scytophylla (Diels) J. J. Halda subsp. *mekongensis* (W. W. Smith) J. J. Halda stat. nov.

[bas: *Wikstroemia mekongensis* W. W. Smith in Notes Roy. Bot. Gard. Edinb. 12:229 (1920)].

Daphne sikokiana (Franch. et Savat.) J. J. Halda stat. nov.

[bas: *Wikstroemia sikokiana* Franch. et Savat. Enum. Pl. Jap. 2:481 (1877)].

Daphne skottsbergiana (Sparre) J. J. Halda stat. nov.

[bas: *Wikstroemia skottsbergiana* Sparre in Svensk. Bot. Tidskr. 58:497 (1964); *W. caudata* Skottsb. in Svensk. Bot. Tidskr. 58:177 (1964), non J. W. Moore].

Daphne stenantha (Hemsl.) J. J. Halda stat. nov.

[bas: *Wikstroemia stenantha* Hemsl. in Journ. Linn. Soc. 26:400 (1894)].

Daphne stenophylla (E. Pritz. ex Diels) J. J. Halda stat. nov.

[bas: *Wikstroemia stenophylla* E. Pritz. ex Diels in Engl. Jahrb. 29:480 (1900)].

Daphne stenophylla (E. Pritz. ex Diels) J. J. Halda var. *ziyangensis* (C.Y. Yu) J. J. Halda stat. nov.

[bas: *Wikstroemia stenophylla* E. Pritz. ex Diels var. *ziyangensis* C. Y. Yu in Fl. Tsinlingensis 1(3):455, 330 (1981)].

Daphne taiwanensis (Chang) J. J. Halda stat. nov.

[bas: *Wikstroemia taiwanensis* Chang in For. Journ. Taiwan Prov. Instit. Agr. 19:18 (1977)].

Daphne tenuiramis (Miq.) J. J. Halda stat. nov.

[bas: *Wikstroemia tenuiramis* Miq., Fl. Ind. Bat. Suppl. 141 (1861)].

Daphne trichotoma (Thunb.) J. J. Halda stat. nov.

[bas: *Queria trichotoma* Thunb. in Mus. Nat. Acad. Ups. App. 11:4 (1806); *Wikstroemia trichotoma* (Thunb.) Makino, Bot. Notes Fl. Jap. 5:5 (1898)].

Daphne trichotoma (Thunb.) J. J. Halda subsp. *techinensis* (S. C. Huang) J. J. Halda stat. nov.

[bas: *Wikstroemia techinensis* S. C. Huang in Acta Botanica Yunnanica 7(3):284(1985)].

Daphne uva-ursi (A. Gray) J. J. Halda stat. nov.

[bas: *Wikstroemia uva-ursi* A. Gray in Journ. Bot. 3:304 (1865)].

Daphne uva-ursi (A. Gray) J. J. Halda var. *monticola* (Skottsb.) J. J. Halda stat. nov.

[bas: *Wikstroemia monticola* Skottsb. in Acta Reg. Soc. Sci. Lit. Gothoburg., Bot. 1:70 (1972)].

Daphne venosa (Merrill & Perry) J. J. Halda stat. nov.

[bas: *Wikstroemia venosa* Merrill & Perry in Journ. Arn. Arb. 22:266 (1941)].

Daphne yatabeana J. J. Halda nom. et stat. nov.

[bas: *Wikstroemia albiflora* Yatabe in Tokyo Bot. Mag. 4:217 (1891), non Daphne albiflora J. Wolf].

Daphne zephyrina J. J. Halda nom. et stat. nov.

[bas: *Wikstroemia pauciflora* Franch. et Sav. Enum. Pl. Jap. 1:406 (1875), non *D.pauciflora* Span. ex Walp.].

Daphne zephyrina J. J. Halda var. *yakusimensis* (Makino) J. J. Halda stat. nov.

[bas: *Wikstroemia pauciflora* Franch. et Savat. var. *yakusimensis* Makino in Bot. Mag. Tokyo 24(278): 52 (1910)].

Daphne zhouana J. J. Halda nom. et stat. nov.

[bas: *Wikstroemia linearifolia* H. F. Zhou ex C. Y. Chang in Guihaia 6(4):270 (1986), non Elmer].

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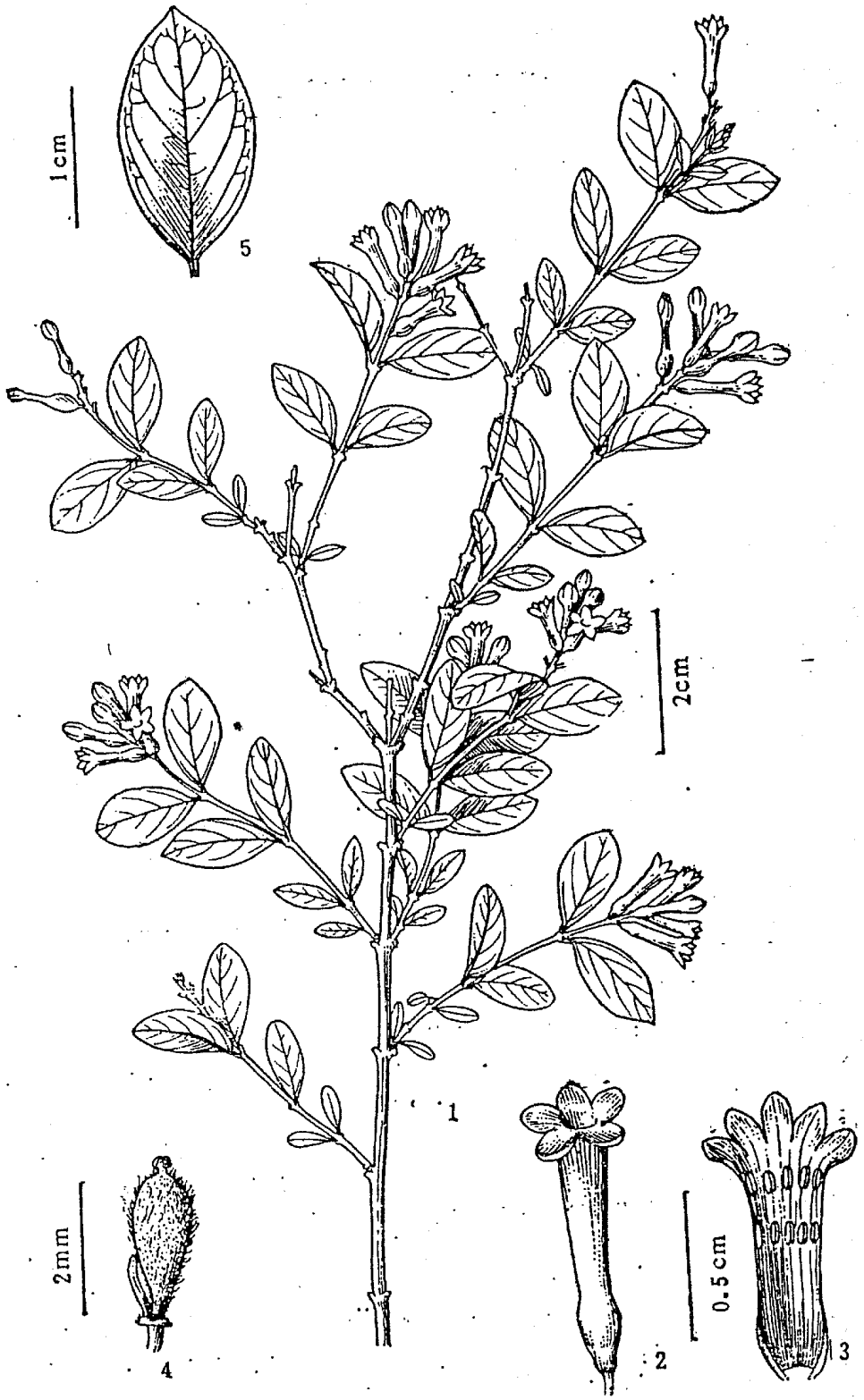
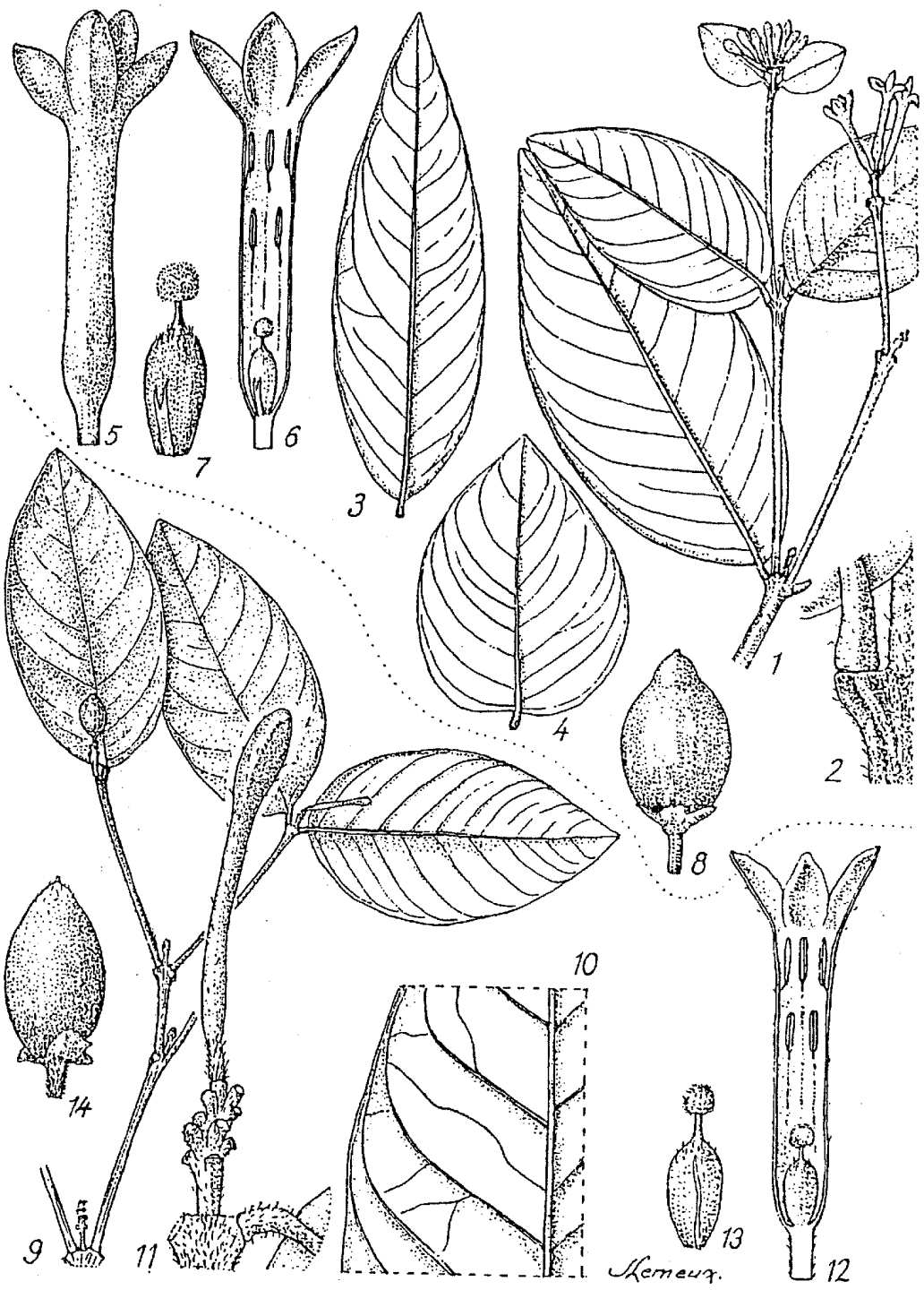


Fig. 5: *D. alba* (Hand.-Mazz.) J. J. Halda subsp. *anhuiensis* (D. C. Zhang et X.P.Zhang) J. J. Halda [Zhang et Shao (1990)].



PL. 11. – **Wikstroemia meyeniana** Warb. : 1, fragment de rameau florifère × 2/3 ; 2, articulation du pétiole × 4 ; 3, 4, autres formes de feuilles × 2/3 ; 5, fleur × 3 ; 6, fleur, coupe longitudinale × 3 ; 7, gynécée × 6 ; 8, fruit × 3. – **W. androsaemifolia** Decne. : 9, fragment de rameau divariqué × 2/3 ; 10, marge et nervation de feuille face inférieure × 2 ; 11, inflorescence, une fleur en place × 4 ; 12, fleur, coupe longitudinale × 4 ; 13, gynécée × 6 ; 14, fruit × 3 (1, 2, 5-7, *Poilane 9045* ; 3, 8, *Pierre 1418 p.p.* ; 4, *Poilane 20901* ; 9-11, 14, *Harmand 753 in Pierre 1418 p.p.* ; 12, 13, *Kerr 17821*, Thaïlande).

Fig. 6: *D. androsaemifolia* (Decne) J. J. Halda and *D. meyeniana* (Warb.) J. J. Halda. [Ho (1992)].

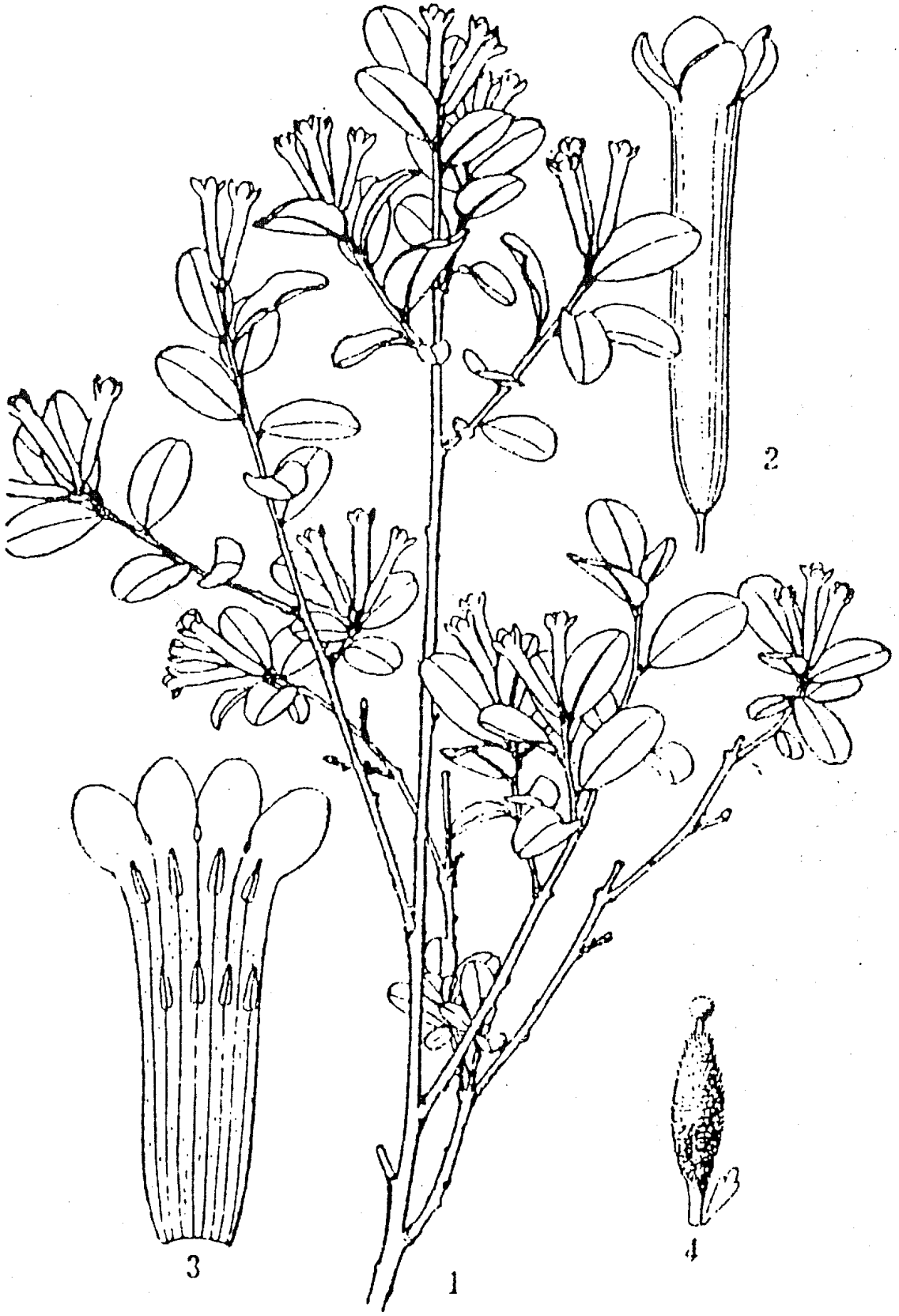
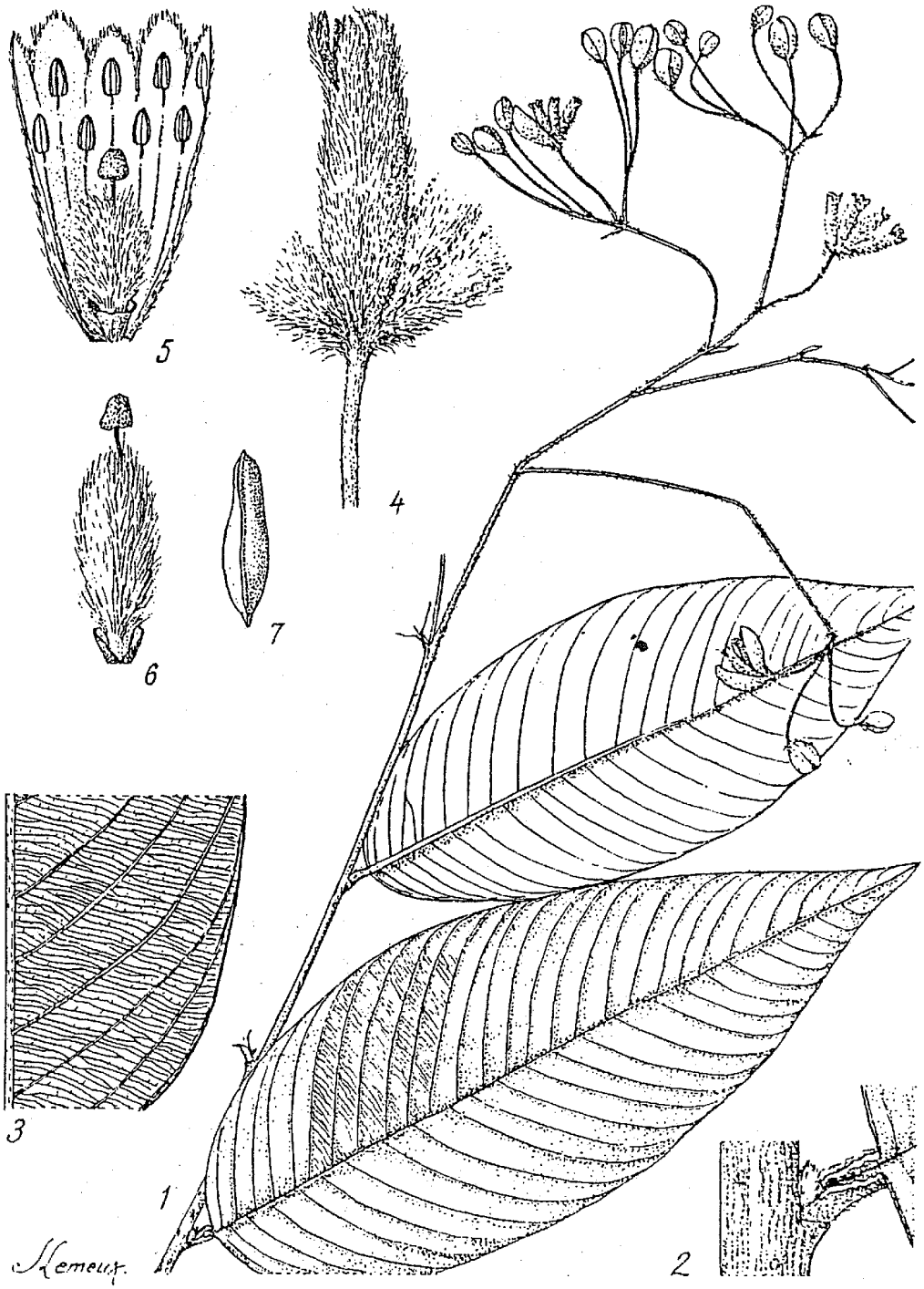


Fig. 7: D. baimashanensis (S. C. Huang) J. J. Halda [Huang (1985)].



PL. 13. – **Rhamnoneuron balansae** (Drake) Gilg : 1, extrémité de rameau fertile, ombelles épanouies et non épanouies × 2/3 ; 2, insertion du pétiole × 3 ; 3, nervation de feuille face inférieure × 1 ; 4, une fleur en place × 4 ; 5, fleur ouverte × 4 ; 6, fruit (ovaire) × 4 ; 7, graine × 4 (1, 2, *Eberhardt 4371* ; 3-7, *Poilane 31359*).

Fig. 8: D. balansae (Drake) J. J. Halda [Ho (1992)].

Fig. 9: D. canescens Wall. [Icon. Cormoph. Sin. (1983)].

Fig. 10: D. chamaedaphne (Meisn.) J. J. Halda [Yu (1981)].

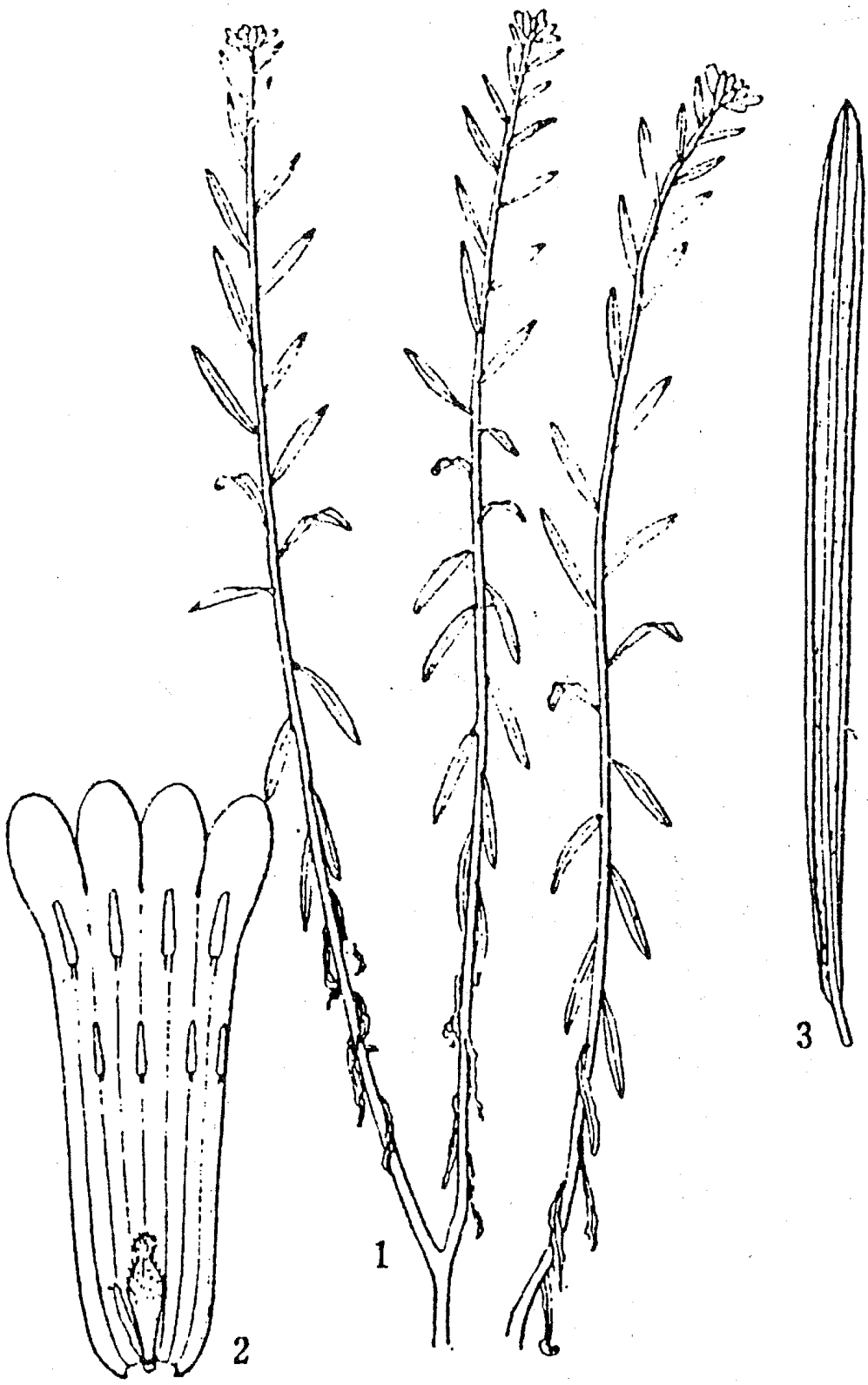


Fig. 11: D. cochlearifolia (S. C. Huang) J. J. Halda [Huang (1985)].

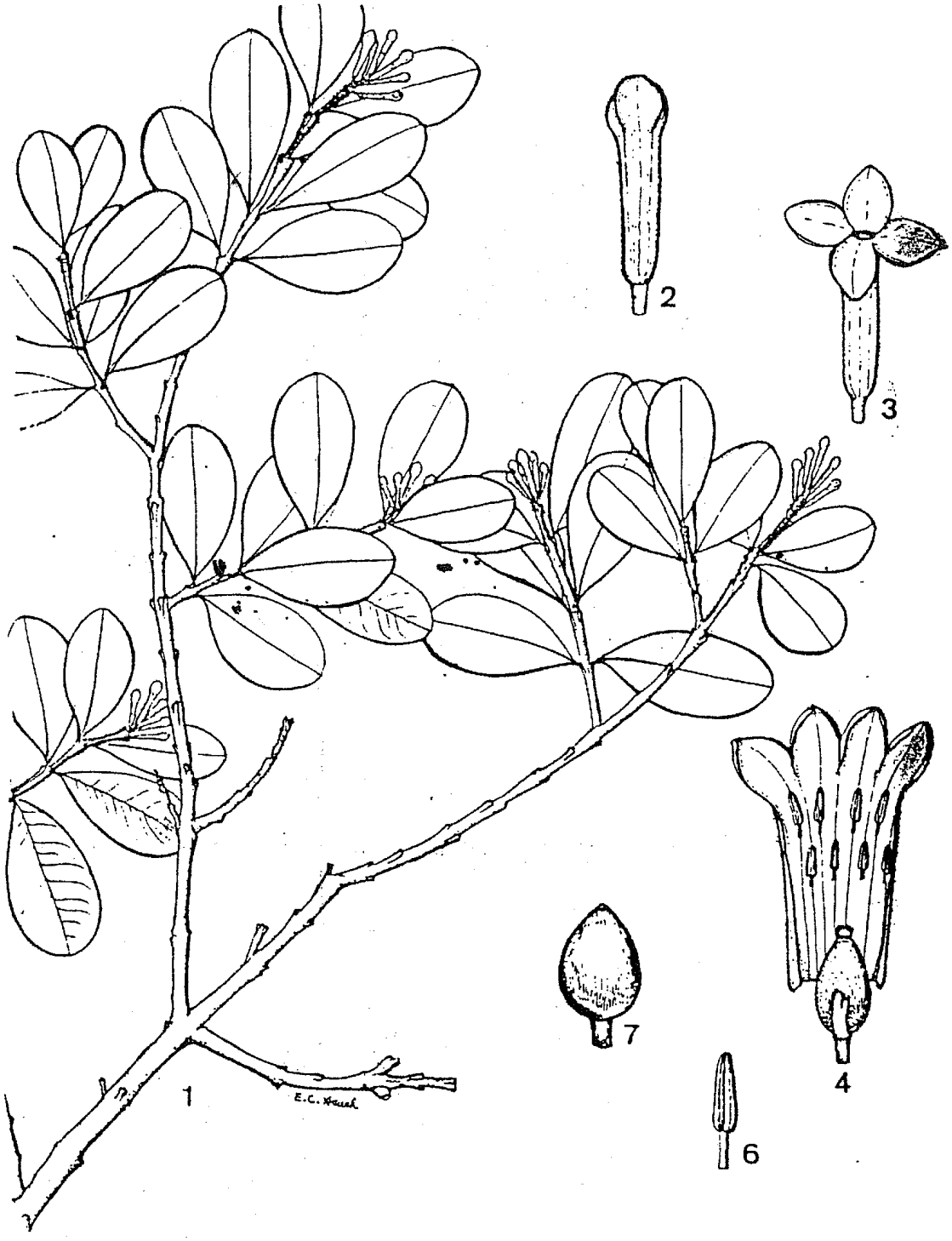


Fig. 12: D. grayana J. J. Halda [Chang (1993)].

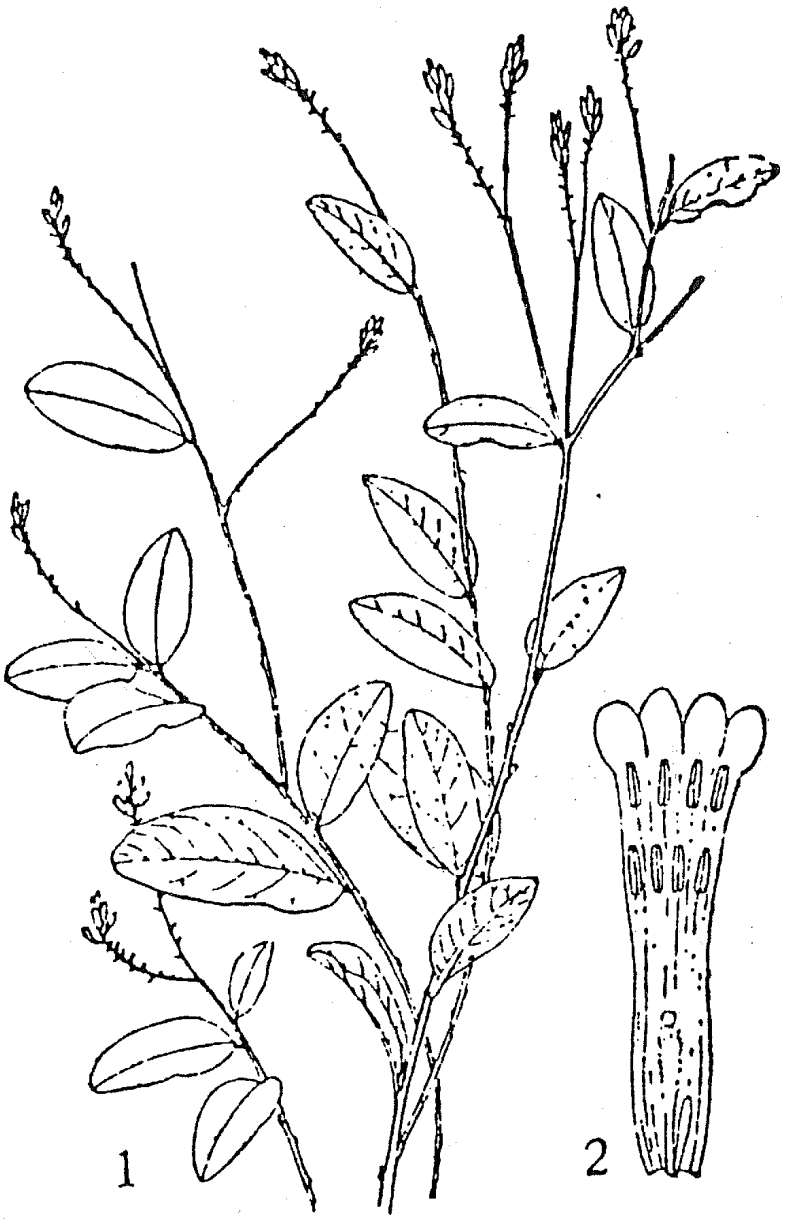
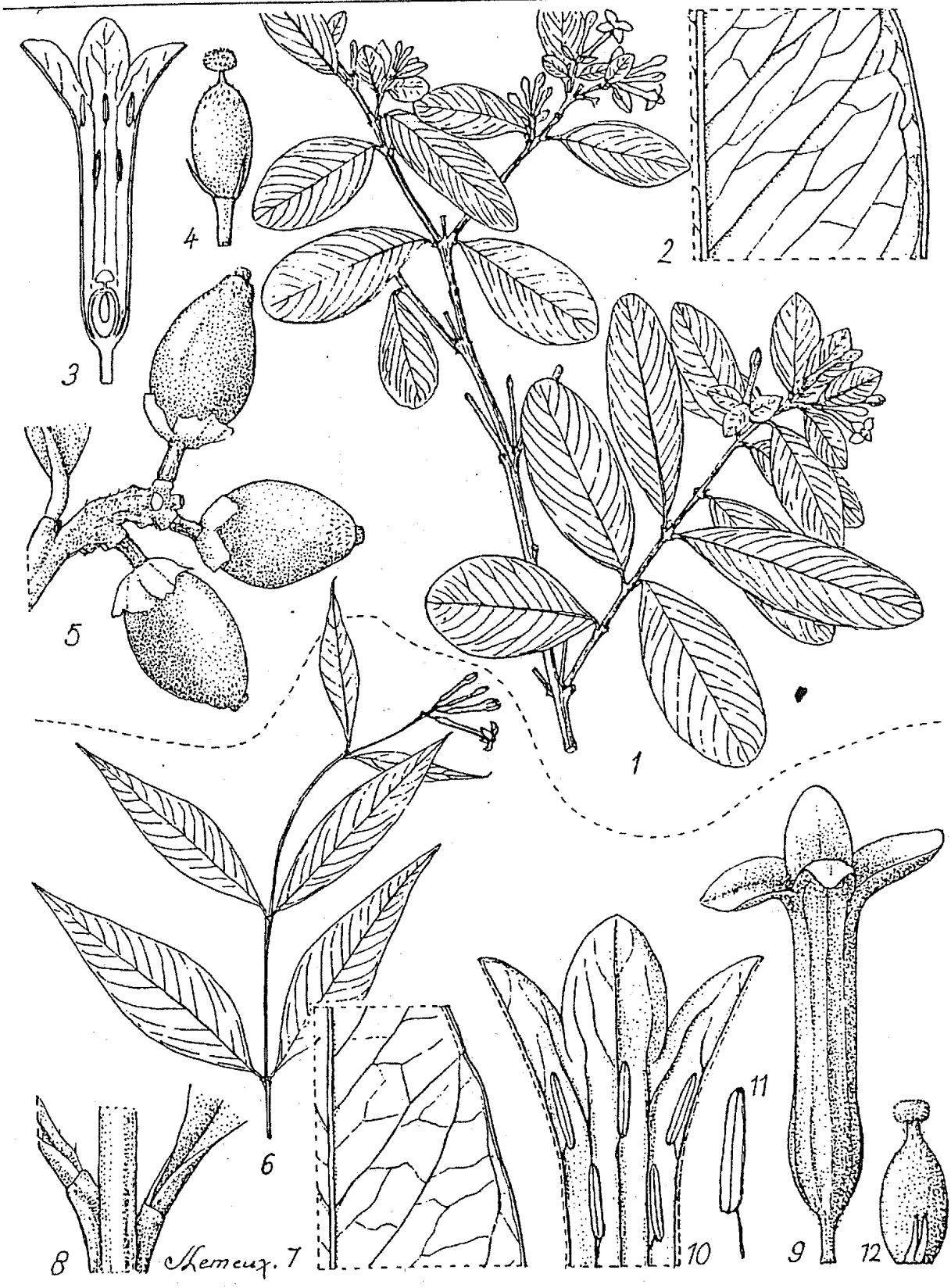


Fig. 13: D. haoii (Domke) J. J. Halda [Icon. Cormoph. Sin. (1983)].



PL. 10. – **Wikstroemia indica** (L.) C. Meyer : **1**, rameau florifère × 2/3 ; **2**, nervation de feuille face inférieure × 3 ; **3**, fleur, coupe longitudinale × 3 ; **4**, gynécée avec écailles du disque à la base × 6 ; **5**, fruits en place × 4. – **W. nutans** Champ. ex Benth. : **6**, fragment de rameau florifère × 2/3 ; **7**, nervation de feuille face inférieure × 4 ; **8**, articulation des pétioles × 6 ; **9**, fleur × 4 ; **10**, partie supé-

Fig. 14: D. indica L. and *D. nutans* (Champ ex Benth) [Ho (1992)].

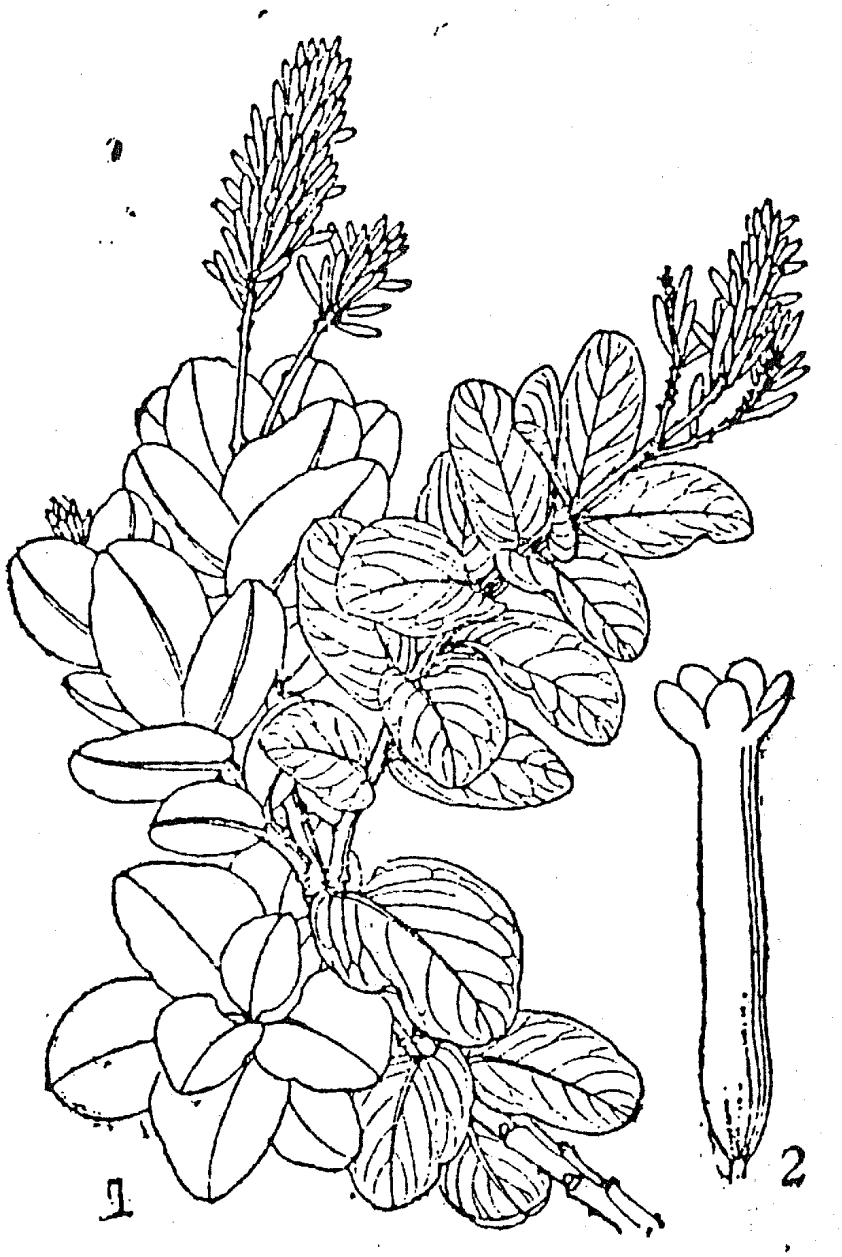


Fig. 15: D. lamatsoensis (Hamaya) J. J. Halda [Icon. Cormoph. Sin. (1983)].

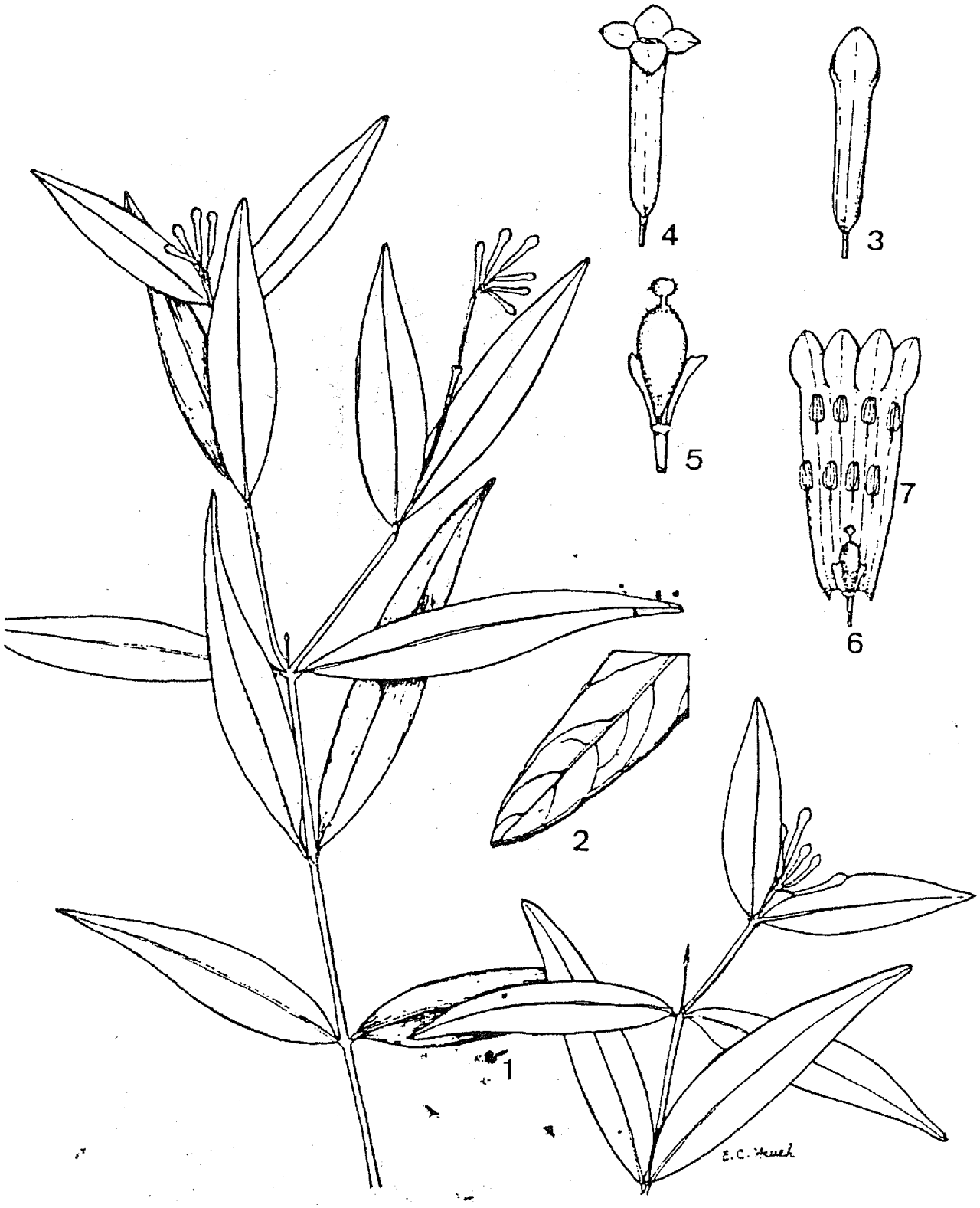


Fig. 16: D. lanceolata (Merrill) J. J. Halda [Chang (1993)].

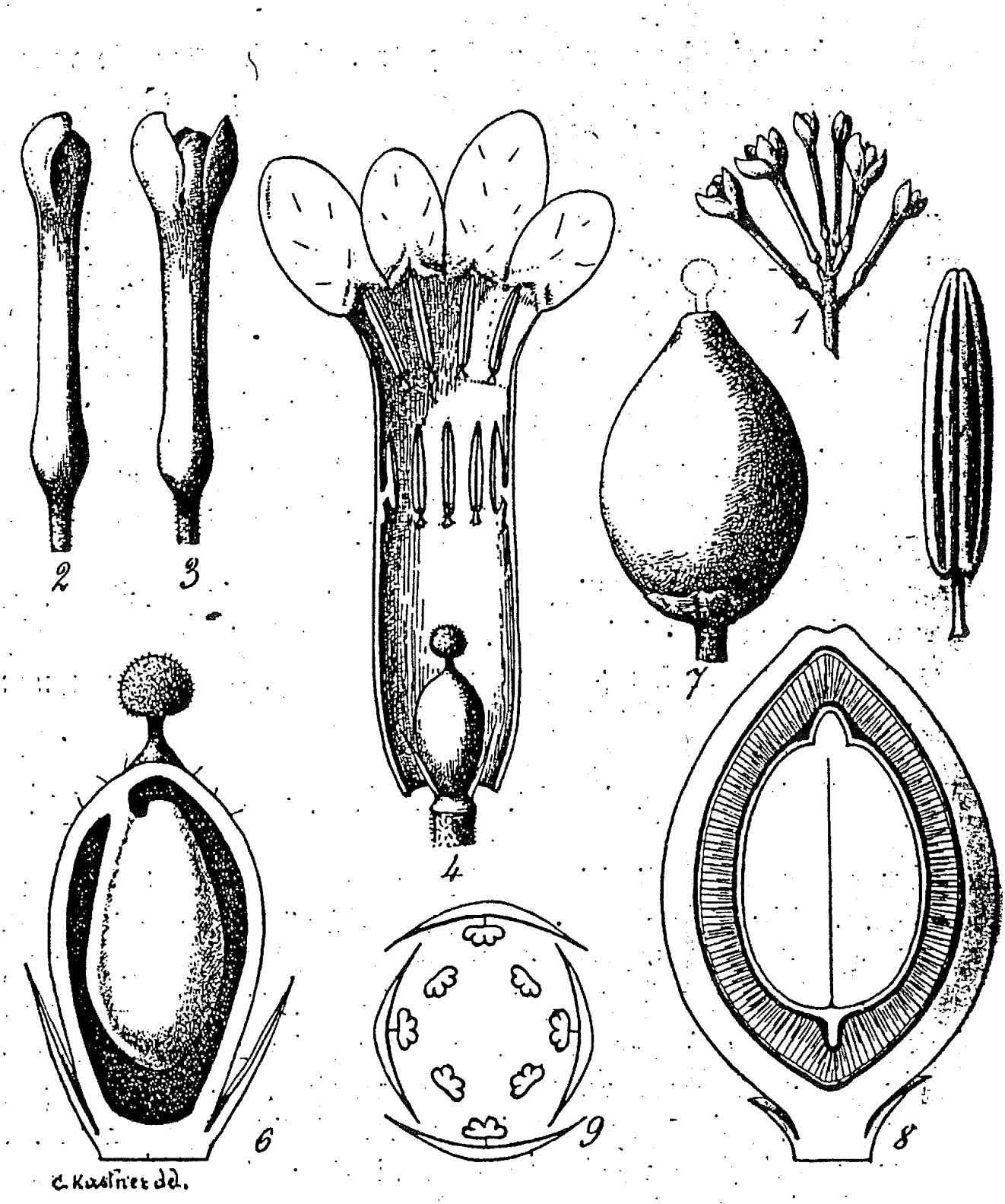


Fig. 17: D. meyeniana (Warburg) J. J. Halda [Lecomte (1931)].

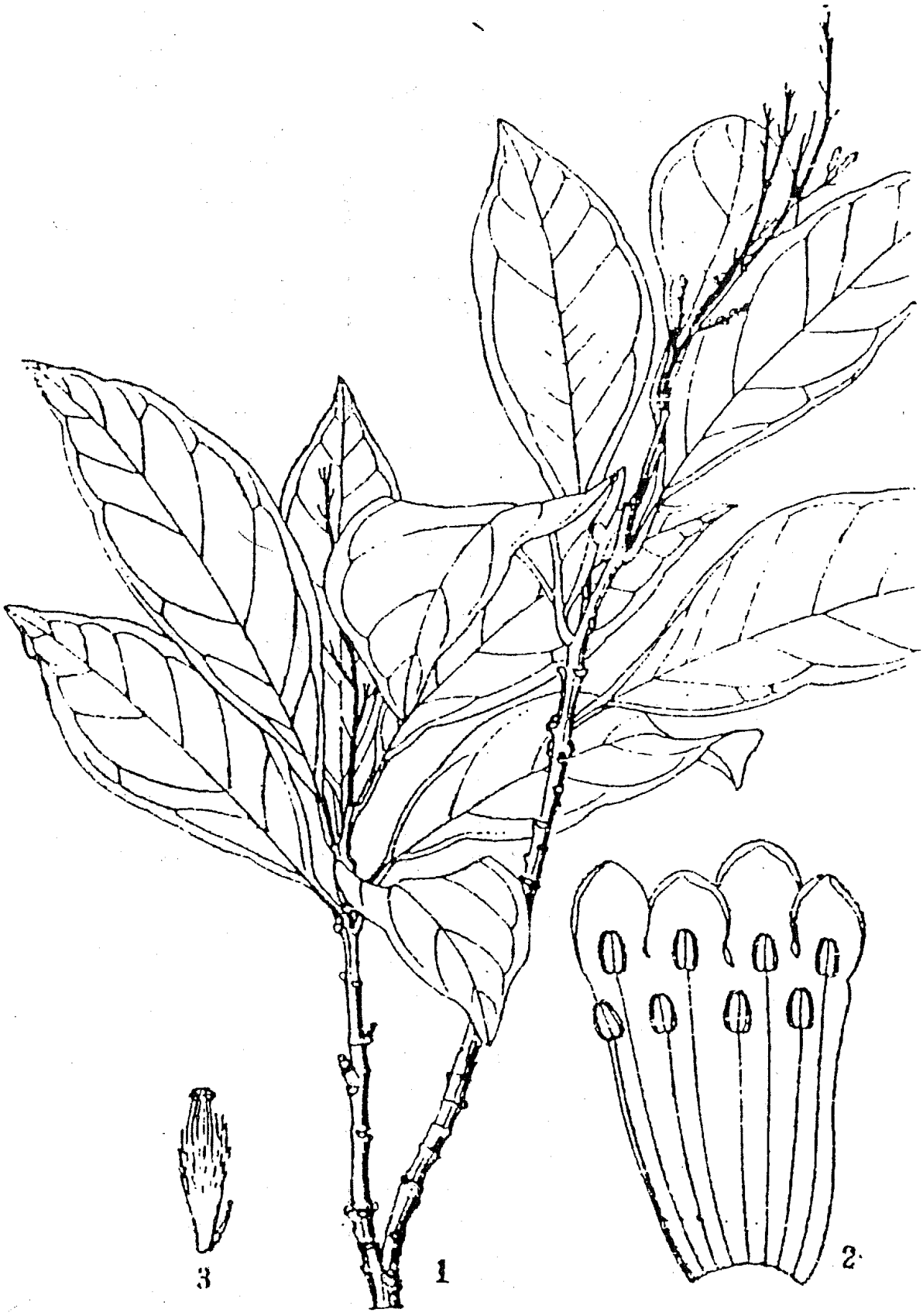


Fig. 18: D. micrantha (Hemsl.) J. J. Halda [Huang (1985)].

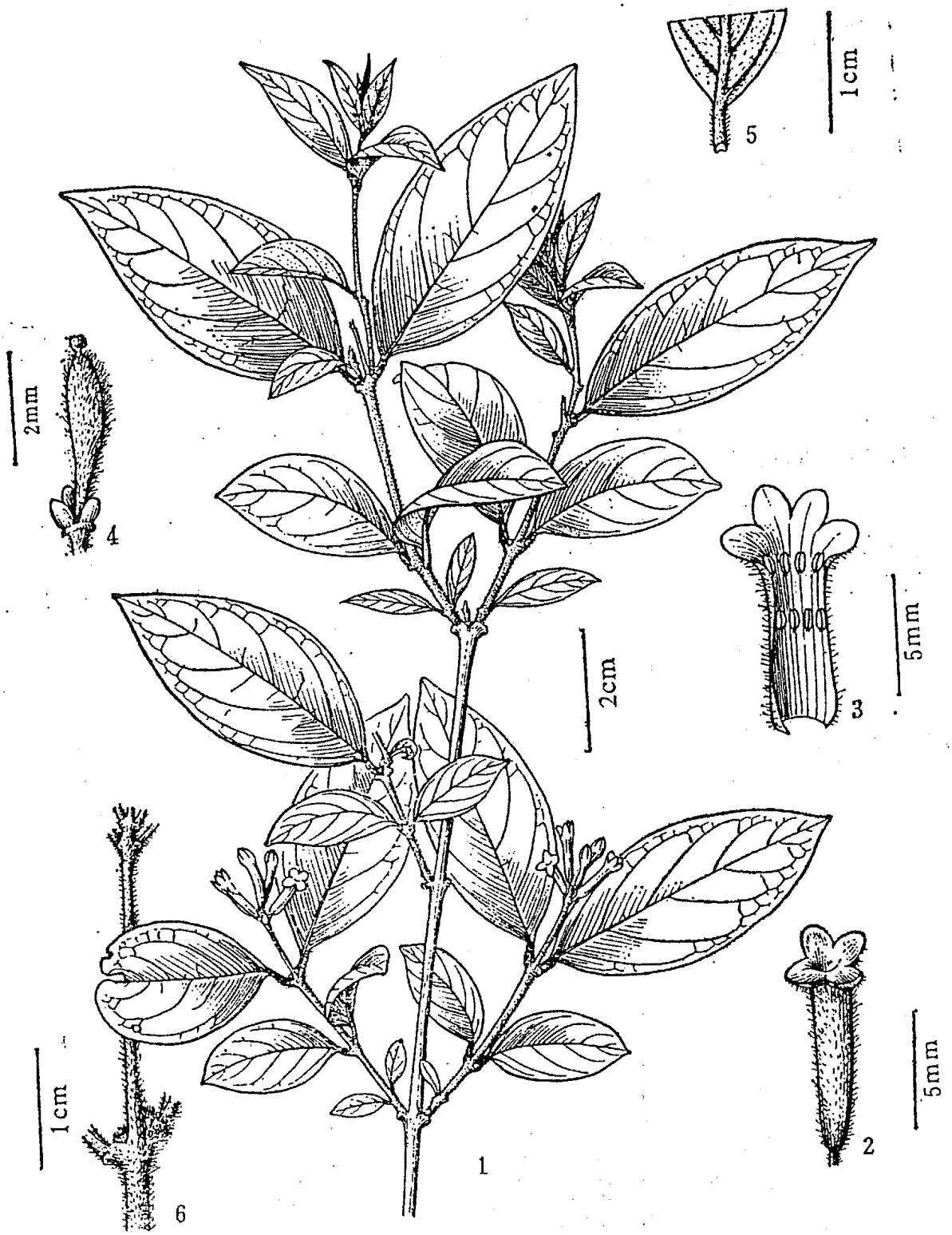
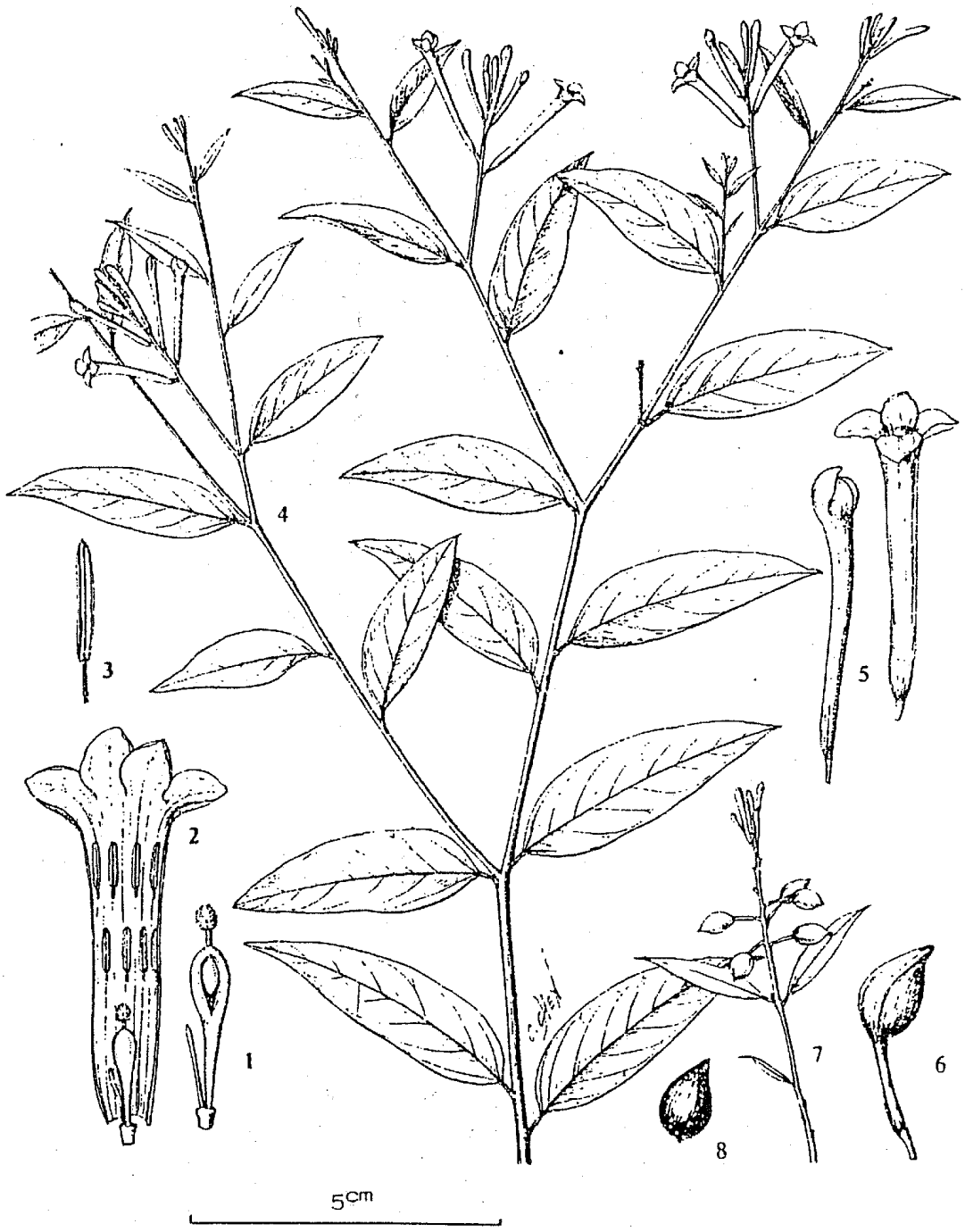


Fig. 19: D. monnula (Hance) J. J. Halda var. *xiuningensis* (Zhang and Shao) J. J. Halda [Zhang et Shao (1990)].



Pl. 801.Wikstroemia mononectria Hayata (THYMELIAEACEAE)

1. longitudinal section of pistil; 2. dissected flower; 3. stamen; 4. flowering branch; 5. flowers; 6. fruit; 7. fruiting branch; 8. seed.

Fig. 20: D. mononectaria (Hayata) J. J. Halda [Li (1983)].

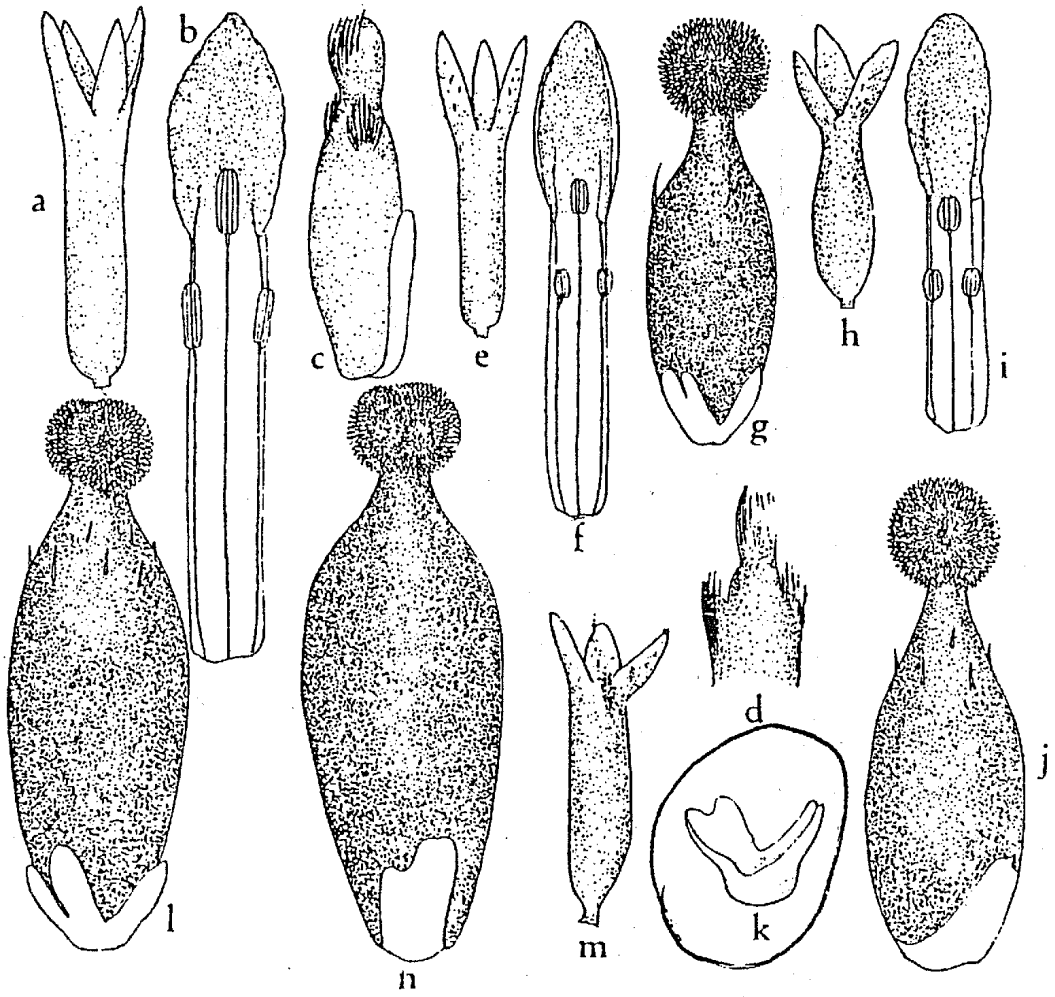
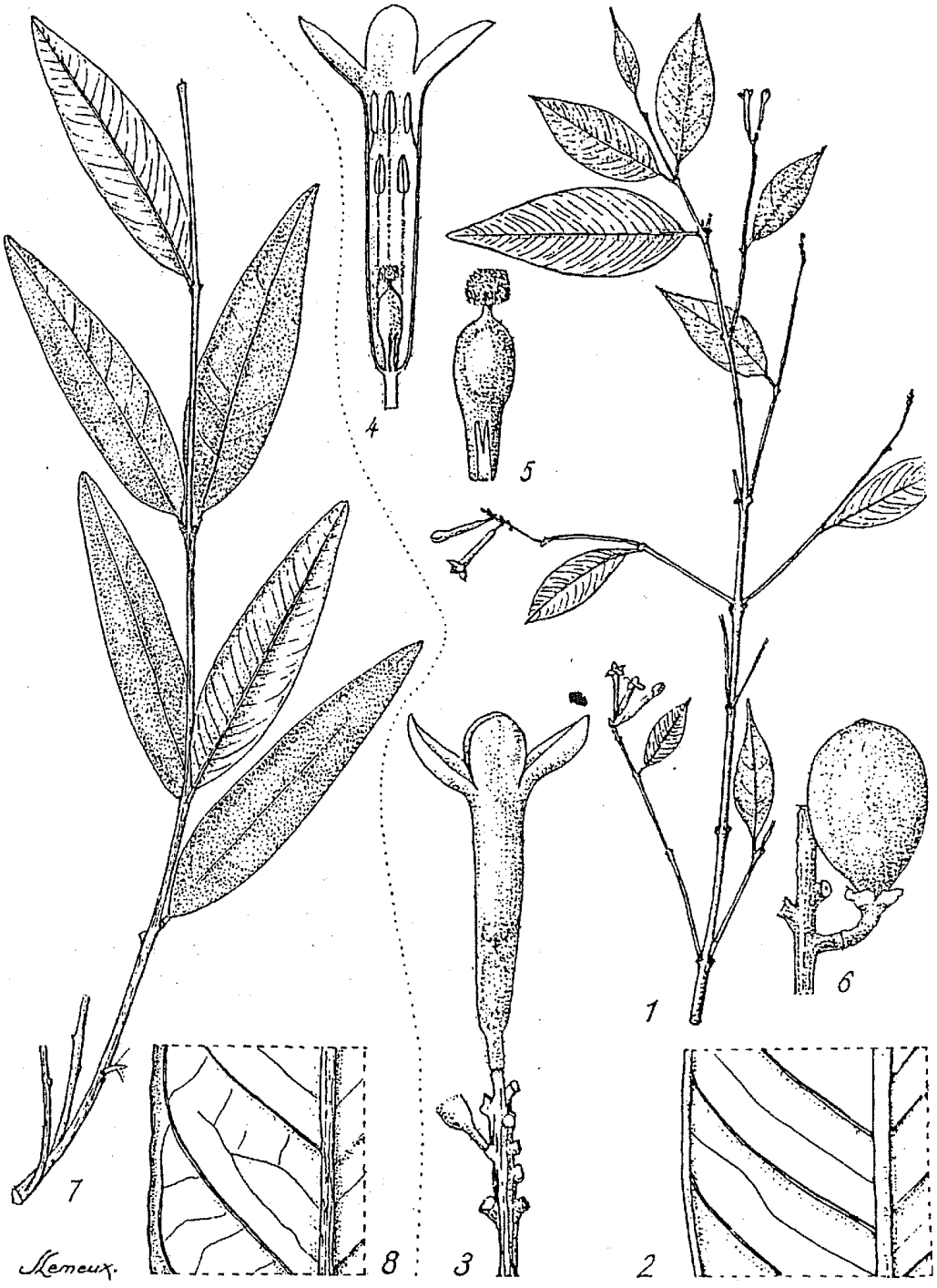


Fig. 11. *Wikstroemia phillyreaefolia*. **a**—**g** part of type, Gray Herb.: **a**—**c** ♂ flower, inner segment and pistillode, **d** upper part of **c** seen from a different side; **e**—**g** ☿ flower, outer segment and pistil; **h**—**k** Skottsb. n. 637: ☿ flower, outer segment, pistil and scales; **l** Skottsb. n. 496, pistil of ☿ flower; **m**, **n** ☿ flower and pistil of Skottsb. n. 1899. — a, e, h, m, × 4; b, f, i, × 6.6; c, d, g, j, k, l, n, × 17

Fig. 21: D. phillyreaefolia (A. Gray) J. J. Halda [Skottsberg (1936)].



PL. 12. – **Wikstroemia poilanei** Léandri : **1**, rameau florifère × 2/3 ; **2**, nervation de feuille face inférieure × 3 ; **3**, fragment d'inflorescence, une fleur en place × 4 ; **4**, fleur, coupe longitudinale × 4 ; **5**, gynécée avec écaille du disque × 6 ; **6**, fruit en place × 3. – **W. austrocochinchinensis** (Lecomte) Pham Hoang Hô : **7**, fragment de rameau feuillé × 2/3 ; **8**, nervation de feuille face inférieure × 3 (**1-6**, *Vidal 802 A* ; **7-8**, *Pierre 476*).

Fig. 22: D. poilanei (Léandri) J. J. Halda and *D. elongata* (A. Gray) J. J. Halda var. *austrocochinchinensis* (Lecomte) J. J. Halda [Ho (1992)].

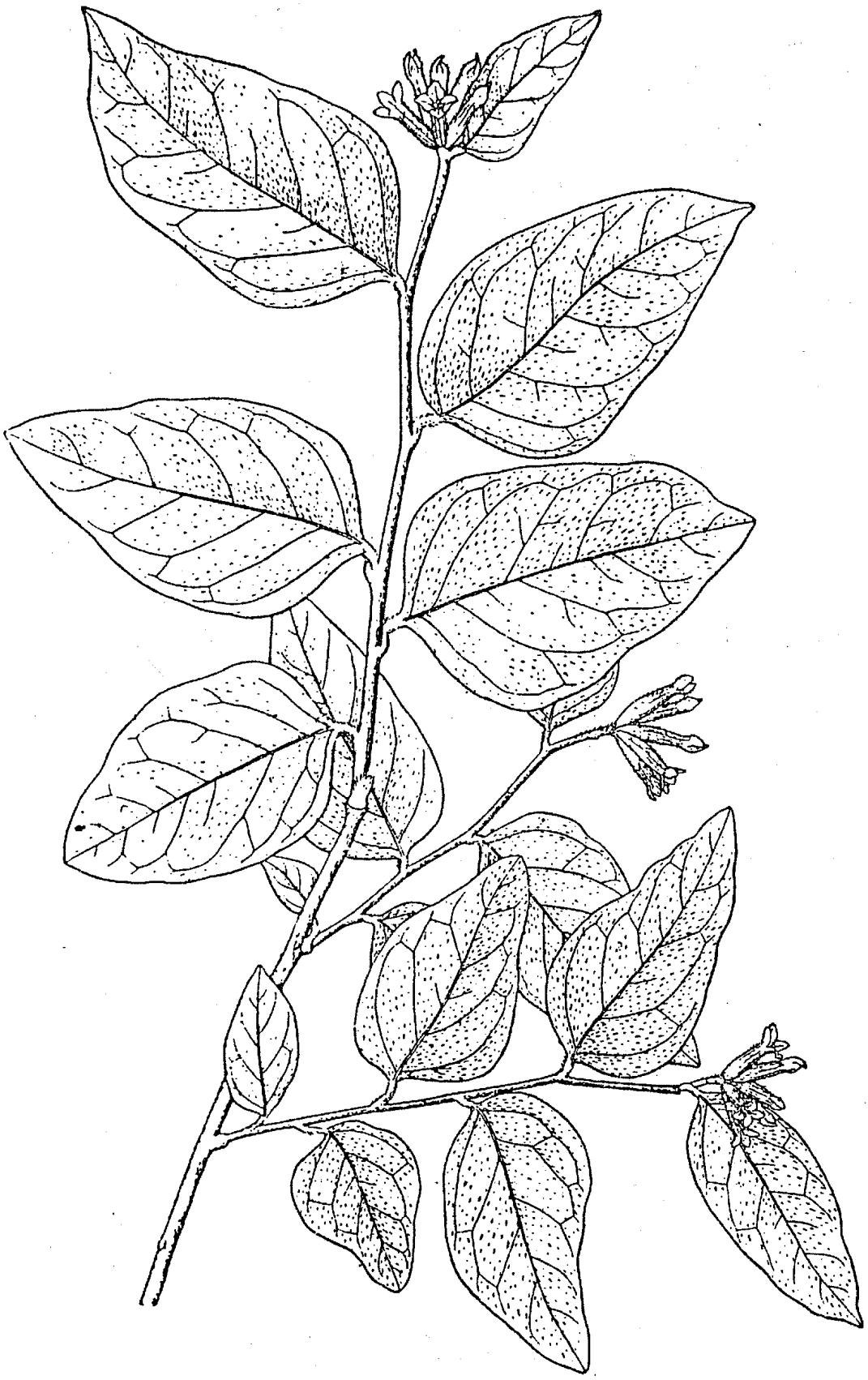


Fig. 23: D. sikoklana (Franch. et Sav.) J. J. Halda [Hamaya (1955)].

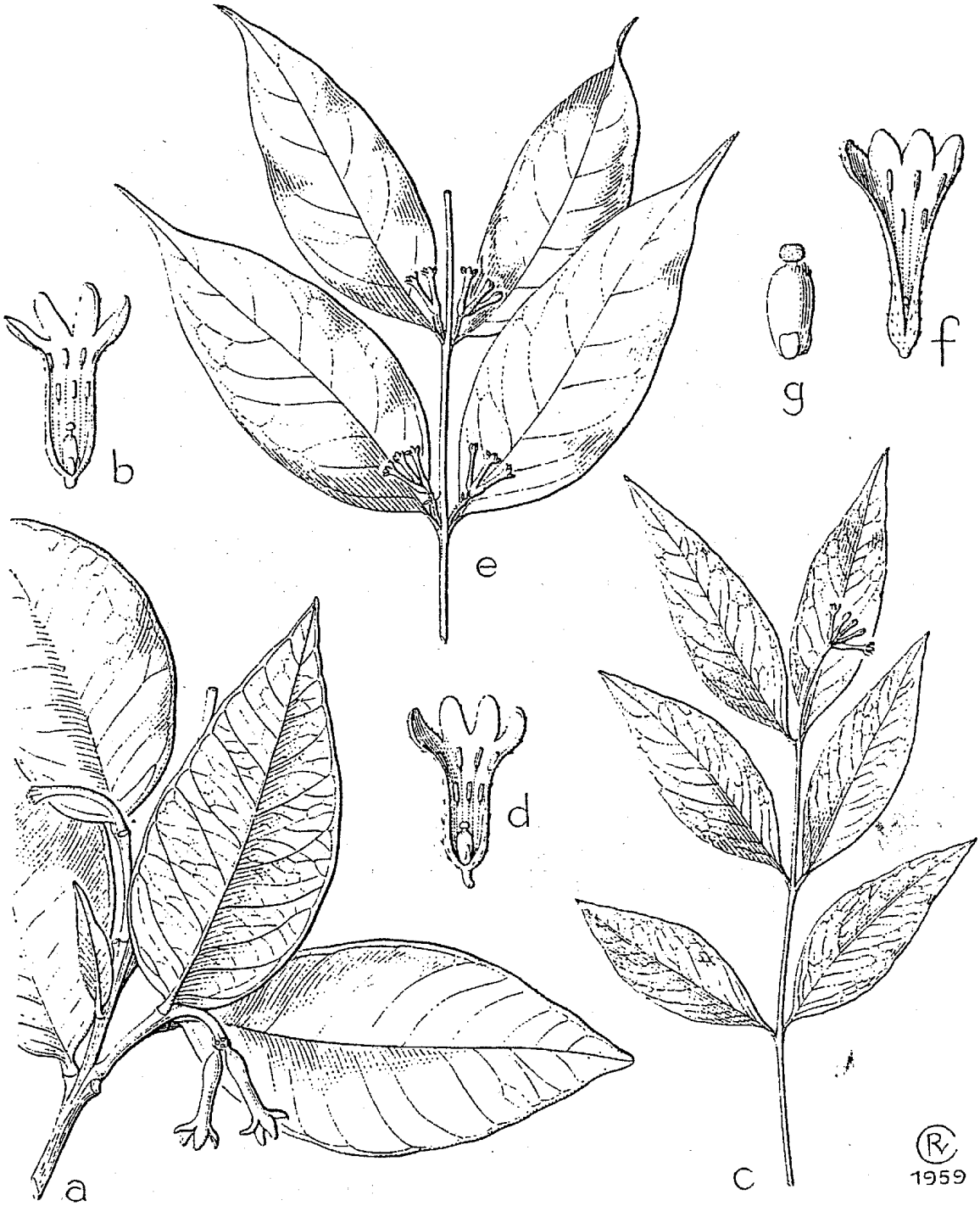


Fig. 12. *Wikstroemia brachyantha* MERR. *a*. Habit, × 2/3, *b*. opened flower, × 4/3.—*W. androsaemifolia* DECNE. *c*. Habit, × 2/3, *d*. opened flower, × 3.—*W. tenuiramis* MIQ. *e*. Habit, × 2/3, *f*. opened flower, × 3, *g*. pistil with scale-like disk at base, × 7 (*a–b* CLEMENS 32439, *c* COERT 41, *d* RANT *s.n.*, *e–f* For. Dep. N. Borneo 4173).

Fig. 24: D. tenuiramis (Miq.) J. J. Halda et *D. brachyantha* (Merrill) J. J. Halda [Ho (1992)].