DISTRIBUTION MAPS OF PACIFIC PLANTS

244. Campynema Labill.

Name: Campynema Labill., Nov. Holl. Pl. Sp. 1 (1805) 93, t. 121.

Family: *Amaryllidaceae.*

Taxonomy & distribution: The genus consists of 2 species: *C. lineare* Labill. (*C. pygmaeum* F.v.M.) is endemic in Tasmania and *C. neo-caledonicum* Rendle is endemic in New Caledonia.

Habit: Perennial herbs up to 35 cm tall, with small linear leaves and terminal, solitary or paniculate inflorescences. Flowers usually hermaphrodite, sometimes unisexual.

Habitat & ecology: In peaty moors, on mountains up to 1200 m and in Tasmania locally at sea-level.

Dispersal: The fruit is a leathery, narrow-oblong, dehiscent capsule a few mm diam., containing numerous seeds. Means of dispersal unknown.

Sources: J.D. Hooker, Fl. Tasm. 2 (1860) 47–48; L. Rodway, Tasm. Fl. (1903) 210; F. Pax & G.E. Hoffmann, Nat. Pfl. Fam. ed. 2, 15a (1930) 430; A. Guillaumin, Fl. Nouv. Caléd. (1948) 55; W.M. Curtis, The Endem. Fl. of Tasm. 2 (1969) 84; collections in L.

245. Campynemanthe Baill.

Name: Campynemanthe Baill., Bull. Soc. Linn. Paris 2 (1893) 1106.

Family: *Amaryllidaceae.*

Taxonomy & distribution: A monotypic genus of which the only species *C. viridiflora* Baill. is restricted to New Caledonia. According to Pax & Hoffmann (1930) *Campynema* and *Campynemanthe* form a separate subfamily *Campynematoideae* within the *Amaryllidaceae* distinguished by the possession of extrorse stamens and 3 free styles.

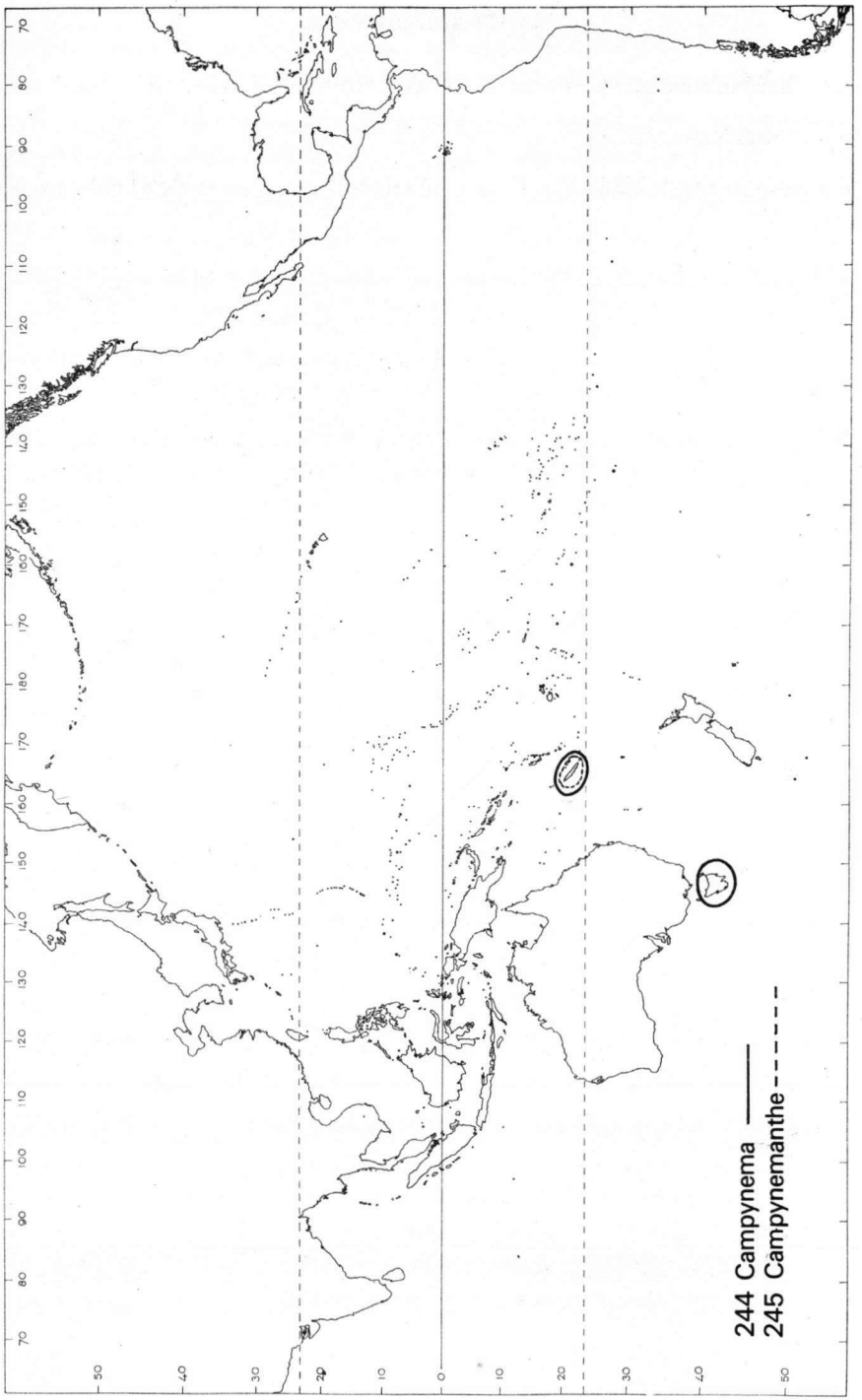
Habit: Perennial herb up to 40 cm tall, with small linear leaves and terminal, umbellate, cymose inflorescences.

Habitat & ecology: Rocky, shadowy places near brooks, on wooded, moist mountaintops up to 1500 m.

Dispersal: The fruit is a dehiscent, membranous capsule, a few mm across, containing 3–6 seeds. Means of dispersal unknown.

Sources: R. Schlechter, Bot. Jahrb. 19 (1907) 33; F. Pax & G.E. Hoffmann, Nat. Pfl. Fam. ed. 2, 15a (1930) 430; A. Guillaumin, Fl. Nouv. Caléd. (1948) 55; collections in L.

W. AVÉ.


244 Campynema
245 Campynemanthe

246. **Buchanania** Spreng.

Name: Buchanania Spreng. in Schrader, J. Bot. (1800) 2, (1801) 234.

Family: *Anacardiaceae.*

Taxonomy & distribution: The genus contains about 20 species, distributed from W. India to Samoa.

Habit: Trees up to c. 40 m tall, usually much less, with spiral, simple leaves and axillary, paniculate inflorescences. The flowers are bisexual.

Habitat & ecology: In primary lowland forest up to 500 m, sometimes in secondary forest, on limestone hills, in peat swamp and along river-banks.

Dispersal: The fruit is a red or brown, sublentiform drupe up to c. 2 cm diam. Squirrels were observed to feed on the fruits in Borneo (Dr. M. Leighton, pers. inf.).

Sources: Ding Hou, Fl. Mal. I, 8 (1978) 412–419; local floras.

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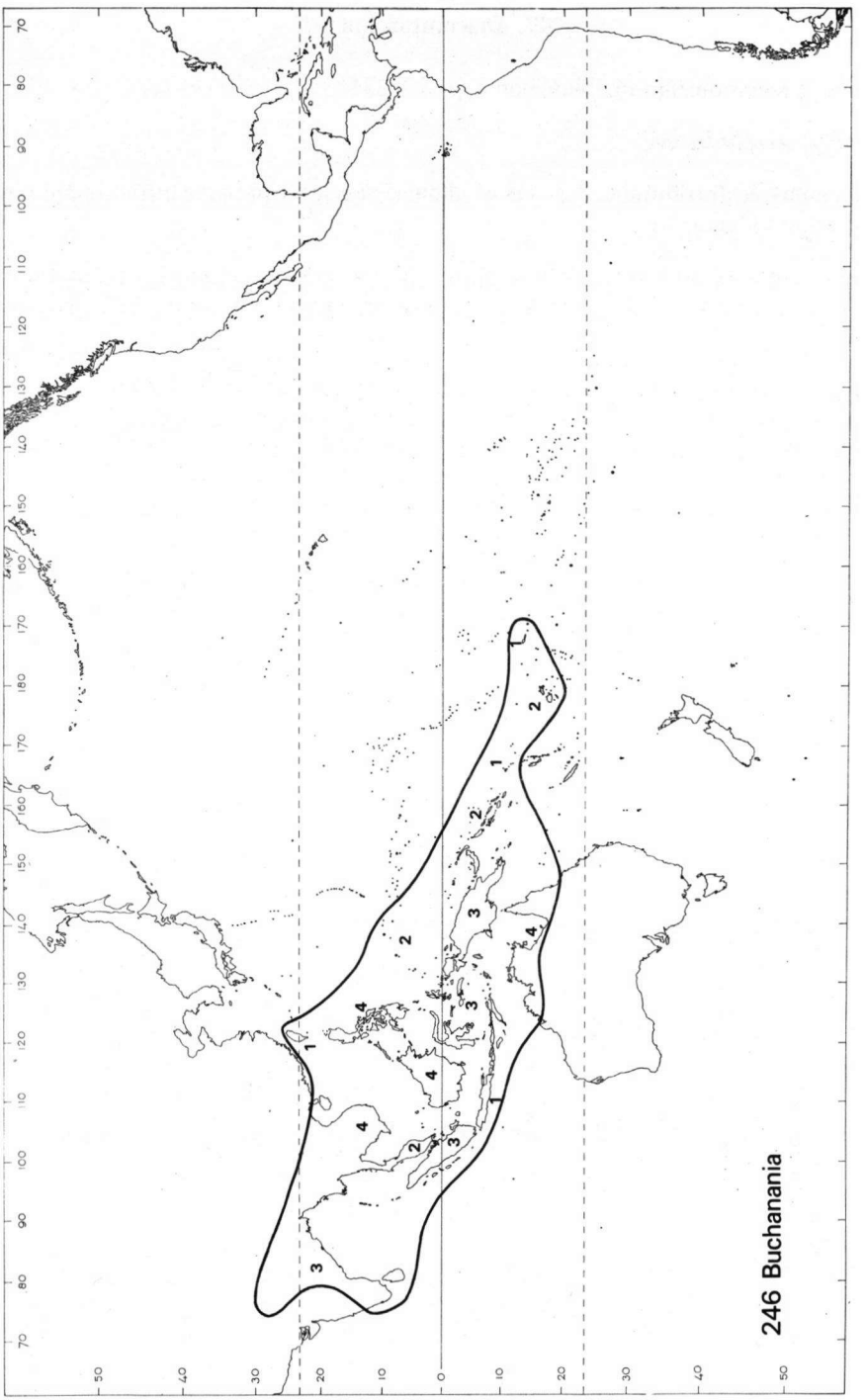
246 Buchanania

247. Dracontomelon Bl.

Name: **Dracontomelon** Bl., Mus. Bot. 1 (1850) 231.

Family: *Anacardiaceae.*

Taxonomy & distribution: A genus of about 5 species, widespread from Indo-China throughout Malesia to Samoa.

Habit: Trees up to c. 40 m tall, often buttressed, with spiral, imparipinnate leaves, sometimes deciduous. Inflorescences paniculate, axillary or terminal. Flowers bisexual.

Habitat & ecology: On alluvial flats, on swampy ground, in secondary forest and primary lowland rain forest or monsoon forest, rarely above 500 m. *D. dao* (Blanco) Merr. & Rolfe is sometimes planted for its edible fruit.

Dispersal: The fruits are brown or black drupes up to 6 cm diam., and are reported to be eaten by pigeons and civets. Local dispersal by river-streams (Ridley, 1930).

Sources: H.N. Ridley, Dispersal of Pl. (1930) 271, 353, 503; Ding Hou, Fl. Mal. I, 8 (1978) 470–474; local floras.

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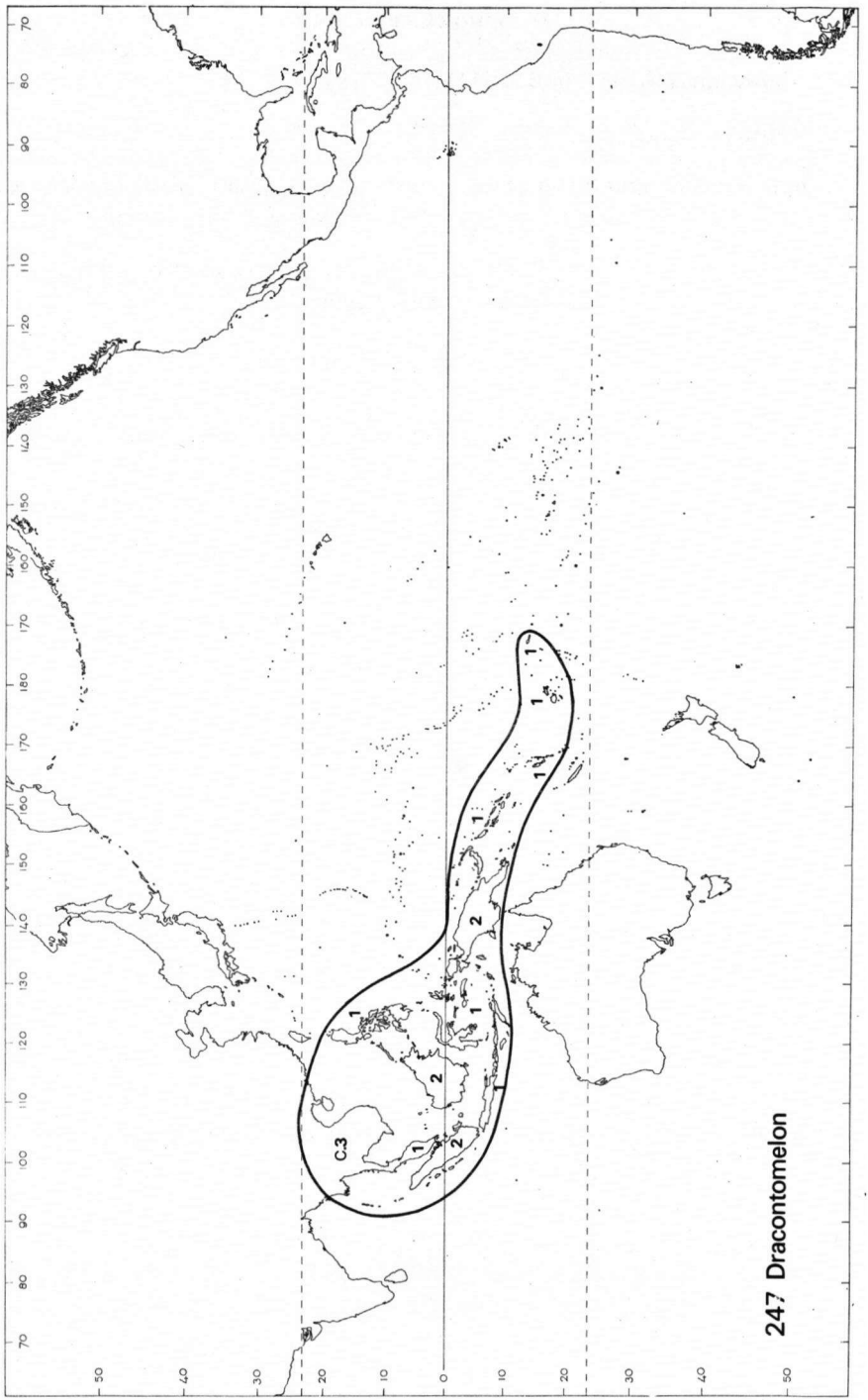

247 Dracontomelon
C.3

248. Euroschinus Hook. f.

Name: Euroschinus Hook. f. in B. & H., Gen. Pl. 1 (1862) 422.

Family: *Anacardiaceae.*

Taxonomy & distribution: The genus consists of 6–8 species: 4–6 are endemic in New Caledonia, one in Australia and one in New Guinea and New Britain.

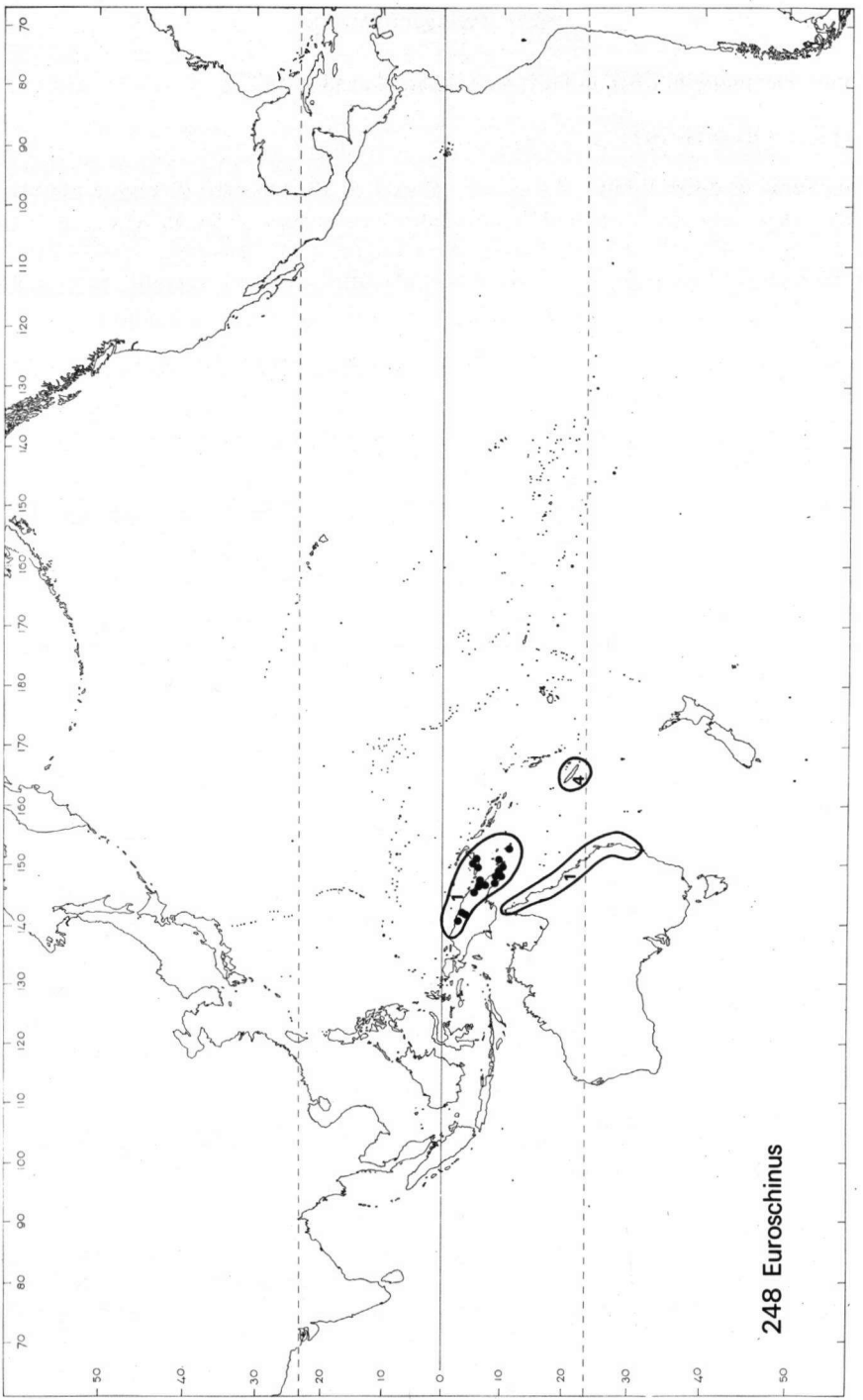
Habit: Mostly trees up to c. 30 m tall, with spiral, paripinnate leaves and axillary, paniculate inflorescences. The plants are polygamous.

Habitat & ecology: In lowland forests of flooded areas and dryland, below 500 m, sometimes up to c. 1000 m.

Dispersal: The fruit is a blackish purple drupe up to 1 cm long and 2/3 cm diam. No data on dispersal were found.

Sources: A. Guillaumin, Fl. Nouv. Caléd. (1948) 190; D. Francis, Austr. Rain For. Trees (1951) 240; Ding Hou, Fl. Mal. I, 8 (1978) 534, map; collections in L.

W. AVÉ and M.M.J. VAN BALGOOY.


248 Euroschinus

249. Pleiogynium Engl.

Name: Pleiogynium Engl. in DC., Mon. Phan. 4 (1883) 255.

Family: *Anacardiaceae.*

Taxonomy & distribution: The genus consists of two species: *P. timoriense* (DC.) Leenh. is widespread from the Philippines to Queensland and Tonga, and is cultivated in a number of places (India, Taiwan, Java and Cook Is.). There are no records from the Bismarcks, Solomons or the New Hebrides although the species has been collected on the St. Cruz Is. One species, *P. hapalum* A.C. Sm., is endemic in Fiji.

Habit: Trees up to c. 40 m tall, with imparipinnate leaves and axillary, paniculate inflorescences. Plants often dioecious.

Habitat & ecology: Scattered in lowland forest, generally below 500 m.

Dispersal: The fruit is a drupe 1.5–2 cm diam., red to dark brown at maturity and is presumably eaten by birds, but no observations are on record.

Sources: T.G. Yuncker, B. P. Bish. Mus. Bull. 220 (1959) 171; A.C. Smith, Contr. U.S. Nat. Herb. 37 (1967) 76–78; Ding Hou, Fl. Mal. I, 8 (1978) 474–476; collections in L. Mr. B.P.M. Hyland (QRS) and Dr. R.W. Johnson (BRI) provided additional localities in Queensland.

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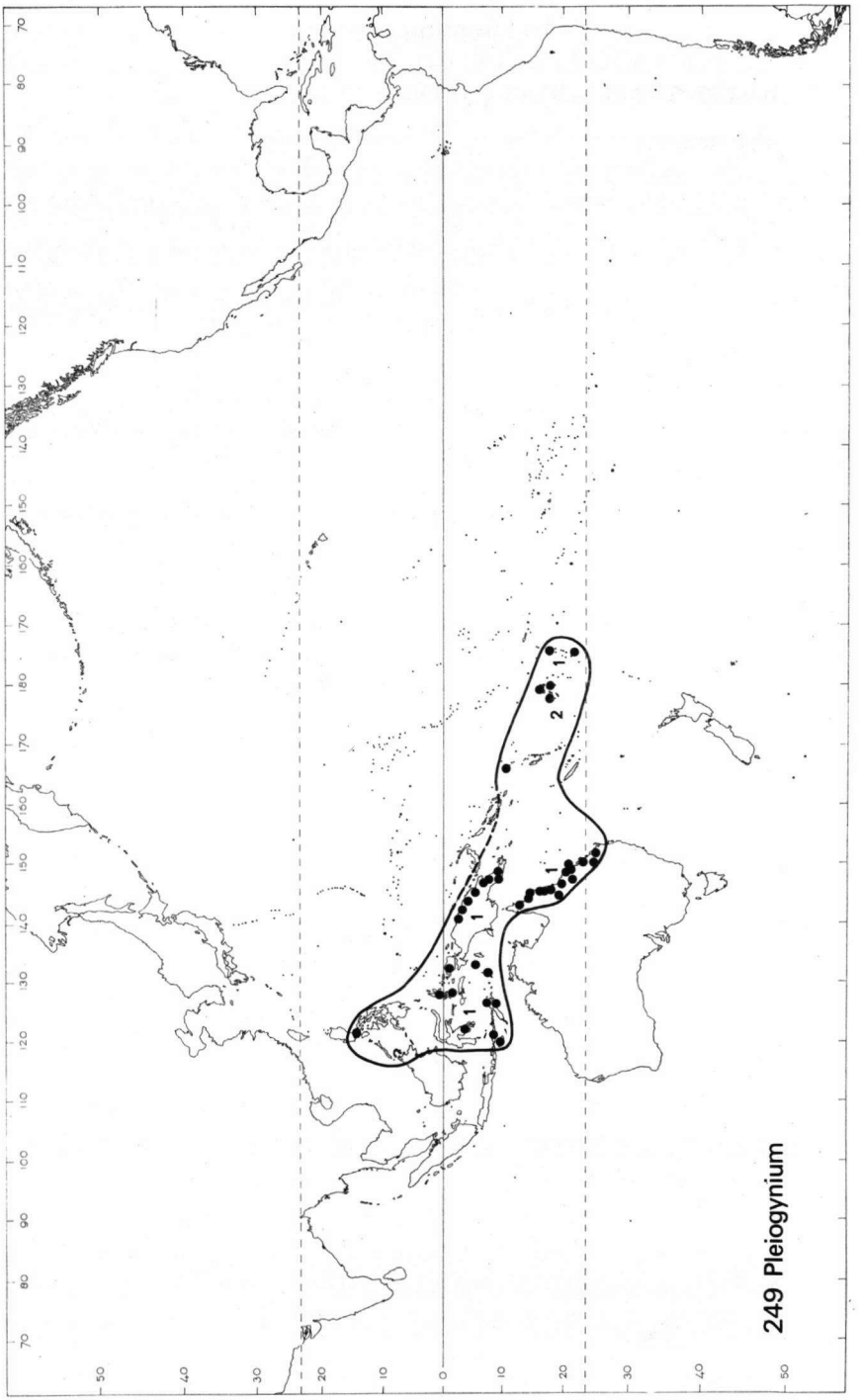

249 Pleiogynium

250. Semecarpus Linné f.

Name: Semecarpus Linné f., Suppl. (1781) 25.

Family: *Anacardiaceae.*

Synonym: *Oncocarpus* A. Gray.

Taxonomy & distribution: The genus consists of about 50 species; mostly in Indo-Malesia, extending from India to the Tonga Islands. The species of *Semecarpus* and some other genera of the family are notorious for their irritant sap which causes itching and blistering of the skin.

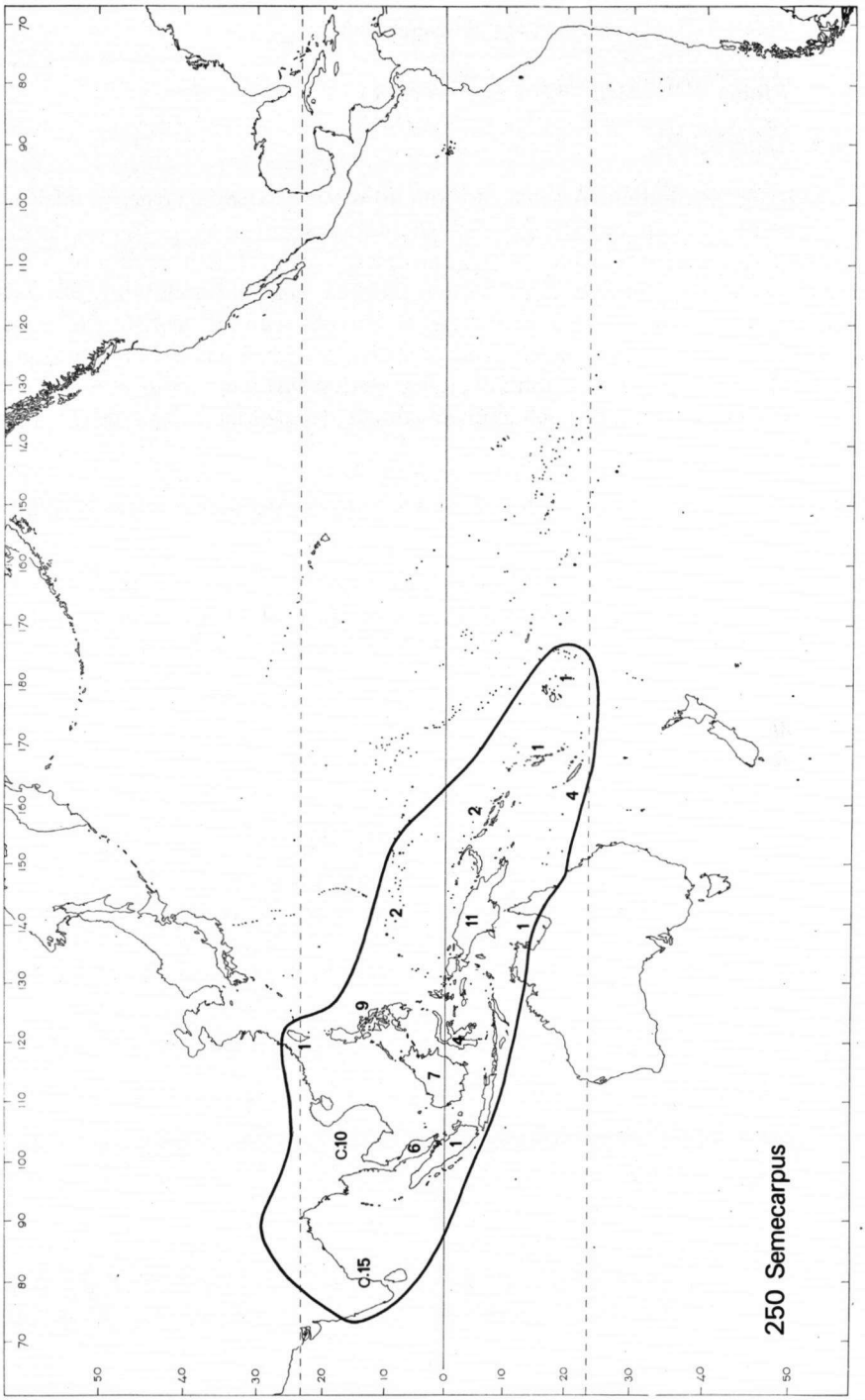
Habit: Treelets or shrubs, but mostly trees up to c. 40 m tall, with simple, spiral or alternate leaves and terminal and/or axillary, paniculate inflorescences. Plants often dioecious.

Habitat & ecology: In primary lowland forest up to 800 m, and sometimes in montane forest up to c. 2000 m, also in periodically flooded areas, on river-banks, monsoon forest, secondary forest, on limestone hills.

Dispersal: The fruit is a glabrous yellow or red drupe up to c. 5 cm diam., often partly enclosed by a fleshy hypocarp. The fruits are eaten by various animals such as squirrels and monkeys (Corner, 1952).

Sources: E.J.H. Corner, Wayside Trees of Malaya, ed. 2 (1952) 117; Ding Hou, Fl. Mal. I, 8 (1978) 499–519, map; local floras.

W. AVÉ and M.M.J. VAN BALGOOY.


250 Semecarpus
C.10
C.15

251. Alstonia R. Br.

Name: Alstonia R. Br., Mem. Wern. Soc. 1 (1811) 75.

Family: *Apocynaceae.*

Taxonomy & distribution: A genus of about 40 species, extending from W. Africa to the Marquesas Islands. For the generic delimitation of *Alstonia* Markgraf (1974) is followed. Pichon (1947) included the Neotropical *Tonduzia* within *Alstonia*. Monachino (1949) did not include *Tonduzia* but reduced *Winchia* (monotypic, SE. Asia) and *Blaberopus* (7 spp., SE. & E. Asia, W. Malesia) to sections of *Alstonia*. Section *Pala* occurs in Africa, Asia, Malesia and Australia; section *Monuraspermum* extends from SE. Asia to the Solomons and Australia; section *Dissuraspermum* is almost confined to the Pacific from the Solomons to the Marquesas islands, one species occurs in Australia.

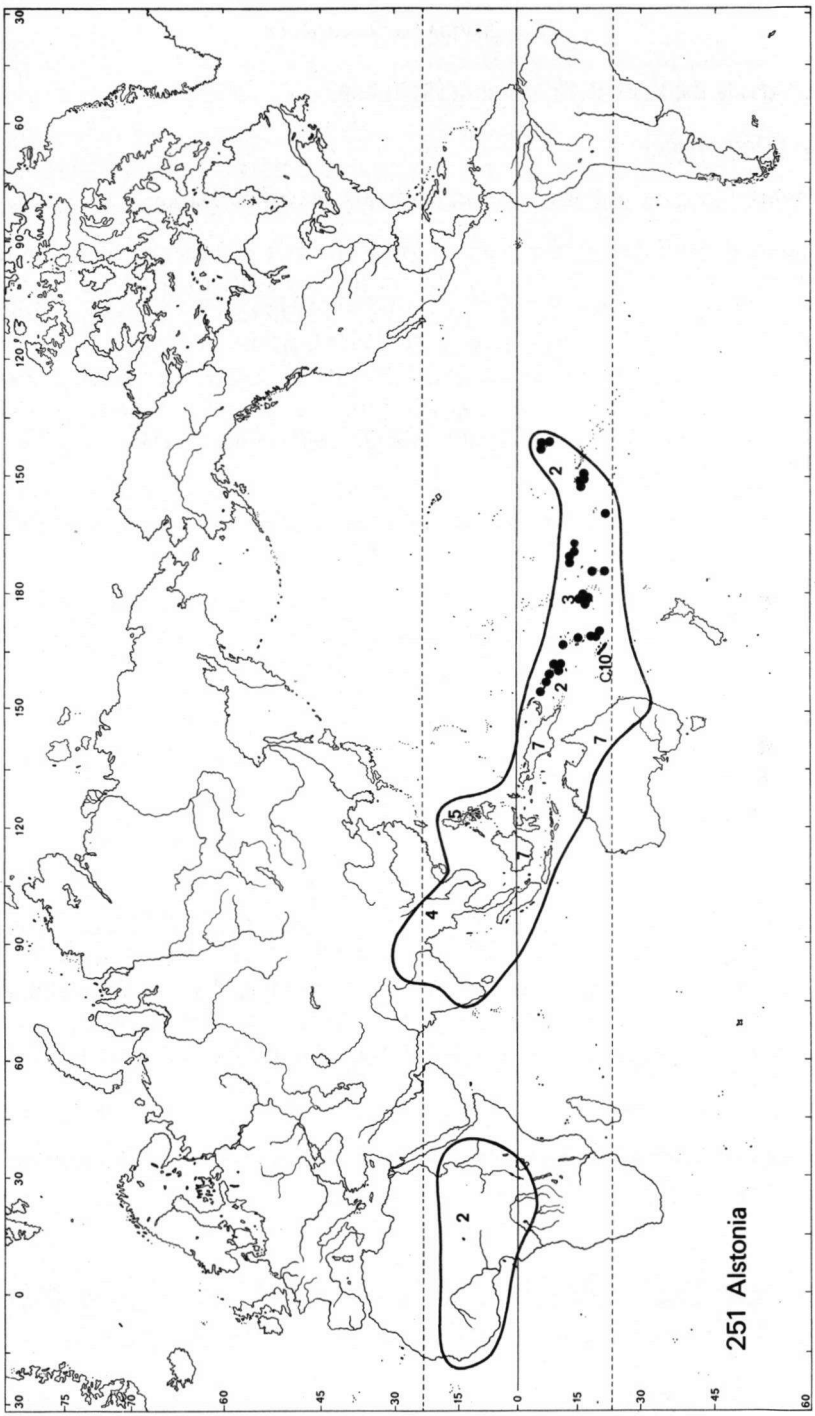
Habit: Laticiferous shrubs or trees, up to c. 40 m, with opposite or verticillate leaves and terminal, pleiochasial inflorescences.

Habitat & ecology: In lowland rain forest, peat swamp forest, sometimes in mountain rain forest up to c. 2000 m, also in monsoon forest, open forest, teak-wood and on limestone hills.

Dispersal: The fruit is a slender dehiscent follicle up to 30 cm long containing numerous flat hairy or ciliate seeds. Wind is the most likely dispersal agent (Ridley, 1930), but Guppy (1906) also suggests exozoic dispersal by birds.

Sources: H.B. Guppy, Observ. of a Naturalist in the Pacific 2 (1906) 384; H.N. Ridley, Dispersal of Pl. (1930) 154; M. Pichon, Bull. Mus. Nat. Hist. Nat. 19 (1947) 294–298; J. Monachino, Pac. Sc. 3 (1949) 133–182; F. Markgraf, Blumea 22 (1974) 20–19; B.H. de Jong, Meded. Landb. Hogesch. Wageningen 79-13 (1979) 1–16; P. Boiteau, Fl. Nouv. Caléd. et Dépend. 10 (1981) 160–207; M.L. Grant, F.R. Fosberg & H.M. Smith, Smithson. Contr. Bot. 17 (1974) 41–45; local floras.

W. AVÉ.


251 Alstonia

252. Alyxia Banks ex R. Br.

Name: Alyxia Banks ex R. Br., Prodr. (1810) 469.

Family: *Apocynaceae.*

Synonyms: *Gynopogon* Forst., *Paralstonia* Baill., *Discalyxia* Markgr.

Taxonomy & distribution: The genus consists of about 100 species, mostly in Indo-Malesia and New Caledonia, extending from the Himalaya to Henderson Island (c. 24° S, 128° W). The Madagascan species were transferred to the genus *Cabucala* (Markgraf, 1976) and the Ceylon species to *Petchia* (Huber, 1973). Markgraf (1977) recognises 57 species in Malesia of which 25 in New Guinea. The exact number of species in the Pacific is unknown, apparently there is a centre of speciation in New Caledonia (Guillaumin, 1948, Boiteau & Allorge, 1979, Boiteau, 1981).

Habit: Laticiferous lianas, rarely erect or suberect shrubs up to c. 5 m, leaves decussate or whorled, mostly coriaceous. Inflorescences axillary or pseudoterminal, thyrsoid.

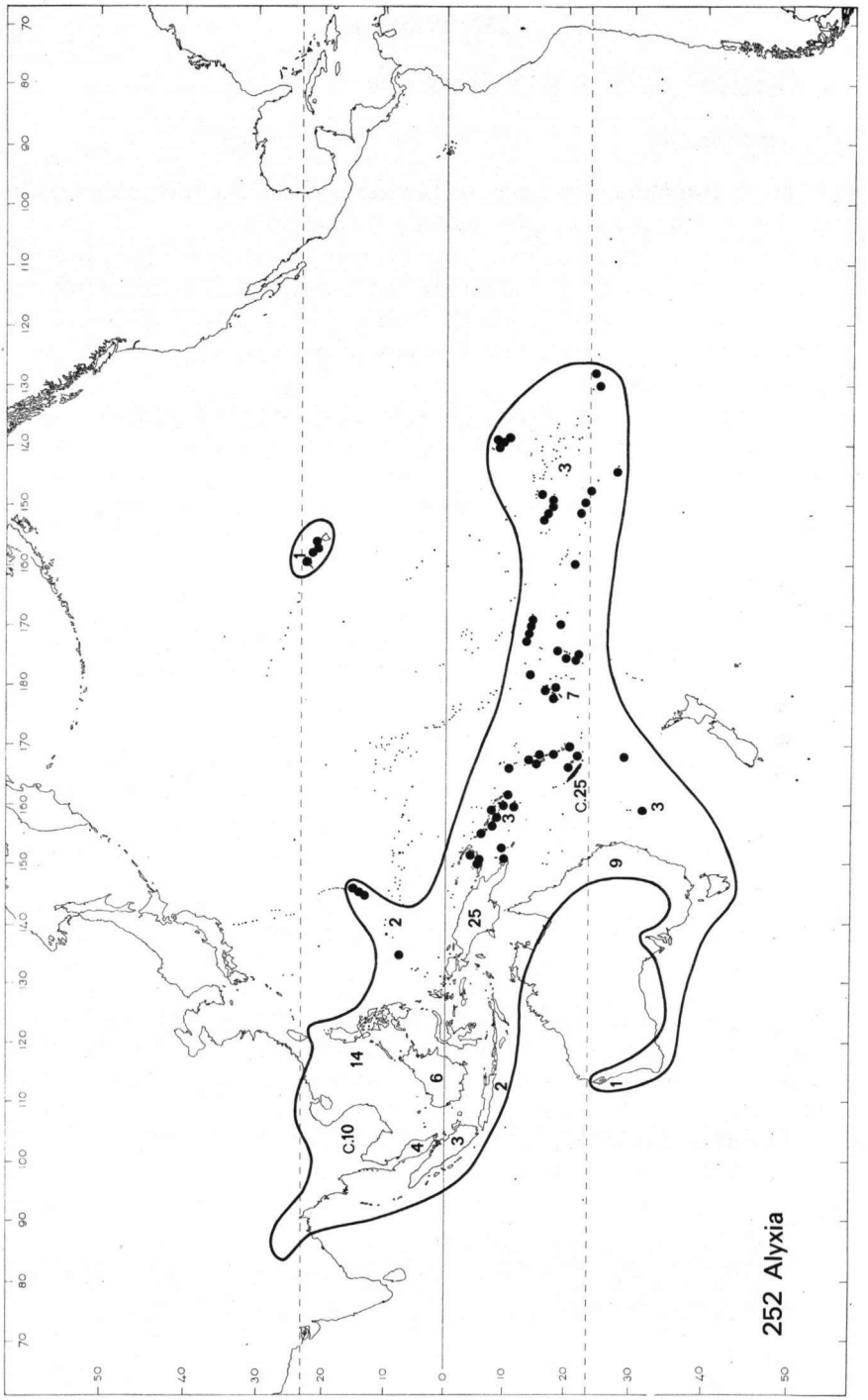
Habitat & ecology: Lowland rain forest, montane rain forest up to c. 2400 m, mossy forest, heath forest on sandstone, dry and bushy rain forest edges, also in brackish water swamps. In New Caledonia also in maquis on ultrabasic rocks.

Dispersal: The fruit consists of two, usually moniliform, mericarps which turn red or black at maturity. The seeds up to 8 in each mericarp are black, ruminate, a few mm to 1 cm diam. Means of dispersal unknown.

Map: On the map the number of species in the partial areas are indicated; localities in the Pacific proper are shown by dots.

Sources: A. Guillaumin, Fl. Nouv. Caléd. (1948) 290–292; F.R. Fosberg, Micronesica 4 (1969) 258; M.L. Grant, F.R. Fosberg & M.H. Sachet, Smithson. Contr. Bot. 17 (1974) 46–50; H. Huber, Rev. Handb. Fl. Ceyl. 1 (1973) 16; F. Markgraf, Fl. Madag. 169 (1976) 61–87; Blumea 23 (1977) 377–414; P. Boiteau & L. Allorge, Adansonia II, 18 (1979) 443–457; P. Boiteau, Fl. Nouv. Caléd. et Dépend. 10 (1981) 96–160.

W. AVÉ.


252 Alyxia
C.10
C.25

253. Cerbera L.

Name: Cerbera L., Sp. Pl. ed. 1 (1753) 208.

Family: *Apocynaceae.*

Taxonomy & distribution: A genus of two sections and about 8 species (Pichon, 1948). The sections are distinguished by the following characteristics:

Section *Cerbera (Manghas):* Flowers white with pink eye, tube long, widened at the top, fruit ovoid. Two species belong to this section: *C. venenifera* (Poir.) Steud.; endemic in Madagascar (Markgraf, 1976), and *C. manghas* L. which is widespread from the Comores and Seychelles through SE. Asia, Malesia and Australia to Pitcairn I.

Section *Odollam:* Flowers white with yellow eye, tube short, gradually widening, fruit globose. *C. odollam* Gaertn. and some related species belong to the second section.

Habit: Mostly shrubs, also trees usually less than 15 m but exceptionally up to 30 m with simple, spirally arranged leaves and terminal or axillary, cymose inflorescences. Flowers usually hermaphrodite.

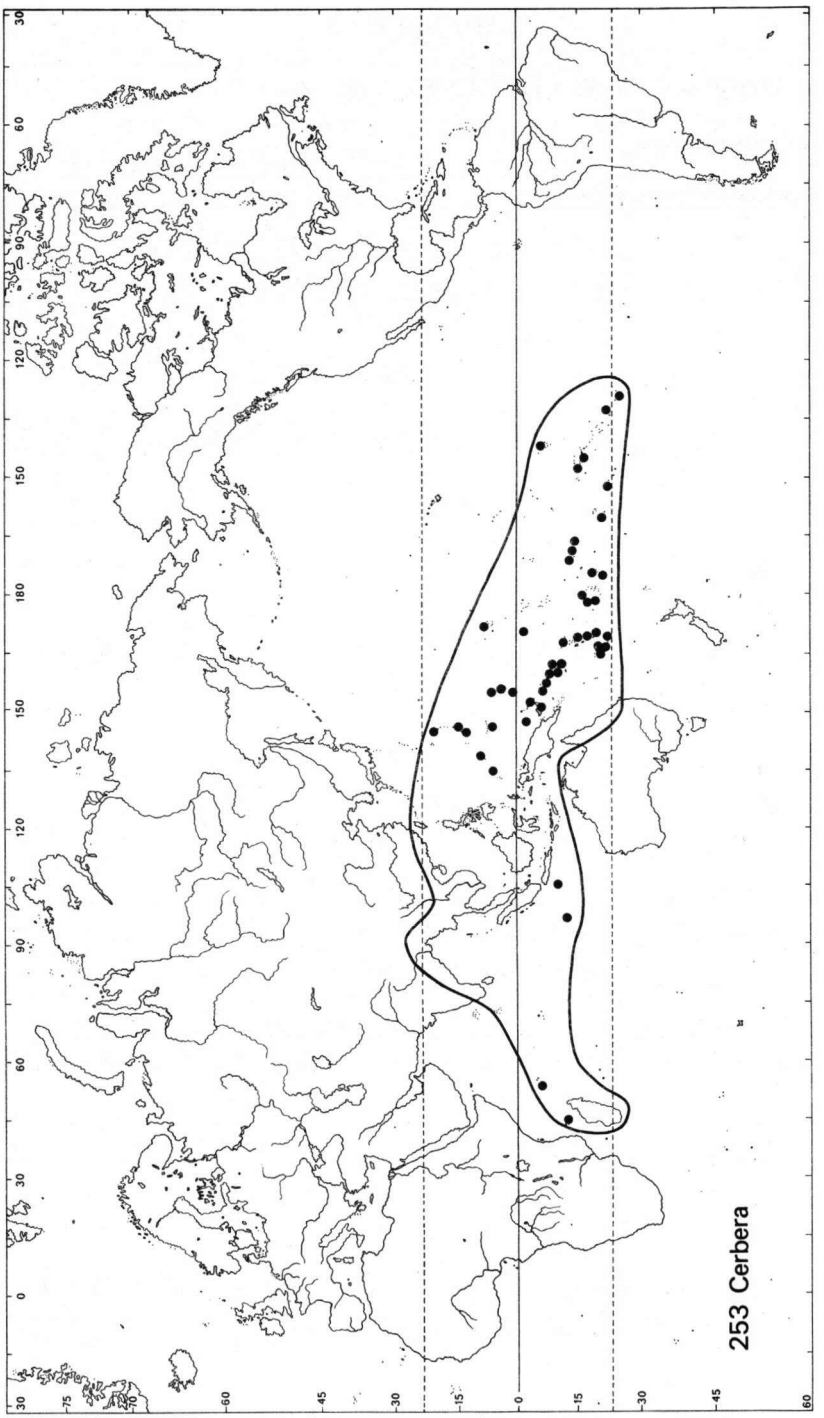
Habitat & ecology: On sandy or rocky seashores (*C. manghas*), along muddy tidal creeks and estuaries (*C. odollam*), on river-banks, in primary and secondary forests up to 900 m.

Dispersal: The fruit is a globose or ovoid, solitary or occasionally paired drupe up to 10 cm diam., purple to black at maturity. The exocarp is thin and fleshy, the endocarp is thick, fibrous and woody. According to Guppy (1906) the fruits of *C. manghas* are dispersed by sea-drift. The buoyancy is due to the presence of air-bearing tissues.

Map: In view of the uncertainty about the number of species, these have not been indicated. Only localities in the Pacific are shown.

Sources: Th. Valeton, Ann. Jard. Bot. Buitenzg. 12 (1895) 240; H.B. Guppy, Observ. of a Naturalist in the Pacific 2 (1906) 108, 114; S.T. Blake, Proc. Roy. Soc. Qld. 59 (1948) 161–163; M. Pichon, Not. Syst. 13 (1948) 221–224; F. Markgraf, Fl. Madag. 169 (1976) 156–160; P. Boiteau, Fl. Nouv. Caléd. et Dépend. 10 (1981) 212–222; local floras and collections in L.

W. AVÉ.


253 Cerbera

254. Rauvolfia L.

Name: Rauvolfia L., Sp. Pl. 1 (1753) 208.

Family: *Apocynaceae.*

Synonym: *Podochrosia* Baill.

Taxonomy & distribution: A genus of about 80 species, in 13 sections (Pichon, 1947; Woodson, 1957) of pantropical distribution: Central and South America, from West to East Africa and Madagascar, from India to New Caledonia. From the latter island 4 species are known (Boiteau et al., 1976), from Hawaii 7 (St. John, 1973), perhaps all forms of one species (Woodson, l.c.) and one species from the Marquesas Islands (Fosberg & Sachet, 1981). Boiteau et al. (l.c.) have shown that *Podochrosia* of New Caledonia is a monstrosity of *Rauvolfia schumanniana* (Schltr) Boit. The New Caledonian species belong to sect. *Heurckia* endemic to the island, the Hawaiian species to the endemic sect. *Ochrosioides.*

Habit: Laticiferous shrubs or trees, with whorled leaves and terminal dichasial inflorescences.

Habitat & ecology: On fertile, constantly damp soil in shaded primary and secondary forest, both in the lowland and in the mountains, along river-banks and in open places. Some species are grown for their medicinal properties (antihypertensive).

Dispersal: The fruit consists of two connate or distinct, usually one-seeded, globose drupes, 0.5–4 cm in diam., red or black at maturity. The exocarp is thin, the mesocarp fleshy and the endocarp stony. Dispersal by birds is most likely but no observations recorded.

Sources: M. Pichon, Bull. Soc. Bot. Fr. 94 (1947) 31–39; A.S. Rao, Ann. Mo. Bot. Gard. 43 (1956) 253–352; R.E. Woodson, H. Youngken, E. Schlittler & J.A. Schneider, Rauwolfia, botany, pharmacognosy, chemistry and pharmacology (1957) xii & 149; H. St. John, List Flow. Pl. Hawaii (1973) 281; P. Boiteau, L. Allorge & T. Sévenet, Adansonia II, 16 (1976) 51–60; F.R. Fosberg & M.H. Sachet, Smithson. Contr. Bot. 47 (1981) 21–24; P. Boiteau, Fl. Nouv. Caléd. et Dépend. 10 (1981) 79–96.

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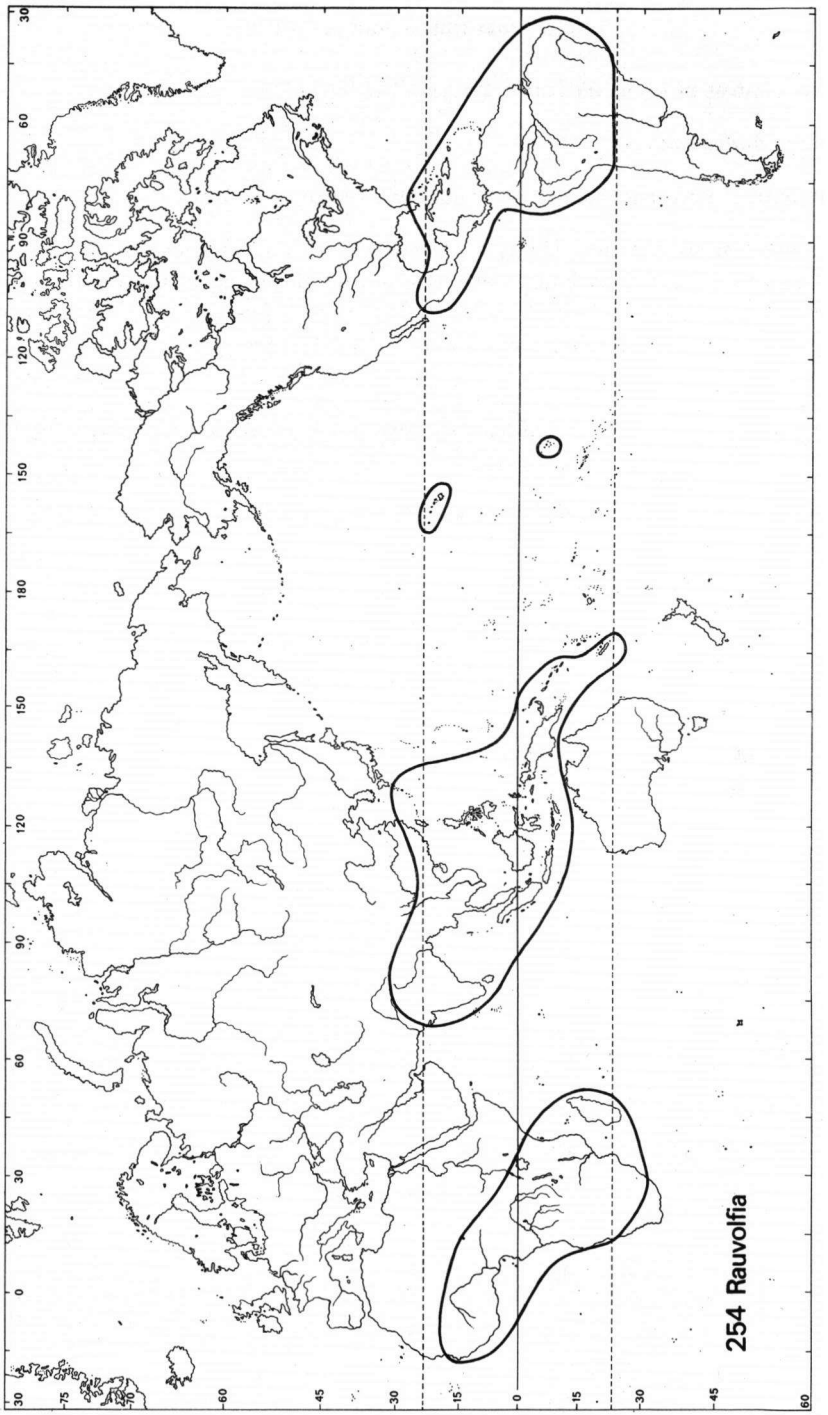

254 Rauvolfia

255. **Gastonia** Comm. ex Lamk

Name: **Gastonia** Comm. ex Lamk, Encycl. 2 (1786) 610.

Family: *Araliaceae.*

Synonyms: *Indokingia* Hemsl., *Peekeliopanax* Harms.

Taxonomy & distribution: The genus consists of c. 5 species, two of which in Malesia: *G. serratifolia* (Miq.) Philipson extends from the Malay Peninsula to the Solomons; *G. spectabilis* (Harms) Philipson is confined to New Guinea, Bismarck and Solomon Islands. The remaining species are found in Madagascar, the Mascarenes and Seychelles.

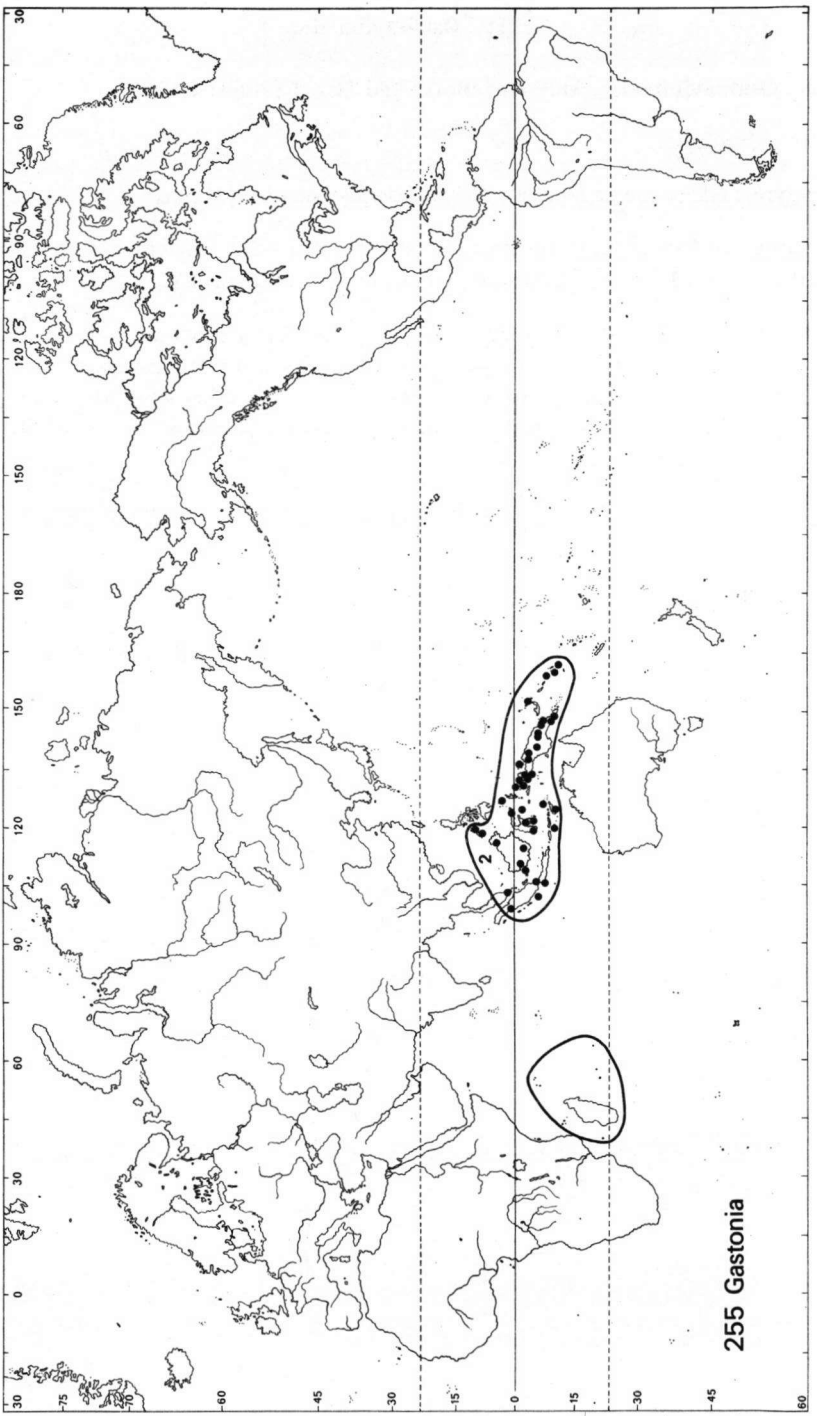
Habit: Trees up to c. 40 m tall (*G. spectabilis*), little branched, large imparipinnate, exstipulate leaves and terminal compound inflorescences.

Habitat & ecology: Lowland to lower montane primary and secondary forest, also in cultivated areas; from sea-level to 2000 m.

Dispersal: Unknown: the fruit is a spherical, fleshy, black drupe, up to c. 1 cm diam., containing 10–20 crustaceous pyrenes.

Sources: W.R. Philipson, Blumea 18 (1970) 491–495; Fl. Mal. I, 9 (1979) 67–72.

M.C. ROOS.


255 Gastonia
2

256. Osmoxylon Miq.

Name: Osmoxylon Miq., Ann. Mus. Bot. Lugd.-Bat. 1 (1863) 5.

Family: *Araliaceae.*

Synonyms: *Eschweileria* Zipp. ex Boerl., *Boerlagiodendron* Harms.

Taxonomy & distribution: A genus of about 50 species, of which 41 in Malesia (Philipson, 1976). Distributed from Taiwan to the New Hebrides.

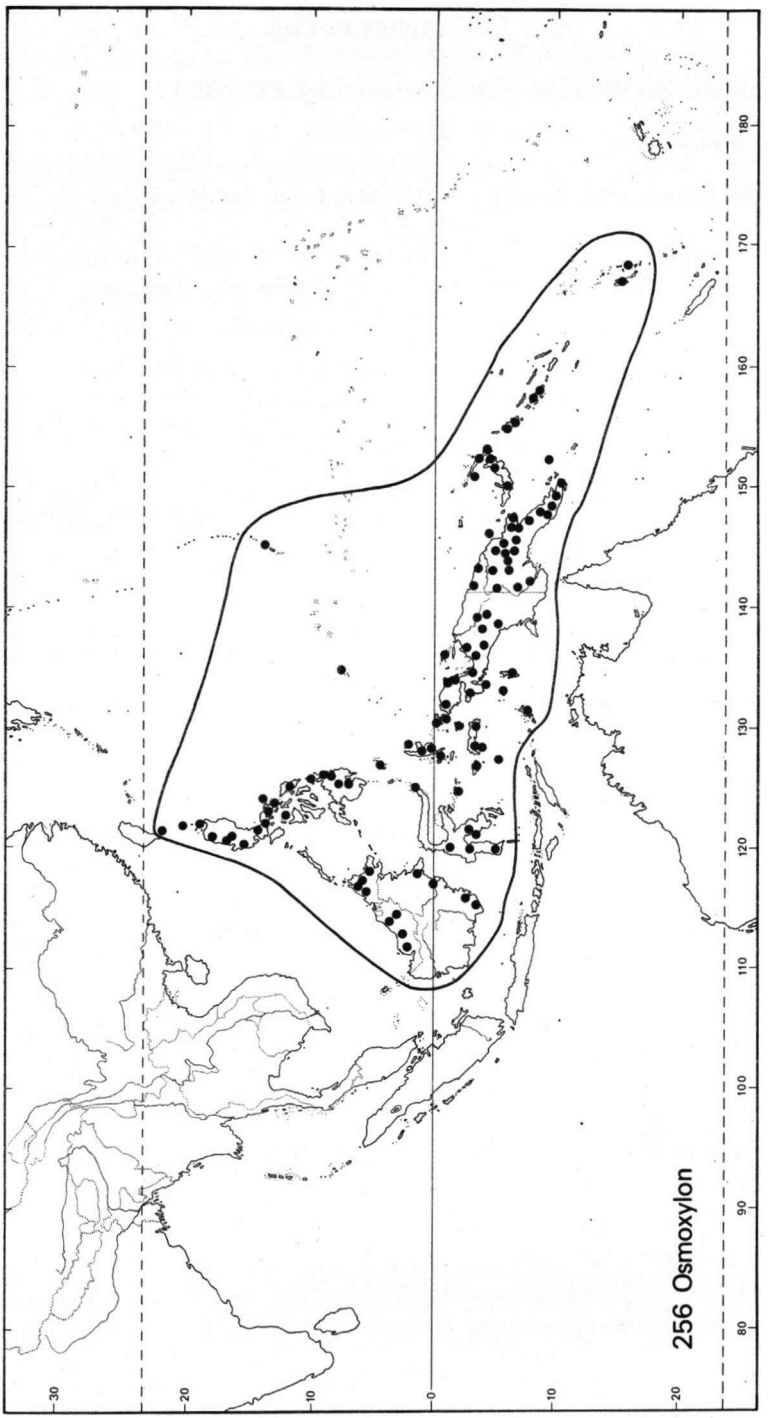
Habit: Shrubs or trees up to c. 15 m tall, with palmately lobed or undivided leaves. The petiole bears a spiny crest or a collar at base. The inflorescences are terminal and compound umbellate. The primary rays terminate in three branches, the central one of which bears sterile flowers (pseudo-fruits).

Habitat & ecology: Primary rain forest, near sea-level up to c. 1800 m, along creek-banks, usually in shaded places, also in secondary vegetations and on limestone.

Dispersal: The fruit is 5-sulcate, subglobose, drupe up to 9 mm long and 6 mm diam., with fleshy exocarp. Dispersal by birds is suggested but has not been recorded.

Sources: W.R. Philipson, Blumea 23 (1976) 99–119; Fl. Mal. I, 9 (1979) 31–53; local floras and collections in L.

M.C. ROOS.


256 Osmoxylon
30
20
10
0
10
20
80
90
100
110
120
130
140
150
160
170
180

257. **Deplanchea** Vieill.

Name: **Deplanchea** Vieill., Bull. Soc. Bot. Normandie 7 (1862) 96.

Family: *Bignoniaceae.*

Taxonomy & distribution: A genus of 5 species. One species, *D. bancana* (Scheffer) Steen. occurs in Malaya, Sumatra, Borneo and Celebes. *D. tetraphylla* (R. Br.) F.v.M. is found in New Guinea and Queensland, *D. glabra* (Steen.) Steen. is known from a restricted area in N. New Guinea and one collection in Borneo (not in Celebes as stated in Fl. Mal.). The other species, *D. sessilifolia* Vieill. ex Steen. and *D. speciosa* Vieill. are endemic in New Caledonia.

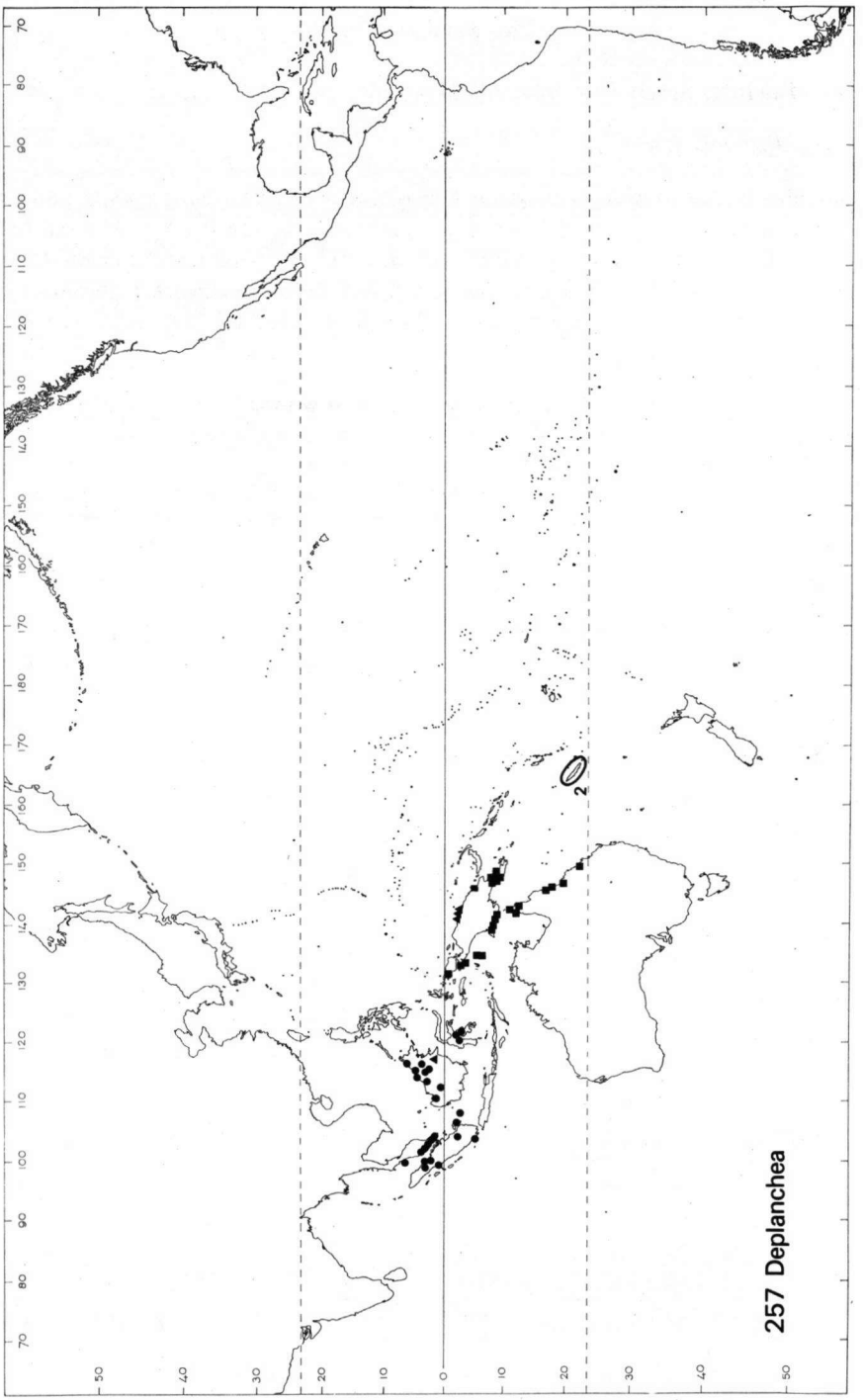
Habit: Trees up to 35 m tall with simple leaves in whorls of 3–4. Thyrses terminal and erect. Flowers bisexual.

Habitat & ecology: Primary and secondary forest from sea-level up to 1000 m, also in kerangas forest, forest on serpentine in Celebes, in grassland and wooded savannahs. The flowers of *D. bancana* in Celebes were observed to be visited by large numbers of honey eaters (*Nectarinia*, Van Balgooy, pers. inf.).

Dispersal: The fruit is a terete or flattened capsule up to 14 by 3.5 cm. Seeds many, roundish and thin-winged, 1.5–3 by 1–2 cm. The seeds of *D. bancana* in Celebes were observed to be carried by the wind (Van Balgooy, pers. inf.).

Sources: H. Heine, Fl. Nouv. Caléd. 7 (1976) 71; C.G.G.J. van Steenis, Fl. Mal. I, 8 (1977) 135–141; collections in L.

W. AVÉ.


257 Deplanchea

258. **Pandorea** Spach

Name: Pandorea Spach, Hist. Vég. 9 (1840) 136.

Family: *Bignoniaceae.*

Taxonomy & distribution: This genus consists of 6 species. One species, *P. pandorana* (Andr.) Steen. occurs in Celebes, Moluccas, Lesser Sunda Is., New Guinea, Solomons, Australia, Lord Howe Is. and New Caledonia. Two species, *P. stenantha* Diels and *P. montana* (Diels) Steen. are endemic in New Guinea. The other species, *P. jasminoides* (Lindl.) K. Sch., *P. baileyana* (Maid. & R.T. Baker) Steen. and *P. nervosa* Steen. are endemic in Australia.

Habit: Lianas, exceptionally (in arid areas) erect, up to 30 m, with pinnate, jugate leaves. Thyrses axillary, terminal or on old wood. Flowers bisexual.

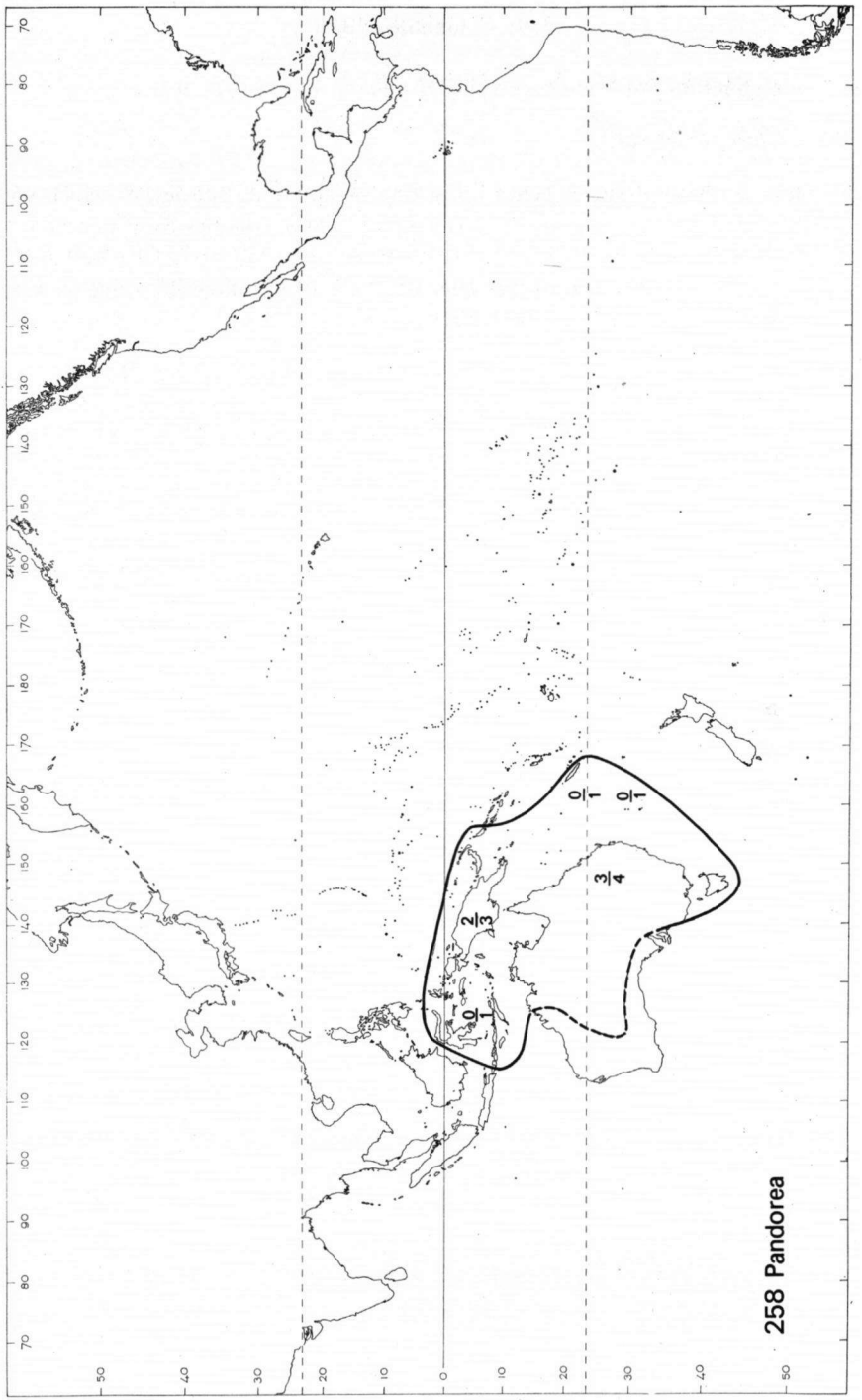
Habitat & ecology: In primary and secondary rain forests from sea-level to the mountains, often in mossy forest up to 2000 m, open shrub, monsoon forest and on sandstone slopes; one species in Australia also in arid places.

Dispersal: The fruit is a terete or flattened stipitate capsule up to 12 by 3 by 2.5 cm. Seeds many, roundish and thin-winged, up to 1.5–3 by 1–2 cm, suitable for wind dispersal.

Map: The number above the hyphen indicates the endemic species, the number below it the total number of species.

Sources: C.G.G.J. van Steenis, Fl. Mal. I, 8 (1977) 174–180; collections in L.

W. AVÉ.


0/1
0/1
3/4
2/3
0/1
258 Pandorea

259. **Colobanthus** Bartl.

Name: Colobanthus Bartl. in Presl, Reliq. Haenk. II, 13 (1830) t. 49.

Family: *Caryophyllaceae.*

Taxonomy & distribution: A genus consisting of about 25 species, of which 15 in New Zealand, Tasmania and SE. Australia and c. 8 in S. America from Fuegia to the Ecuadorian Andes. Also in Mexico according to Moore (1968, 1972). Represented on various subantarctic islands (Greene, 1963) and one of the three flowering plant species represented on the Antarctic (Skottsberg, 1954).

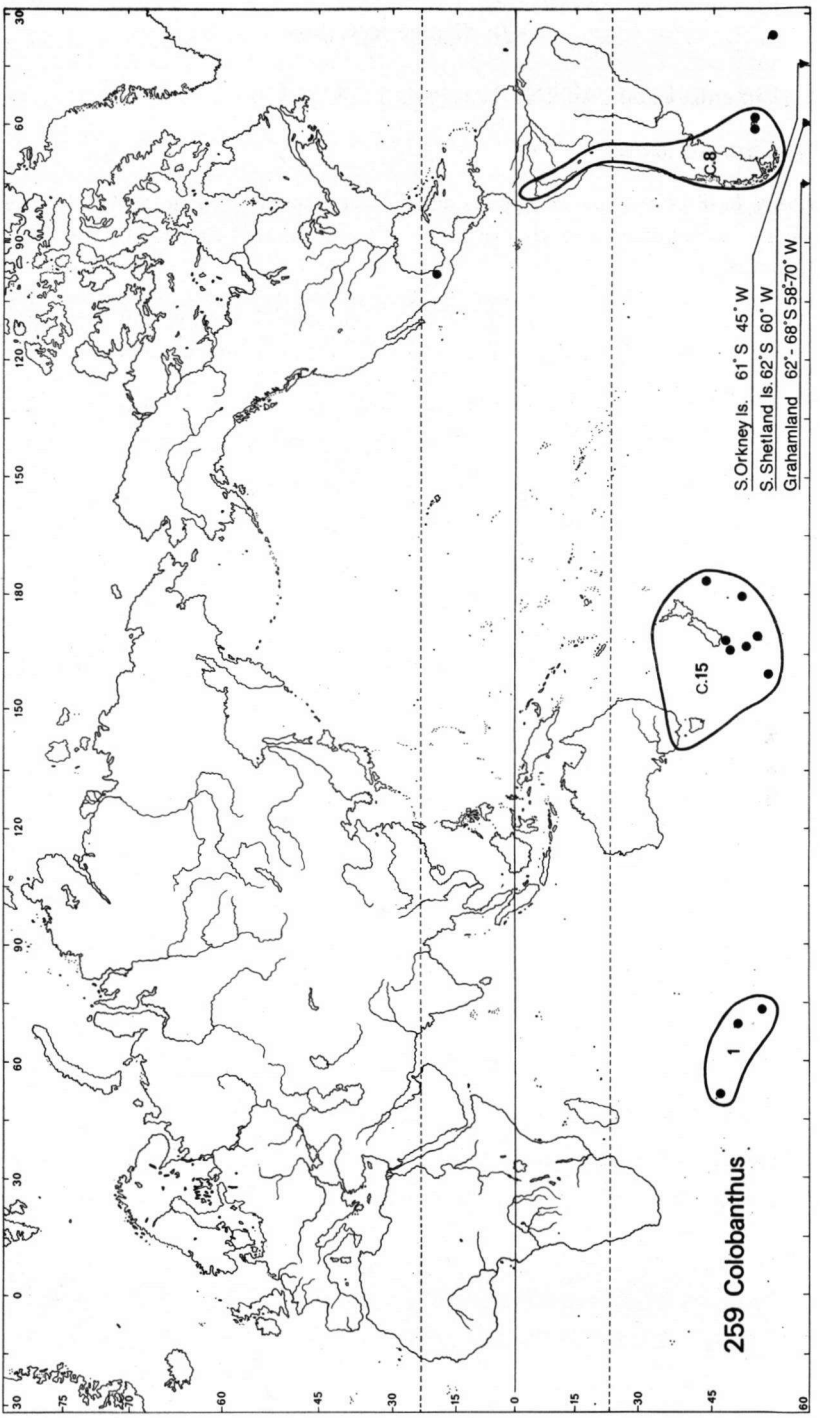
Habit: Glabrous perennial herbs, usually with strong taproot, some forming small cushions, leaves opposite, flowers bisexual.

Habitat & ecology: In damp, sandy, gravelly, peaty or muddy soil, often in rock crevices at sea-level and along ponds. Most species are self-compatible and are usually self-pollinated.

Dispersal: The fruit is a capsule opening with 4–5 valves. Seeds many, up to 0.5 mm diam.

Sources: C. Skottsberg, Kungl. Sv. Vet. Akad. Handl. 56 (1916) 214–218; Bot. Tidsskr. 51 (1954) 330–338; H.H. Allan, Fl. New Zeal. 1 (1961) 208–216; A. Lourteig & P. Cour, C.N.F.R.A. Extra. 3 (1963) 63–70; S.W. & D.M. Greene, Polar Rec. 11 (1963) 413–418; D.M. Moore, Vasc. Fl. Falkland Is. (1968) 58–59; in Valentine, Tax. Phytog., Evol. (1972) 126, fig. 3 (map). Miss B. Perry (Washington) checked the distribution in America.

N.A.P. FRANKEN.


259 Colobanthus
1
C.15
C.8
S.Orkney Is. 61°S 45°W
S.Shetland Is. 62°S 60°W
Grahamland 62°-68°S 58-70°W

260. **Gaimardia** Gaud.

Name: **Gaimardia** Gaud., Ann. Sc. Nat. Paris 5 (1825) 100.

Family: *Centrolepidaceae.*

Taxonomy & distribution: The genus consists of 3 species, one in S. America, one is endemic in Tasmania, and another occurs in New Zealand, Tasmania and New Guinea (*G. setacea* Hook. f.).

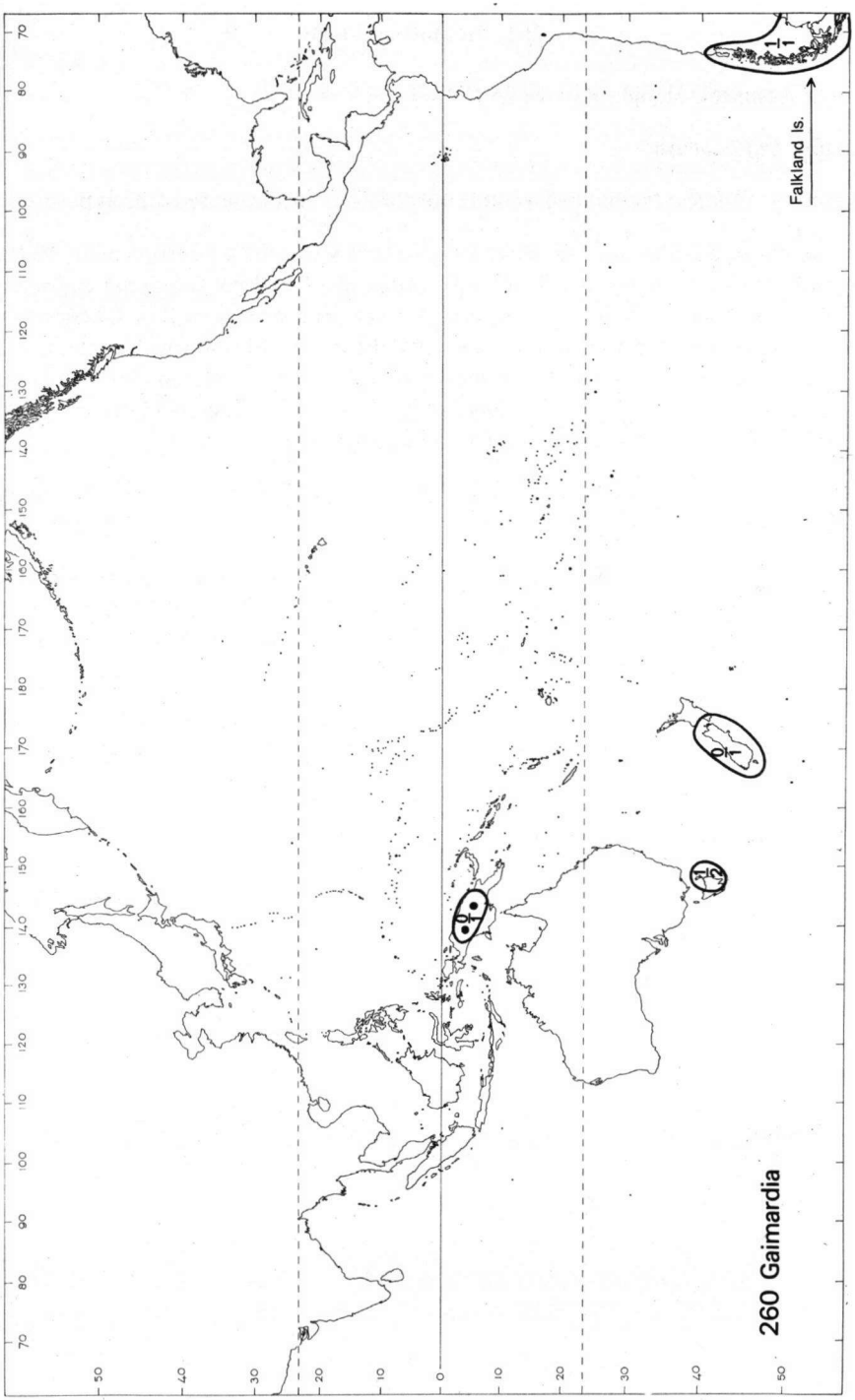
Habit: Moss-like perennial herbs, up to 8 cm tall, densely tufted and forming cushions, with glabrous, slightly ligular leaves and flowers in small spikelets.

Habitat & ecology: Damp areas, especially peat bogs. In New Guinea found at 3000 and 3500 m in mountain bogs.

Dispersal: Unknown, the fruiting carpels are up to 5 mm diam.

Sources: L. Rodway, Fl. Tasm. (1903) 233; Ding Hou, Fl. Mal. I, 5 (1957) 421–427; D.M. Moore, Vasc. Fl. Falkland Is. (1968) 145; L.B. Moore & E. Edgar, Fl. New Zeal. 2 (1970) 85; W.M. Curtis, The Endem. Fl. of Tasm. 6 (1978) 402.

M.C. ROOS.


Falkland Is.
260 Gaimardia

261. **Acsmithia** Hoogl.

Name: **Acsmithia** Hoogl., Blumea 25 (1979) 492.

Family: *Cunoniaceae.*

Synonym: *Spiraeanthemum* of various authors, not in the sense of its type species.

Taxonomy & distribution: A genus of 14 species of which four occur in Malesia (Moluccas, New Guinea), one in NE. Australia, eight in New Caledonia and one in Fiji. Closely related to *Spiraeanthemum* A.Gray. The species in New Caledonia appear to be clearly distinct and homogeneous, though the distinctive characters, while constant, are partly of relatively minor magnitude. The species in New Guinea are less clearly distinct and more heterogeneous; therefore, with more material available it may be possible to distinguish a larger number of taxa.

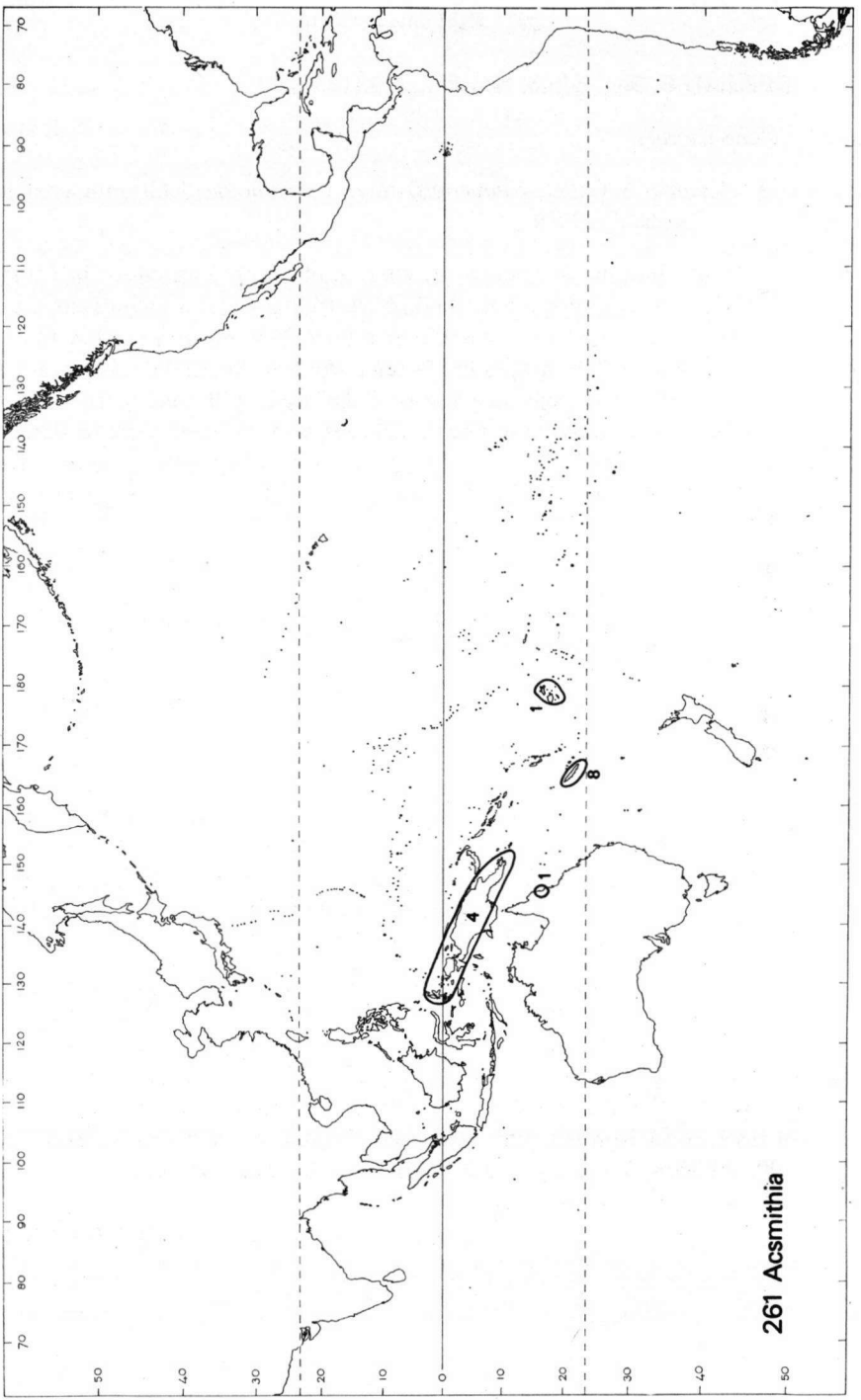
Habit: Shrubs or small, less commonly medium-sized to tall trees, leaves simple, verticillate, flowers hermaphrodite.

Habitat & ecology: In New Caledonia on serpentine in maquis and in mesophyll forest, particularly along creeks. Elsewhere in lowland and lower montane rain forest, in Fiji between 500 and 1200 m, in Australia from sea-level to 1500 m, and in Malesia between 150 and 2700 m altitude.

Dispersal: Fruit small, a few mm diam., usually four dehiscent follicles, each with 1–4 ellipsoid seeds, c. 1 mm long, winged both ends. Dispersal by wind is most likely.

Source: R.D. Hoogland, Blumea 25 (1979) 492–501.

R.D. HOOGLAND.


261 Acsmithia

262. **Caldcluvia** D. Don

Name: **Caldcluvia** D. Don, Edinb. New Phil. J. 9 (1830) 92.

Family: *Cunoniaceae.*

Synonyms: *Ackama* A. Cunn., *Spiraeopsis* Miq., *Opocunonia* Schltr; for complete synonymy see Hoogland (1979).

Taxonomy & distribution: A genus of 11 species, of which *C. celebica* (Bl.) Hoogl. occurs in Malesia from Celebes and the Philippines to the Solomon Islands, six are endemic to New Guinea, two to E. Australia, one to N. New Zealand and one to Chile and adjacent Argentina. The species in Australia and New Zealand (*Ackama*) are distinguished by having few, ellipsoid to subglobular seeds with long hairs, the other species have more numerous elongate and glabrous seeds with subulate or flattened terminal appendages. This character would at most justify segregation at infrageneric level. The S. American species (*Caldcluvia s. s.*) stands out by having simple (unifoliolate) leaves. Other characters, e.g. the number of carpels cut across these differences and on the basis of external morphology there appears to be little to support subdivision of the genus (Hoogland, 1979). However, according to Dickison (1980) 'the wood anatomy of *Caldcluvia (s. l.)* is unusually diverse and indicates that this genus may not be a natural assemblage.'

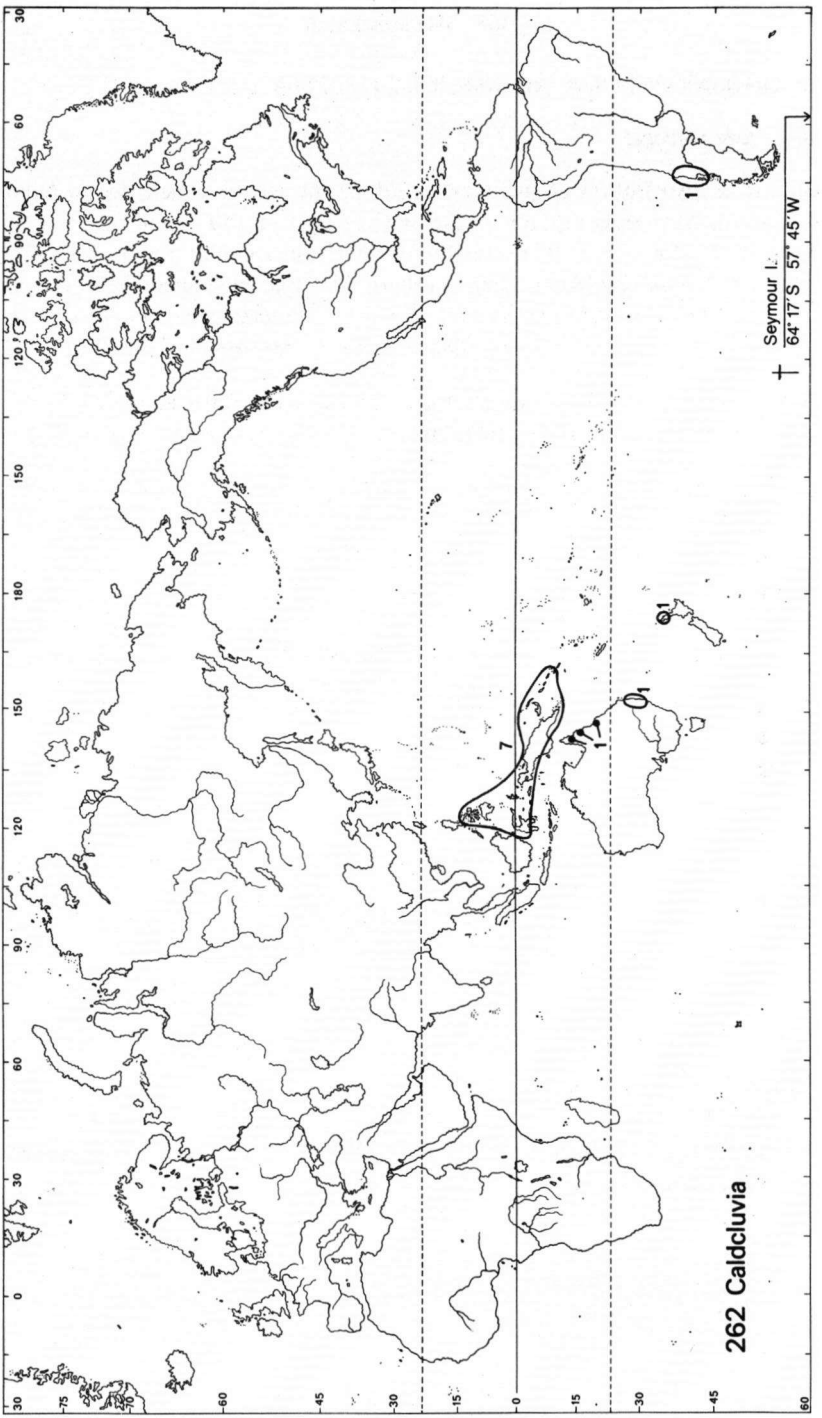
Habit: Trees, at least reaching 15 m, some up to 35 m, leaves opposite, simple, 3- or 5-foliolate or pinnate; like in most *Cunoniaceae*, fairly young plants of only 2 m will commonly flower and set fruit, particularly in open habitats; flowers hermaphrodite.

Habitat & ecology: Within the tropics mainly in the lower montane zone, extending upward into subalpine areas and to a lesser extent downward into lowland rain forest in the foothills. The widespread *C. celebica* has also the widest ecological amplitude, occurring in primary forest and secondary growth between 100 and 2800 m. In the temperate zone in lowland rain forest up to 1000 m altitude.

Dispersal: The nature of the (minute) seeds in the dehiscent fruit suggests wind dispersal.

Sources: R. D. Hoogland, Blumea 25 (1979) 481–490; W. C. Dickison, Allertonia 2 (1980) 290–291. For the fossil record see P. Dusén, Ueber die tertiaire Flora der Seymour-Insel, in O. Nordenskjöld, Wissensch. Ergebn. der Schwed. Sudpolar Exp. 1901–1903 3 (1908) 3, t. 1, figs. 20 & 22 (*Caldcluvia mirabilis* Dusén).

R. D. HOOGLAND.


262 Caldcluvia
Seymour I.
64° 17' S 57° 45' W

263. Geissois Labill.

Name: Geissois Labill., Sert. Austro-Caled. 2 (1825) 50, t. 50.

Family: *Cunoniaceae.*

Taxonomy & distribution: A genus of about 20 species, of which two in E. Australia, two in the New Hebrides, one in the St. Cruz Is., four in Fiji and the remainder in New Caledonia. Because of its possession of numerous stamens, the most closely similar genus is *Lamanonia* Vieill. from southern Brazil and Paraguay. The eastern Australian monotypic genera *Vesselowskya* Pamp. and *Pseudoweinmannia* Engl., though their species were at one stage included in *Geissois*, are probably not closely related.

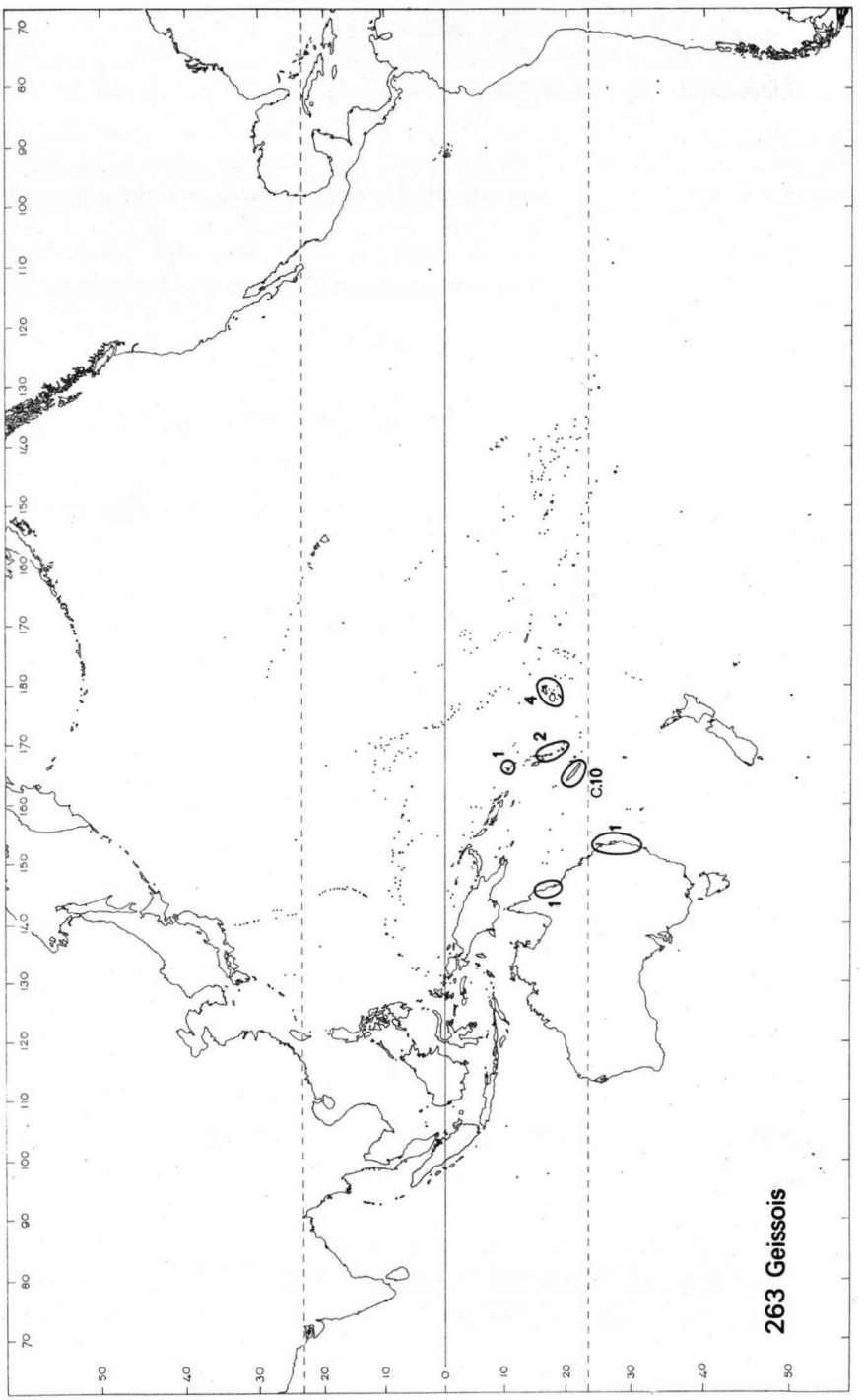
Habit: Small to large trees, reaching up to 35 m. Several species are cauli- or ramiflorous. Flowers hermaphrodite, apetalous.

Habitat & ecology: Generally in lowland rain forest, in Fiji occurring at up to 1050 m, in New Caledonia at up to 1200 m. In New Caledonia also frequently found in gallery forests and common also in maquis.

Dispersal: The nature of the seeds in the dehiscent fruit suggests wind dispersal.

Sources: A. Guillaumin, Bull. Soc. Bot. Fr. 87 (1940) 242–245; A.C. Smith, J. Arn. Arb. 33 (1952) 120–128; herbaria of BRI, MEL, NSW and QRS.

R.D. HOOGLAND.


263 Geissois
C.10

264. **Pullea** Schltr

Name: **Pullea** Schltr, Bot. Jahrb. 52 (1914) 164.

Family: *Cunoniaceae.*

Taxonomy & distribution: A genus of three species of which one in NE. New Guinea, one in NE. Australia and one in the Moluccas, throughout New Guinea and in Fiji. On account of its semi-inferior ovary the genus constitutes the tribe *Pulleeae* in Engler's classification (Nat. Pfl. Fam. ed. 2, 18a, 1938, 260).

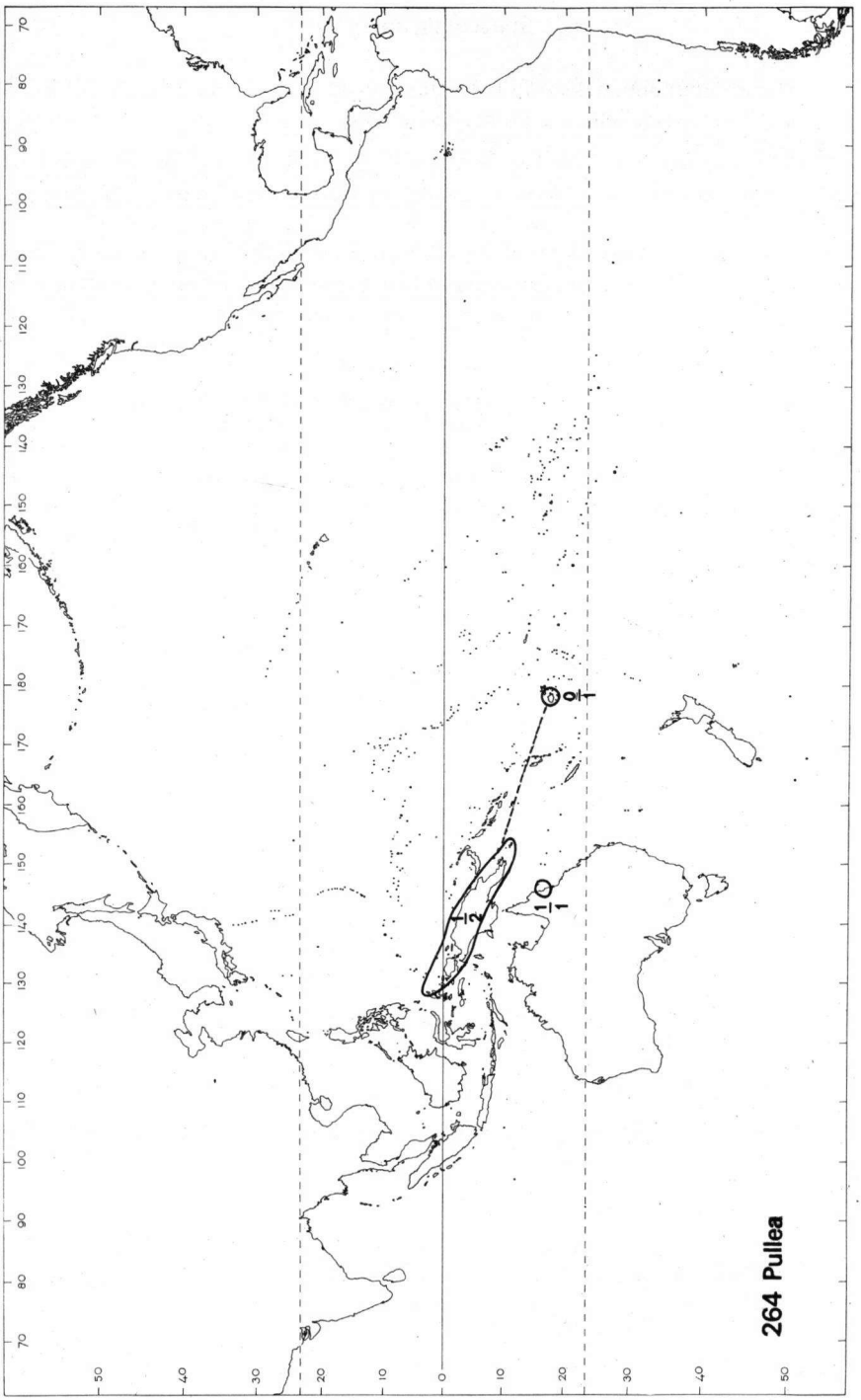
Habit: Small to large (up to 32 m) trees, leaves simple opposite, rarely verticillate, flowers hermaphrodite.

Habitat & ecology: In lowland to lower montane rain forest from near sea-level to 2300 m.

Dispersal: The nature of the calyx lobes in old flowers suggests wind dispersal of the seeds which remain enclosed by the old dried floral parts with the calyx lobes more or less spreading.

Source: R.D. Hoogland, Blumea 25 (1979) 490–492.

R.D. HOOGLAND.


264 Pullea

265. Spiraeanthemum A. Gray

Name: **Spiraeanthemum** A. Gray, Proc. Amer. Acad. Arts & Sc. 3 (May, 1854) 128; U.S. Expl. Exped. Bot. Phan. 1 (June, 1854) 666 & Atlas (1856) t. 83, as to lectotype species.

Family: *Cunoniaceae.*

Taxonomy & distribution: After the exclusion of a number of species now accommodated in *Acsmithia* (see there) a genus of six species of which one in Samoa, three in Fiji, one from the Bismarck Archipelago to the New Hebrides and one in Bougainville Island.

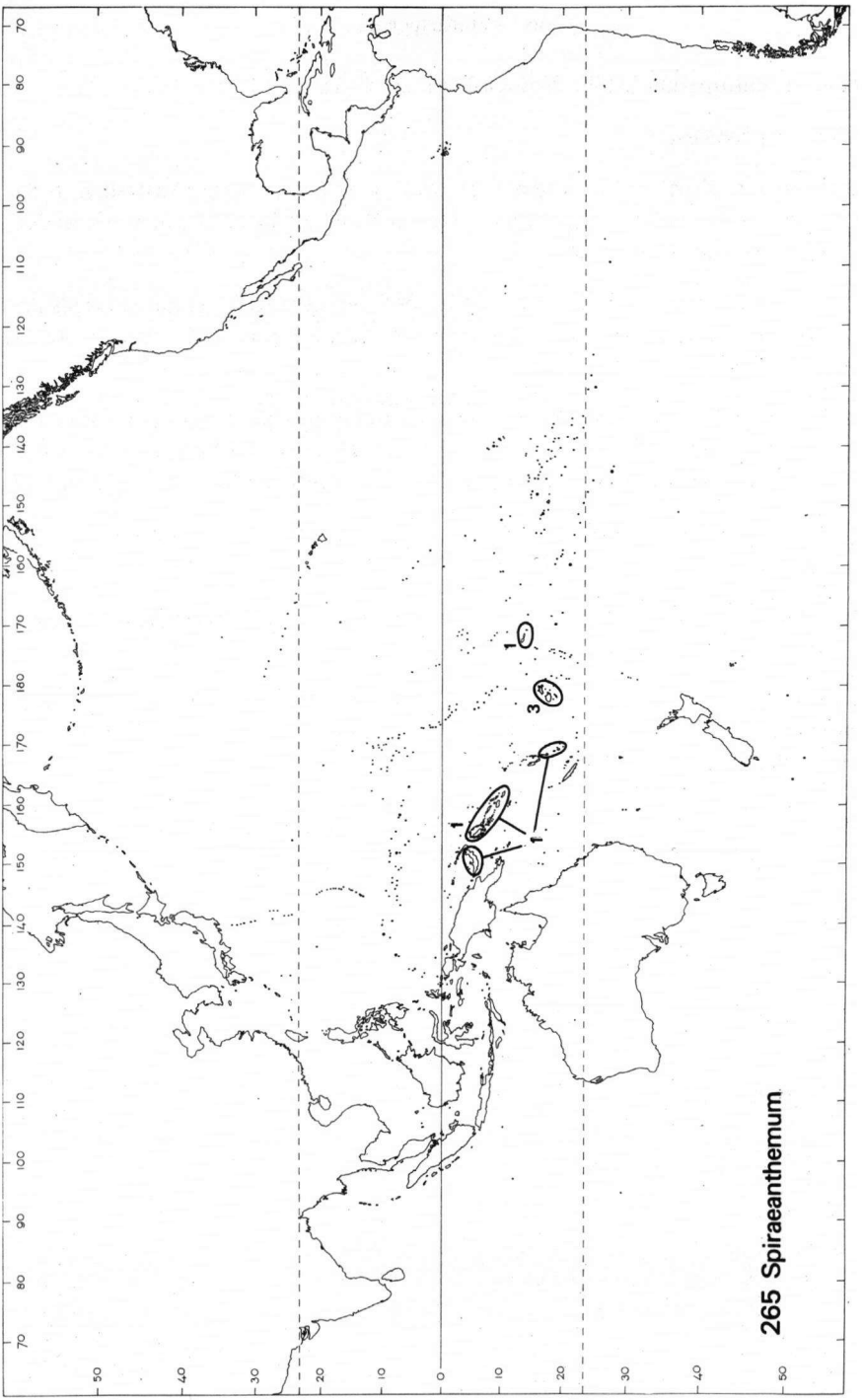
Habit: Dioecious shrubs or small to medium-sized trees, leaves simple opposite.

Habitat & ecology: In rain forest, in New Britain and the Solomon Islands between 700 and 2250 m, elsewhere in the Pacific occasionally at lower altitudes and in drier vegetation types.

Dispersal: See under *Acsmithia*. In *Spiraeanthemum* the number of seeds per carpel is consistently 2.

Source: R.D. Hoogland, Blumea 25 (1979) 501–505.

R.D. HOOGLAND.


265 Spiraeanthemum

266. **Lepidosperma** Labill.

Name: **Lepidosperma** Labill., Nov. Holl. Pl. Sp. 1 (1804) 14.

Family: *Cyperaceae.*

Taxonomy & distribution: A genus of over 40 species, mostly Australian, three in New Zealand of which one endemic, three in New Caledonia of which two endemic, one in Malesia and S. China.

Habit: Perennial herbs with woody rhizomes. Stems tufted, terete, compressed, or 3 or 4 angular. Leaves basal, resembling the stems. Inflorescence paniculate, with some spikelets.

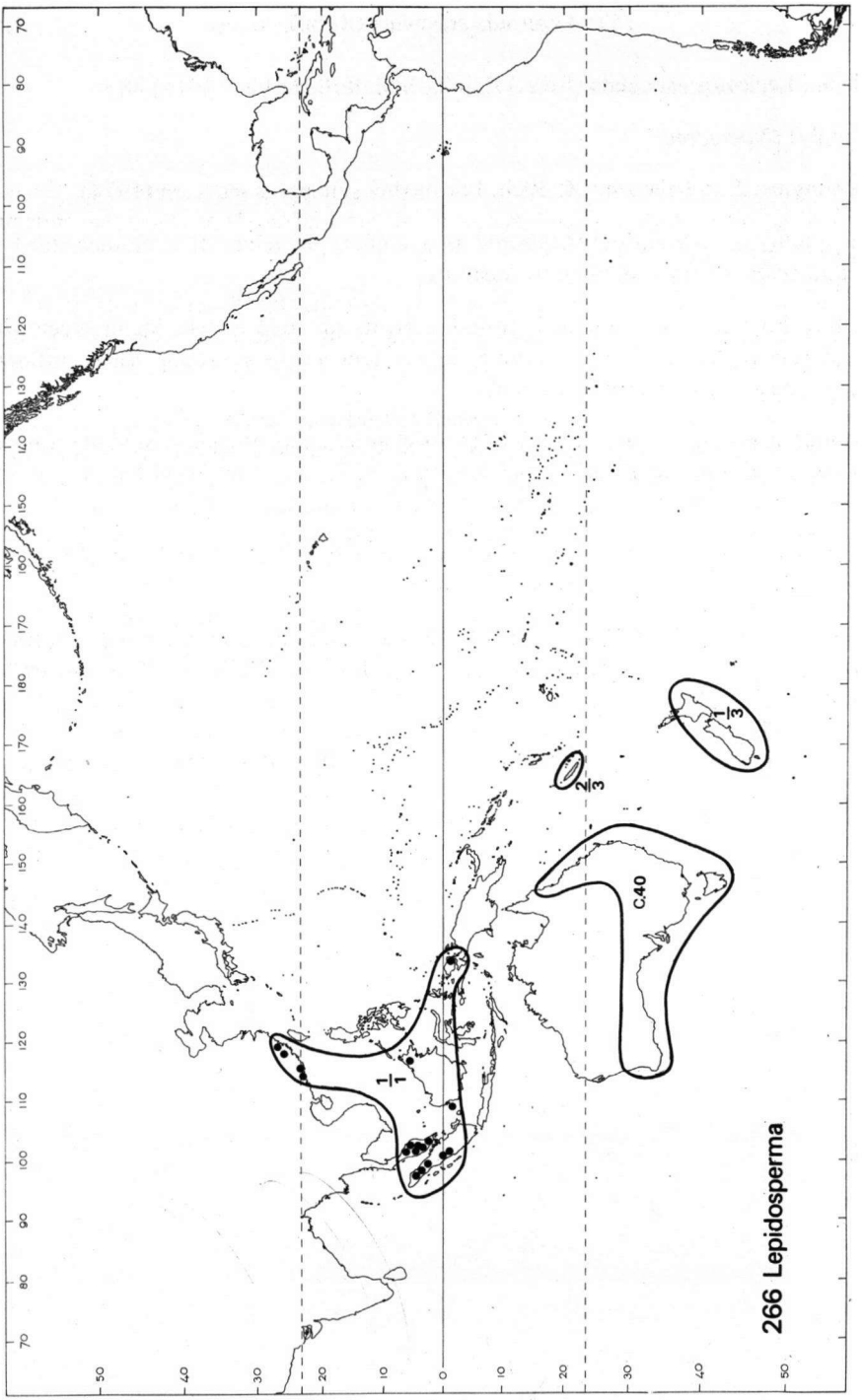
Habitat & ecology: *L. chinense* of Malesia is found in heaths, on open rocks and in marshy meadows in mountains up to 1500–3000 m. In S. China also in rice-fields. The New Zealand species mostly grow in scrub on sandy or clayey soils.

Dispersal: The fruit is an oblong, obtusely trigonous and crusty nut, up to 4 mm long and 2 mm diam.

Map: Figures above the hyphen indicate the number of endemic species, those below the total number of species.

Sources: G. Kükenthal, Fedde, Rep. 50 (1941) 19–50, 112–128; L.B. Moore & E. Edgar, Fl. New Zeal. 2 (1970) 200–202; J.H. Kern, Fl. Mal. I, 7 (1974) 668–669, map; collections in L.

W. AVÉ and M.M.J. VAN BALGOOY.


266 Lepidosperma
1/1
2/3
1/3
C.40

267. **Lepironia articulata** (Retz.) Domin

Name: Lepironia articulata (Retz.) Domin, Bibl. Bot. Heft 85 (1915) 486.

Family: *Cyperaceae.*

Synonyms: *L. mucronata* L.C. Rich. For further synonyms see Kern (1974).

Taxonomy & distribution: *Lepironia* is a monotypic genus. It is closely allied to *Chorizandra* (4 spp.) confined to Australia.

Habit: Rhizomatous, perennial, rush-like plants up to 2 m tall. Stems erect with transverse septa, visible upon drying. Leaves reduced to sheathing scales. Inflorescence consisting of a single short spike.

Habitat & ecology: Open swampy or marshy places, along the coast or along streams, mostly in the lowlands, but found as high as 1750 m in the Wissel Lakes region in New Guinea. Often forming extensive closed communities.

Dispersal: Unknown. The nut is obovate, compressed, longitudinally striate, keeled on the margins, c. 3.5 mm long and 3 mm diam.

Sources: J.H. Kern, Fl. Mal. I, 7 (1974) 460–462; various local floras and collections in L. Dr. R.W. Johnson (BRI) and Dr. L.A.S. Johnson (NSW) listed the Australian localities.

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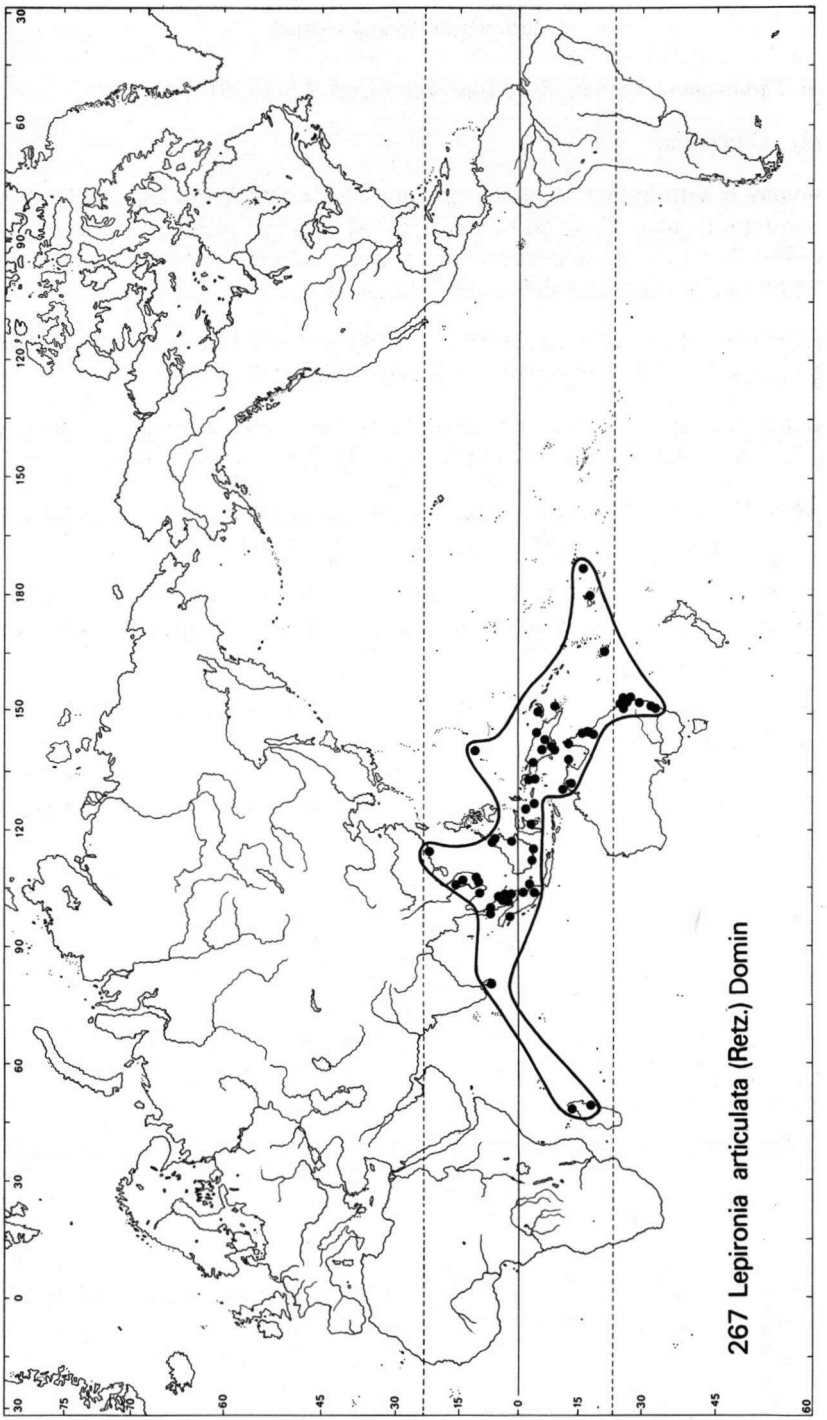
267 Lepironia articulata (Retz.) Domin

268. Paramapania Uittien

Name: **Paramapania** Uittien, Rec. Trav. Bot. Néerl. 32 (1935) 186.

Family: *Cyperaceae.*

Taxonomy & distribution: *Paramapania* and *Thoracostachyum* are closely allied to the pantropical genus *Mapania*. Koyama (1964) does not regard them worth generic rank. The 7 species of *Paramapania* are mutually closely related. *P. parvibracteata* (Cl.) Uitt. practically covers the range of the genus.

Habit: Woody, rhizomatous, perennial herbs up to 1 m tall with coarse linear leaves. Inflorescence terminal, corymbose, with few to many spikelets.

Habitat & ecology: In rain forest, along forest trails, on seepages, on shaded riverbanks, in the lowlands and on the lower mountain slopes up to 1750 m.

Dispersal: Unknown; the fruit is a subterete or angular nut, up to 5 mm long and 2 mm diam., shortly stipitate, with an apical beak, exocarp hard, thin.

Map: Figures above the hyphen indicate the number of endemic, those below the hyphen the total number of species. Localities of *P. parvibracteata* in the Pacific are indicated.

Sources: T. Koyama, Micronesica 1 (1964) 66; J.H. Kern, Fl. Mal. I, 7 (1974) 484–489; local floras and collections in L.

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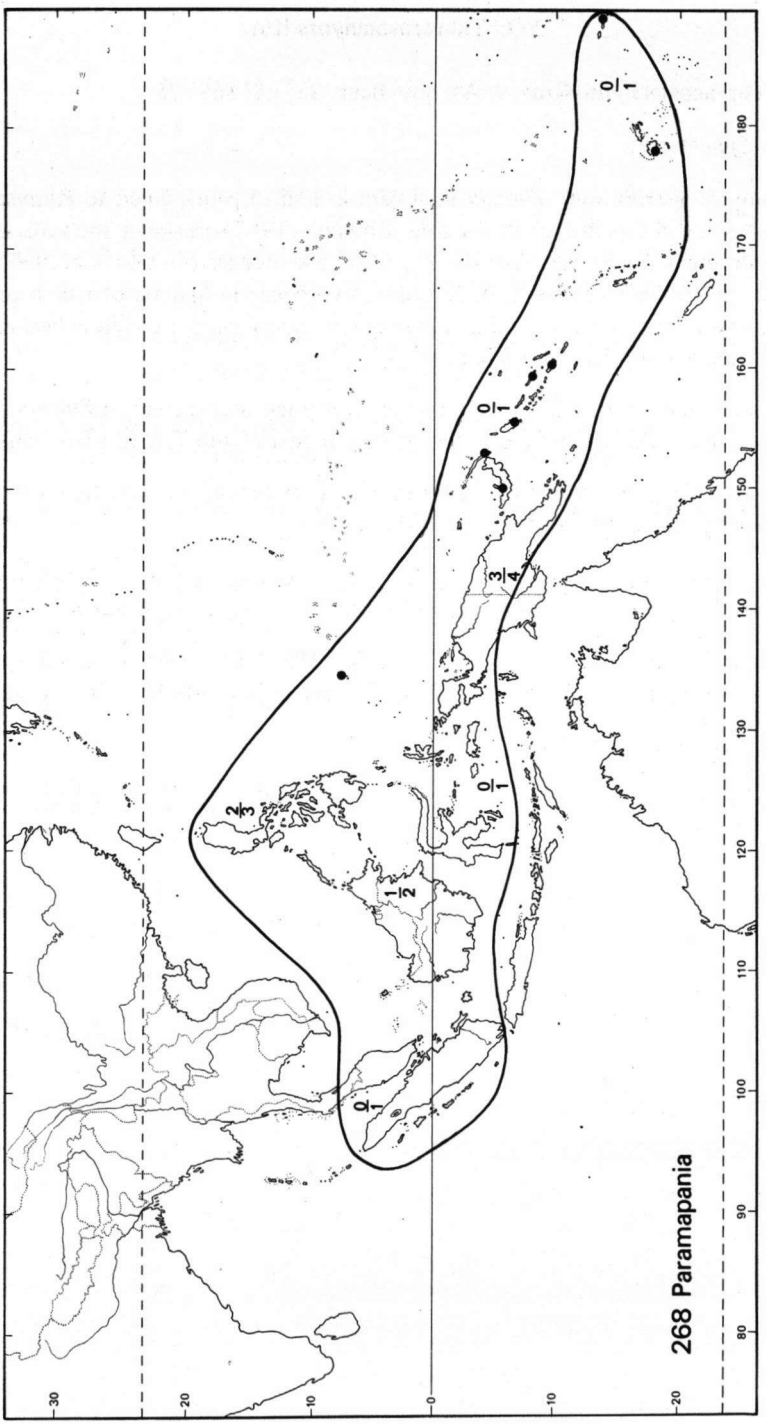
268 Paramapania
0/1
0/1
3/4
0/1
2/3
1 1/2
0/1
30
20
10
0
10
20
80
90
100
110
120
130
140
150
160
170
180

269. **Thoracostachyum** Kurz

Name: Thoracostachyum Kurz, J. As. Soc. Beng. 38, ii (1869) 75.

Family: *Cyperaceae.*

Taxonomy & distribution: *Thoracostachyum* is a small genus allied to *Paramapania* (see there) and the pantropical *Mapania*. Koyama (1967) assigns it the rank of section in *Mapania. Thoracostachyum* has a rather disjunct distribution: one species endemic in the Seychelles, two in Indo-China, two occur in Malesia of which one extends to Indo-China, Queensland and Micronesia, one species is endemic in the Carolines (Palau), one species is confined to Fiji.

Habit: Perennial herbs with woody, creeping rhizomes. Stems erect, triquetrous. Leaves linear, 3-ranked. Inflorescence terminal, paniculate with few to many spikelets.

Habitat & ecology: In swamps, marshy forests, peat forests, on river-banks, but also in wet open places at low altitudes (in Buru at 1075 m).

Dispersal: Unknown; the fruit is an angular, hard, shining nut, up to 3 mm long and 2 mm diam., endocarp stony, exocarp not fleshy or spongy as in *Mapania.*

Sources: H. Uittien, Rec. Trav. Bot. Néerl. 33 (1936) 133–140; T. Koyama, Mem. N.Y. Bot. Gard. 17 (1967) 50; J.H. Kern, Fl. Mal. I, 7 (1974) 464–466; local floras and collections in L.

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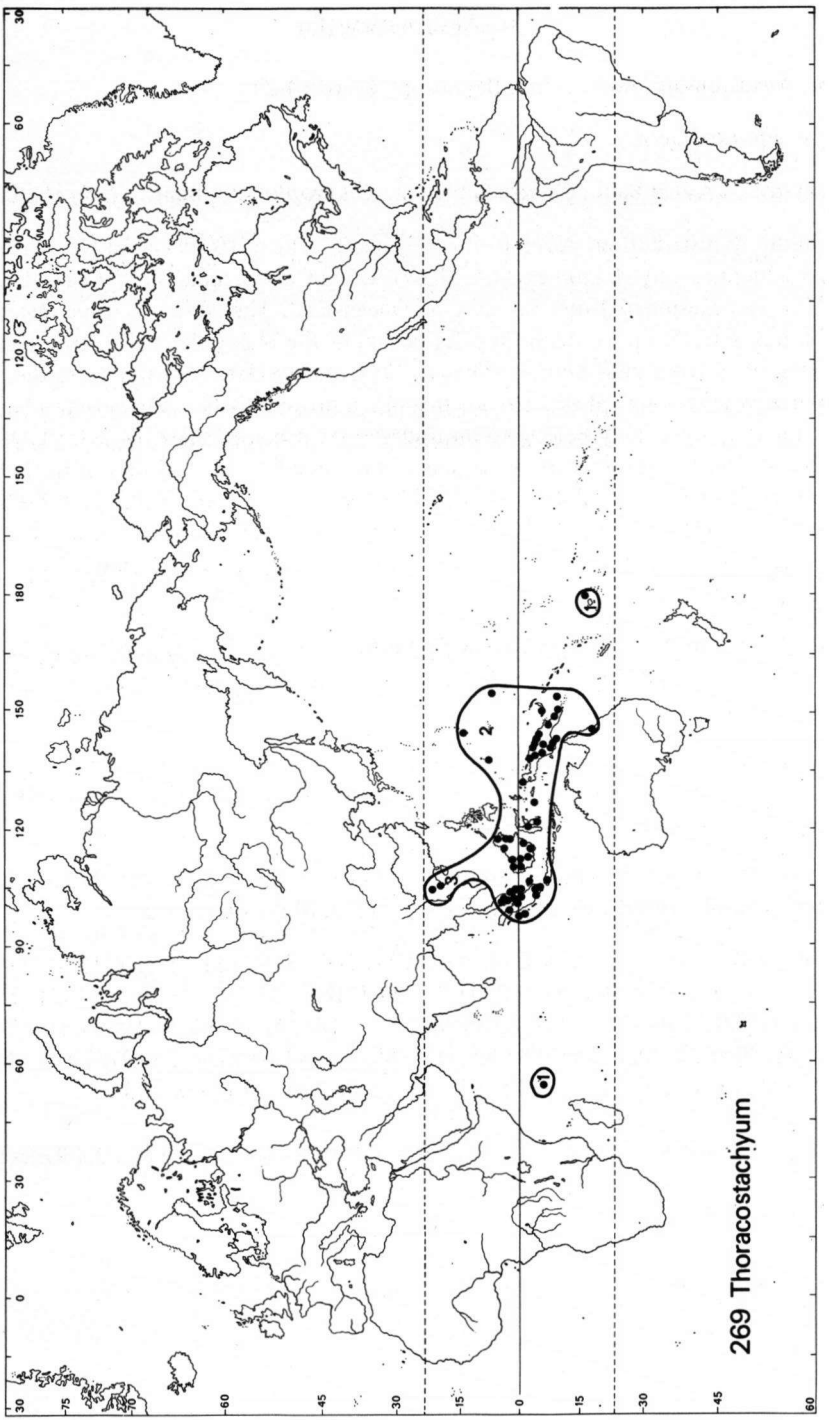

269 Thoracostachyum

270. Austrobuxus Miq.

Name: Austrobuxus Miq., Fl. Ind. Bat. Suppl. (1861) 445.

Family: *Euphorbiaceae.*

Synonyms: *Bureavia* Baill., *Canaca* Guillaum., *Choriophyllum* Benth., *Longetia* Baill.

Taxonomy & distribution: A genus of c. 15 species. The c. 10 species in New Caledonia are endemic, only *A. cuneatus* (A. Shaw) A. Shaw also occurs on St. Cruz. *A. nitidus* Miq. is widespread from Sumatra to Queensland. The status of some Malesian taxa is not settled; one endemic species occurs in the Malay Peninsula, two species were described from New Guinea (Shaw, 1974), one was later transferred to the monotypic *Kairothamnus* (Shaw, 1980), the other proved to be a *Ryparosa*, whereas some specimens probably belong to an undescribed species (Shaw, pers. inf.). Other endemic species are known from New South Wales and Fiji. The affinity of the latter, *A. horneanus* (A.C. Sm.) A. Shaw is with *A. nitidus* rather than with any of the New Caledonian species (Smith, 1981). Fossil pollen of *Austrobuxus* or the endemic Australian *Dissiliaria* has been found throughout the Tertiary of Australia in the tropical zone (Martin, 1978).

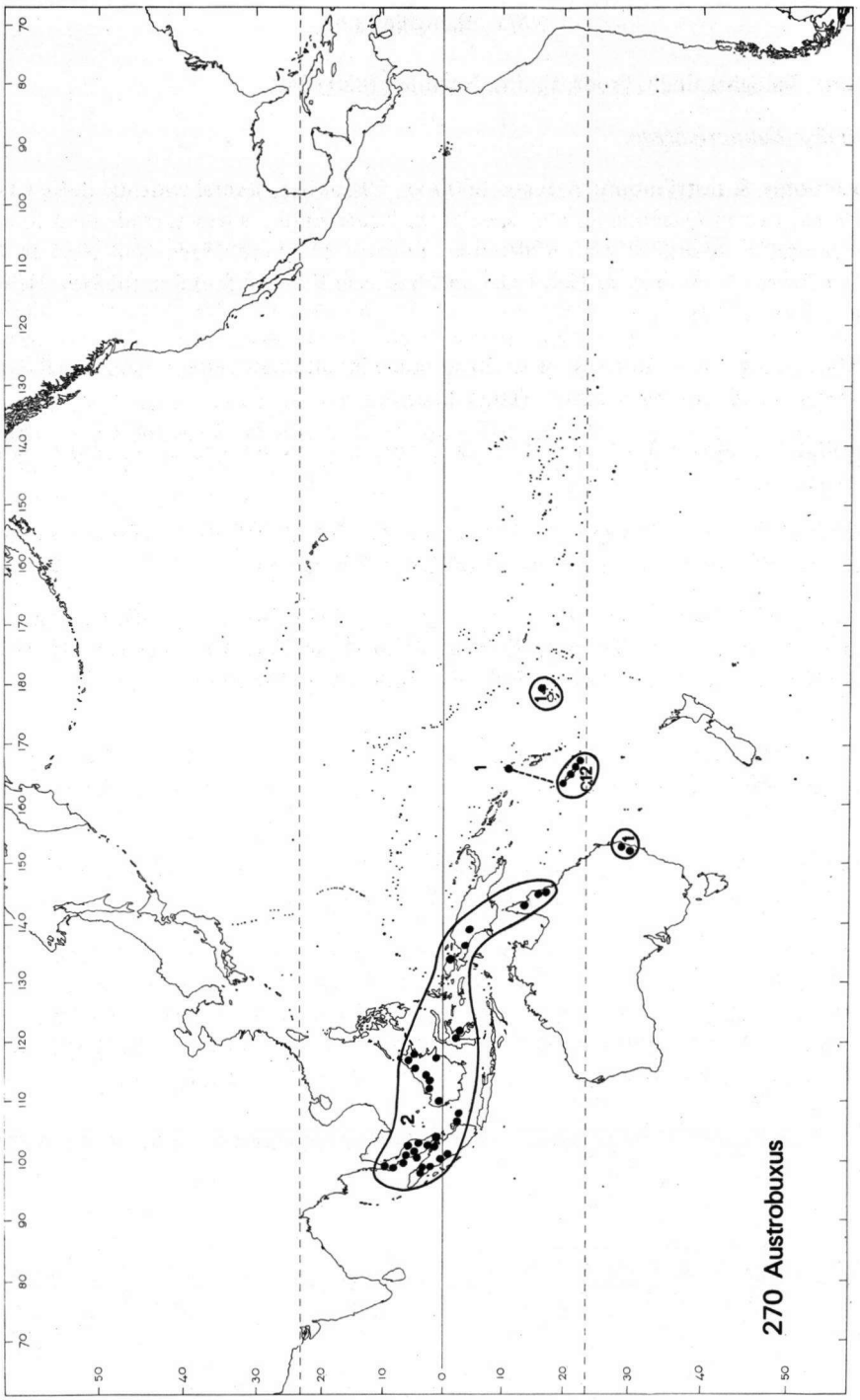
Habit: Mostly shrubs or small trees, rarely up to 30 m tall, with opposite or alternate coriaceous leaves and few-flowered axillary inflorescences. Plants dioecious, rarely monoecious.

Habitat & ecology: Lowland and montane forest, up to c. 1500 m, often on acid soil: peat swamp forest, quartz ridges and waterlogged sand and peat, also on ultrabasic soils in Celebes and New Caledonia.

Dispersal: The fruit is an ellipsoid smooth dehiscent capsule up to 2.5 cm long, containing 1–3 arillate seeds. No observations on dispersal are on record.

Sources: H.K. Airy Shaw, Kew Bull. 25 (1971) 506–510; ibid. 29 (1974) 303–309; The Euphorbiaceae of Borneo (1975) 43; Kew Bull. 33 (1978) 39–43; 531–532; ibid. 34 (1980) 596–597; ibid. 37 (1982) 177–181; Muelleria 4 (1980) 219; T.C. Whitmore, Tree Fl. Mal. 2 (1973) 63; H.A. Martin, Alcheringia 2 (1978) 181–202; A.C. Smith, Fl. Vit. Nova 2 (1981) 495–498; collections in BO, K and L.

M.M.J. VAN BALGOOY and N.A.P. FRANKEN.


270 Austrobuxus
1
2
Ct1
Ct2
Ct3

271. **Baloghia** Endl.

Name: **Baloghia** Endl., Prodr. Fl. Ins. Norfolk (1883) 84.

Family: *Euphorbiaceae.*

Taxonomy & distribution: A genus of about 10 species, several endemic in New Caledonia, two in Queensland. One species, *B. lucida* Endl., is widespread and is found in coastal E. Australia, New Caledonia, Loyalty Is., Lord Howe and Norfolk Is. *B. montana* (M.A.) Pax of New Caledonia has recently been found in the New Hebrides (Shaw, 1980).

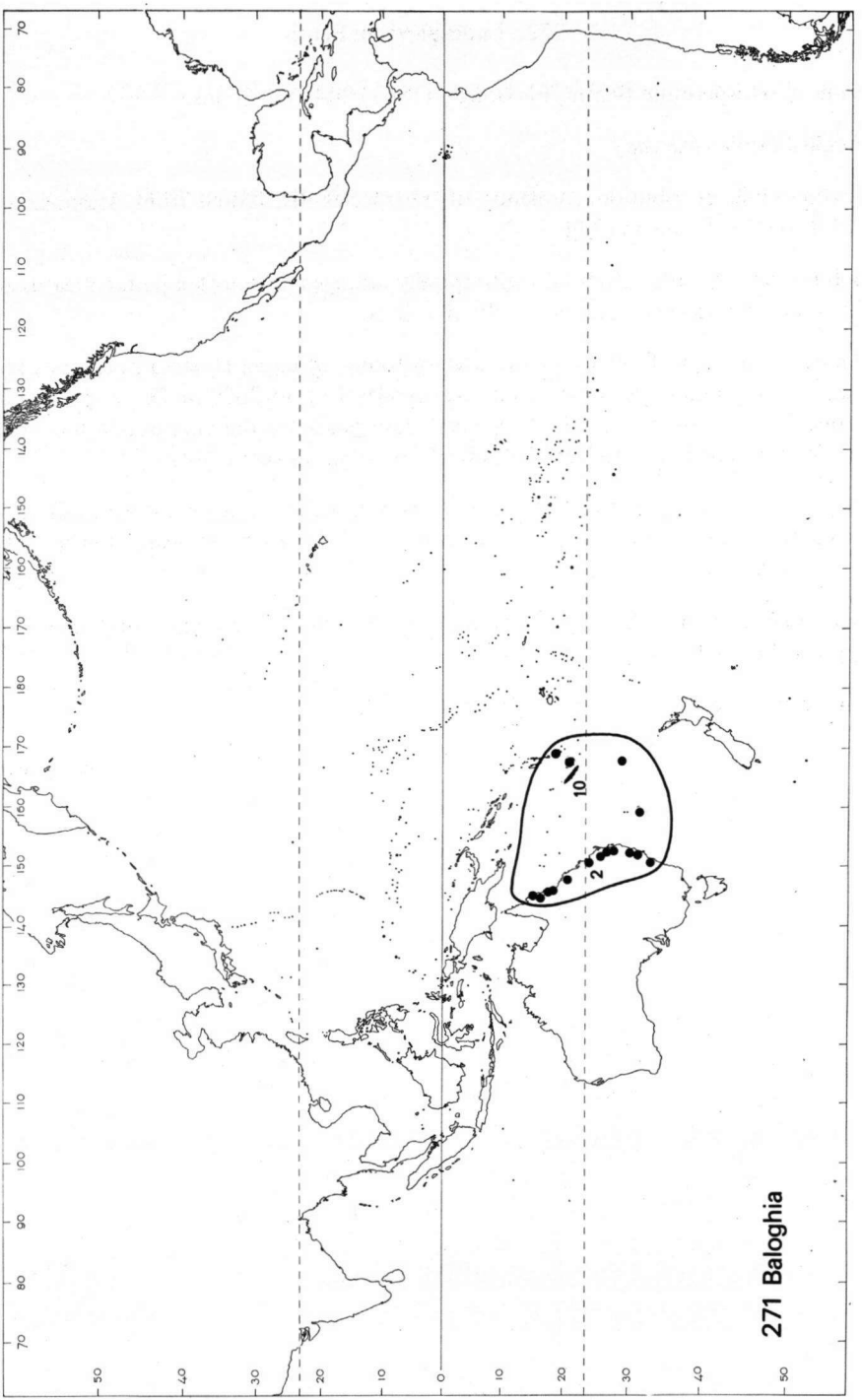
Habit: Shrubs or small trees up to 20 m tall, with alternate, rarely opposite (*B. lucida*) leaves and terminal racemes. Plants dioecious.

Habitat & ecology: Littoral and lowland forest, in mountains up to 900 m, also along streams.

Dispersal: The fruit is a more or less round, 3–6-lobed, dehiscent capsule up to 1.5 cm across. Seeds 1 in each cell, oval, mottled, c. 8 mm long.

Sources: C.T. White, Proc. Roy. Soc. Qld. 53 (1942) 226–237; A. Guillaumin, Fl. Nouv. Caléd. (1948) 188; W.D. Francis, Austr. Rain For. Trees (1951) 231; H.K. Airy Shaw, Kew Bull. 35 (1980) 598–599; collections in K and L.

W. AVÉ.


271 Baloghia
10
2

272. **Endospermum** Benth.

Name: Endospermum Benth., Fl. Hongk. (1861) 304, nom. cons.

Family: *Euphorbiaceae.*

Taxonomy & distribution: A genus of 13 species distributed from Assam and S. China to Queensland and Fiji.

Habit: Trees up to c. 50 m tall, with spirally arranged large, often peltate, leaves and thyrsoid inflorescences; plants usually dioecious.

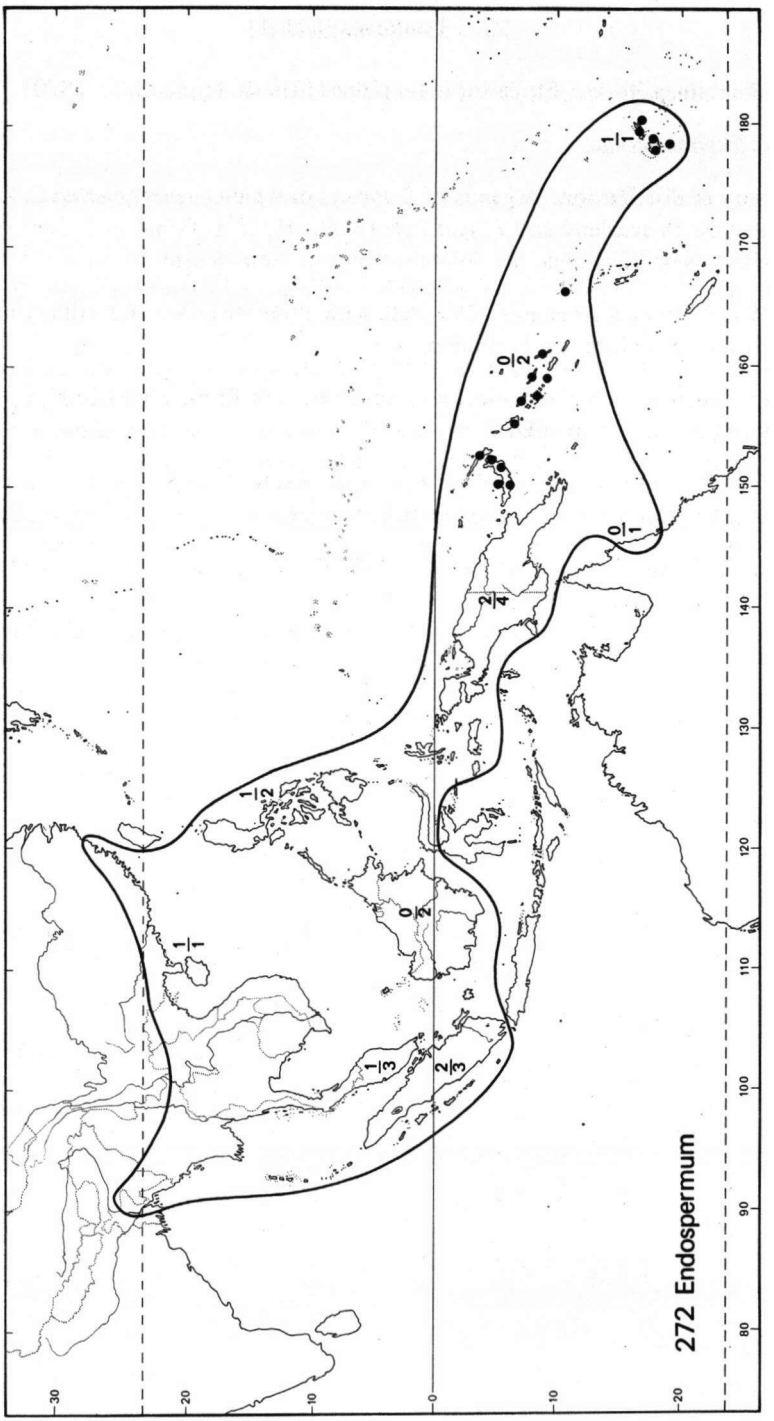
Habitat & ecology: Primary and secondary forest, often along streams and in water-logged or even swampy forest, from near sea-level up to 2000 m. Some species have swollen hollow stems inhabited by ants. Besides shelter the ants obtain food from glands on the petioles and leaf blades which produce a sweet exudate.

Dispersal: Unknown; the fruit is more or less drupaceous, indehiscent, generally 0.5–1 cm diam., up to 2 cm in *E. moluccanum* (T. & B.) Kurz. Exocarp thin to rather thick and fleshy.

Map: Figures above the hyphen indicate the number of endemic, those below the hyphen the total number of species.

Source: J. Schaeffer, Blumea 19 (1971) 171–192.

N. A. P. FRANKEN.


272 Endospermum
1/1
0/2
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2/3
30
20
10
0
10
20
80
90
100
110
120
130
140
150
160
170
180

273. **Fontainea** Heckel

Name: Fontainea Heckel, Étude sur le Fontainea (Thèsis, Montpellier, 1870).

Family: *Euphorbiaceae.*

Taxonomy & distribution: A genus of 2 species of which *F. picrosperma* C.T. White is endemic in Queensland and *F. pancheri* (Baill.) Heck. is found in E. New Guinea, Queensland, New Caledonia, the Solomons and the New Hebrides.

Habit: Shrub or small tree up to 25 m tall, with alternate leaves and axillary inflorescences. Plants dioecious, rarely monoecious.

Habitat & ecology: Lowland and lower montane rain forest up to 2000 m, coastal calcareous hills and on riverflats.

Dispersal: The fruit is a more or less oval 4- or 5-valved drupe up to 3.5 cm diam., red or orange at maturity, more or less fleshy outside.

Sources: H.K. Airy Shaw, Kew Bull. 29 (1974) 326–328; ibid. 35 (1980) 632–633; local floras and collections in K and L.

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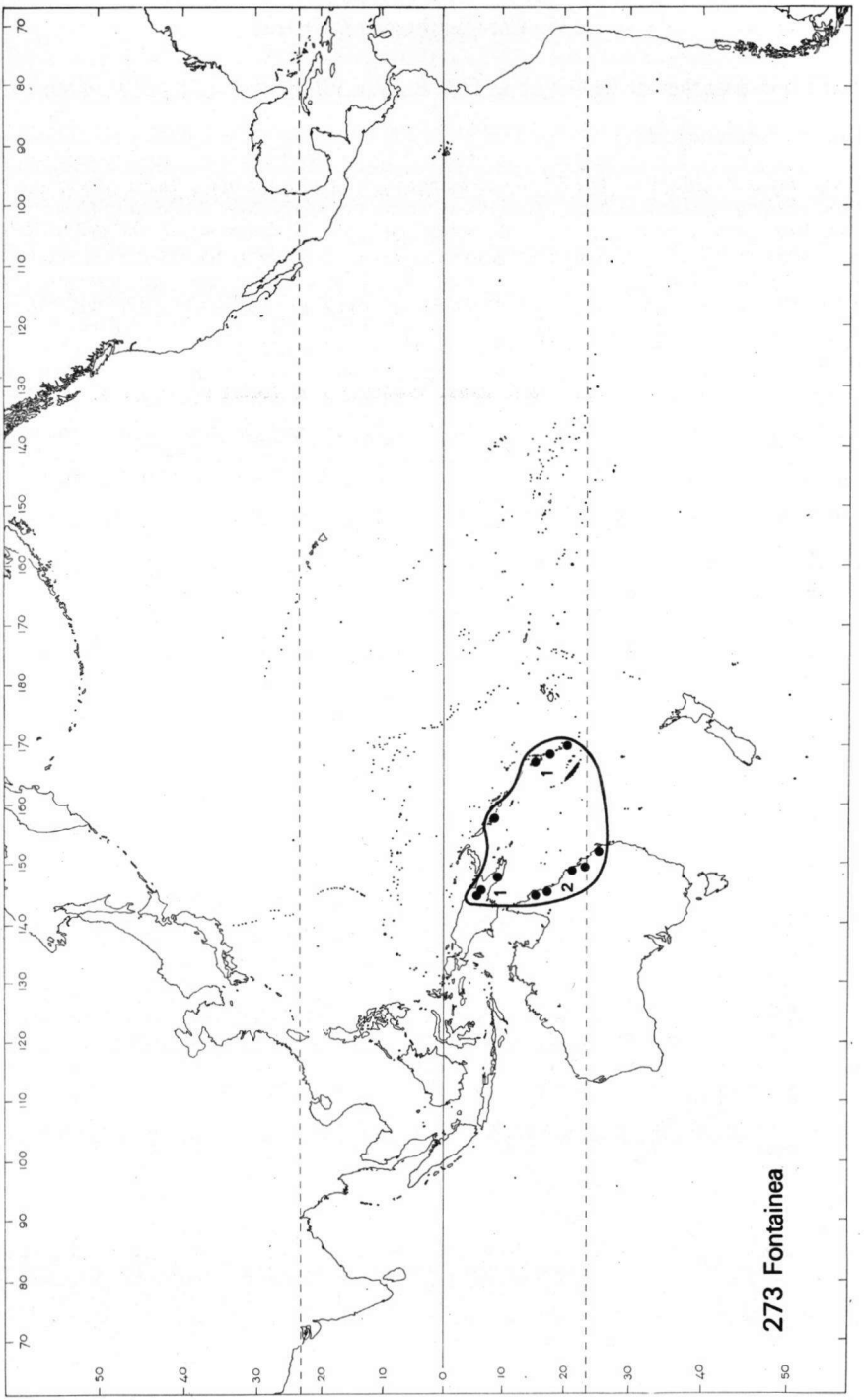

273 Fontainea

274. Coronanthereae K. Fritsch

Name: Coronanthereae K. Fritsch in E. & P., Nat. Pfl. Fam. IV, 3b (1893) 160.

Family: *Gesneriaceae.*

Taxonomy & distribution: The *Gesneriaceae* consist of two subfamilies (Burtt, 1962), the Old World *Cyrtandroideae* and the *Gesnerioideae* which are largely New World but of which tribe *Mitrarieae* is also represented in the Old World and tribe *Coronanthereae* is confined to it. According to Burtt (in litt.) Dr. Wiehler, who has done much work on the American Gesneriads, is in favour of regarding these two tribes as a separate subfamily. His main argument is cytological: *Asteranthera, Fieldia, Mitraria, Rhabdothamnus,* and *Sarmienta* are all high polyploids, but chromosome numbers are unknown in the largest genus *Coronanthera.*

The *Coronanthereae* consist of *Coronanthera* Vieill. ex C. B. Cl. (10 spp. in New Caledonia, 1 in the Solomons), *Depanthus* S. Moore (2 spp. described but probably conspecific, New Caledonia), *Negria* F.v.M. (monotypic, Lord Howe) and *Rhabdothamnus* A.Cunn. (monotypic, New Zealand).

Habit: Shrubs or small trees with opposite or alternate (*Negria*) leaves, and flowers in few-flowered cymes or solitary (*Rhabdothamnus*). Corolla tubular, asymmetrical (actinomorphic in *Depanthus*), yellow to orange.

Habitat & ecology: *Rhabdothamnus* occurs in lowland forest, especially by streamsides, *Negria* is common on the forested slopes of Lord Howe, *Coronanthera grandiflora* Gillett is a rarely collected component of the undergrowth in Bougainville and St. Isabel in the Solomons. The New Caledonian species of *Coronanthera* are common in dense humid forest at medium altitude as is *Depanthus* which, however, is confined to schists (Morat, in litt.).

Dispersal: The fruit is a dry dehiscent capsule containing numerous seeds without appendages. Dispersal of the light seeds is likely by shaker action of the capsules and subsequent transport by wind.

275. Mitrarieae Burtt

Name: Mitrarieae Burtt, Not. Roy. Bot. Gard. Edinb. 24 (1962) 216.

Family: *Gesneriaceae.*

Taxonomy & distribution: This tribe consists of *Fieldia* F.v.M. (monotypic, SE. Australia), *Lenbrassia* Gillett (monotypic, Queensland) and three monotypic genera in Chile and adjacent Argentina: *Asteranthera* Klotzsch & Hanst., *Mitraria* Cav., and *Sarmienta* R. & P. (Chile only).

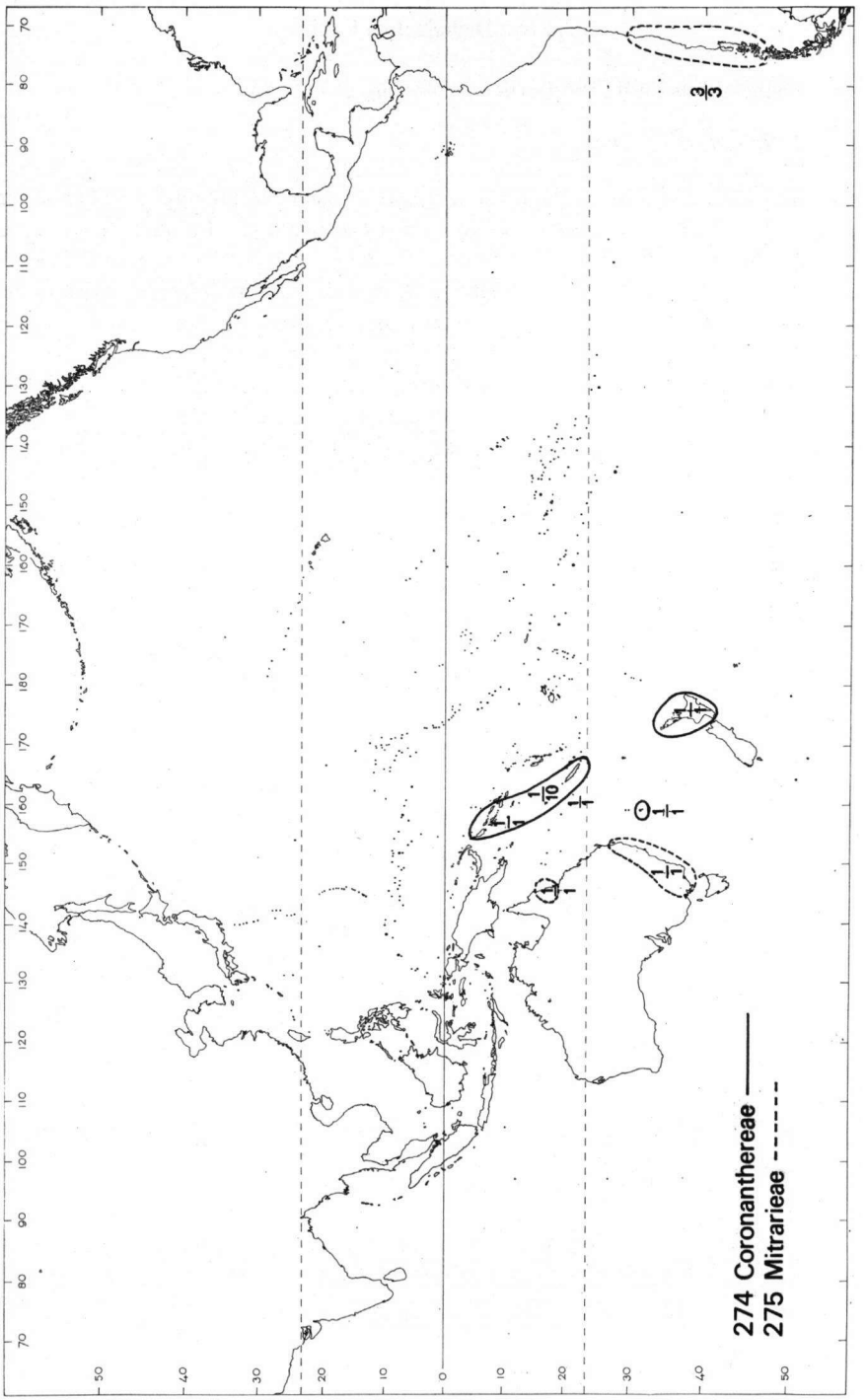
Habit: Climbing or creeping shrubs (except *Lenbrassia* which is a weak, erect shrub) with opposite leaves. Flowers solitary, axillary except in *Lenbrassia* which has cymes of 1–3 flowers. The corolla is tubular, slightly zygomorphic, cream to greenish in the Australian genera and red in the American ones. Pollination in Chile is mainly by hummingbirds and also by insects (Mrs. M. Munoz Schick, in litt.).

Habitat & ecology: Undergrowth of damp rain forest, *Lenbrassia* very local, then often gregarious.

Dispersal: The fruit is a fleshy oval berry up to c. 2 cm long, containing numerous minute seeds. Dispersal by birds is suggested but observations are lacking.

Sources: K. Fritsch in E. & P., Nat. Pfl. Fam. IV, 3b (1893) 160–162; H.H. Allan, Fl. New Zeal. 1 (1961) 953–954; B.L. Burtt, Not. Roy. Bot. Gard. Edinb. 24 (1962) 205–220; G.W. Gillet, J. Arn. Arb. 48 (1967) 245–248; ibid. 55 (1974) 431–434; P.S. Green, Curtis Bot. Mag. n.s. 179, 4 (1973) t. 659; A. Trancoso, C. Villagran & M. Munos, Bol. Mus. Nac. Hist. Nat. 37 (1980) 117 117–152, maps.

M.M.J. VAN BALGOOY.


274 Coronantheae
275 Mitrarieae

276. **Dichelachne** Endl.

Name: Dichelachne Endl., Prodr. Fl. Ins. Norfolk (1833) 20.

Family: *Gramineae (Aveneae).*

Taxonomy & distribution: The genus consists of four (Veldkamp, 1974) to eight (Edgar & Connor, 1982) species; *D. rara* (R. Br.) Vickery is found in Timor, New Guinea, Australia and is naturalised in New Zealand; Edgar & Connor regard *D. novo-guineensis* (Pilg.) Pilg. as a distinct species; *D. rara* ssp. *asperula* Veldk., perhaps best regarded as a distinct species, *D. sieberiana* Trin. & Rupr., occurs in Australia and New Zealand; *D. micrantha* (Cav.) Domin is found in Australia, Kermadec Is., Norfolk Is., New Zealand, Easter Is. and is introduced in Hawaii; its var. *inaequiglumis* (Cheesem.) Domin from New Zealand is regarded as a distinct species by Edgar & Connor; *D. crinita* (Linné f.) Hook. f. is known from New Guinea, Australia, New Zealand, Lord Howe, Kermadec and Norfolk Islands; one or two undescribed species occur in Queensland and New South Wales.

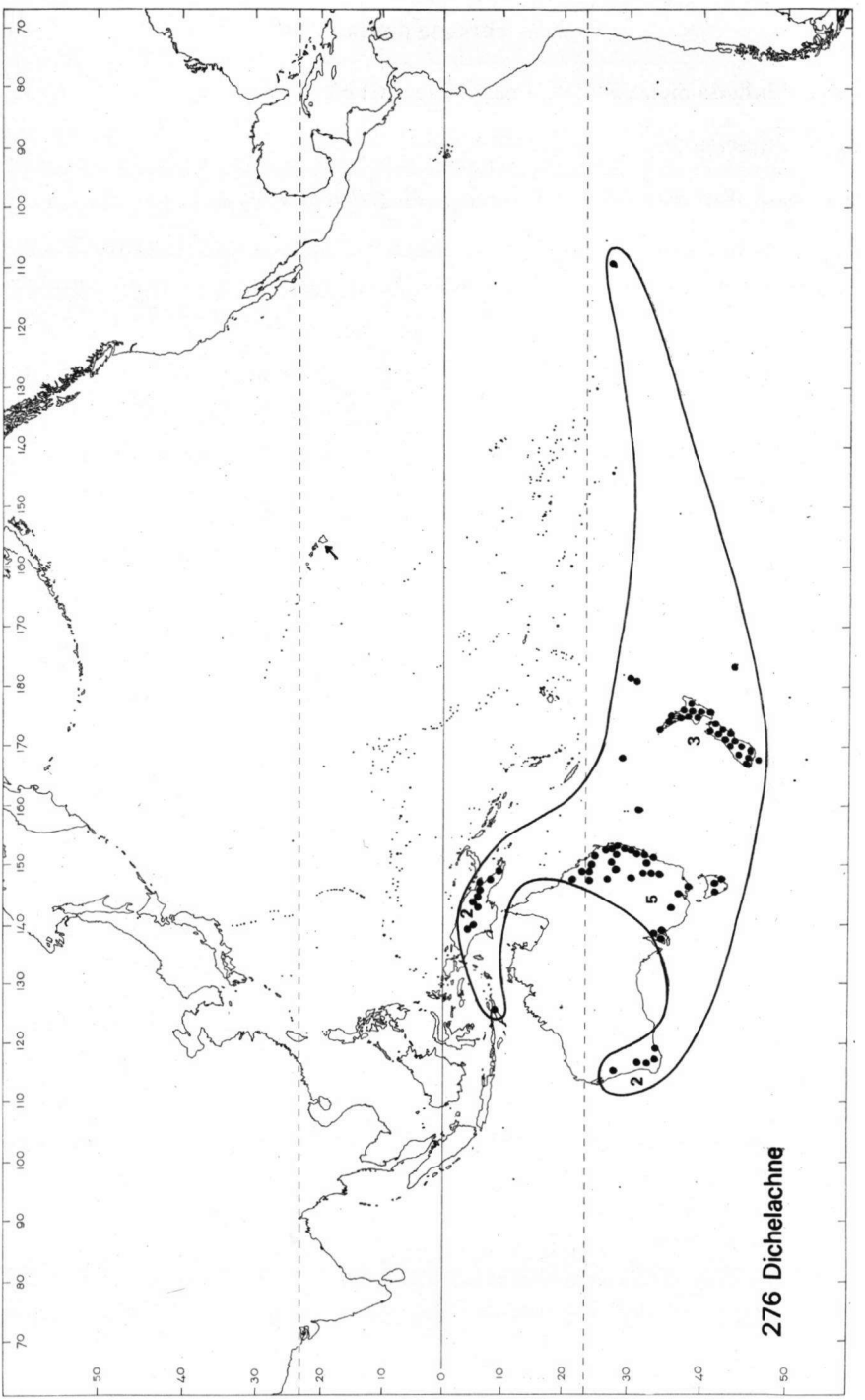
Habit: Erect perennials up to 1.3 m tall, forming small tussocks, culms few-noded, wiry, with loose to densely contracted panicles, spikelets solitary, 1(–3)-flowered, dehiscing above the glumes.

Habitat & ecology: In clearings, in open places, dry forests, along roads, streams, etc., in New Guinea between 1500 and 3770 m.

Dispersal: The caryopsis remains within the lemma and palea which easily detach from the spikelet. The awns on the lemmas presumably stick to passing animals, or may cohere together and the mass may be blown about.

Sources: J.F. Veldkamp, Blumea 22 (1974) 5–12; E. Edgar & H.E. Connor, New Zeal. J. Bot. 20 (1982) 303–309, map. Drs. L.A.S. Johnson (NSW) and R.W. Johnson (BRI) have completed the distribution data for Australia.

M.C. ROOS and J.F. VELDKAMP.


276 Dichelachne
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277. **Ehrharta diplax** F.v.M.

Name: Ehrharta diplax F.v.M., Fragm. 7 (1870) 90.

Family: *Gramineae.*

Synonyms: *Microlaena avenacea* Hook. f., *M. giulianettii* Stapf.

Taxonomy & distribution: The genus *Ehrharta* includes a number of taxa once considered separate genera, mostly of limited range, e.g. *Microlaena* R. Br. and *Petriella* Zotov. See Willemse (1982) for synonymy and map of the inclusive genus and the genera formerly distinguished.

Ehrharta diplax consists of two varieties, var. *diplax* occurs in New Zealand, Fiji and Tahiti, var. *giulianettii* (Stapf) Willemse is confined to New Guinea.

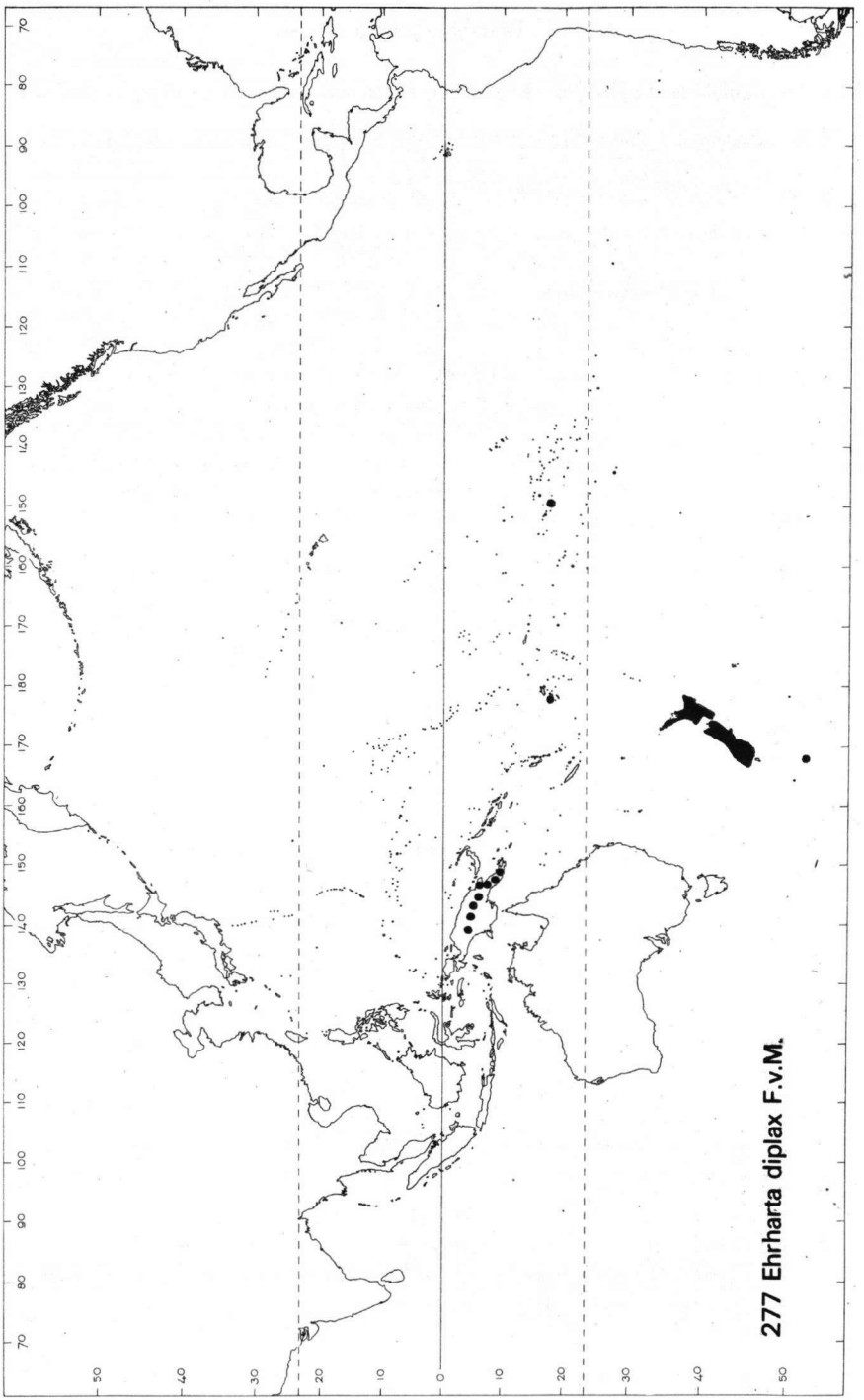
Habit: Tufted perennial to nearly 1 m tall, rhizome ascending or spreading, leaves basal, some cauline, blade linear up to 35 cm long; inflorescence a simple raceme up to 50 cm long, containing up to c. 100 spikelets.

Habitat & ecology: In New Guinea in dense moss forest or more or less open clearings and forest margins at 2800–3500 m altitude. In New Zealand and Auckland I. mostly in lowland and montane forest up to 900 m. In Fiji only known from Mt. Victoria on Viti Levu at 1350 m and in Tahiti only once found on Mt. Aorai at 2050 m. Parham (1979) suggested that the species has been introduced in Fiji, but the specimen from Tahiti (van Balgooy nr. 1830) grew in a locality where it is not likely to have been introduced.

Dispersal: The caryops is c. 3–5 mm long and 0.8 mm diam. and has no dispersal device; perhaps the spikelet can get attached to objects by means of its long awned sterile lemma.

Sources: T.F. Cheeseman, Man. New Zeal. Fl. ed. 2 (1925) 145; J.W. Parham in Smith, Fl. Vit. Nova 1 (1979) 320; L.P.M. Willemse, Blumea 28 (1982) 181–194.

M.M.J. VAN BALGOOY.


277 Ehrharta diplax F.v.M.

278. Dianella Lamk & Jussieu

Name: **Dianella** Lamk, Encycl. (1786) 276 (nom. inval.) ex Juss., Gen. Pl. (1791) 47.

Family: *Liliaceae s. l.* (*Dianellaceae* by Dahlgren, *Phormiaceae* by Takhtajan).

Synonyms: *Excremis* Willd., *Rhuacophila* Bl.

Taxonomy & distribution: According to Schlittler (1940) the genus consists of c. 20 species but, depending on the taxonomic viewpoint, estimates vary from 8 to over 30. The majority occur in Australia.

Mr. Henderson (Indooroopilly), who has extensively studied living and herbarium specimens of *Dianella*, has kindly improved text and map. He also provided the following comments. The concept of *Dianella* and the figures on the map are made to agree with the ideas of Schlittler and Jessop which Henderson does not believe to be correct. He disagrees with authors who try to cover all variability by accepting one or two species in each area. In Australia alone there are some 35 distinct taxa. Not all of these necessarily represent species but several do and at least one represents a new subgenus. The two species recognised by Jessop for Malesia could best be regarded to belong to two genera: *Dianella s. s.* and *Rhuacophila*. When all attributes are considered there is as little justification in including the Neotropical *Excremis* and *Rhuacophila* in *Dianella* as to include the Australian *Stypandra* which no one who knows *Stypandra* would do.

Habit: Glabrous herbaceous perennials with aerial stems to c. 2 m from contracted or elongated rhizomes. Leaves linear, distichous, sheathing at the base. Inflorescence a terminal panicle. Flowers purple to white, hermaphrodite; anthers pale yellow to almost black.

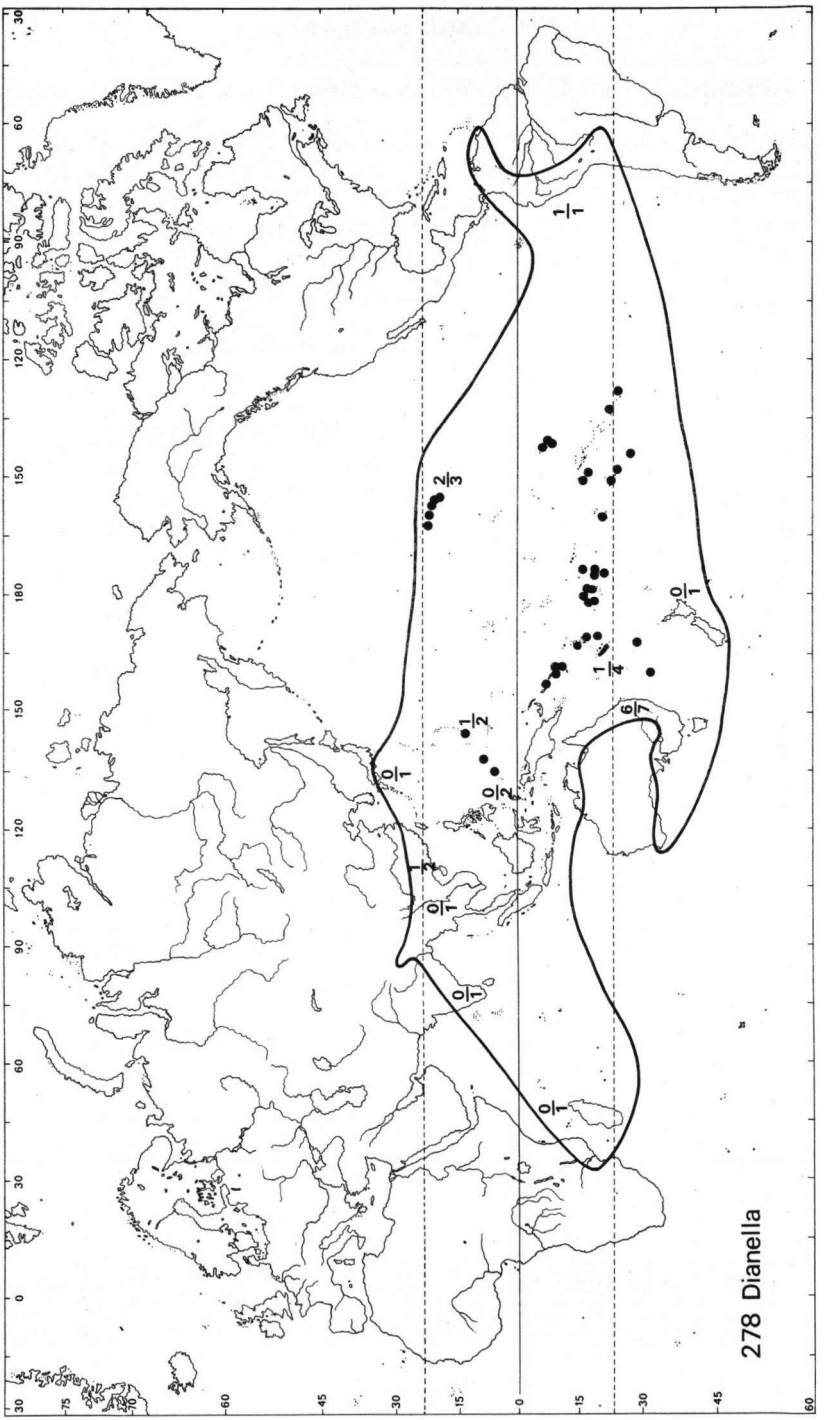
Habitat & ecology: On sands, loams or heavy clays, or amongst rocks, on beach dunes and headlands, in open grasslands and forests, in rain forests and mossy forests, from sea-level to over 4000 m.

Dispersal: Fruit a trilocular, globose to oblong-ovoid, blue to white berry up to 2.75 cm long. Seed 1 to c. 30 per fruit, ovoid or compressed, with black, usually shining testa. Berries are eaten by birds (Guppy, 1906; Ridley, 1930; Gilbert, 1940; Rose, 1973), and Guppy (1906) found fruits or seeds of an inland Hawaiian form identified as *D. odorata* to float in sea-water for a few days, indicating possible dispersal in water.

Map: Figures above the hyphen indicate endemic species, those below the hyphen the total number of species estimated for the area.

Sources: H.B. Guppy, Observ. of a Naturalist in the Pacific 2 (1906) 357, 533; H.N. Ridley, Dispersal of Pl. (1930) 422; P.A. Gilbert, Emu 39 (1940) 209–219; J. Schlittler, Mitt. Bot. Mus. Zürich 163 (1940) 231–283; Blumea 6 (1948) 200–228; Mitt. Bot. Mus. Zürich 207 (1957) 1–36; A.B. Rose, Emu 73 (1973) 177–183; R.J.F. Henderson, Taxon 26 (1977) 131–136; J.P. Jessop, Fl. Mal. I, 9 (1979) 206–209; local floras and collections in BRI and L.

W. AVÉ.


278 Dianella

279. Tristellateia Thouars

Name: Tristellateia du Petit-Thouars, Gen. Nov. Madag. 14, n. 47 (1806).

Family: *Malpighiaceae.*

Taxonomy & distribution: The genus consists of 22 species, of which 19 in Madagascar (18 species endemic). *T. australasiae* A. Rich. is widespread in Indo-Malesia and the W. Pacific. The genus is divided in two sections: sect. *Homoiactinia* with 10 species incl. *T. australasiae*, and sect. *Heteractinia* containing the remaining 12 species.

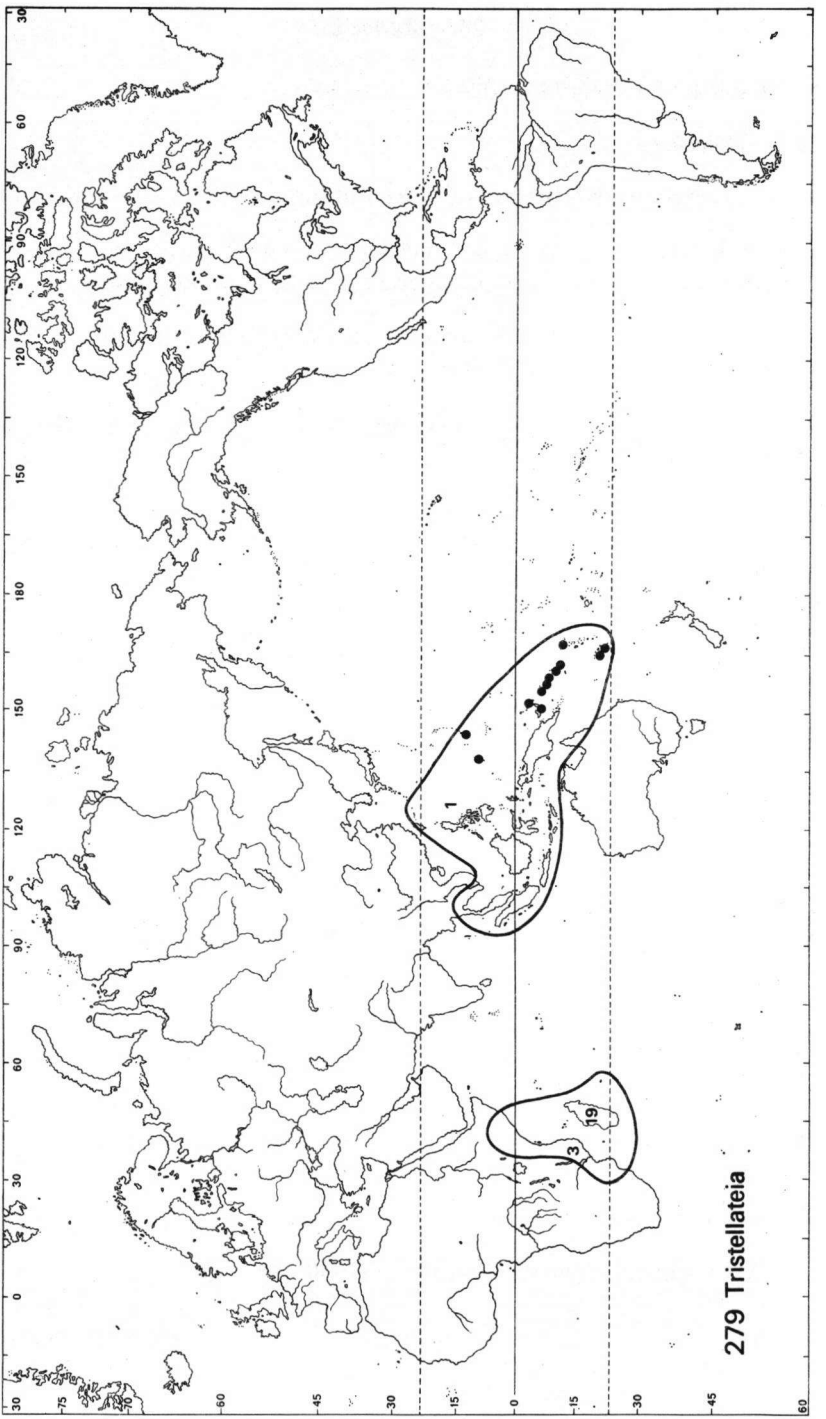
Habit: Woody climbers with opposite or verticillate leaves and terminal or lateral, racemose inflorescences. Flowers bisexual.

Habitat & ecology: Along sandy seashores, on coral rocks, near tidal streams or in the edge of mangrove swamps, in primary forest up to 700 m and occasionally in mountains up to 1600 m. *T. australasiae* is often cultivated as an ornamental.

Dispersal: The fruit is a samara with 4–10 lateral wings up to 4 cm across. According to Ridley (1930), in *T. australasiae* the wings are reduced and more corky or woody than in the other species, making the fruits more suitable for dispersal by sea.

Sources: H.N. Ridley, Dispersal of Pl. (1930) 87, 264; J. Arènes, Mém. Mus. Nat. d'Hist. Nat. Nouv. sér. XXI, 7 (1947) 275–330; M. Jacobs, Fl. Mal. I, 5 (1955) 136–138; local floras and collections in L.

W. AVÉ.


279 Tristellateia
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19
3

280. Myrica L.

Name: Myrica L., Sp. Pl. (1753) 1024.

Family: *Myricaceae.*

Synonyms: *Comptonia* L'Hérit. ex Ait., *Gale* Duham.

Taxonomy & distribution: The genus consists of about 50 species, best represented in the northern hemisphere. Two species occur in Malesia (Backer, 1951).

Habit: Erect shrubs or trees with spiral, simple leaves. Flowers in axillary, solitary, spiked or racemed catkins. Plants polygamous.

Habitat & ecology: Often gregarious, in open sunny localities near active craters, on ridges and lavastreams (also in forest).

Dispersal: The fruit is in most species an ovoid, tuberculate drupe with hard endocarp. The fruits of some species are much sought after by birds (see e.g. Ridley, 1930, and Docters van Leeuwen, 1933). The fruits of *M. gale* L. are buoyant (Ridley, 1930: 227).

Sources: A. Chevalier, Monogr. Myricaceae (1901); H.N. Ridley, Dispersal of Pl. (1930) 478, 502; W.M. Docters van Leeuwen, Verh. Kon. Ned. Ak. Wet. A'dam, Afd. Natuurk. II, 31 (1933) 155–157; C.A. Backer, Fl. Mal. I, 4 (1951) 276–279; H. Meusel, E. Jäger & E. Weinert, Chorol. Zentr. Europ. Flora (1965) Karten, 116 C.

M.C. ROOS.

281. Canacomyrica Guill.

Name: Canacomyrica Guillaumin, Bull. Soc. Bot. Fr. 87 (1940) 299.

Family: *Myricaceae.*

Taxonomy & distribution: The only species of this genus, *C. monticola* Guill., is confined to New Caledonia.

Habit: Shrub up to 3 m tall, with alternate leaves; inflorescence spicate with male or bisexual flowers.

Dispersal: The fruit is a black fleshy drupe, 4 mm diam., with a 1-seeded bony pyrene.

Source: A. Guillaumin, Bull. Soc. Bot. Fr. 87 (1940) 299–300.

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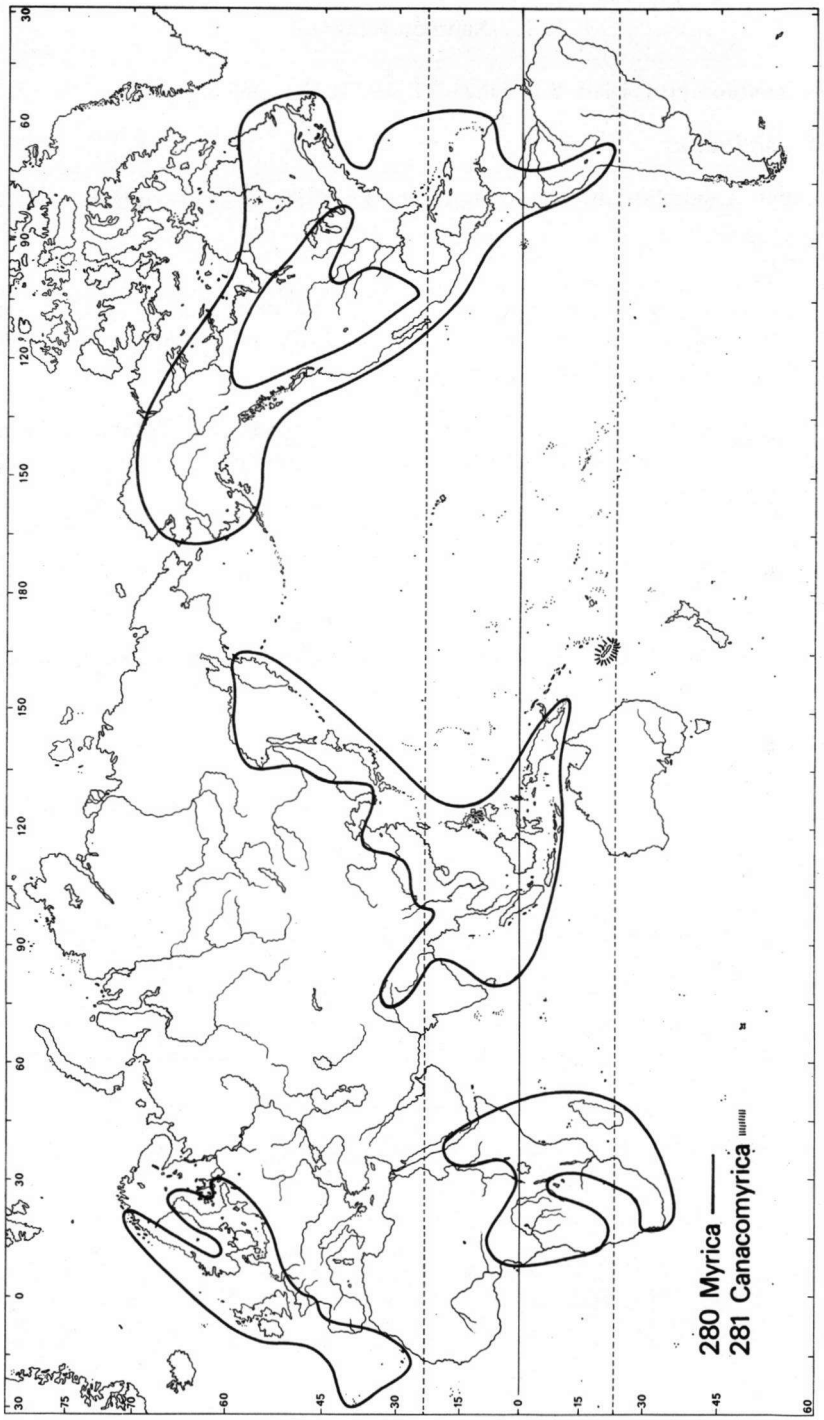

280 Myrica
281 Canacomyrica

282. Xanthomyrtus Diels

Name: Xanthomyrtus Diels, Bot. Jahrb. 57 (1922) 362–267.

Family: *Myrtaceae.*

Taxonomy & distribution: According to Scott (1979) the genus consists of 23 species, mostly in New Guinea. One species, *X. hienghenensis* Guill. is endemic in New Caledonia.

Habit: Shrubs or trees up to 35 m tall with opposite, coriaceous leaves and axillary and terminal, pedunculate inflorescences. *X. compactus* (Ridl.) Diels of New Guinea is occasionally found as a prostrate shrub.

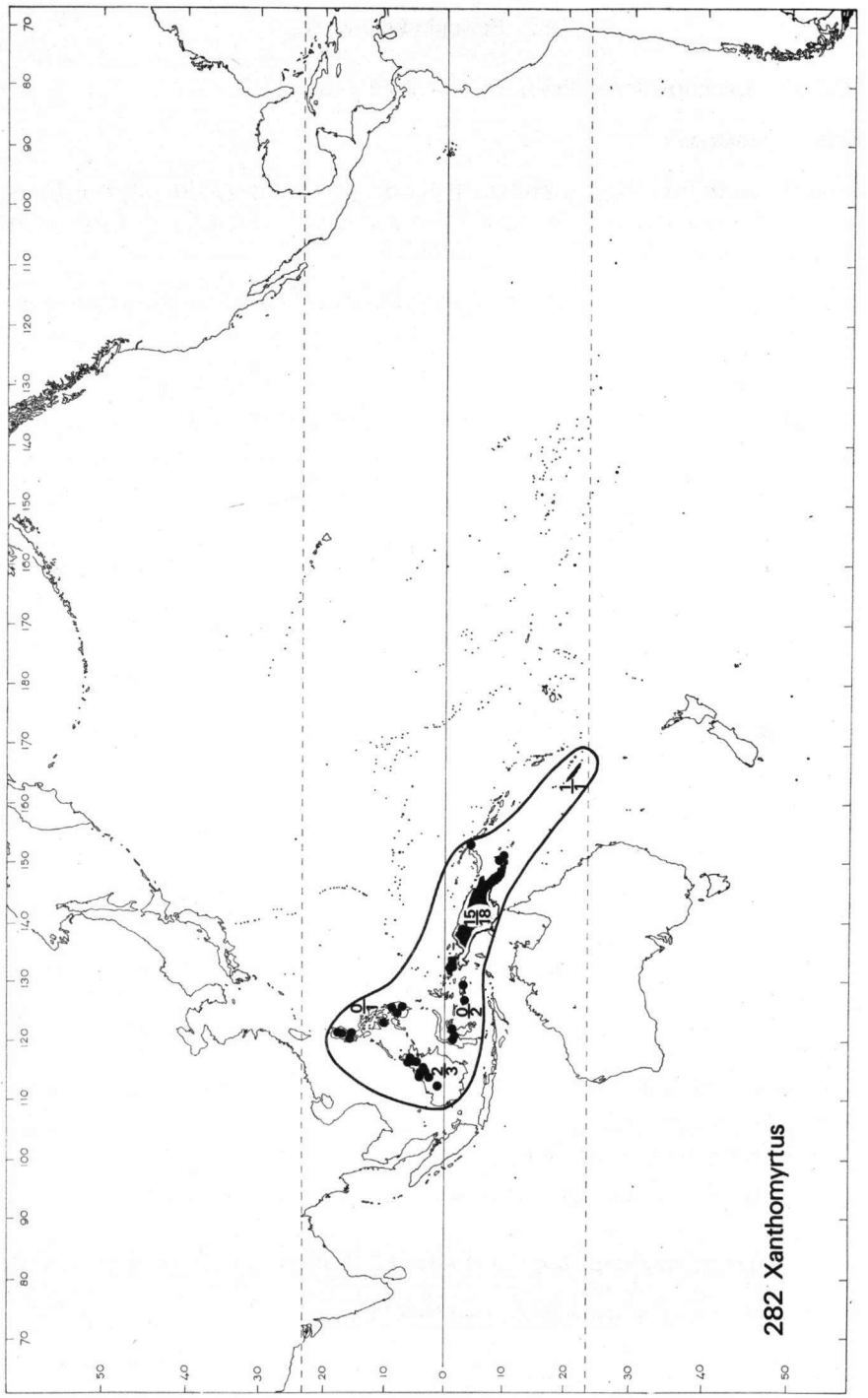
Habitat & ecology: In montane and subalpine mossy forest up to 4000 m, in primary and secondary rain forest, in open fern-covered vegetation, on peat ridges and in swampy grassland.

Dispersal: The fruit is an ellipsoid or globose, fleshy berry up to 0.8 cm diam., reddish, dark blue or black at maturity. Seeds many, 1–1.5 mm diam. Dispersal by birds is most likely.

Map: Figures above the hyphen indicate the number of endemic species, those below the hyphen the total number of species.

Sources: A.J. Scott, Kew Bull. 33 (1979) 461–483, and collections in L.

W. AVÉ.


282 Xanthomyrtus

283. Prasophyllum R. Br.

Name: Prasophyllum R. Br., Prodr. Fl. Nov. Holl. (1810) 317.

Family: *Orchidaceae.*

Taxonomy & distribution: A genus of about 80 species, the majority in extratropical Australia: West, and South Australia, Victoria, Tasmania, New South Wales. Also in Queensland, New Zealand and New Caledonia.

Habit: Terrestrial glabrous herbs with underground tubers, solitary leaves, flowers in a terminal spike or raceme.

Habitat & ecology: Found in a variety of habitats, lowland and upland forest, dry rocky places, bogs, grassland, both open and shaded places.

Dispersal: The fruit is a dehiscent capsule containing numerous minute seeds. As in most orchids dispersal of the seeds by wind is most likely.

Sources: A.W. Dockrill, Australian indigenous Orchids (1964) 85–87; W.H. Nichols, Orchids of Australia (1969) 25–44; L.B. Moore & E. Edgar, Fl. New Zeal. 2 (1970) 140–152; N. Hallé, Fl. Nouv. Caléd. et Dépend. 7 (1977) 472–475.

M.C. ROOS.

284. Microcachrys Hook. f.

Name: Microcachrys Hook. f., Lond. J. Bot. 4 (1845) 149.

Family: *Podocarpaceae.*

Taxonomy & distribution: The *Podocarpaceae* consist of 13 genera. See De Laubenfels (1969) for a general account and a key to the genera. *Phyllocladus* has been mapped in Pac. Pl. Ar. 2 (1966) map 140. The remaining genera are treated in this volume.

The only species of *Microcachrys, M. tetragona* (Hook. f.) Hook. f. is confined to Tasmania. Pollen ascribed to the genus has been recorded from the Kerguelen, S. Australia and New Zealand in Cretaceous and Tertiary deposits (Florin, 1963; Martin, 1978); Khan (1974) found pollen of *Dacrycarpus, Microcachrys* and *Microstrobos* in Upper Miocene deposits in Papua.

Habit: Dioecious straggling shrubs, branches up to 1 m long, usually prostrate, leaves scale-like in opposite pairs. Male and female cones solitary, terminal.

Habitat & ecology: Exposed ridges and wet moors between 1000 and 1400 m.

Dispersal: The ripe seed cones are 6–8 mm long, the bracts, each with one arillate seed turn scarlet and fleshy.

Sources: R. Florin, Acta Horti Berg. 20 (1963) 182; W.M. Curtis, The Endem. Fl. of Tasm. 2 (1969) 106; D.J. de Laubenfels, J. Arn. Arb. 50 (1969) 274–277; A.M. Khan, Pollen et Spores 16 (1974) 265–284; H.A. Martin, Alcheringia 2 (1978) 187.

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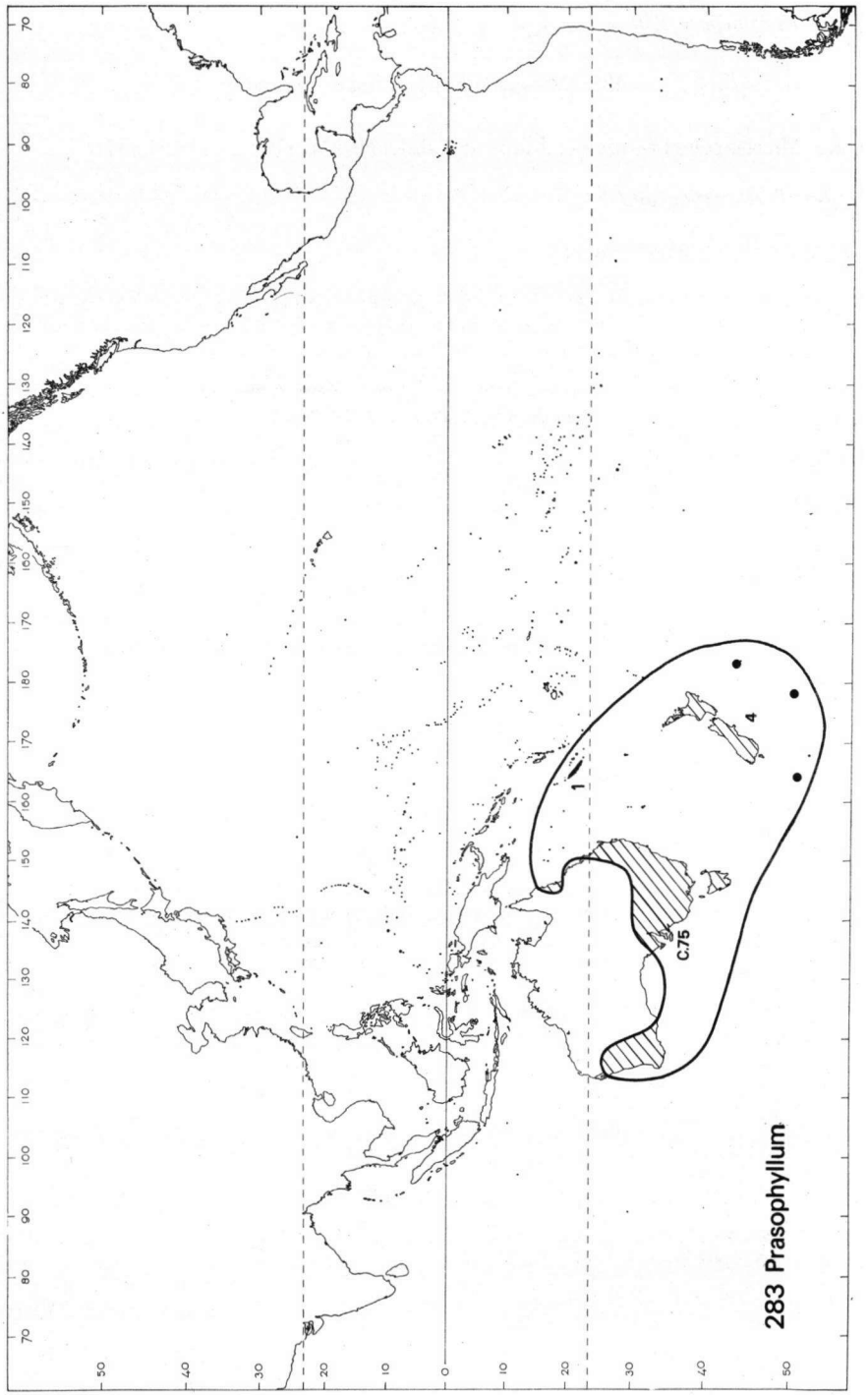
283 Prasophyllum
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(continued from page 200)

285. Microstrobos Garden & Johnson

Name: Microstrobos Garden & Johnson, Contr. N.S.W. Herb. 1 (1951) 316.

Family: *Podocarpaceae.*

Synonym: *Pherosphera* Archer.

Taxonomy & distribution: A genus of two species of restricted distribution. *M. niphophilus* Garden & Johnson is endemic to Tasmania and *M. fitzgeraldi* (F.v.M.) Garden & Johnson is only known from the Blue Mountains in New South Wales, Australia.

Habit: Dioecious, much branched shrubs up to 3 m tall, leaves a few mm long closely appressed spirally arranged, male and female cones terminal.

Habitat & ecology: The Tasmanian species occurs in boggy places and along watercourses between 1000 and 1400 m, often together with *Microcachrys*. The Australian species is limited to the base of waterfalls within the reach of spray.

Dispersal: The female cone is c. 3 mm long and consists of several bracts each with one seed; the seeds are covered by a hard integument.

Sources: W. Dallimore & A.B. Jackson, Handb. of Conif. (1931) 32; N.C.W. Beadle, O.D. Evans & R.C. Carolin, Flora of the Sydney region (1972) 97; W.M. Curtis, The Endem. Fl. of Tasm. 5 (1975) 352.

286. Saxegothaea Lindl.

Name: Saxegothaea Lindl., J. Hort. Soc. 6 (1951) 258.

Family: *Podocarpaceae.*

Taxonomy & distribution: The only species of this genus, *S. conspicua* Lindl. is confined to Chile and adjacent Argentina between 35°–45°S. There is a doubtful Oligocene record from Fuegia (Florin, 1963).

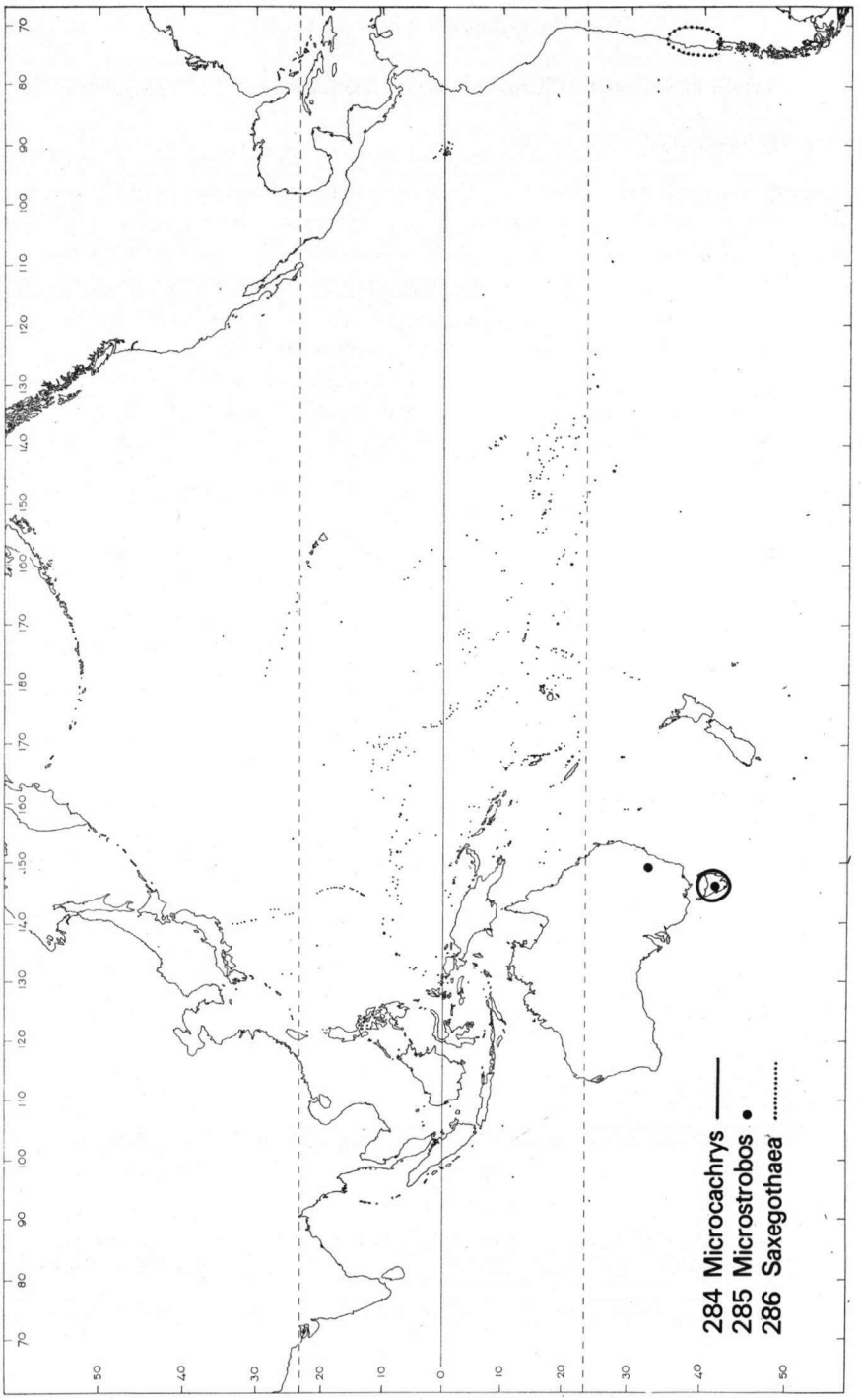
Habit: Monoecious trees up to 18 m tall, shrubby at higher elevations, leaves linear pointed, spirally arranged. Male cones solitary, lateral on a short naked peduncle, the female cones borne terminally on scaly shoots.

Habitat & ecology: Rain forest of the lower montane regions.

Dispersal: Ripe female cones are 1–1.5 cm long and consist of fleshy scales with 6–12 arillate seeds.

Sources: W. Dallimore & A.B. Jackson, Handb. of Conif. (1931) 60–62; R. Florin, Acta Horti Berg. 20 (1963) 182. Professor De Laubenfels has critically read the text of *Microcachrys, Microstrobos* and *Saxegothaea*.

M.M.J. VAN BALGOOY.


284 Microcachrys
285 Microstrobos
286 Saxegothaea

287. **Dacrydium** Solander ex Lambert

Name: Dacrydium Solander ex Lambert, Descr. Gen. Pinus 1 (1807) Appendix 93.

Family: *Podocarpaceae.*

Taxonomy & distribution: There are about 25 species in this genus which can be divided in two groups, one mainly extratropical (Tasmania, New Zealand and Chile), the other primarily tropical but for *D. cupressinum* Soland. ex Lamb. in New Zealand. A third group which used to be distinguished in *Dacrydium* forms a separate genus (see *Falcatifolium*). Recently Quinn (1981) has proposed a further subdivision of the genus as follows: *Dacrydium s. s.* (16 spp., Asia, Malesia, Pacific); *Lepidothamnus* Philippi (2 spp., New Zealand; 1 sp., Chile); *Lagarostrobos* Quinn (1 sp., Tasmania; 1 sp., New Zealand) and *Halocarpus* Quinn (3 spp., New Zealand). I accept the distinction of *Halocarpus* (see there) but not that of the other two genera.

Habit: Shrubs or trees up to 40 m tall with needle- or scale-like leaves, dioecious, rarely monoecious (New Zealand), male cones cylindrical, terminal or lateral or both, female cones much reduced, with bracts hardly different from foliage leaves.

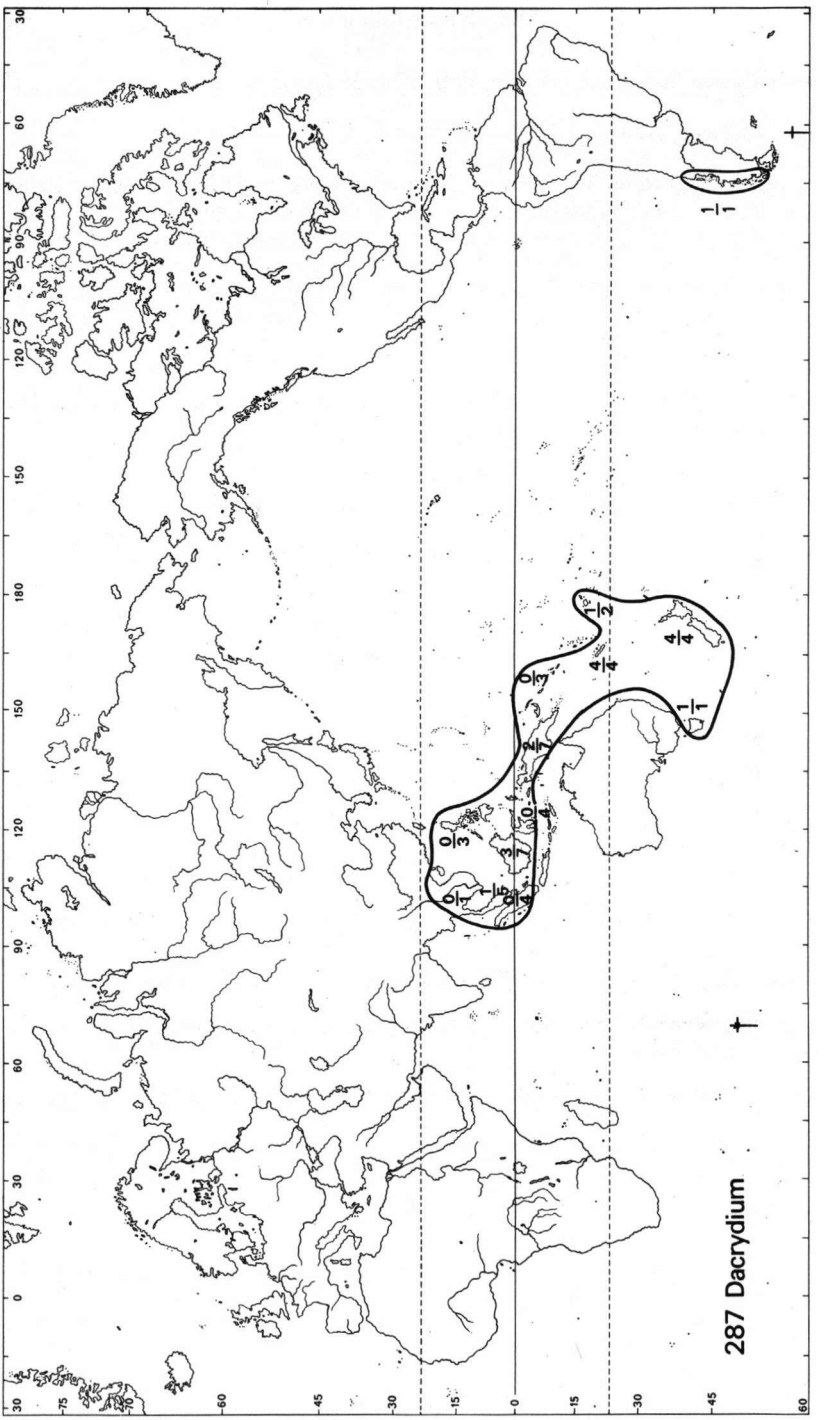
Habitat & ecology: The species of *Dacrydium* are found on a variety of, predominantly very wet, soils under an everwet climate. In the tropical part of the range the species are mostly found in montane habitats and are particularly common in the upper Fagaceous forest at 1500–2500 m (Stein, 1978), up to an altitude of 3500 m. Some species descend to near sea-level. *D. guillauminii* Buchh. of New Caledonia is a rheophyte (van Steenis, 1981).

Dispersal: The seed is rather small, 3.5–5 mm long, covered by a fertile scale (epimatium) on top of a bracteate receptacle. Ovule inserted, seed becomes semi-erect. The whole structure becomes fleshy and often red at maturity. Dispersal by birds was observed by Van Balgooy in Malaya and New Guinea.

Map: The figures indicate the numbers of species in each partial area, above the hyphen the endemic and below the total number of species. Daggers indicating fossil records are based on Florin (1963).

Sources: H.H. Allan, Fl. New Zeal. 1 (1961) 108–112; R. Florin, Acta Horti Berg. 20 (1963) 187; D.J. de Laubenfels, J. Arn. Arb. 50 (1969) 282–308; Fl. Nouv. Caléd. et Dépend. 4 (1972) 17–30; N. Stein, Biogeographica 11 (1978) 1–168; C.G. G.J. van Steenis, Rheophytes of the World (1981) 168; C.J. Quinn, Austr. J. Bot. 30 (1981) 311–320.

D.J. DE LAUBENFELS.


287 Dacrydium

288. Falcatifolium Laub.

Name: Falcatifolium Laub., J. Arn. Arb. 50 (1969) 308.

Family: *Podocarpaceae.*

Taxonomy & distribution: The at least five species of this genus were formerly considered a distinct species group within *Dacrydium*; see e.g. Florin (1931). One species is distributed from the Malay Peninsula to the Philippines and Moluccas, the other species are endemic to Sarawak, New Guinea and New Caledonia. The genus is characterised against *Dacrydium* by the bilaterally flattened distichous leaves. The fertile structures are produced on specialised axillary shoots in *Falcatifolium* and on ordinary branches in *Dacrydium*; ovule inverted, seed becomes semi-erect.

Habit: Shrubs or trees up to 25 m tall.

Habitat & ecology: Usually in the understorey of rain forest at medium altitudes, maximum altitude recorded 2500 m, also found near sea-level.

Dispersal: See under *Dacrydium*, but in *Falcatifolium* the seed is partly covered by a humped epimatium. Epimatium does not become fleshy, cone is red at maturity, seed black.

Sources: R. Florin, Kungl. Sv. Vet. Akad. Handl. III, 10 (1931) 256–259; D.J de Laubenfels, J. Arn. Arb. 50 (1969) 310–314; Fl. Nouv. Caléd. et Dépend. 4 (1972) 30–34.

289. Halocarpus Quinn

Name: Halocarpus Quinn, Austr. J. Bot. 30 (1981) 317.

Family: *Podocarpaceae.*

Taxonomy & distribution: This genus is split from *Dacrydium*. It consists of the three New Zealand species in which the seed is completely covered by the scale and remains inverted. The juvenile leaves are linear and bifacially flattened, not needles as in *Dacrydium* (see under *Dacrydium*).

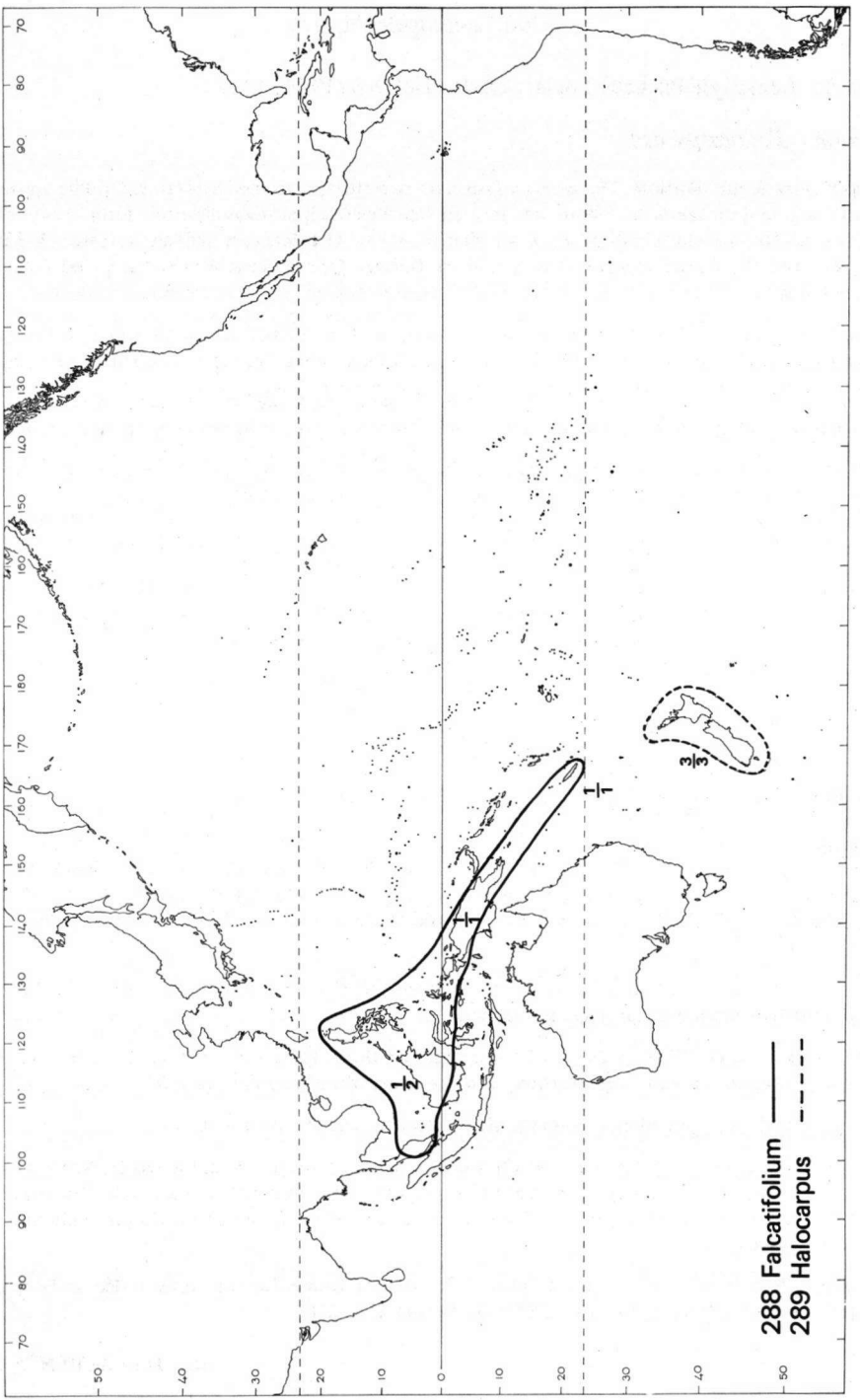
Habit: Dioecious shrubs to tall trees up to 25 m, adult leaves spirally arranged scales. Male and female cones solitary, terminal.

Habitat & ecology: Subtropical forest to subalpine shrub and more up to 600 m.

Dispersal: The ripe female cone is up to 12 mm long and usually becomes fleshy, with one to several dark striated seeds.

Sources: H.H. Allan, Fl. New Zeal. 1 (1961) 108–112; D.J. de Laubenfels, J. Arn. Arb. (in press).

D.J. DE LAUBENFELS.


288 Falcatifolium
289 Halocarpus
1/1
1/1
1/2
3/3

290. Acmopyle Pilger

Name: Acmopyle Pilger in Engler, Pfl. R., Heft 18 (1903) 117.

Family: *Podocarpaceae.*

Taxonomy & distribution: The genus consists of two species, *A. pancheri* (B. & G.) Pilg. in New Caledonia and *A. sahniana* Buchh. & Gray on Viti Levu (Fiji). According to Florin (1940) the genus has had a wider distribution in the past, fossils of Conifers very similar to *Acmopyle* have been found in Jurassic deposits in India and in Tertiary deposits in S. America and Grahamland, Antarctica.

Habit: Small to medium sized trees up to 25 m tall, trunk gnarled at higher elevations, leaves flat, distichous, scale-like on fertile shoots; male cones terminal or lateral, often grouped, female cones on short lateral or terminal branches; ovules inverted, becoming semi-erect.

Habitat & ecology: *A. pancheri* is found in everwet forest from near sea-level to 1200 m, either as part of the undergrowth on very wet soil or in the upper layer in forest on dry soil. *A. sahniana* is a rare treelet in dense forest between 670–1050 m.

Dispersal: The female cone grows out to a warty receptacle, bearing one erect seed, c. 1 cm long, fused along one side with the scale (epimatium) which becomes fleshy at maturity.

Sources: R. Florin, Sv. Bot. Tidskr. 34 (1940) 117–140; J.T. Buchholz & N.E. Gray, J. Arn. Arb. 28 (1947) 141–143; D.J. de Laubenfels, J. Arn. Arb. 50 (1969) 337–340; Fl. Nouv. Caléd. et Dépend. 4 (1972) 39–44; A.C. Smith, Fl. Vit. Nova 1 (1979) 97–98.

291. Parasitaxus Laub.

Name: Parasitaxus Laub., Fl. Nouv. Caléd. et Dépend. 4 (1972) 44.

Family: *Podocarpaceae.*

Taxonomy & distribution: The only species of this genus, *P. ustus* (Vieill.) Laub. is endemic to New Caledonia. Earlier authors considered the taxon a section of *Podocarpus* (sect. *Microcarpus* Pilg.).

Habit: Compact monoecious shrub to 1.5 m tall with scattered appressed scale-like leaves. Fertile shoots at the end of non-specialised branches.

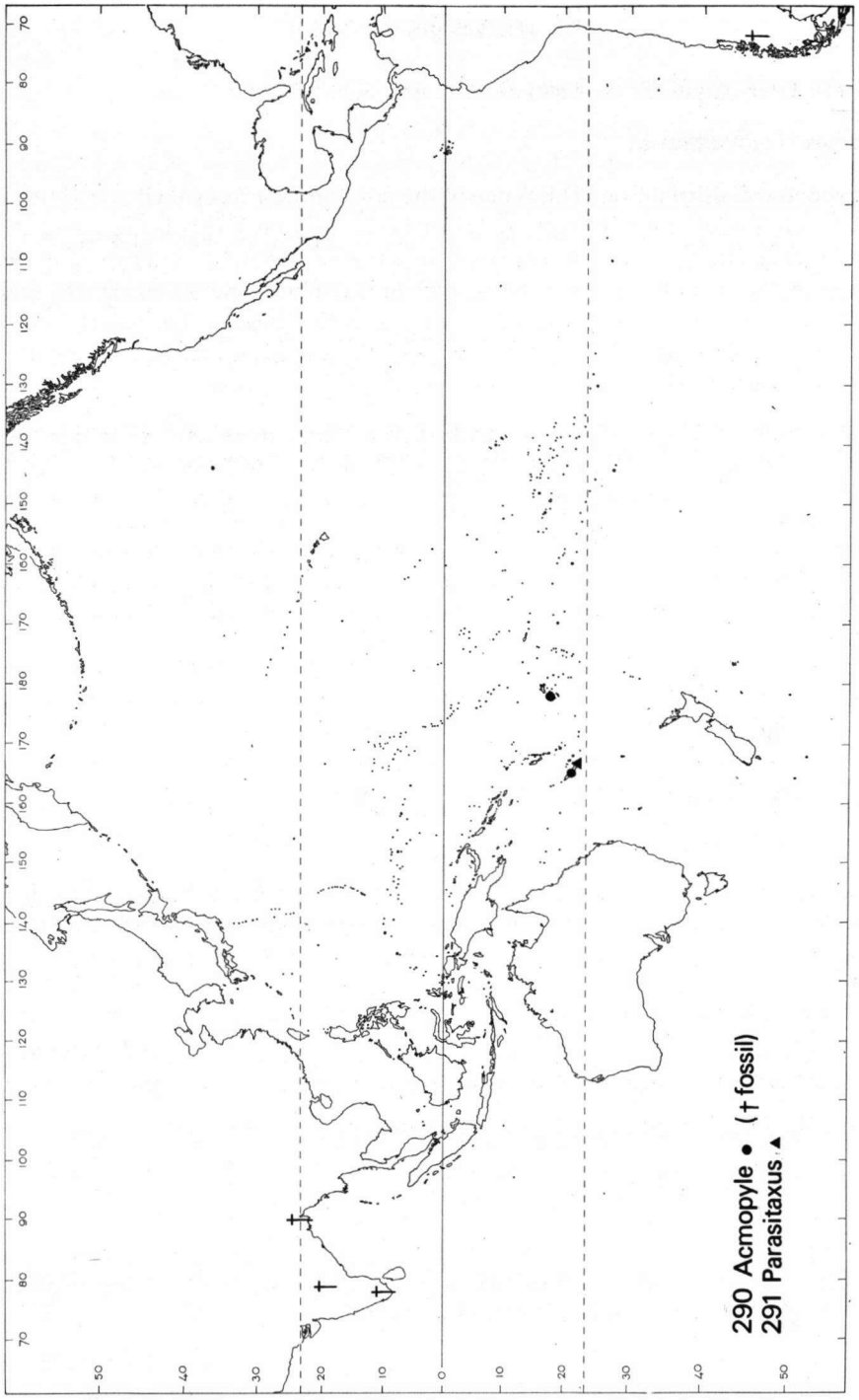
Habitat & ecology: This species is the only known (hemi-)parasitic Gymnosperm. It is found scattered over the island in association with the roots of *Falcatifolium taxoides* (B. & G.) Laub.

Dispersal: The seed is globular 3–4 mm diam., glaucous and fleshy at maturity.

Note: Apart from being the home of the only parasitic Gymnosperm in the world, New Caledonia is also the place to harbour the only three rheophytic Gymnosperms (see under *Dacrydium*, *Decussocarpus* and *Podocarpus*). See also Carlquist's (1974) discussion on Conifer radiation in New Caledonia.

Sources: N.E. Gray, J. Arn. Arb. 41 (1960) 36; D.J. de Laubenfels, Fl. Nouv. Caléd. et Dépend. 4 (1972) 44–47; S. Carlquist, Island Biology (1974) 214–226.

D.J. DE LAUBENFELS.


290 Acmopyle • († fossil)
291 Parasitaxus ▲

292. Dacrycarpus (Endl.) Laub.

Name: Dacrycarpus (Endl.) Laub., J. Arn. Arb. 50 (1969) 315.

Family: *Podocarpaceae.*

Taxonomy & distribution: This is one of the taxa formerly recognised as a section of *Podocarpus* raised to genus rank by De Laubenfels (op. cit.). It is distinguished from *Podocarpus int. al.* by the leaves resembling those of *Dacrydium* and by a projecting crest on one side of the seed formed by the union of bract and seed scale. The genus comprises nine species and ranges from Burma to New Zealand and Fiji. *D. imbricatus* (Bl.) Laub. practically covers the range of the genus but most species are of restricted distribution.

Habit: Shrubs [*D. kinabaluensis* (Wassch.) Laub. 2 m or more tall] but mostly trees, up to 50 m tall [*D. dacrydioides* (Rich.) Laub. of New Zealand] with dimorphous leaves, bilaterally flattened in the juvenile stage and awl-shaped in the adult stage.

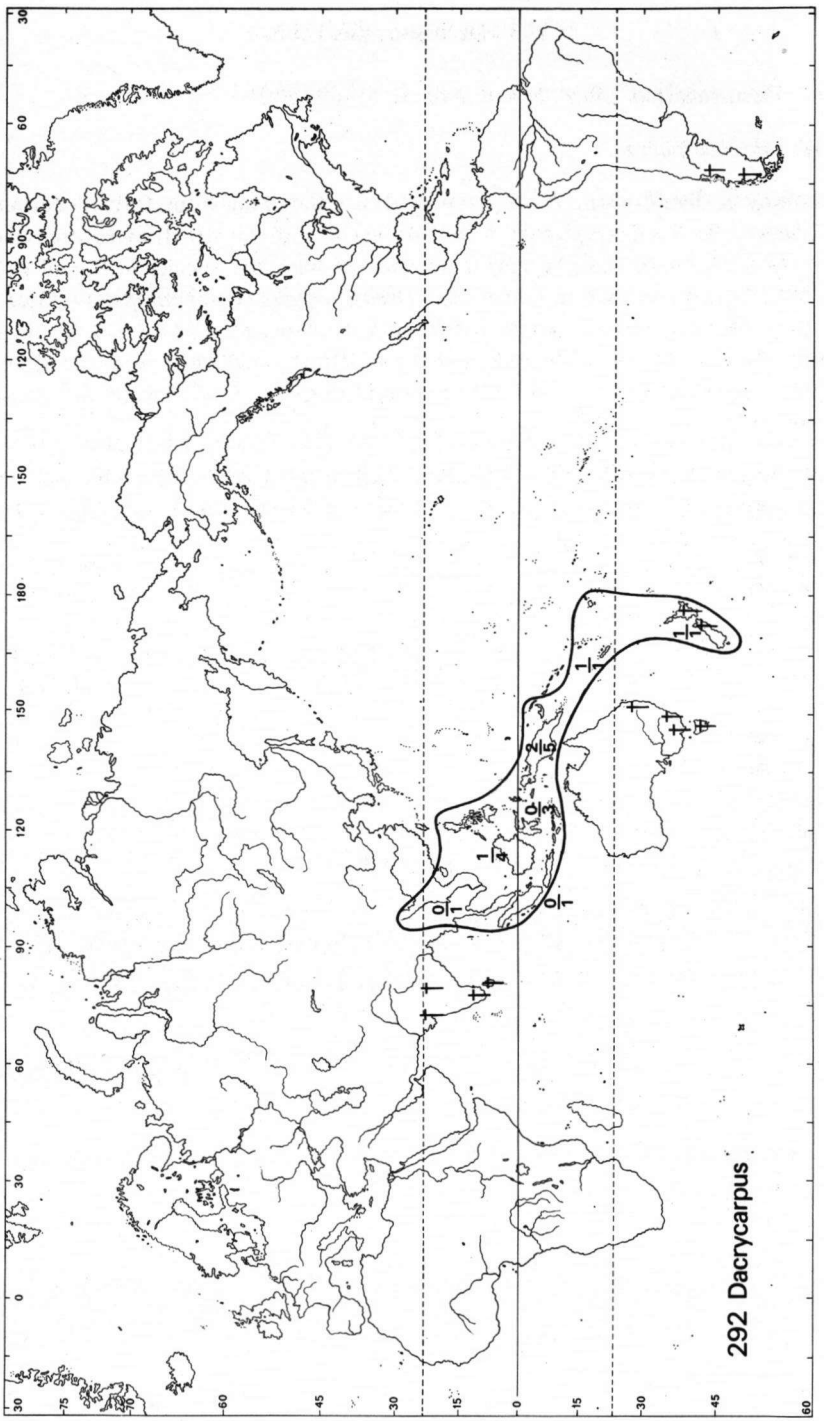
Habitat & ecology: Rain forest, mostly between 1000–3000 m, but some species descend to a few 100 metres a.s.l., other species reach the treeline at c. 4000 m such as *D. kinabaluensis* in Borneo and *D. compactus* (Wassch.) Laub. in New Guinea.

Dispersal: The solitary seed is 0.5 cm diam. and sits on a warty receptacle which becomes fleshy and red at maturity. The structure is eaten by birds according to Ridley (1930). Beveridge (1964) found large amounts of viable seeds of *D. dacrydioides* and other Podocarps in the droppings of several New Zealand birds.

Map: Figures above the hyphen indicate the endemic, those below the hyphen the total number of species. Daggers indicating fossil records are based on Florin (1963).

Sources: H.N. Ridley, Dispersal of Pl. (1930) 459, 499; R. Florin, Acta Horti Berg. 20 (1963) 189; A.E. Beveridge, Proc. New Zeal. Ecol. Soc. 11 (1964) 48–55; D.J. de Laubenfels, J. Arn. Arb. 50 (1969) 315–337; Fl. Nouv. Caléd. et Dépend. 4 (1972) 34–39.

D.J. DE LAUBENFELS.


292 Dacrycarpus

293. Decussocarpus Laub.

Name: Decussocarpus Laub., J. Arn. Arb. 50 (1969) 340.

Family: *Podocarpaceae.*

Taxonomy & distribution: A widespread genus combining three former sections of *Podocarpus.* Sect. *Afrocarpus* with two species is confined to Africa (dotted line on map); sect. *Dammaroides (Nageia)* is represented with five species in S. and E. Asia and Malesia (broken line on map); sect. *Decussocarpus (Polypodiopsis)* (closed line and dots on map) has a disjunct distribution, two species are found in S. America, two are endemic in New Caledonia and the fourth is widespread from the Moluccas to Fiji. Fossils of this genus have been found in Chile, New Zealand and Australia (Florin, 1963).

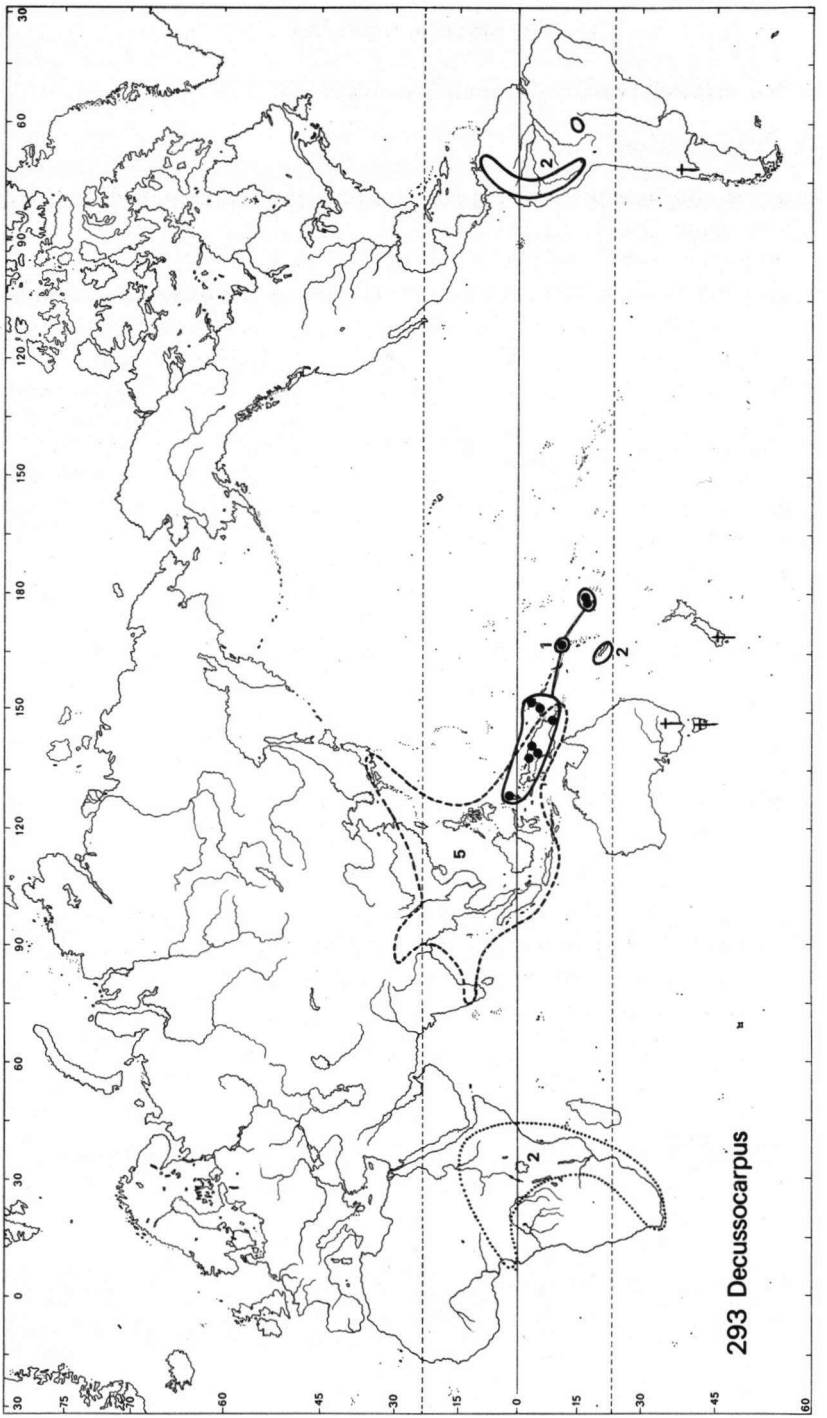
Habit: Shrubs, more often trees, medium-sized to large, up to 50 m tall, with decussate, rarely spirally arranged, ovate to lanceolate leaves. Sterile specimens of sect. *Dammaroides* may be mistaken for *Agathis* but can be told apart by the buds which are round in *Agathis* and acute in *Decussocarpus.* Male cones often more than one on a scaly shoot.

Habitat & ecology: Most species are confined to rain forest from near sea-level to c. 2000 m. Some species also in swamp forest and *D. minor* (Carrière) Laub. is a plant of lake and stream sides, one of the three coniferous rheophytes found only in New Caledonia (van Steenis, 1981).

Dispersal: The seed is a more or less globose beaked organ up to 2 cm long, produced at the end of a scaly shoot, not as in most *Podocarpaceae* supported by a fleshy receptacle except in some species of sect. *Dammaroides.*

Sources: N.E. Gray, J. Arn. Arb. 34 (1953) 67–76; R. Florin, Acta Horti Berg. 20 (1963) 193; D.J. de Laubenfels, J. Arn. Arb. 50 (1969) 340–359; Fl. Nouv. Caléd. et Dépend. 4 (1972) 48–55; S. Carlquist, Island Biology (1974) 223; C.G.G.J. van Steenis, Rheophytes of the World (1981) 168–169.

D.J. DE LAUBENFELS.


293 Decussocarpus

294. **Podocarpus** L'Hérit. ex Persoon

Name: Podocarpus L'Hérit. ex Persoon, Synopsis 2 (1807) 580.

Family: *Podocarpaceae.*

Taxonomy & distribution: Several species described in *Podocarpus* have been removed to other genera by De Laubenfels (1969). In the more restricted sense of this author 94 species remain in *Podocarpus*, which is the most widely distributed genus practically covering the range of the family. There are two subgenera: *Fasciculum* (de Laubenfels, in press) with 53 species of Indo-Australian distribution and *Podocarpus* with 41 species in America, Africa, Tasmania, New Zealand and one species each in New Caledonia and Queensland, the only places where the two subgenera overlap.

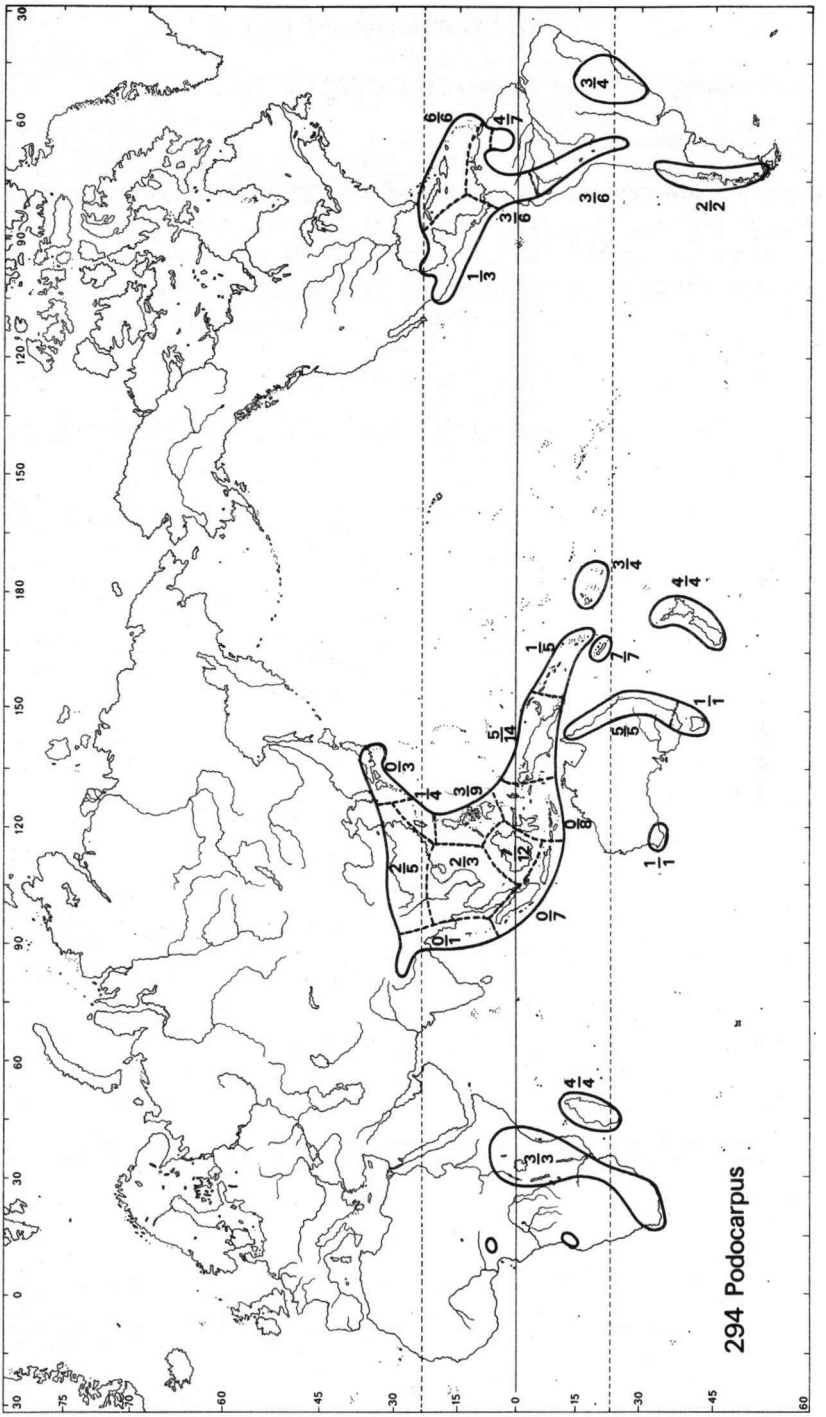
Habit: Dioecious shrubs or trees, leaves bifacially flattened, mostly linear, spirally arranged with specialised, usually axillary fertile, shoots. Male cones lateral, solitary or grouped, sessile or on a naked peduncle, female cone consisting of a naked peduncle and a fleshy receptacle.

Habitat & ecology: Species of the genus occur on a variety of soils, mostly as members of montane rain forest in the tropics, but also in lowland forest especially in the temperate part of the range. *P. novaecaledoniae* Vieill. is a rheophyte (van Steenis, 1981).

Dispersal: The seeds are ellipsoid to ovoid a few mm to 2 cm long. In most species the receptacle becomes fleshy and red at maturity and is reported to be eaten by birds in some species (Ridley, 1930).

Sources: J.T. Buchholz & N.E. Gray, J. Arn. Arb. 29 (1948) 49–63, 123–151; J. Wasscher, Blumea 4 (1941) 359–481; N.E. Gray, J. Arn. Arb. 34 (1953) 163–175; ibid. 37 (1956) 160–172; ibid. 39 (1958) 424–477; H.H. Allan, Fl. New Zeal. 1 (1961) 104–108; D.J. de Laubenfels, J. Arn. Arb. 50 (1969) 274–277; Fl. Nouv. Caléd. et Dépend. 4 (1972) 59–79; Fl. Madag. 18 (1972) 9–22; C.G.G.J. van Steenis, Rheophytes of the World (1981) 169.

D.J. DE LAUBENFELS.


294 Podocarpus

295. **Prumnopitys** Philippi

Name: Prumnopitys Philippi, Linnaea 30 (1860) 731.

Family: *Podocarpaceae.*

Taxonomy & distribution: The genus consists of two sections, both formerly recognised as sections of *Podocarpus:* sect. *Sundacarpus* with one species, *P. amarus* (Bl.) Laub., widespread in Malesia (dotted line on map) and N. Queensland, and sect. *Prumnopitys (Stachycarpus)* (continuous line on map) with five species in the Neotropics, two in New Zealand and one each in New Caledonia and Queensland.

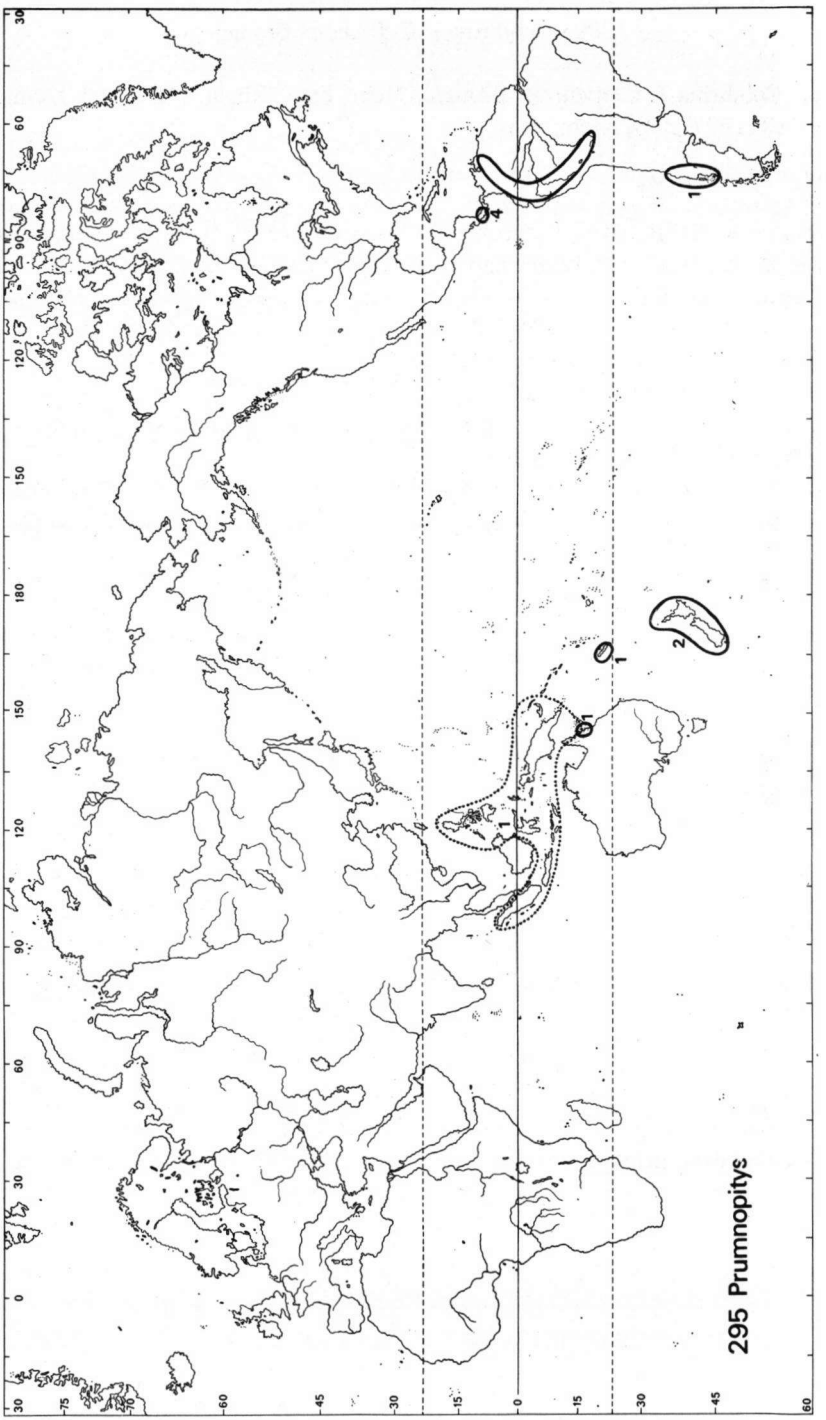
Habit: Dioecious trees, leaves linear, spirally arranged.

Habitat & ecology: Rain forest at medium altitudes in the tropics and in the lowlands in temparate countries.

Dispersal: Seeds often more than one in one spike, purplish or glaucous yellow or orange at maturity, smallest seeds 6 mm diam. but in the New Zealand *P. ferruginea* (D. Don) Laub. up to 2 cm long (Allan, 1960). The seeds of both New Zealand species are eaten by a number of native bird species (Beveridge, 1964). The 'fruit' of the New Caledonian *P. ferruginoides* (Compt.) Laub. is eaten by birds (de Laubenfels, 1972). The 'fruit' of the Chilean species is quite popular and the 'fruit' of one species in Venezuela is delicious.

Sources: N.E. Gray & J.T. Buchholz, J. Arn. Arb. 32 (1951) 82–97; H.H. Allan, Fl. New Zeal. 1 (1961) 106–107; A.E. Beveridge, Proc. New Zeal. Ecol. Soc. 11 (1964) 48–55; D.J. de Laubenfels, Fl. Nouv. Caléd. et Dépend. 4 (1972) 56–59; Blumea 24 (1978) 189–190.

D.J. DE LAUBENFELS.


295 Prumnopitys

296. **Colubrina** L.C. Rich. ex Brongn.

Name: Colubrina L.C. Rich. ex Brongn., Mém. Fam. Rham. (1826) 61 [Ann. Sci. Nat. I, 10 (1827) 368], nom. cons.

Family: *Rhamnaceae.*

Taxonomy & distribution: According to Johnston (1971) the genus consists of 31 species, mostly American. He recognised 2 subgenera and 4 sections:

I. Subgenus *Colubrina:*
   a. Sect. *Bracena* (2 spp. in America);
   b. Sect. *Cowania* (6 spp. in S. America);
   c. Sect. *Capuronia* (4 spp. in Madagascar);
   d. Sect. *Colubrina* (5 spp. of which 4 spp. in S. America and 1 sp., *C. oppositifolia* Brongn. ex H. Mann, is endemic in Hawaii).

II. Subgenus *Serrataria* (14 spp. of which 9 in America and 5 in Asia, incl. Malesia). One of them, *C. asiatica* (L.) Brongn., is widespread from East Africa and Madagascar through India, SE. Asia, Malesia, Australia, Polynesia to the West Indies.

Habit: Shrubs or trees up to 30 m tall with alternate or opposite leaves. Inflorescences: cymes or usually small thyrses, sessile and umbel-like or short-peduncled. Flowers bisexual.

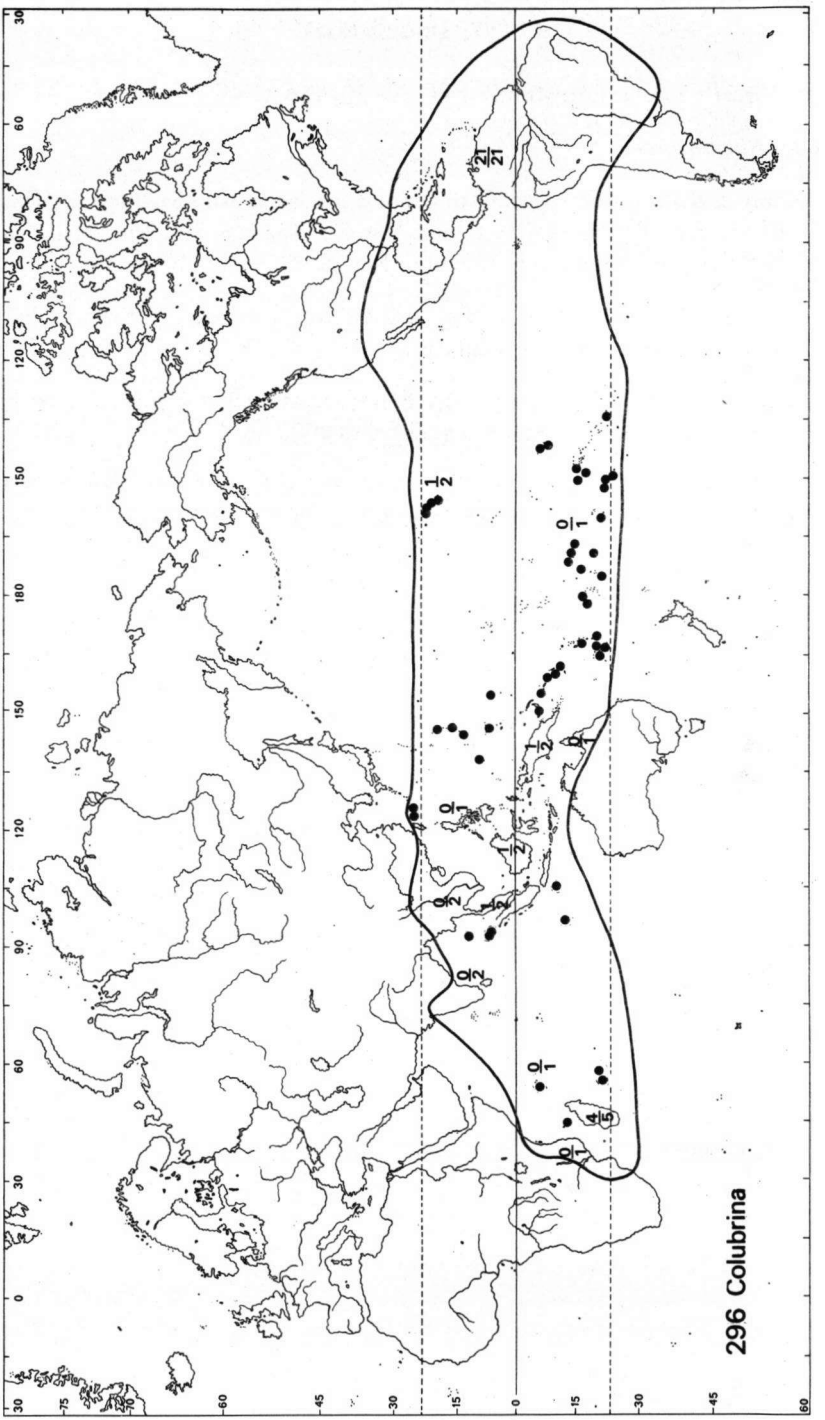
Habitat & ecology: Along the seashore, along rivers, on rocks, on lava soil and limestone, in lowland rain forest and in dry forest up to 70 m.

Dispersal: The fruit is a subglobose to globose, 3-locular, late dehiscent capsule up to 1 cm diam., brown to black at maturity. Each cell contains 1 black smooth seed. According to Guppy (1906) and Ridley (1930) the seeds of the shoreplant *C. asiatica* are very light and may float for months.

Map: Figures above the hyphen indicate the number of endemic species, those below the hyphen the total number of species. Only insular localities have been indicated by dots.

Sources: H.B. Guppy, Observ. of a Naturalist in the Pacific 2 (1906) 105, 137; H.N. Ridley, Dispersal of Pl. (1930) 267; M.C. Johnston, Brittonia 23 (1971) 2–53; local floras and collections in L.

W. AVÉ.


296 Colubrina

297. **Discaria** Hook.

Name: Discaria Hook., Bot. Miscell. 1 (1829–30) 156, t. 44, 45.

Family: *Rhamnaceae.*

Taxonomy & distribution: A genus of about 8 species, mostly S. American. One species, *D. pubescens* (Brongn.) Druce, occurs in SE. Australia and Tasmania. Another species, *D. toumatou* Raoul, is restricted to New Zealand and Chatham Is.

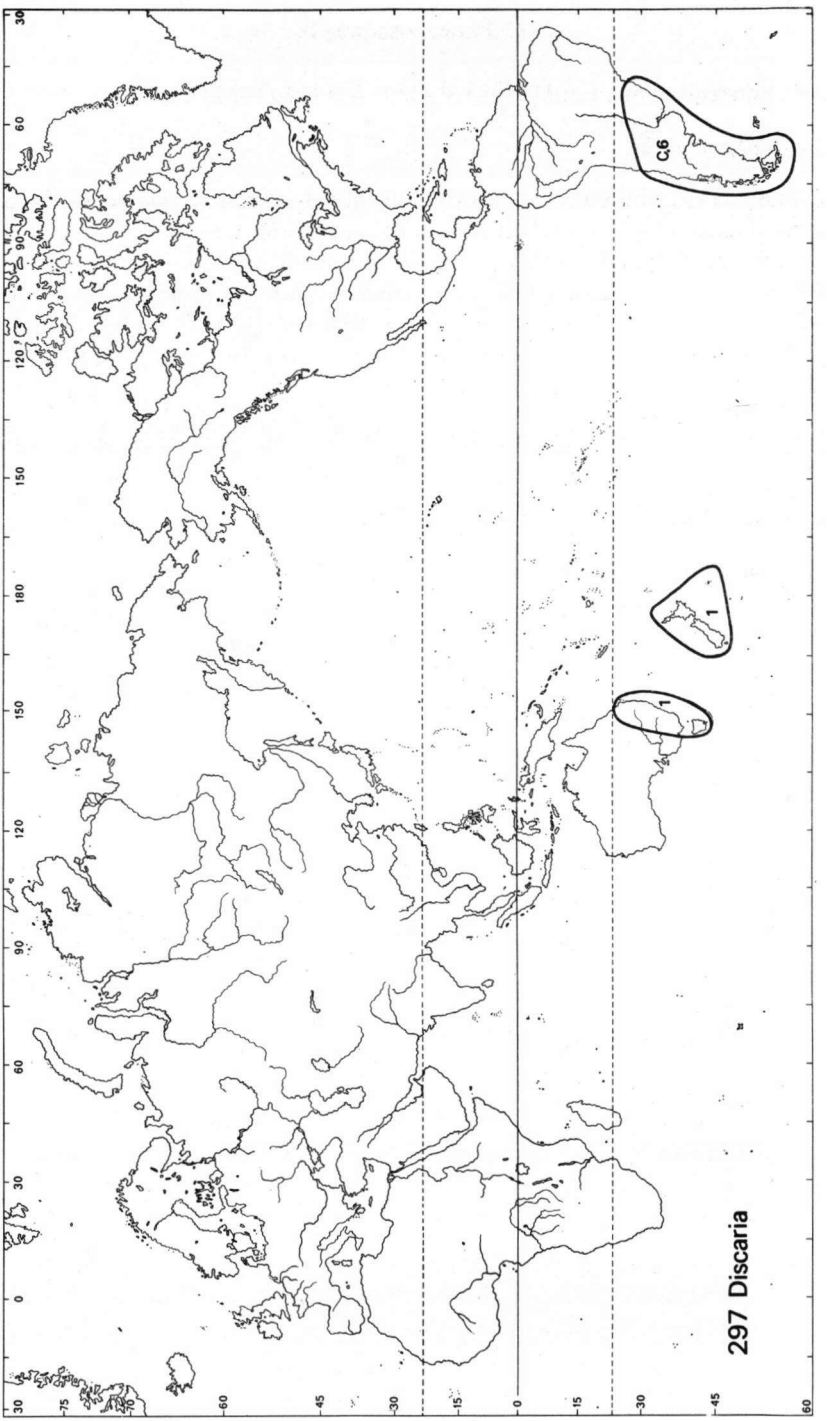
Habit: Shrubs or small trees up to 6 m tall with opposite leaves. Flowers solitary or fascicled, on very short axillary peduncles.

Habitat & ecology: On sandy or gravelly soil, in moist shady localities on river-banks, on hill-slopes and in mountains, from sea-level to 3000 m.

Dispersal: The fruit is a subglobose to globose, deeply 3-lobed dehiscent 3-locular capsule up to 0.8 cm diam., with one seed in each cell.

Sources: H.H. Allan, Fl. New Zeal. 1 (1961) 418; M.C. Johnston, Fl. Illustr. Catarin. (1972) 18–22; local floras and collections in L.

W. AVÉ.


297 Discaria
C.6
1

298. Emmenosperma F.v.M.

Name: Emmenosperma F.v.M., Fragm. Phyt. Austr. 3 (1862) 62.

Family: *Rhamnaceae.*

Taxonomy & distribution: A genus of 5–6 species. *E. alphitonioides* F.v.M. occurs in New Guinea, Aru Is. and Australia, *E. papuanum* (M. & P.) M.C. Johnston in East Malesia (Lesser Sunda Is., Moluccas, New Guinea), an undescribed species is endemic to Celebes, *E. cunninghamii* Benth. is endemic in Australia, *E. pancherianum* Baill. is endemic in New Caledonia and *E. micropetalum* (A.C. Sm.) M.C. Johnston is endemic in the Fiji Is. The genus is closely related to *Colubrina* (see there) and to the monotypic *Schistocarpaea* endemic in Queensland.

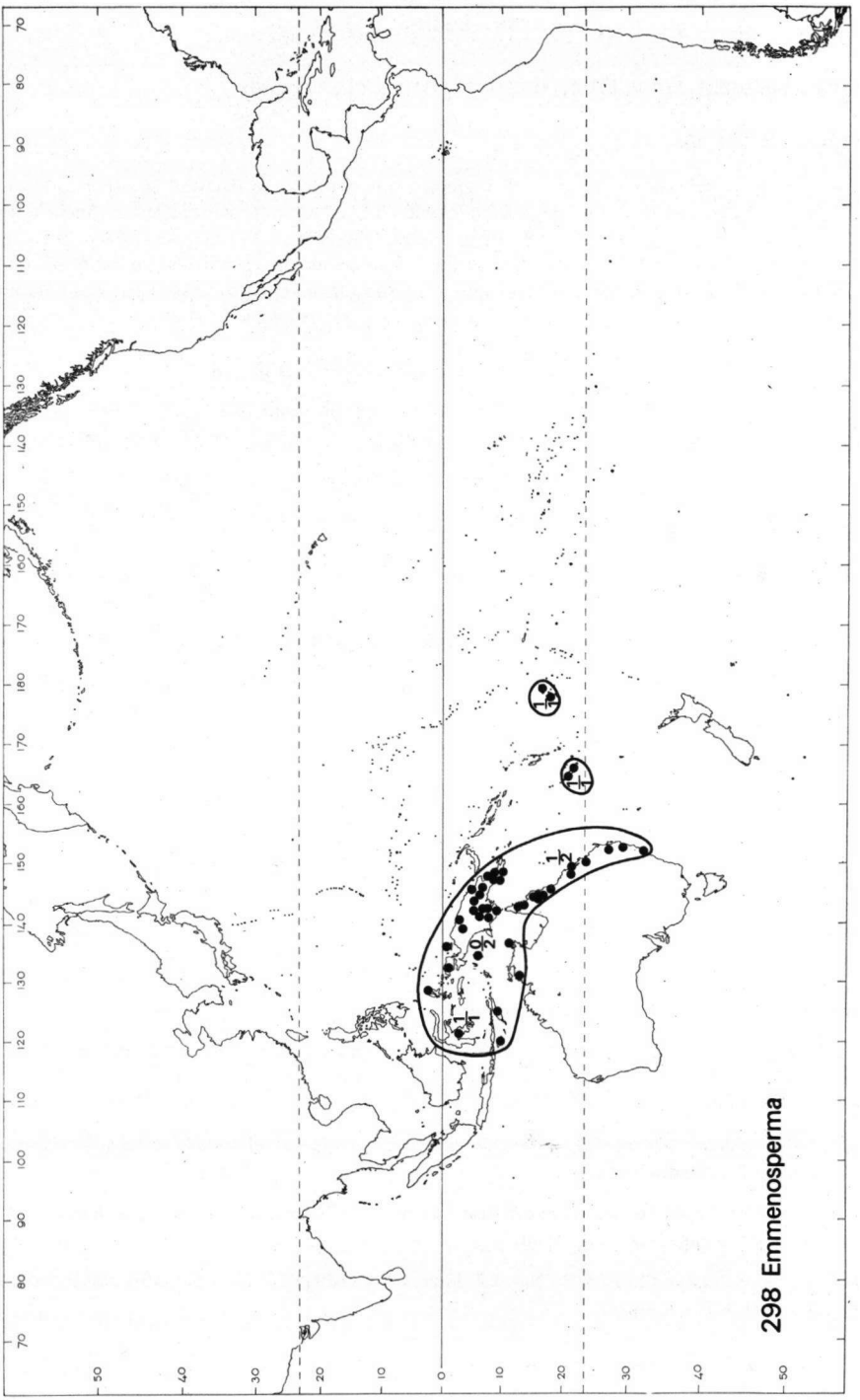
Habit: Trees or shrubs up to 25 m tall, with opposite or alternate leaves and axillary, terminal, cymose or corymbose panicles. Flowers bisexual.

Habitat & ecology: Primary rain forest up to 1500 m and on sandy beaches.

Dispersal: The fruit is a nearly globular, 2- or 3-locular, dehiscent capsule up to 1.5 cm diam., yellow, orange or green (New Caledonia) at maturity. Each cell of the fruit contains one seed (brilliant red in the New Caledonian species).

Sources: M.C. Johnston, Brittonia 23 (1971) 2–5; local floras and collections in BISH, BO, and L.

W. AVÉ.


298 Emmenosperma

299. Badusa A. Gray

Name: Badusa A. Gray, Proc. Am. Acad. Arts 4 (1859) 308.

Family: *Rubiaceae.*

Taxonomy & distribution: A genus of 3 species, one confined to Palawan, another to Palau in the Carolines and the third, *B. corymbifera* (Forst. f.) Gray with one subspecies confined to Biak, the other widespread from the Solomons to Tonga. The genus was originally placed in the *Cinchoneae*. Ridsdale (1982) placed *Badusa* in the tribe *Condamineae* subtribe *Portlandineae* on account of the basifixed anthers, the attachment of the filaments to the base of the corolla tube, the aestivation of the corolla lobes, the Y-shaped placenta, ovule and seed characters. It is closely related to *Morierina* (map 300) of New Caledonia.

Specimens of *Badusa* have been pre-identified as *Cinchona* or *Bikkia.*

Habit: *B. palawanensis* Ridsd. is a shrub up to 2 m tall, *B. palauensis* Valet. and *B. corymbifera* are trees 5–20 m tall.

Habitat & ecology: *B. palawanensis* is known from the summit of a limestone hill, the other species are similarly reported from calcareous soils, beach forest, coral rocks and limestone ridges.

Dispersal: The fruit is an oblong or cylindrical capsule 5–12 mm long, dehiscing septicidally and loculicidally. The numerous seeds are small, slightly crested on one end. Mode of dispersal is unknown.

Sources: Th. Valeton, Bot. Jahrb. 63 (1930) 233–288; C.E. Ridsdale, Blumea 28 (1982) 145–150; a photograph and some sketches among Valeton's manuscripts at the Rijksherbarium, and collections of BISH and L.

M.E. JANSEN.

300. Morierina Vieill.

Name: Morierina Vieill., Bull. Soc. Linn. Norm. 9 (1865) 344.

Family: *Rubiaceae.*

Taxonomy & distribution: Two species have been described, but according to Dr. Morat only one species is involved. The genus is endemic in New Caledonia.

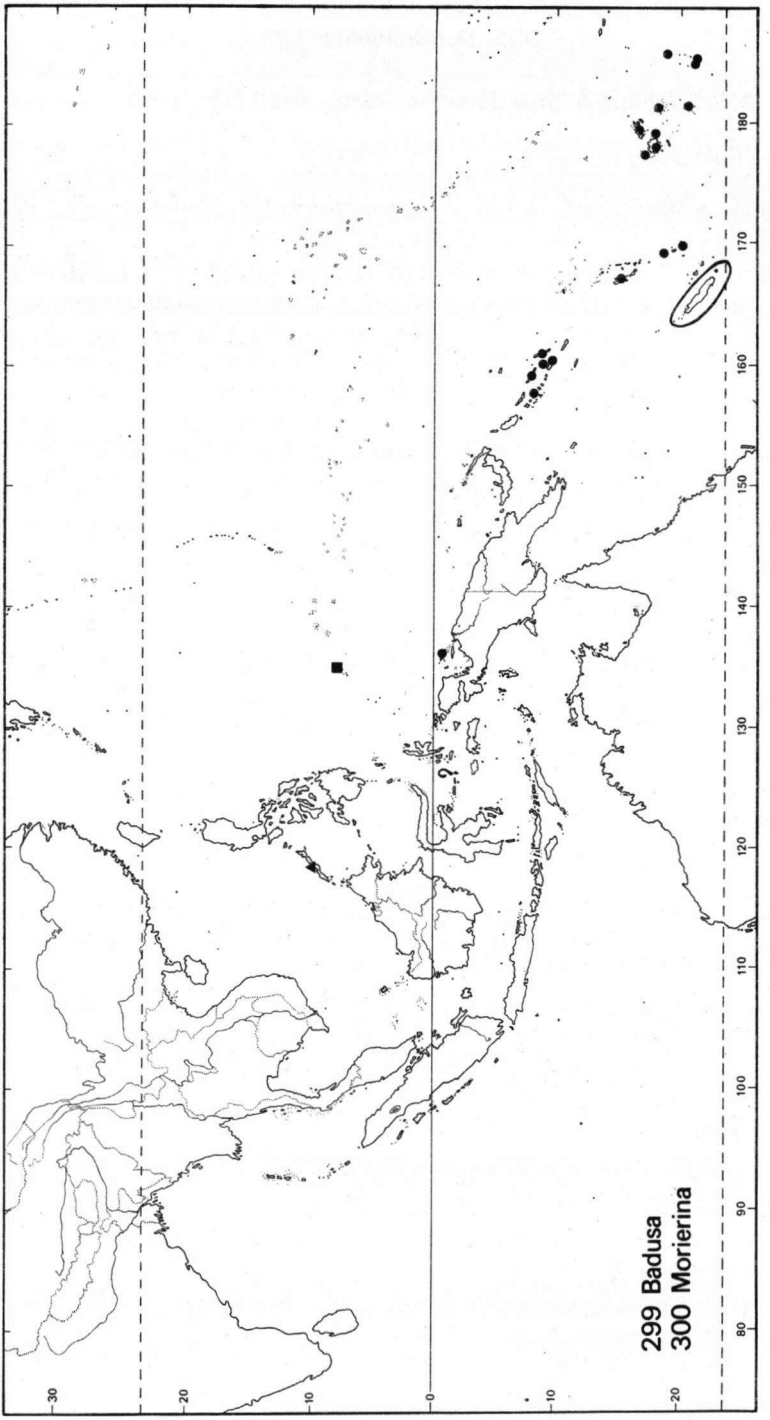
Habit: Shrubs or small trees, up to 10 m tall, with opposite coriaceous leaves and terminal paniculate inflorescences. The flowers are white, the corolla tube 25–28 mm long, with reflexed lobes 30–35 mm long.

Habitat & ecology: Although local in its occurrence, it may be abundant in dense rain forest on ultrabasic soil at medium altitudes.

Dispersal: The fruit is a two-locular dehiscent capsule 15–18 mm long, 8 mm diam., containing numerous flat seeds, 2–2.5 mm diam.

Sources: K. Schumann in E. & P., Nat. Pfl. Fam. IV, 4 (1891) 20. Personal information from Drs. Morat and McKee (Nouméa).

M.M.J. VAN BALGOOY.


299 Badusa
300 Morierina

301. **Dolicholobium** A. Gray

Name: Dolicholobium A. Gray, Proc. Am. Acad. Arts 4 (1859) 308.

Family: *Rubiaceae.*

Taxonomy & distribution: A genus of 28 species ranging from the Philippines to Fiji and with the highest density of species in eastern New Guinea and the Solomon Is. The species have small distributional areas and are, except in the Solomon Is. and in Fiji, apparently rare. Most species are very variable in indumentum and in number of flowerparts. From West New Guinea westwards the area of the genus is fragmented; in some cases, as e.g. the Vogelkop Peninsula of West New Guinea, this is certainly not due to undercollecting.

Habit: Small shrubs to small trees, often crooked, leaning, or with more than one trunk. Often *Terminalia*-branching. Inflorescences lateral under the new leaves, each with a central female flower surrounded by male flowers. Fruits cylindrical, elongate to very slender.

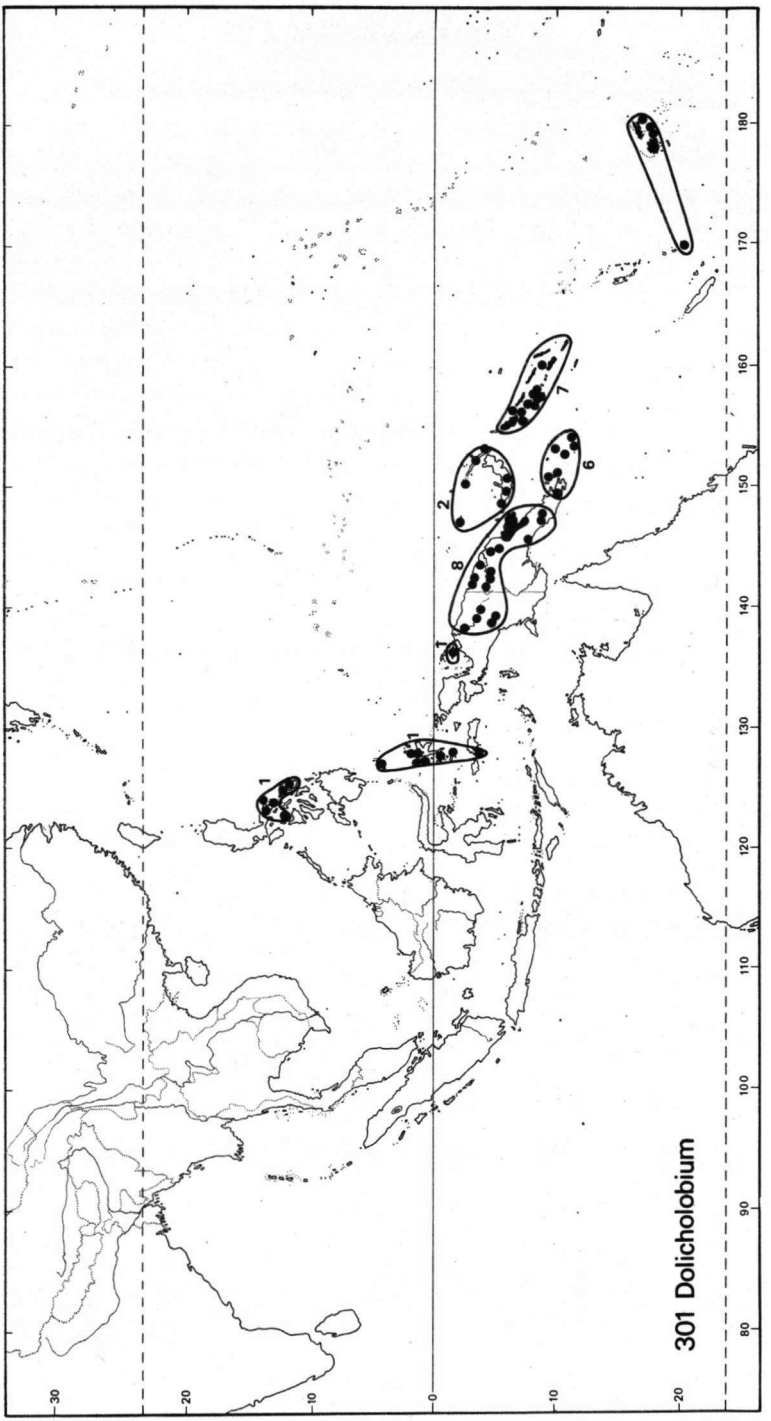
Habitat & ecology: Usually in understorey along streams and creeks in rain forest from sea-level to medium (1900 m) altitudes, but sometimes also in swamps or on exposed ridges. One species (*D. rheophilum* M.E. Jansen) is a rheophyte.

Fruit: The exocarp disintegrates, liberating a number of thickened strands, two linear endocarps, the placentas, and the seeds. The seeds are numerous, very small, and provided with two tail-shaped wings.

Map: The figures indicate the number of (endemic) species within each delineated area.

Source: M.E. Jansen & C.E. Ridsdale, Blumea 29 (1983) 251–311.

W. VINK.


301 Dolicholobium

302. Kajewskiella M. & P.

Name: Kajewskiella Merrill & Perry, J. Arn. Arb. 28 (1947) 331.

Family: *Rubiaceae.*

Taxonomy & distribution: One of the few endemic genera of the Solomon Islands. Of the two species recognised *K. trichantha* M. & P. is confined to Bougainville I., whereas *K. polyantha* M.E. Jansen has also been found on other islands of the group. On account of their zygomorphic flowers specimens of *Kajewskiella* have sometimes been misidentified as *Gesneriaceae.* Within the *Rubiaceae* the genus was confused with *Dolicholobium* (see there) which it resembles in fruit. Considering the absence of rhaphides, the characters of ovule and placenta, the mode of dehiscence of the fruit and the unwinged seeds, I have tentatively placed *Kajewskiella* in the *Condamineae* (Jansen, 1979) where it occupies an excentric position.

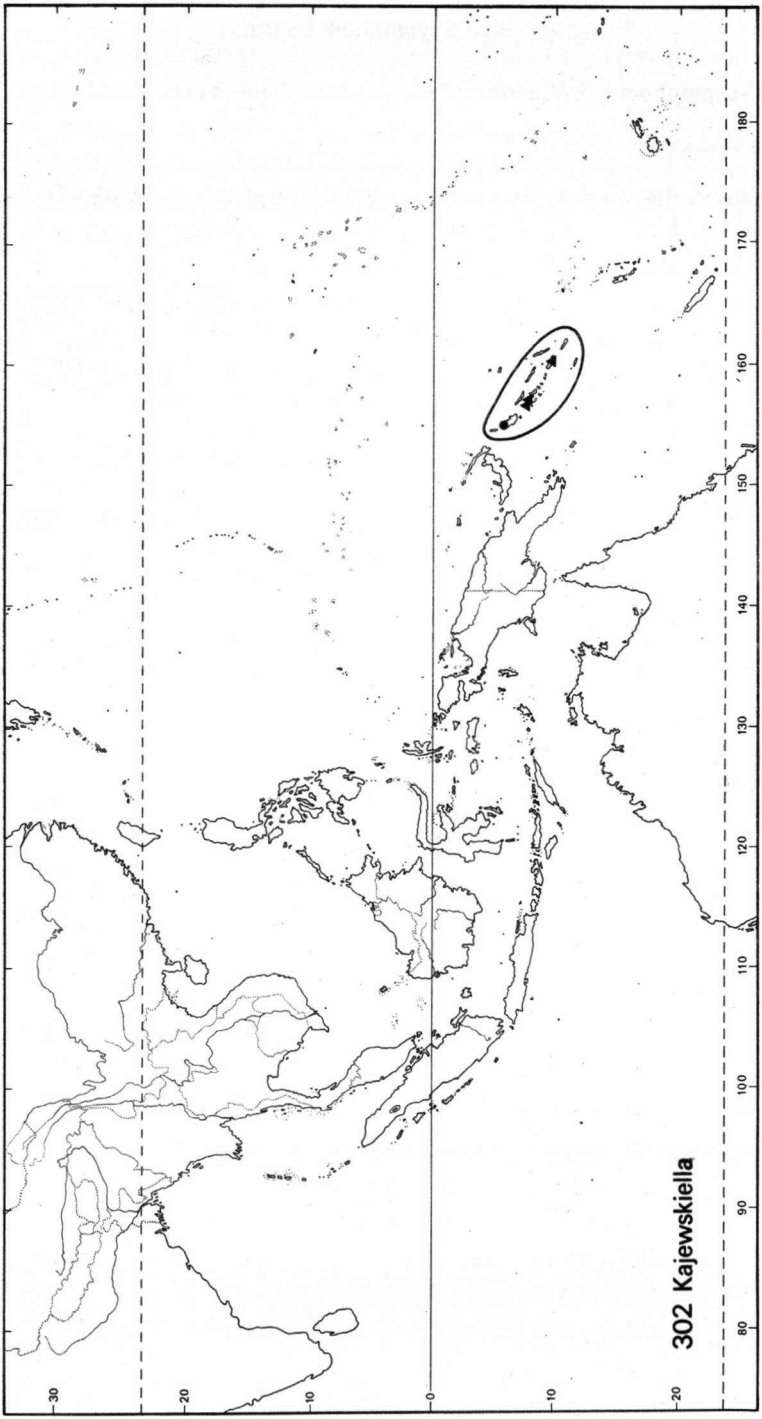
Habit: Shrubs, up to 6 m tall.

Habitat & ecology: Both species occur in primary lower montane forest from 100–950 m, *K. trichantha* is also found in montane forest up to 1500 m.

Dispersal: The fruit is narrow elongate, up to 3 cm long in *K. trichantha.* The infructescences of both species may be long peduncled. Small globose white glands are present on the exocarp of *K. polyantha*; their function is unknown. In mature fruits the exocarp desiccates and shrivels and the endocarp becomes horny; the fruit opens by septicidal dehiscence. Seeds are numerous, small (c. 0.5 mm diam.), pentagonal, flat with reticulate testa. The long peduncles suggest that the infructescence is pendulous and that the seeds are shaken out by the wind, but this needs confirmation.

Sources: T.C. Whitmore in Corner, A discussion on the results of the Royal Soc. Exp. to the British Solomon Islands Protectorate, Phil. Trans. Roy. Soc. London, Ser. B, 255 (1969) 549–566; M.E. Jansen, Blumea 25 (1979) 283–294.

M.E. JANSEN.


302 Kajewskiella
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303. **Scyphiphora** Gaertn.

Name: Scyphiphora C.F. Gaertner, Fruct. et Sem. Plant. 3 (1805) 91, t. 196.

Family: *Rubiaceae.*

Taxonomy & distribution: The only species of the genus, *S. hydrophyllacea* Gaertn., is widespread from India through Malesia to the W. Carolines, the north coast of Australia and to New Caledonia.

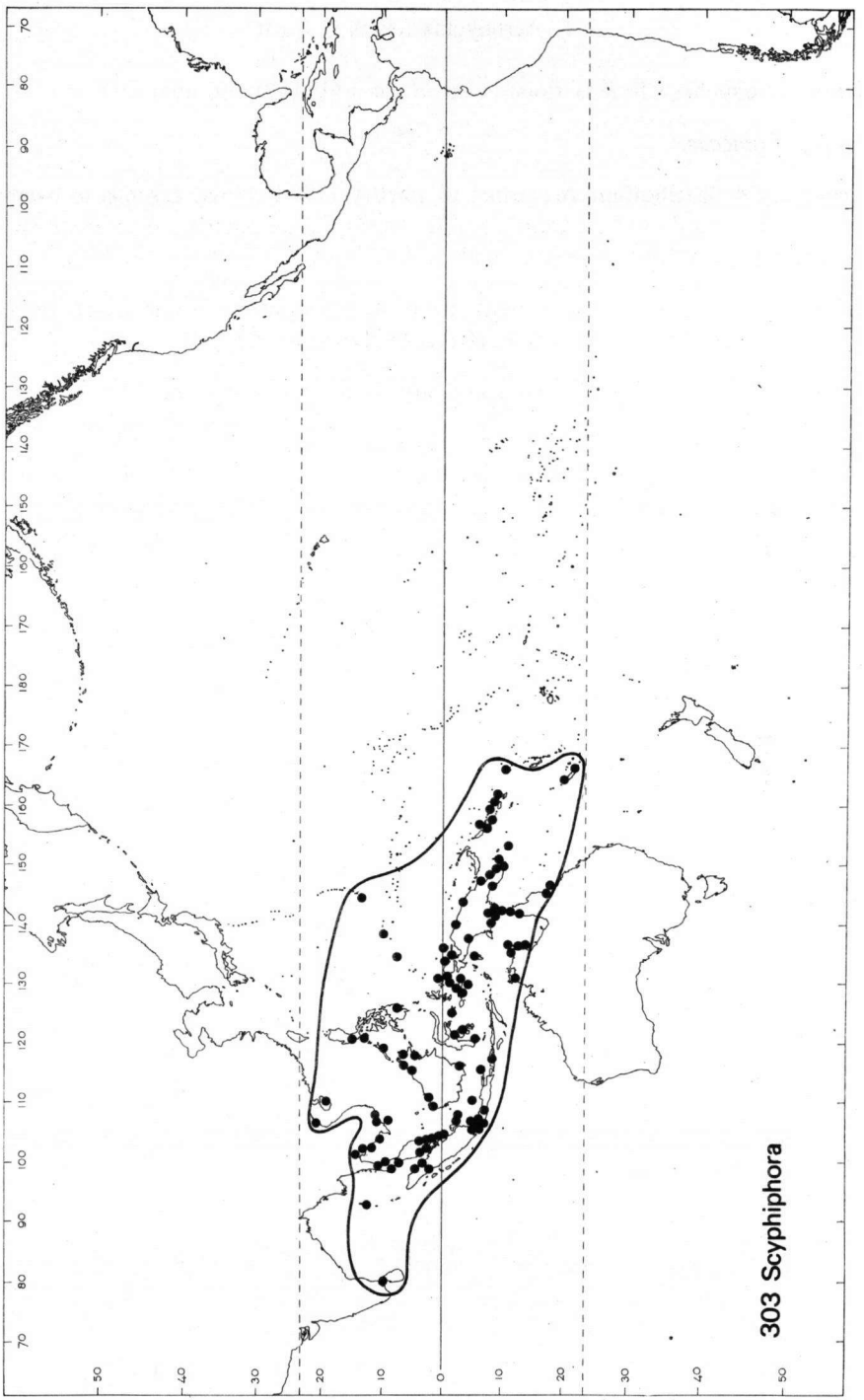
Habit: Shrub or small tree up to 10 m tall, with opposite leaves and supra-axillary cymose inflorescences. Flowers bisexual. Superficially resembling *Lumnitzera* (Pac. Pl. Ar. 2, maps 87 & 88) with which it often occurs together, but which differs amongst others in the spirally arranged leaves.

Habitat & ecology: On sandy shores, rocky coasts and sandy mud along the banks of tidal waterways. Wells (unpublished) found it growing in water with salinities of 35–40%, and up to 63% normally in sites that are inundated infrequently. It cannot stand lengthy inundation with fresh water. Seedlings appear to be intolerant of shade.

Dispersal: The fruit is an ellipsoid-cylindric, longitudinally ridged drupe up to 1 cm long, green or brown at maturity. The buoyant fruits are dispersed by sea-drift (Ridley, 1930).

Sources: H.N. Ridley, Dispersal of Pl. (1930) 296; C.A. Backer & R.C. Bakhuizen van den Brink, Fl. of Java 2 (1965) 316; local floras and collections in L. Information on ecology and distribution of *Scyphiphora* in Australia was provided by Dr. A.G. Wells (Sydney).

W. AVÉ and M.M.J. VAN BALGOOY.


303 Scyphiphora

304. Acronychia J.R. & G. Forst.

Name: Acronychia J.R. & G. Forst., Gen. Pl. ed. 1 (1775) t. 27, nom. cons.

Family: *Rutaceae.*

Taxonomy & distribution: According to Hartley (1974, 1975) a genus of over 40 species, the majority in New Guinea and E. Australia. The generic range extends from India and Taiwan to SE. Australia and New Caledonia.

Habit: Unarmed trees up to 30 m tall or shrubs, with opposite 3-foliolate or unifoliolate leaves and axillary paniculate inflorescences. Flowers bisexual.

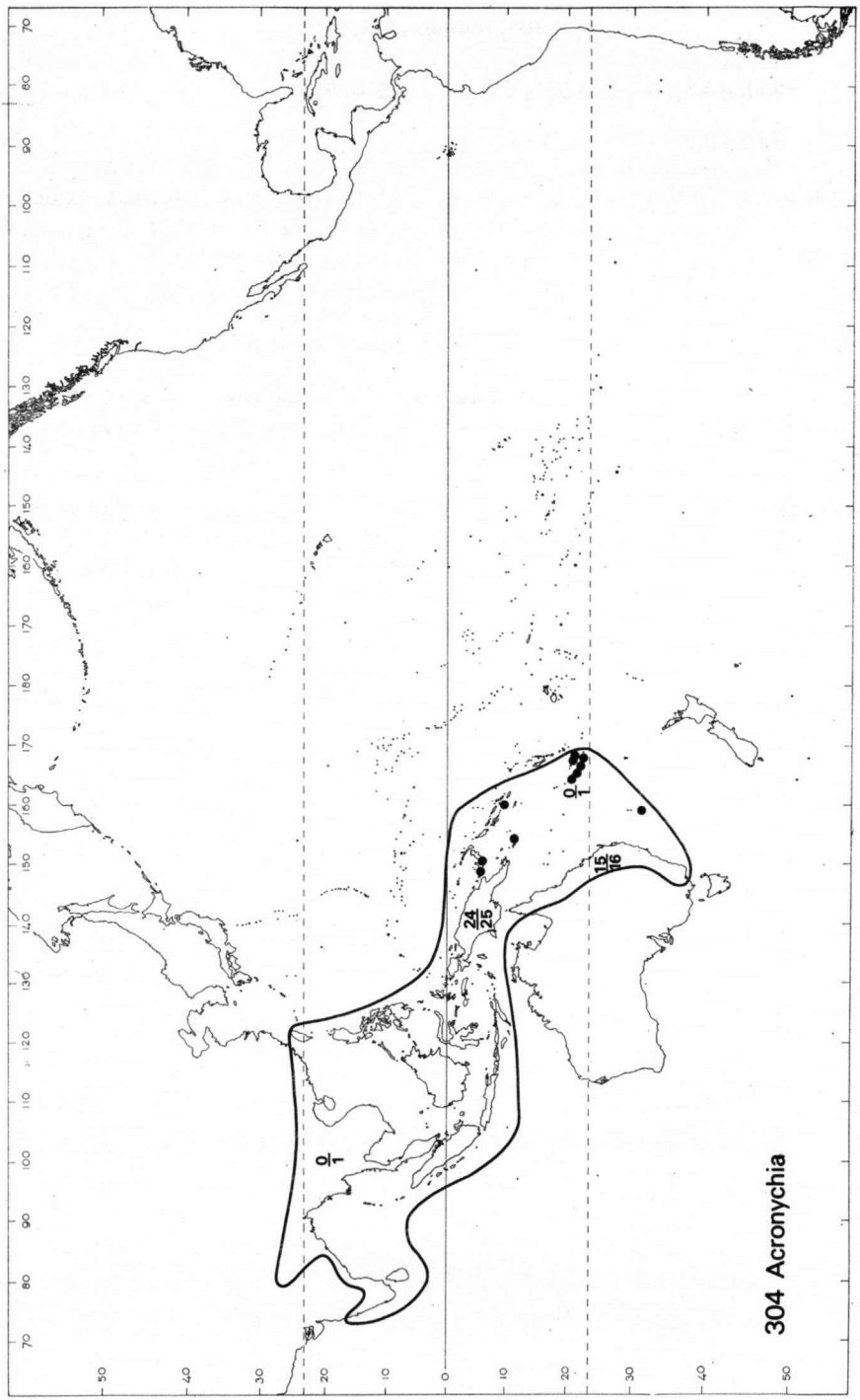
Habitat & ecology: Primary and secondary rain forest from the lowlands up to 3200 m.

Dispersal: The fruit is a 4(–8)-locular drupe, up to 1.5 cm diam. usually with a hard fleshy mesocarp and a cartilaginous or pergamentaceous endocarp. The fruit of *A. pedunculata* (L.) Miq. is a favorite food of fruit pigeons in Java (Van Balgooy, pers. inf.).

Map: Figures above the hyphen indicate the number of endemic species, below the hyphen the total number of species.

Sources: T.G. Hartley, J. Arn. Arb. 55 (1974) 469–567; ibid. 56 (1975) 164–170; collections in L.

N.A.P. FRANKEN.


304 Acronychia
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305. Flindersia R. Br.

Name: Flindersia R. Br., Flinder's Voyage 2 (1814) 595.

Family: *Rutaceae.*

Taxonomy & distribution: A genus of 17 species, mostly in E. Australia, extending to the Moluccas, New Guinea and New Caledonia. *Flindersia* and *Chloroxylon* (S. India and Sri Lanka) are placed in subfam. *Flindersieae* by Engler (1931), considered a distinct family *Flindersiaceae* by Airy Shaw (1973).

Habit: Small to large unarmed trees, leaves alternate or opposite pinnate, trifoliolate or simple.

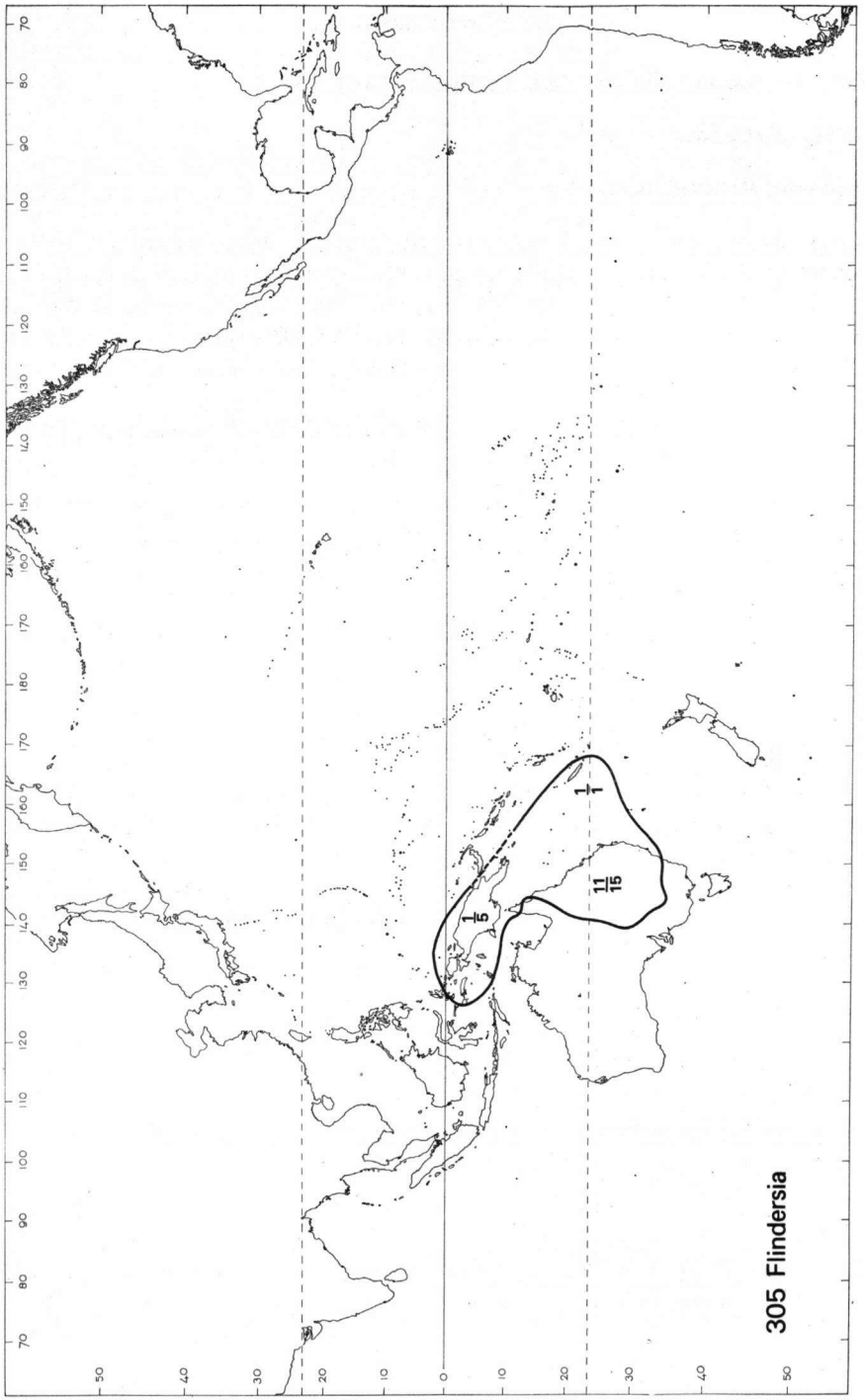
Habitat & ecology: Lowland rain forest, also in upland rain forest, in scrub and open places.

Dispersal: The fruit is a 5-locular, more or less woody, septicidal capsule up to 27 cm long, the exocarp is coarsely muricate. The seeds are flat oblong to elliptic, the testa forming a wing at one or both ends. Local dispersal by wind is possible. The fruits of one species were observed to be eaten by white cockatoes (Van Balgooy, pers. inf.), but this does not seem very effective for dispersal.

Map: Figures above the hyphen indicate the number of endemic, those below the hyphen the total number of species.

Sources: A. Engler, Nat. Pfl. Fam. ed. 2, 19a (1931) 294–296; T.G. Hartley, J. Arn. Arb. 50 (1969) 482–526; T.G. Hartley & B.P.M. Hyland, ibid. 56 (1975) 243–247; H.K. Airy Shaw in J.C. Willis, Dict. Flow. Pl. ed. 8 (1973) 463.

M.C. ROOS.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305 Flindersia

306. Sarcomelicope Engl.

Name: Sarcomelicope Engl., Nat. Pfl. Fam. III, 4 (1896) 122.

Family: *Rutaceae.*

Synonym: *Bauerella* Borzi.

Taxonomy & distribution: A genus consisting of six species (Hartley, 1982), of which five endemic in New Caledonia incl. Pine Island. *S. simplicifolia* (Endl.) Hartley consists of three allopatric subspecies: ssp. *simplicifolia* occurs in E. Australia, Lord Howe and Norfolk Island; ssp. *neoscotica* (P.S. Green) Hartley occurs in New Caledonia and the New Hebrides; ssp. *petiolaris* (A. Gray) Hartley is confined to the Fiji Islands.

Engler (1931) in his classification of the *Rutaceae* placed *Bauerella* next to *Acronychia* and *Halfordia, Sarcomelicope* near *Melicope*, which seems the best disposition.

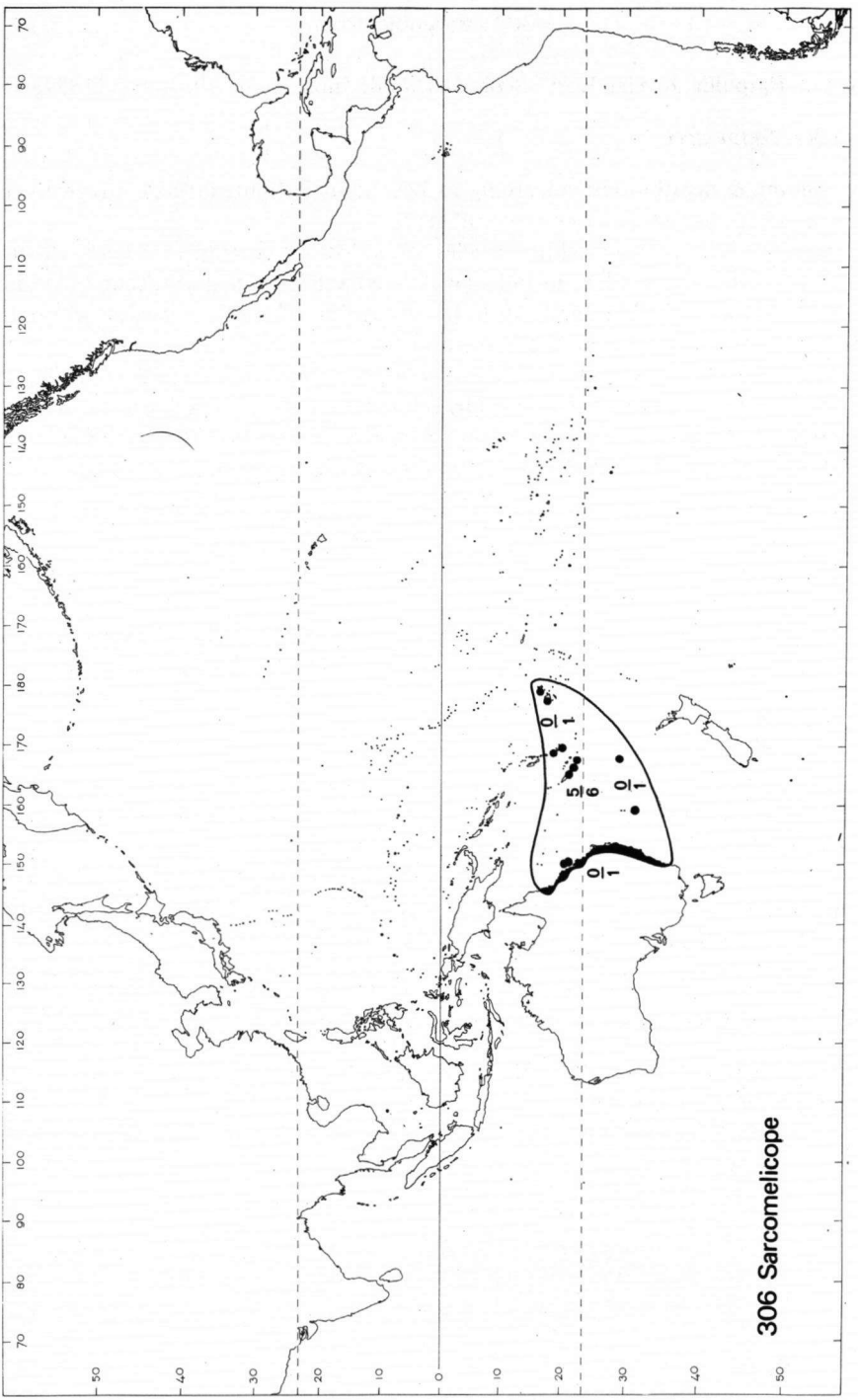
Habit: Shrubs or small to medium dioecious trees, up to 18 m tall. Leaves unifoliolate, opposite or verticillate.

Habitat & ecology: In everwet rain forest or dry lowland forest on calcareous hills or on serpentine, from near sea-level to 1000 m.

Dispersal: The fruit is a 4-locular subapocarpous to syncarpous drupe, up to 5 cm diam., usually less, seeds black, carunculate, 1 or 2 per locule.

Sources: A. Engler, Nat. Pfl. Fam. ed. 2, 19a (1931) 310; P.S. Green, J. Arn. Arb. 51 (1970) 208–214; T.G. Hartley, J. Arn. Arb. 56 (1975) 164–170; Austr. J. Bot. 30 (1982) 359–372, map.

M.M.J. VAN BALGOOY and N.A.P. FRANKEN.


306 Sarcomelicope

307. Harpullia Roxb.

Name: **Harpullia** Roxb., Hort. Beng. (1814) 86, nom. nud.; Fl. Ind. 2 (1824) 441.

Family: *Sapindaceae.*

Taxonomy & distribution: According to Leenhouts & Vente (1982), this genus consists of 26 species, grouped into two subgenera:

I. Subgenus *Otonychium* with 2 species, of which one species, *H. arborea* (Blanco) Radlk., is widespread from India (W. Ghats) and Ceylon throughout Indo-China and S. China, Malesia and Australia to Samoa. The other species, *H. pendula* Planch. ex F.v.M., is endemic in Australia.

II. Subgenus *Harpullia* with 24 species, mostly in New Guinea and Australia. One species, *H. cupanioides* Roxb., is distributed from Assam (India) throughout SE. Asia, Malesia to Australia (Northern Territory). *H. austro-caledonica* Baill. is endemic in New Caledonia and *H. largifolia* Radlk. is endemic in the Solomon Is.

Habit: Trees or shrubs up to 30 m tall with spirally arranged, 1–9 jugate paripinnate leaves. Inflorescences axillary, terminal or rami- and/or cauliflorous, solitary or tufted. Plants dioecious.

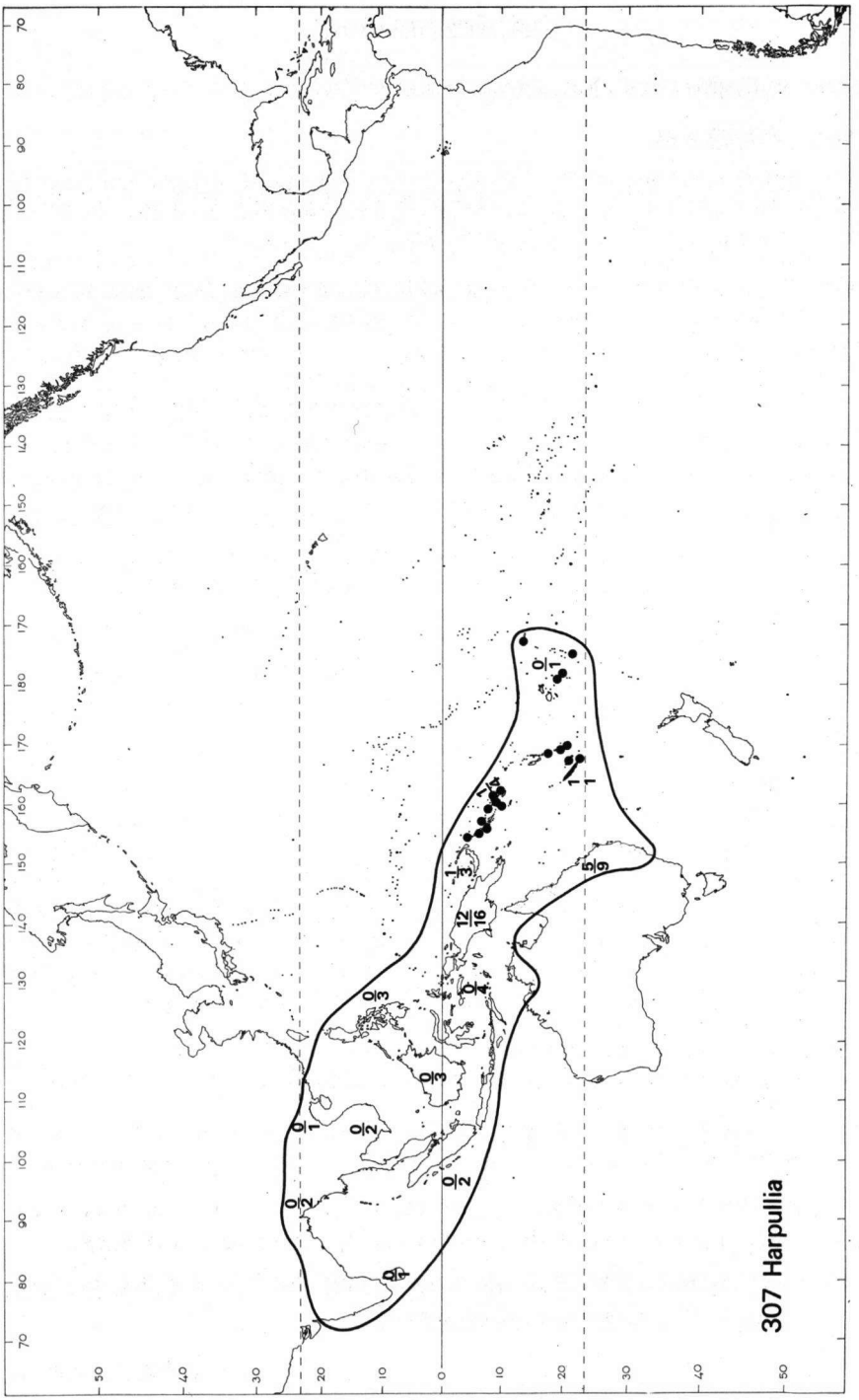
Habitat & ecology: In primary rain forest, on river-banks, along the sea-coast, on ridges, slopes and plains, in ravines, in swamp, secondary and monsoon forests, in lower and middle montane forests up to 1800 m, sometimes in savannahs and grasslands.

Dispersal: The fruit is a short-stipitate, ellipsoid to globular, 2- or 3-lobed, inflated, loculicidally dehiscent capsule up to 3.5 cm high and 6 cm wide, yellow to red at maturity. Seed 1 or 2 per cell, globular to ellipsoid up to 1 cm diam., black, with yellow to orange aril restricted to a narrow sarcotestal ring around the hilum (*Otonychium*) or composed of a sarcotestal and a free arilloid part (subg. *Harpullia*). The fruits of *H. camptoneura* Radlk. of New Guinea are said to be eaten by birds.

Map: Figures above the hyphen indicate the number of endemic species and those below the hyphen the total number of species.

Sources: P.W. Leenhouts & M. Vente, Blumea 28 (1982) 1–51, and personal information from Dr. Leenhouts.

W. AVÉ.


307 Harpullia

308. **Broussaisia** Gaud.

Name: Broussaisia Gaud., Bot. Voy. Uranie (1826) 479.

Family: *Saxifragaceae.*

Taxonomy & distribution: The only species of this genus, *B. arguta* Gaud., is endemic in the Hawaiian Islands. Two varieties and some forms have been described for this species. *Broussaisia* is closely allied to *Dichroa.*

Habit: Shrub or small tree up to 4 m tall with opposite or ternate or verticillate leaves and terminal corymbose inflorescences. Plants functionally dioecious; anthers virtually absent in female flowers but small ovaries present in male flowers (Carlquist, 1974).

Habitat & ecology: In forests on mountain slopes and ridges up to 1700 m, down to 300 m.

Dispersal: The fruit is an ellipsoidal to spherical berry up to 1 cm long, red to maroon at maturity. According to Rock (1913) the berries are eaten by native birds.

Sources: J.F. Rock, Indig. Trees Haw. Is. (1913) 152; F.R. Fosberg, Occ. Pap. Bish. Mus. 15, 4 (1939) 49–60; H. St. John, List of Flow. Pl. Hawaii (1973) 169; S. Carlquist, Island Biology (1974) 527–528.

W. AVÉ.

309. **Dichroa** Lour.

Name: Dichroa Lour., Fl. Cochinch. (1790) 301.

Family: *Saxifragaceae.*

Taxonomy & distribution: Several species have been described in this genus, e.g. Engler (1930), Wu (1941), but most of them belong to one variable species, *D. febrifuga* Lour., which is widespread from SE. Asia throughout Malesia. Perhaps a few more species can be distinguished in continental Asia and the Philippines.

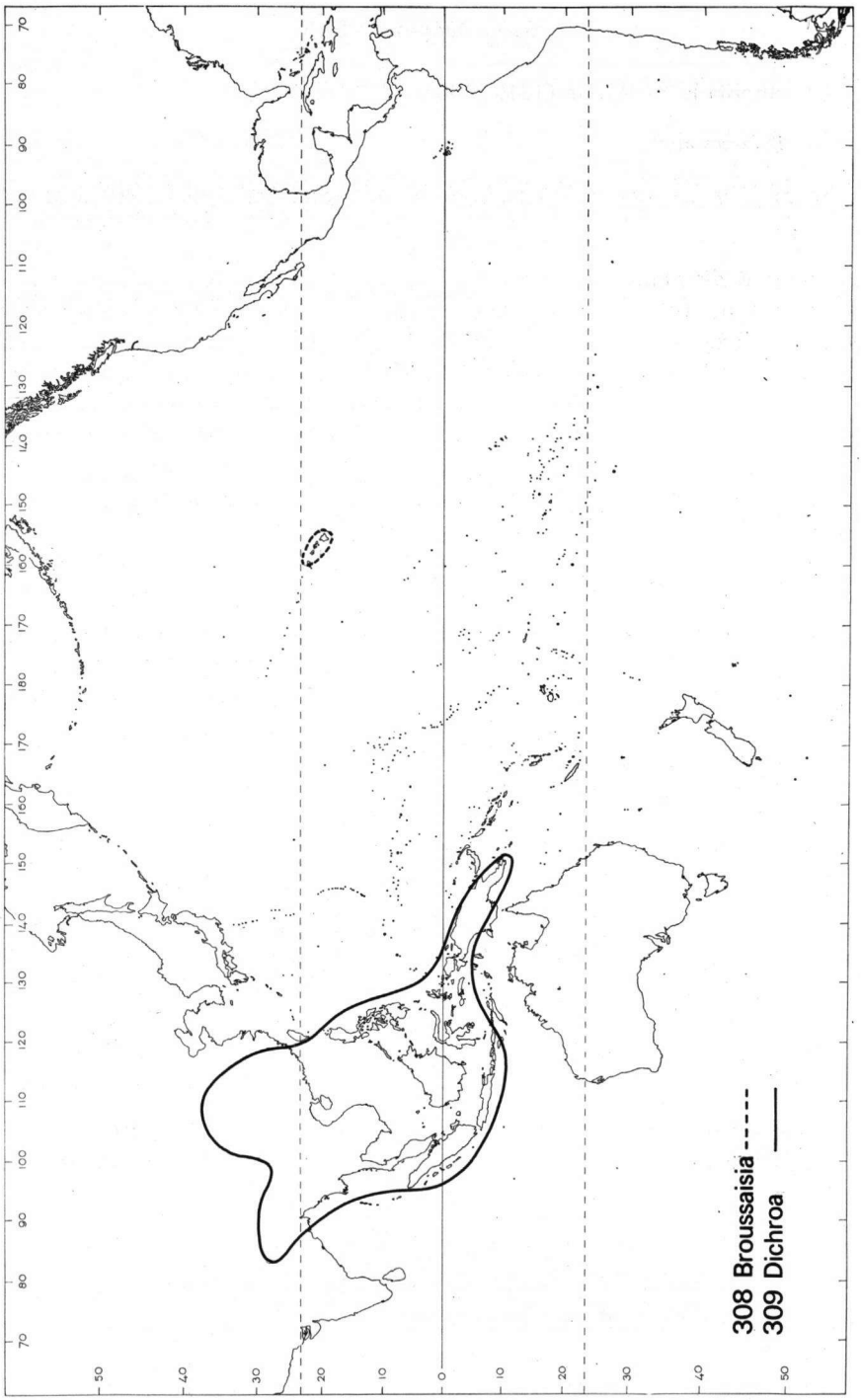
Habit: Mostly shrubs, occasionally treelets up to 5 m tall with opposite leaves and terminal or axillary inflorescences. Flowers hermaphrodite.

Habitat & ecology: In the undergrowth, often along stream-banks in rain forest, also in secondary forest, usually in the mountains up to 2500 m, rarely as low as 450 m.

Dispersal: The fruit is a spherical, many-seeded berry, up to 0.7 cm diam., blue to black at maturity; no record could be found of animals feeding on the berries.

Sources: A. Engler, Nat. Pfl. Fam. ed. 2, 18a (1930) 209–210; Y.C. Wu, Bot. Jahrb. 71 (1941) 179–180; local floras and collections in L.

J.J. KESSLER and W. AVÉ.


308 Broussaisia
309 Dichroa

310. Duboisia R. Br.

Name: **Duboisia** R. Br., Prodr. (1810) 448.

Family: *Solanaceae.*

Synonym: *Entrecasteauxia* Montrouzier, Mém. Acad. Sci. Belles Lett. d'Ang. 10 (1860) 244.

Taxonomy & distribution: A genus of 3 species, belonging to the almost endemic Australian tribe *Anthocercideae*. Only one species in the tribe extends beyond Australia (including Tasmania): this is *D. myoporoides* R. Br. (*Entrecasteauxia elliptica* Montrouzier) which is widespread on the east coast of the Australian mainland and is found also in New Caledonia. Records of this species for New Guinea are incorrect, having been based on specimens of *Myoporum*. Guillaumin's (1948) record from the New Hebrides is very doubtful. Of the two remaining species, *D. leichhardtii* (F.v.M.) F.v.M. is restricted to southeastern Queensland while *D. hopwoodii* (F.v.M.) F.v.M. is widespread across arid areas of the Australian mainland.

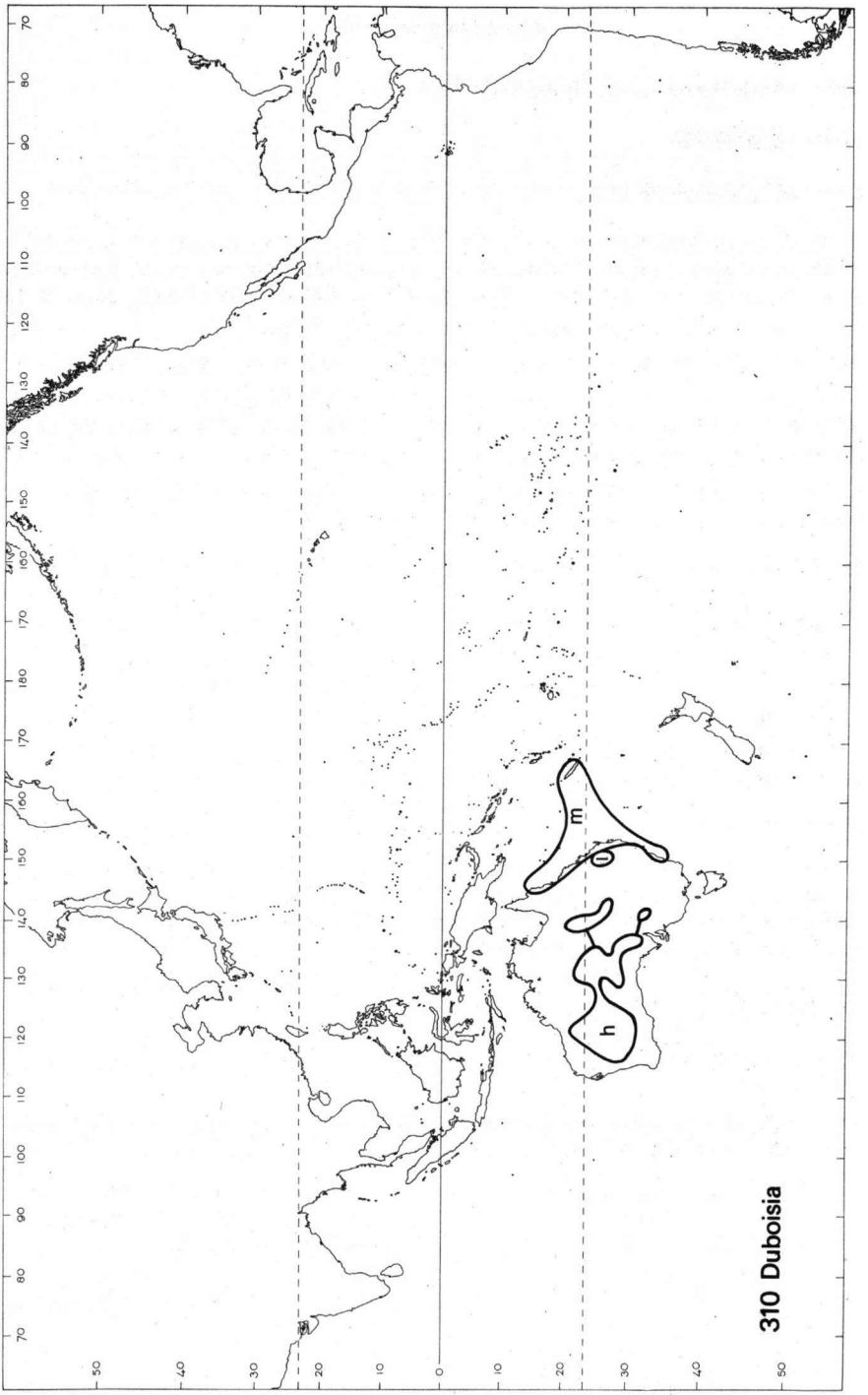
Habit: Evergreen large bushy shrubs to small trees.

Habitat & ecology: All of the species tend to occur on disturbed sites. *D. myoporoides* is frequently found in association with rain forest, usually at the margin or in major canopy breaks, on a variety of soils. *D. leichhardtii* usually occurs on rich soils of volcanic origin in drier areas, along roadsides, seasonally dry watercourses etc. *D. hopwoodii* is a plant of sand dune and sand plain regions. The foliage of all species contains relatively large amounts of alkaloids.

Dispersal: In all species the fruit is a black, shining, succulent berry, which is probably dispersed by birds.

Sources: A. Guillaumin, Ann. Mus. Col. Marseille 55/56 (1948) 48; C. Barnard, Econ. Bot. 6 (1952) 3–17; H. Heine, Fl. Nouv. Caléd. et Dépend. 7 (1976) 122–126; L. Haegi, Telopea 2 (1981) 173–180. Collections in Australian, New Caledonian and other herbaria.

L. HAEGI and D.E. SYMON.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310 Duboisia

311. Exodeconus Rafin.

Name: Exodeconus Rafin., Sylva Tellur. (1838) 57.

Family: *Solanaceae.*

Synonym: *Cacabus* Bernh.

Taxonomy & distribution: A genus of c. 8 species, ranging from Tarapaca in N. Chile to S. Ecuador and the Galapagos Islands. D'Arcy (1976) is followed in considering the Galapagos population as an endemic species, *E. miersii* (Hook. f.) D'Arcy; Wiggins & Porter (1971) stated that the species (as *Cacabus miersii* Hook. f.) also occurs on the mainland.

Habit: Prostrate annual herbs with alternate leaves and axillary tubular 5-merous flowers.

Habitat & ecology: Most species show a marked ecological adaptation to desert habitats along the Pacific S. American coast. The Galapagos species occurs on coastal, sandy to rocky beaches and along brackish pools inland to an altitude of 250 m.

Dispersal: The fruit is a berry up to 2.5 cm long enclosed by the persistent 10-ribbed calyx, it contains many irregularly wavy, flat seeds a few mm across.

Sources: I.L. Wiggins & D.M. Porter, Fl. Galap. (1971) 459–461, map; W.G. D'Arcy, Phytologia 34 (1976) 283; A.T. Hunziker, S. American Solanaceae, in Hawkes c.s., Biol. & Taxon. of the Solanaceae (1979) 49–85.

312. Nothocestrum A. Gray

Name: Nothocestrum A. Gray, Proc. Am. Acad. Arts 6 (1862) 48.

Family: *Solanaceae.*

Taxonomy & distribution: A genus of 5 species (St. John, 1973) confined to the Hawaiian Islands where it is represented on the six largest islands. According to Professor Hunziker (in litt.) 'a perplexing genus with unknown affinities.' Rock (1913) was wide off the mark with his suggestion of affinity with the S. American *Athenaea.*

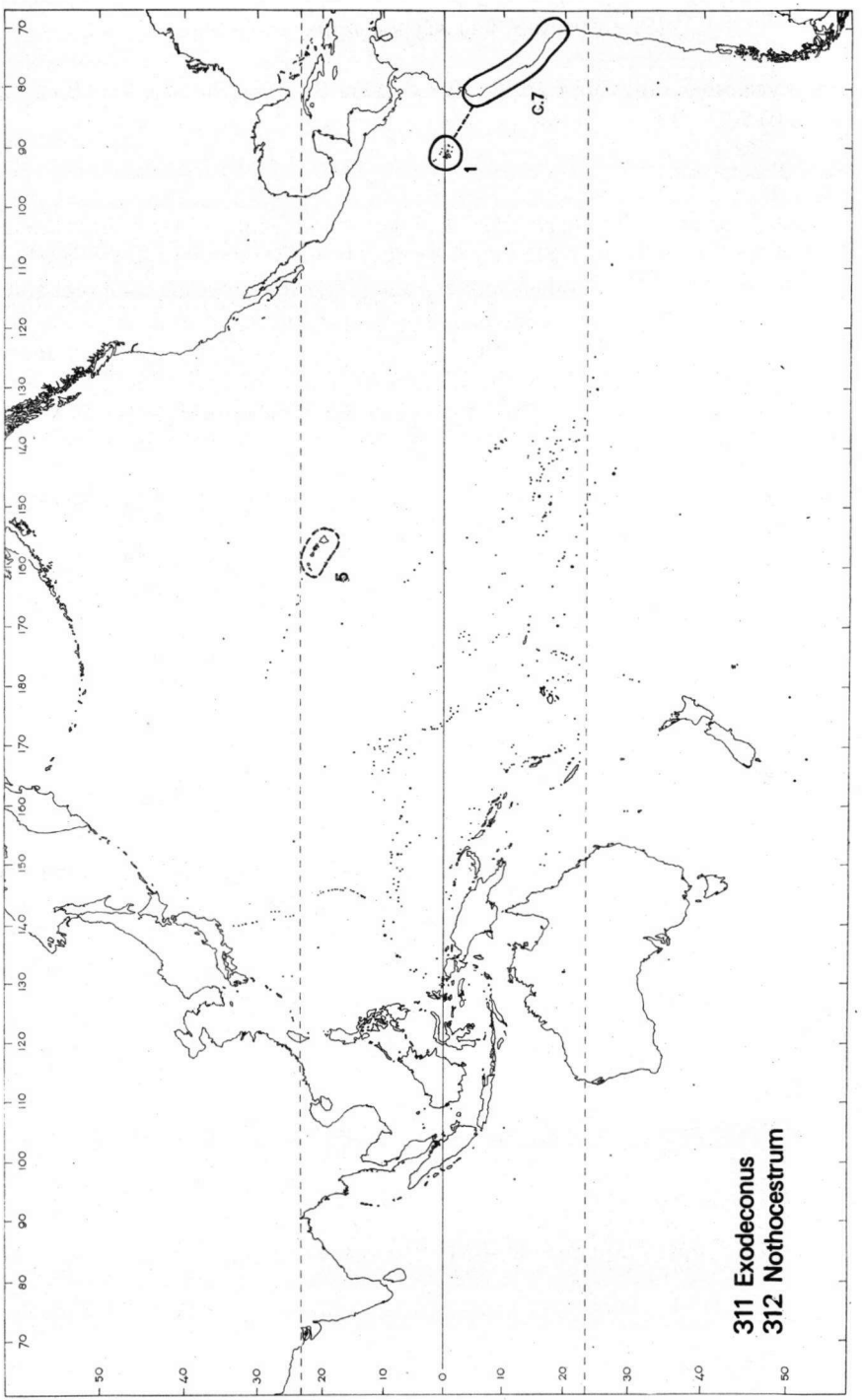
Habit: Shrubs or small soft-wooded trees up to 12 m tall, with alternate leaves and axillary greenish yellow tubular 4-merous flowers, single or in fascicles.

Habitat & ecology: On dry forested slopes up to 1200 m. *N. peltata* Skottsb. occurs in wet rain forest on Kauai.

Dispersal: The fruit is a globose to fusiform fleshy berry up to 2 cm long, yellow orange or red at maturity and contains many reniform or irregularly shaped seeds. Dispersal by birds is most likely.

Sources: J.F. Rock, Indig. Trees Haw. Is. (1913) 417–423; C. Skottsberg, Acta Horti Gotob. 15 (1944) 438–440; H. St. John, List Flow. Pl. Hawaii (1973) 300. Professor A.T. Hunziker (Cordoba) has critically checked text and maps of *Exodeconus* and *Nothocestrum.*

M.M.J. VAN BALGOOY.


311 Exodeconus
312 Nothocestrum
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313. **Lycianthes** subg. **Cypellocalyx** (Bitt.) Bitt.

Name: Lycianthes subgenus **Cypellocalyx** (Bitter) Bitter, Abh. Nat. Ver. Brem. 24 (1919–20) 502–513.

Family: *Solanaceae.*

Taxonomy & distribution: *Lycianthes* is a pantropical genus. Bitter (l.c.) maintains 16 species and several varieties in subg. *Cypellocalyx*. Several more species have been named (a total of c. 33 published species names) and the subgenus comprises about 20 species. The species of the subgenus have not been detected from the Malay Peninsula nor Australia but are concentrated in New Guinea with few species in Indonsia, the Philippines and islands of the western Pacific. Many species of the genus occur in Central and South America and the genus poses major problems in trans-Pacific disjunctions.

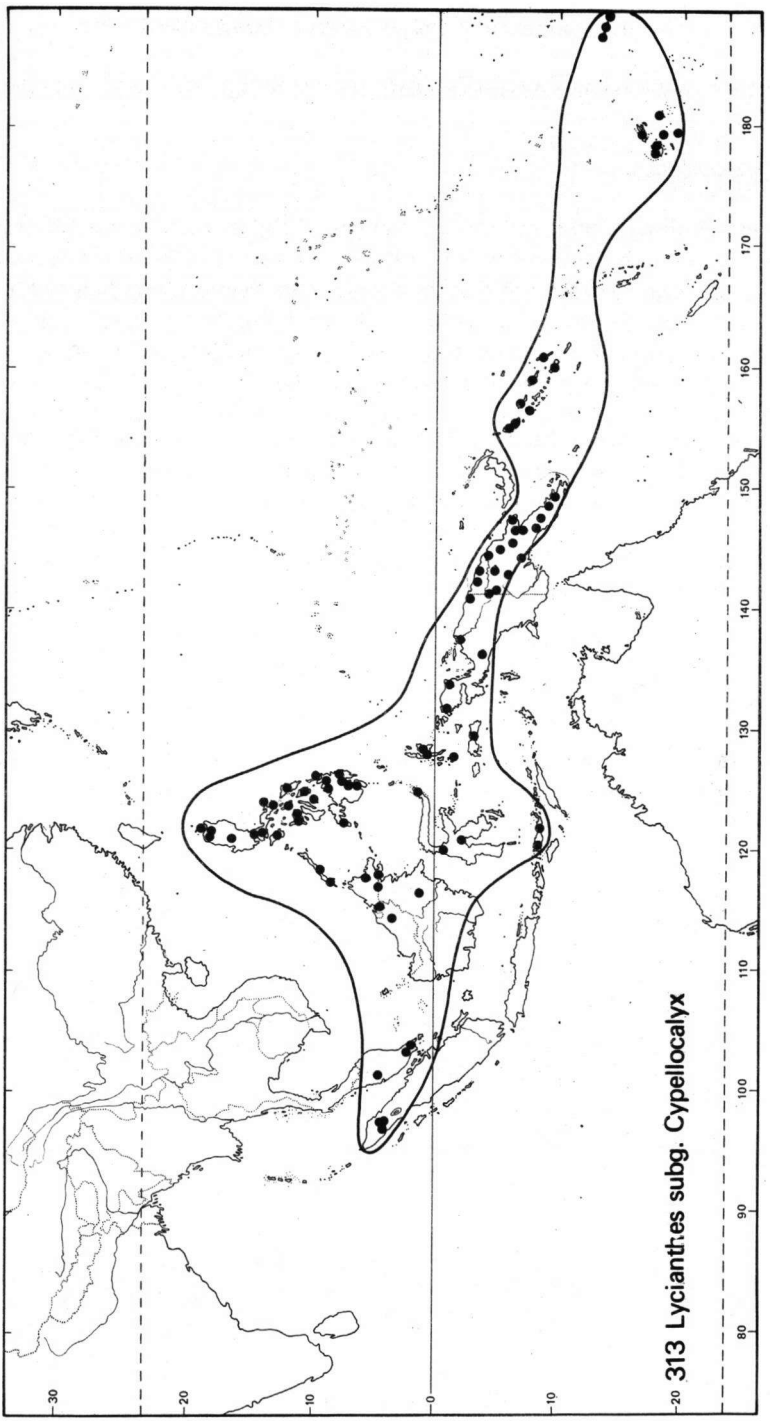
Habit: The species range from sprawling undershrubs and shrubs to large lianas and small trees, unarmed. They may be epiphytic and readily produce adventitious roots along the stems. The leaves are entire, often geminate, glabrescent, the flowers may be androdioecious (biology very inadequately known) and/or cauliferous, stellate, white or lavender with poricidal anthers.

Habitat & ecology: Mostly found in rain forest in the mossy layers, as shrubs in gaps, or lianas in the canopy.

Dispersal: The fruits are hard or succulent, green, red or blue-black berries, little known and poorly represented in collections, in some cases the pedicel and patelliform calyx is also colourful.

Sources: G. Bitter, Abh. Nat. Ver. Brem. 24 (1919–20) 502–513, and herbarium spe specimens at ADW, BM, K, L, and LAE.

D.E. SYMON.


313 Lycianthes subg. Cypellocalyx
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314. Lycianthes subg. Polymeris sect. Asiomelanesia Bitt.

Name: Lycianthes section Asiomelanesia Bitter, Abh. Nat. Ver. Brem. 24 (1919–20) 460.

Family: *Solanaceae.*

Taxonomy & distribution: Bitter (l.c.) maintains 12 species and many subspecies and varieties in the only comprehensive treatment of this section. There are probably fewer species and at least one unnamed species in New Guinea. Deb (1978) made some adjustments to the nomenclature of the species in India. The section is distributed from (mainly eastern) India, through southern China, Japan to Malesia and the western Pacific. It has not been detected in Australia.

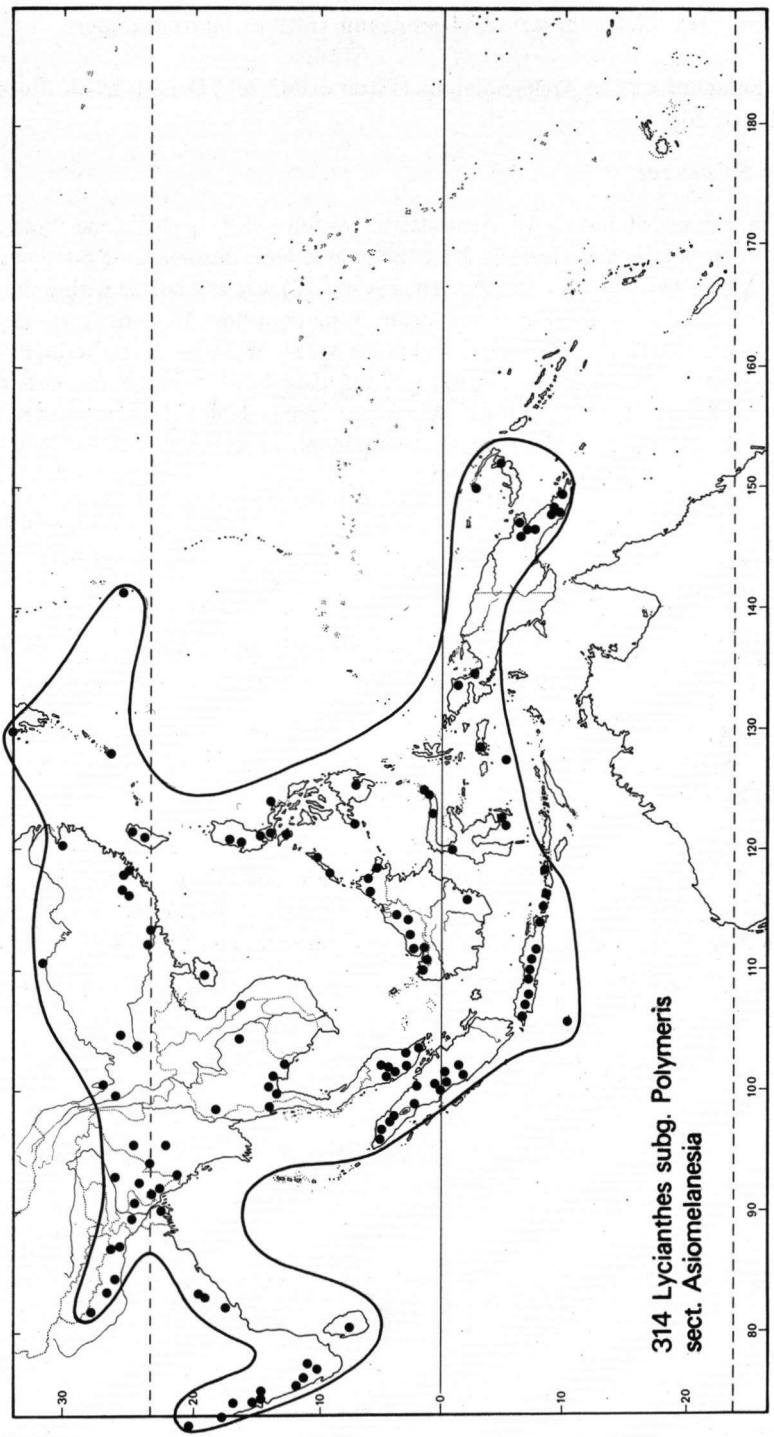
Habit: The species range from prostrate node-rooting herbs to short-lived sub-woody shrubs to 2 m tall. The leaves are entire, pubescent to glabrescent, the flowers stellate white or suffused lavender, the fruits succulent red or black berries.

Habitat & ecology: Few ecological details are recorded but the species are found mostly in disturbed sites such as roadsides.

Dispersal: The succulent berries with numerous seeds are probably dispersed by birds or mammals.

Sources: D.B. Deb, Bot. J. Linn. Soc. 76 (1978) 292–294; in Hawkes et al. (eds.), The Biology and Taxonomy of the Solanaceae (1979) 87–112, and herbarium specimens at ADW, BM, K, L, and LAE.

D.E. SYMON.


314 Lycianthes subg. Polymeris
sect. Asiomelanesia
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315. **Solanum** sect. **Archaesolanum** (Bitt. ex Marzell) Danert

Name: Solanum section **Archaesolanum** (Bitter ex Marzell) Danert, Die Kulturpfl. 18 (1970) 267, 268.

Family: *Solanaceae.*

Taxonomy & distribution: An Australasian section of 8 species (one undescribed species in New Guinea). They all share the unique basic chromosome number n = 23 or n = 46 (the base number for the genus is n = 12). Close relatives within the genus have not been recognised. The species occur in southwestern Western Australia, along the southern coastline of Australia, and more widely in the moderate to high rainfall areas of eastern Australia. Two species, *S. aviculare* Forst. f. and *S. laciniatum* Ait., extend to Tasmania, New Zealand, Kermadec, Three Kings, Chatham, Lord Howe and Norfolk Islands and to New Guinea at higher altitudes.

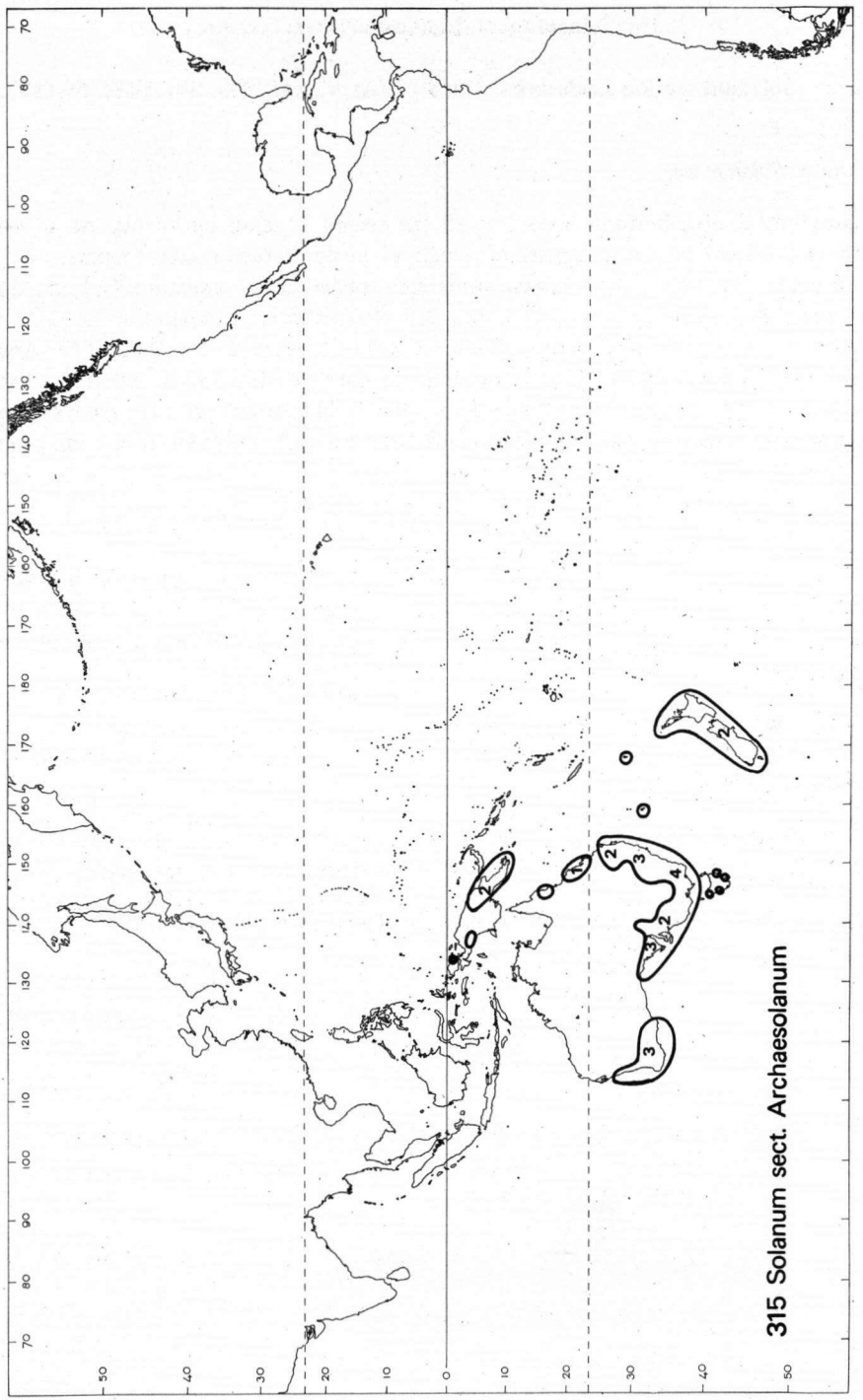
Habit: The species are short-lived soft-wooded shrubs 1–3 m tall, straggly with age, unarmed, glabrescent, leaves in juvenile phase large (to 30 cm) and deeply lobed, adult leaves smaller (to 10 cm) and entire, flowers violet-purple in cymes from axillary or stem-fork sites.

Habitat & ecology: Found mostly in disturbed areas, coastal dunes, fire scars, stream banks, logging tracks and gaps in forest canopy, generally somewhat mesic sites.

Dispersal: In all species the fruits are greenish, yellowish, or scarlet succulent berries with numerous seeds and stone cell masses. They are dispersed by birds, dingos and marsupials.

Sources: G.T.S. Baylis, Austr. J. Bot. 11 (1963) 168–177; D.E. Symon in Hawkes et al. (eds.), The Biology and Taxonomy of the Solanaceae (1979) 125–130; J. Adelaide Bot. Gard. 1 (1979) 321–331; ibid. 4 (1981) 1–367, and herbarium specimens in Australian herbaria and in addition in BM, K, L, and LAE.

D.E. SYMON.


315 Solanum sect. Archaesolanum

316. Solanum sect. Lasiocarpa (Dunal) D'Arcy

Name: Solanum section Lasiocarpa (Dunal) D'Arcy, Ann. Mo. Bot. Gard. 59 (1972) 270.

Family: *Solanaceae.*

Taxonomy & distribution: According to the recent revision by Whalen c.s. (1981) this section consists of 13 species of which 11 in the Neotropics best represented in northern S. America. The two extra-American species are *S. repandum* G. Forst. and *S. lasiocarpum* Dun. (*S. ferox* auctt. non L.). *S. repandum* occurs in the Pacific from Fiji to the Marquesas and is very closely related to *S. sessiliflorum* Dun. of the Amazon Basin. *S. lasiocarpum* occurs from India to the Solomons and is very close to the widespread Neotropical *S. candidum* Lindl. Both Old World species are always found in association with human habitations and early (pre-Columbian) introduction is suggested.

Habit: Armed herbs, shrubs or small trees up to c. 5 m tall.

Habitat & ecology: The natural habitat of the species ranges from dry savannah to rain forest, but many species occur in disturbed situations. The majority of the species thrives best in the lowlands but some have been found to an altitude of 3000 m.

Dispersal: The fruits are juicy, orange to red, many-seeded berries densely covered with trichomes and range in size from 1–3 cm diam. The fruits of several species are edible, *S. quitoense* Lamk is even planted for that reason. Dispersal by frugiforous birds and bats is most likely.

Map: The continuous line shows the distribution of the section in America, the broken line the range of *S. lasiocarpum* and the dotted line that of *S. repandum.*

Sources: M.D. Whalen, D.E. Costich & Ch.B. Heiser, Gent. Herb. 12 (1981) 41–129, maps; collections in BISH, BO, and L.

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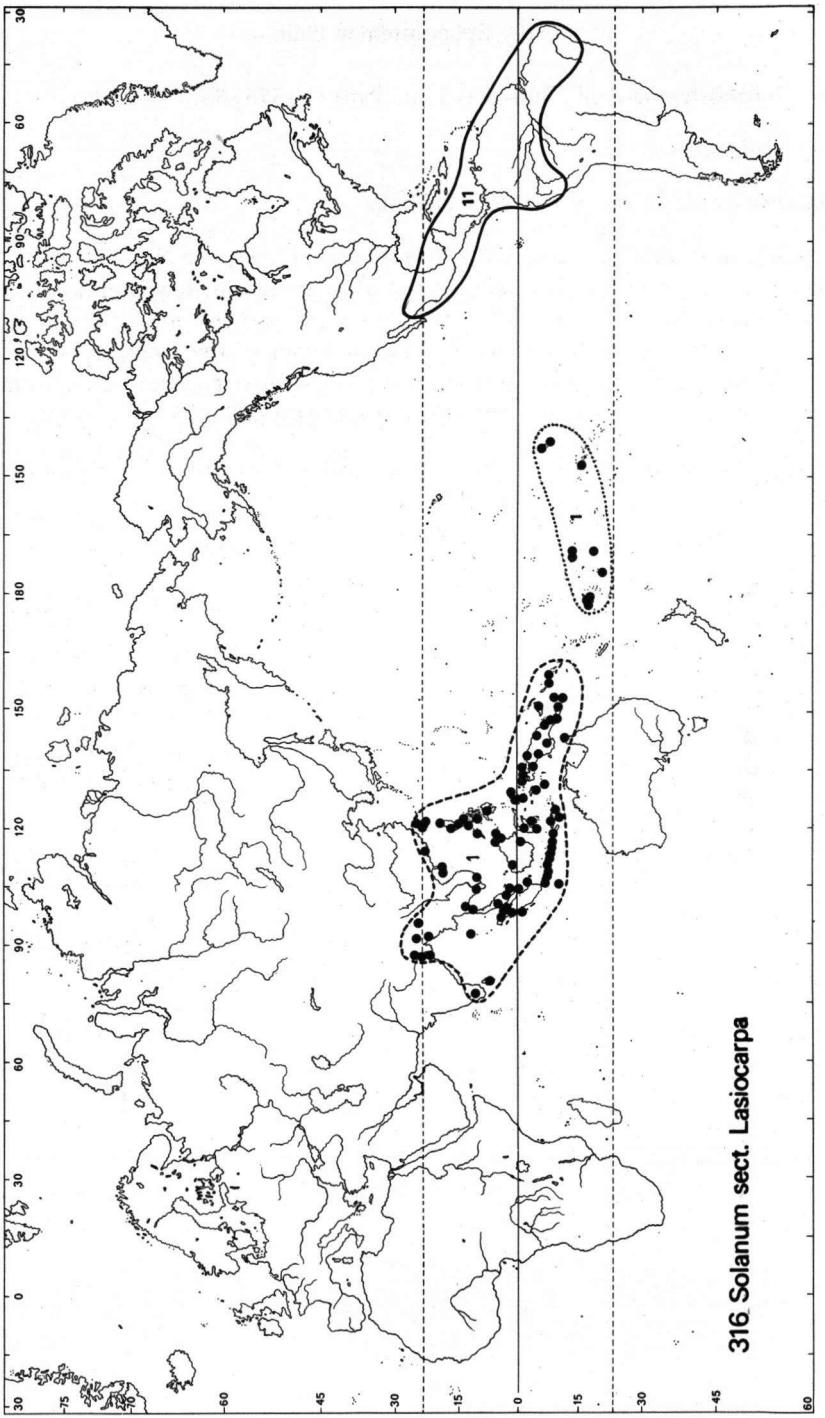
316 Solanum sect. Lasiocarpa
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317. Sphenostemon Baill.

Name: Sphenostemon Baill., Bull. Soc. Linn. Paris 1 (1875) 53.

Family: *Sphenostemonaceae.*

Synonyms: *Nouhuysia* Laut., *Idenburgia* Gibbs.

Taxonomy & distribution: The genus consists of 7 species, 4 in New Caledonia, 1 in Queensland (also found in New Guinea), 2 other species in New Guinea, of which one extends to New Britain and New Ireland, Celebes and Ceram. Species of this genus have been assigned to different genera and families: *Aquifoliaceae, Guttiferae, Monimiaceae* and *Trimeniaceae* (see Bernardi, 1964). It is now agreed upon that it should constitute a family in its own right. See e.g. Baas (1975).

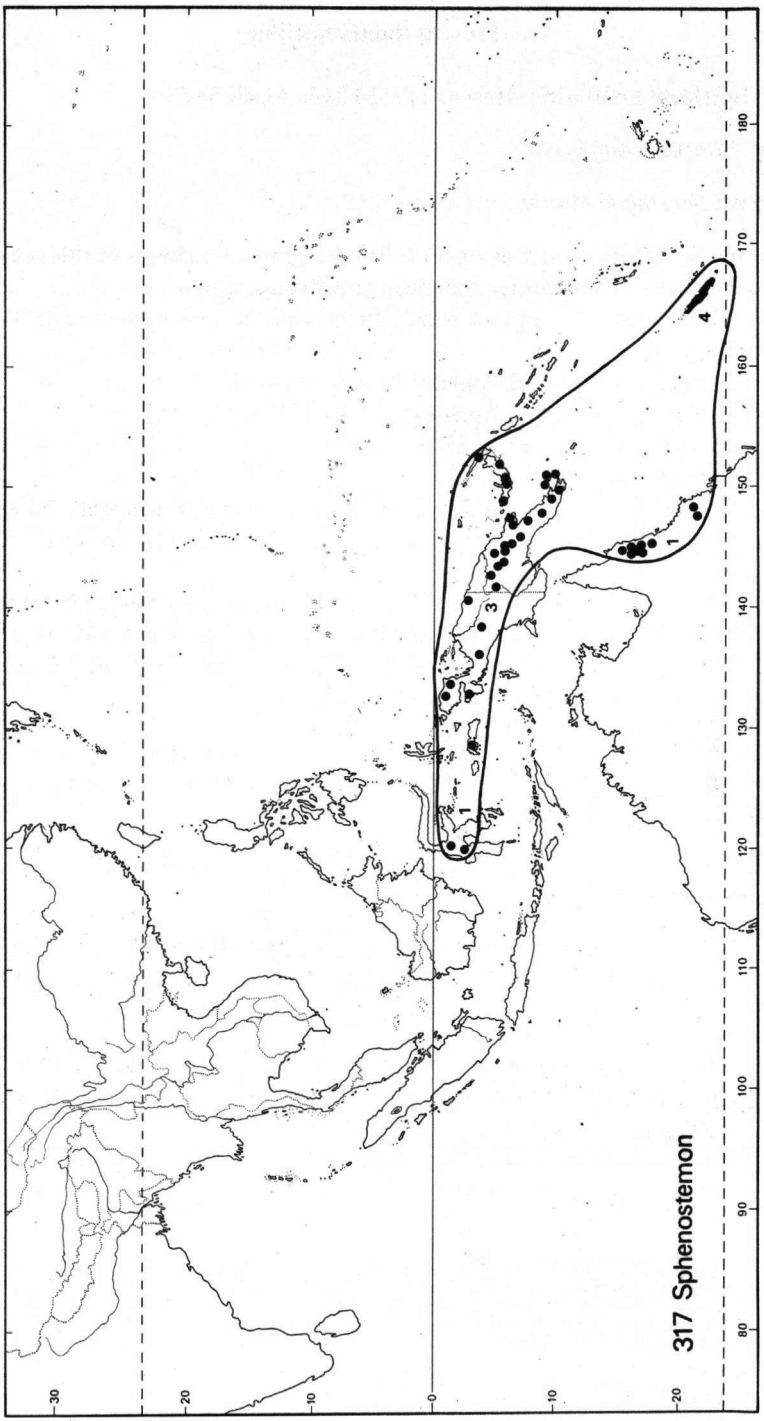
Habit: Shrubs or trees with alternate, exstipulate leaves, often in pseudo-whorls. Flowers bisexual in subterminal racemes.

Habitat & ecology: In mountain forest from (500–)800–3000(–3300) m.

Dispersal: The fruit is a drupe up to c. 2.5 cm long and 1.7 cm diam., containing 1 or 2 bony pyrenes.

Sources: C.G.G.J. van Steenis, Acta Bot. Neerl. 1 (1952) 84–98; Sv. Bot. Tidskr. 49 (1955) 19–23; L.S. Smith, Proc. Roy. Soc. Qld. 68 (1957) 43–50; L. Bernardi, Candollea 19 (1964) 199–205; P. Baas, Blumea 22 (1975) 311–407; local floras. Mr. B.P.M. Hyland (QRS) and Dr. R.W. Johnson (BRI) provided the Queensland localities and Prof. Van Steenis checked the text.

N.A.P. FRANKEN.


317 Sphenostemon
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318. Byttneria Loefling

Name: Byttneria Loefl., Iter. Hispan. (1758) 313, nom. cons.

Family: *Sterculiaceae.*

Synonym: *Buettneria* Murray.

Taxonomy & distribution: Cristobal (1976) recognised 6 sections in this genus to accommodate 131 species, mostly American and Madagascan:

Sect. *Crassipetala:* 22 spp. of which 19 in America, one extending to Polynesia and 3 in Africa.
Sect. *Incasica:* 11 spp. in S. America.
Sect. *Urticifolia:* 15 spp. in America.
Sect. *Byttneria:* 21 spp. in America.
Sect. *Gerontogaea:* 1 sp. in India.
Sect. *Vahihara:* 61 spp., of which 27 in Madagascar, 19 in Asia incl. Malesia, 13 in America, one extending to Polynesia, 3 in Africa of which one also occurs in America.

The two Polynesian species are: *B. aculeata* (Jacq.) Jack. (*B. oligacantha* Merr.) collected from Mangareva I. and *B. catalpifolia* Jacq. (*B. tahitensis* Nad.) known from Tahiti and Marquesas. There is one sterile collection from New Britain at K. The number of Indomalesian species needs checking.

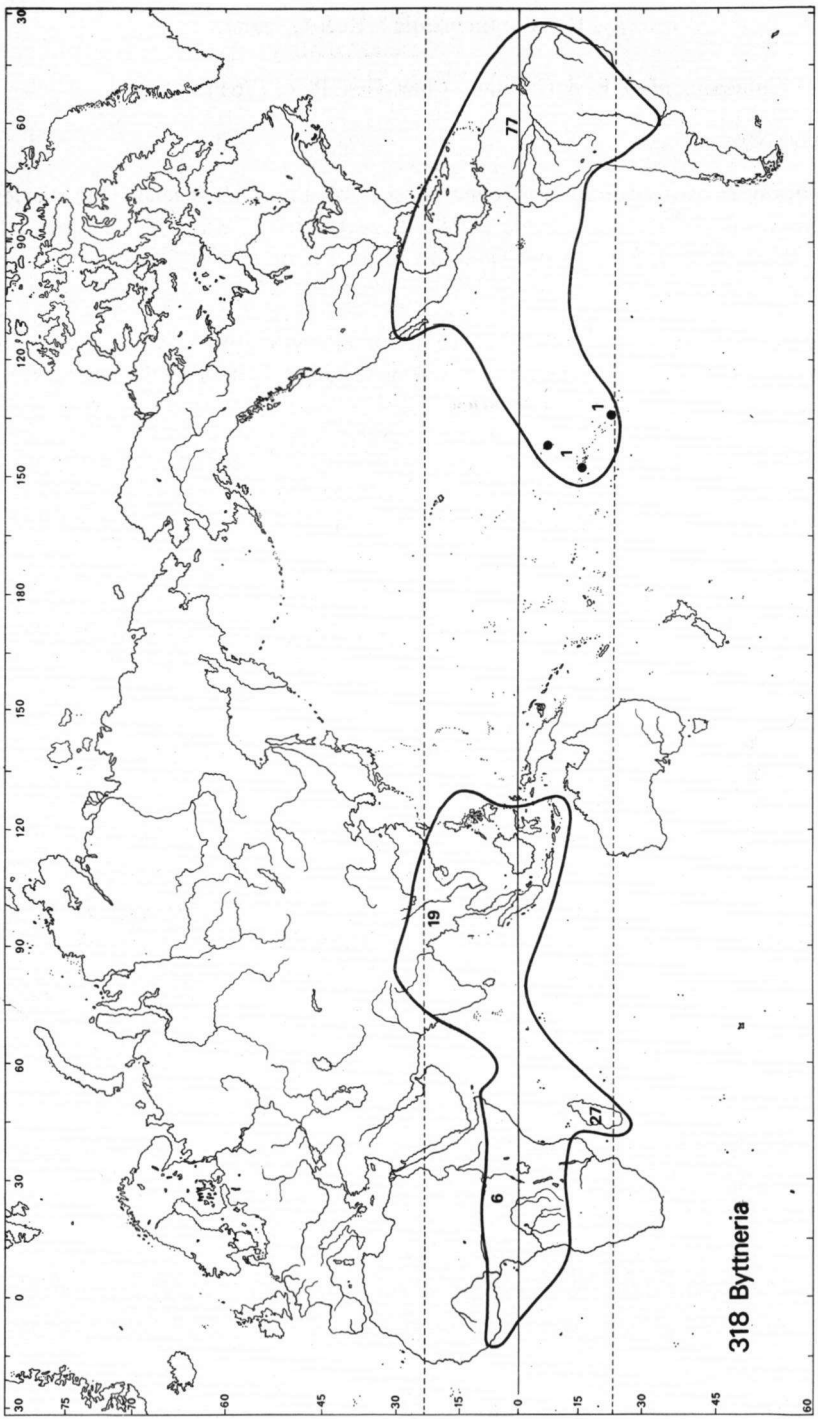
Habit: Mostly lianas or climbers, rarely shrubs or trees up to 10 m tall, with simple, spirally arranged or alternate leaves and axillary or terminal, cymose inflorescences. Flowers bisexual.

Habitat & ecology: Lowland forest up to 850 m, in secondary forest, forest edges and along river-banks.

Dispersal: The fruit is a globose, 5-lobed, loculicidally dehiscent capsule up to 2.5 by 1.8 cm including the long or short firm prickles. Guppy (1906) suggested that the fruits are dispersed by birds but this is not sustained by observations.

Sources: H.B. Guppy, Observ. of a Naturalist in the Pacific 2 (1906) 379; J. Arènes, Fl. Madag. 131 (1959) 35–86; C.L. Cristobal, Bonplandia 4 (1976) 5–395; local floras and collections in K and L.

W. AVÉ.


318 Byttneria
77
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27

319. Commersonia J.R. & G. Forst.

Name: Commersonia J.R. & G. Forst., Char. Gen. Pl. (1776) t. 22.

Family: *Sterculiaceae.*

Taxonomy & distribution: The genus consists of about 10 species. One species, *C. bartramia* (L.) Merr. (*C. echinata* Forst., *C. platyphylla* Andr.) is widespread from Indo-China through Malesia and Queensland to the Marquesas. The other species are endemic to Australia.

Habit: Mostly shrubs, also trees up to 15 m tall with simple, alternate or spirally arranged leaves and axillary, leaf-opposed or terminal, cymose inflorescences. Flowers bisexual.

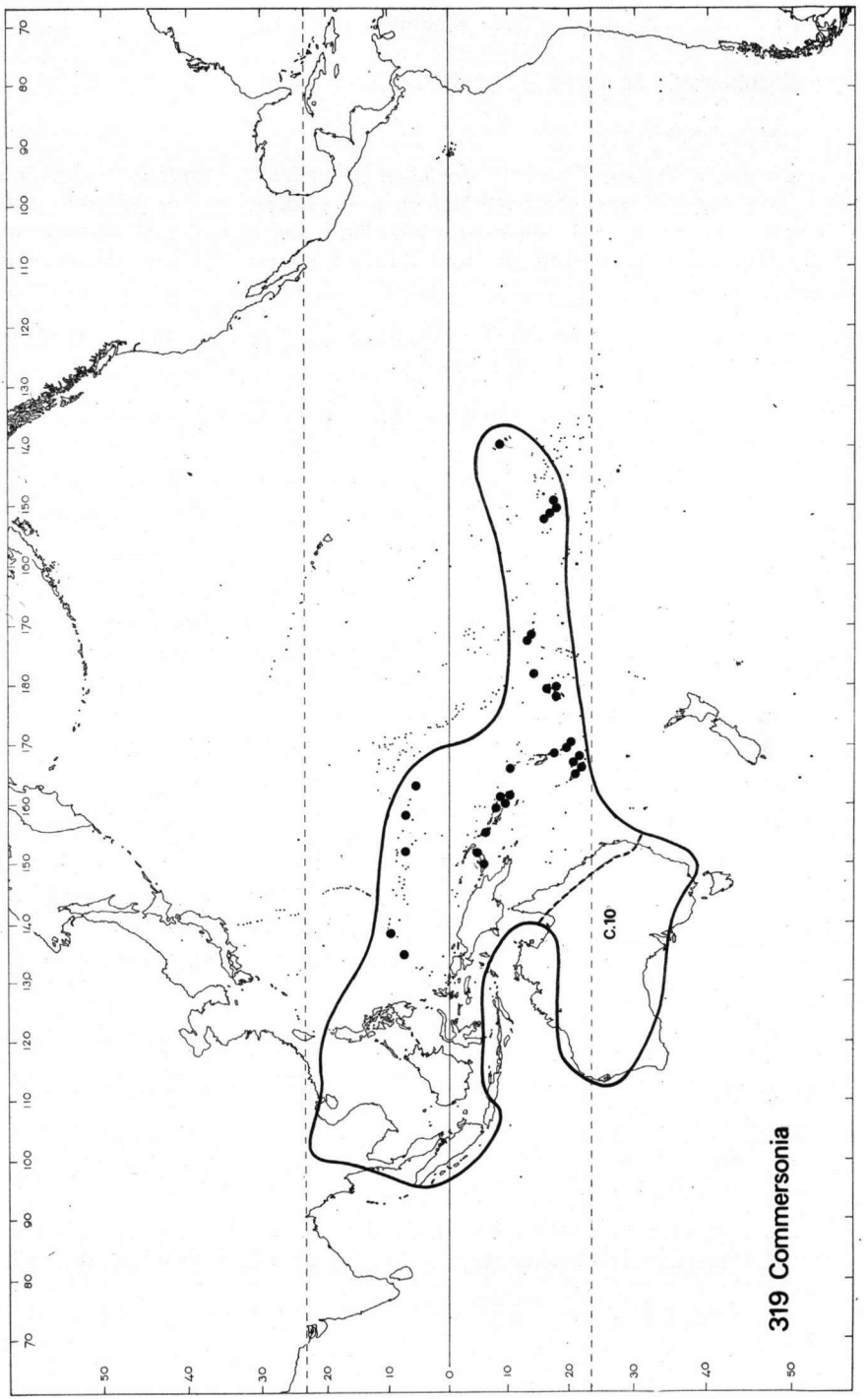
Habitat & ecology: The Australian species are mostly confined to the dry interior. *C. bartramia* is a 'weed tree' of open places in lowlands up to 800 m, brushwoods, secondary forest, in areas with a mild east monsoon.

Dispersal: The fruit is a soft, bristly, loculicidally dehiscent, globose capsule up to 2.5 cm diam. Guppy (1906) suggests that the setose fruits of *C. bartramia* may be transported in the plumage of birds. The other species which have similar fruits are, however, of limited distribution.

Map: The area of the genus is delineated. *C. bartramia* is the only species occurring outside Australia. In Australia it is confined to the east of the broken line, its localities in the Pacific are indicated by dots.

Sources: H.B. Guppy, Observ. of a Naturalist in the Pacific 2 (1906) 376, 380; N.T. Burbidge, Dict. Austr. Pl. Gen. (1963) 78; C.A. Backer & R.C. Bakhuizen van den Brink, Fl. of Java 1 (1963) 406; local floras and collections in L. Dr. S.H. Sohmer (BISH) provided additional localities in the Pacific.

W. AVÉ.


319 Commersonia
C.10

320. Kleinhovia L.

Name: Kleinhovia L., Sp. Pl. ed. 2 (1763) 1365.

Family: *Sterculiaceae.*

Taxonomy & distribution: The only species of the genus, *K. hospita* L., ranges from India (where it is cultivated) through Malesia to the Society Is. The record from Tahiti is based on Gray (1854). Apparently it has never been mentioned east of Samoa since. The species is also mentioned from Moheli I. (Comores) where it is probably not native.

Habit: Shrub or tree up to 25 m tall, with simple, spirally arranged leaves and terminal or axillary inflorescences. Flowers bisexual.

Habitat & ecology: Littoral and lowland forest up to 650 m, along river-banks, open places, often in secondary forest.

Dispersal: The fruit is a globose, 5-lobed, loculicidally dehiscent capsule up to 2.5 cm diam. Guppy (1906) suggests that the small seeds may be dispersed by birds; the fruits are also said to be buoyant, though this is not always the case.

Sources: A. Gray, U.S. Expl. Exp., Bot. 1 (1854) 189; H.B. Guppy, Observ. of a Naturalist in the Pacific 2 (1906) 602; C.A. Backer & R.C. Bakhuizen van den Brink, Fl. of Java 1 (1963) 410–411; local floras and collections in K and L. Dr. S.H. Sohmer (Honolulu) listed the localities as represented in BISH.

321. Ungeria Schott & Endl.

Name: Ungeria Schott & Endl., Melet. (1832) 27, t. 4.

Family: *Sterculiaceae.*

Taxonomy & distribution: A monotypic genus. The only species, *U. floribunda* Schott & Endl., is endemic on Norfolk I. Schumann (1890) places the genus in the *Helictereae* with *Pterospermum, Kleinhovia,* etc. *Ungeria* has been erroneously mentioned for New South Wales, Australia.

Habit: Tree with alternate leaves and cymose, terminal, paniculate inflorescences.

Habitat & ecology: In lowland forest up to 300 m, said to be fairly common in Mt. Pitt reserve (Turner et al.).

Dispersal: The fruit is an ovate-globose, 5-winged, tomentose, 5-celled, loculicidally dehiscent capsule up to 2.5 cm long, with one seed in each cell.

Sources: K. Schumann, Nat. Pfl. Fam. III, 6 (1890) 92–94; J.S. Turner, C.N. Smithers & R.D. Hoogland, The Conservation of Norfolk Island (no date) 35; and collections in K.

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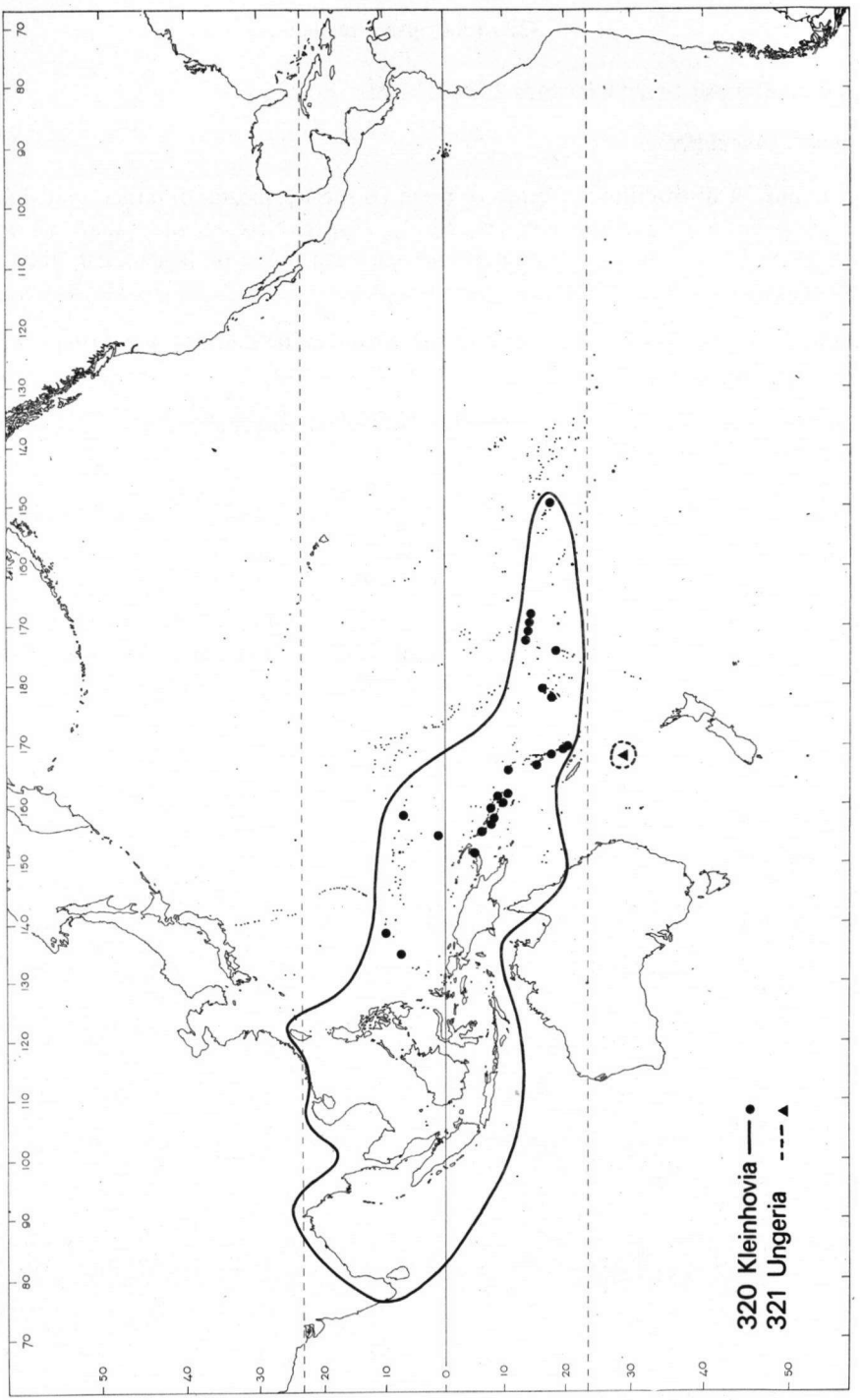
320 Kleinhovia
321 Ungeria

322. Lilaeopsis Greene

Name: **Lilaeopsis** Greene, Pittonia 2 (1891) 192.

Family: *Umbelliferae.*

Taxonomy & distribution: A genus of some 20 species, mostly of rather limited distribution in the southern hemisphere. Nearly all species are found in countries bordering the Pacific, but an outlying species has been found on Madagascar (Raynal, 1977).

Habit: Small, tufted creeping herbs, rooting at the nodes. Inflorescence a simple few-flowered umbel.

Habitat & ecology: In swampy and other wet places along streams or lakes, sometimes partly submerged.

Dispersal: Fruits consist of two ribbed mericarps of 2–3 by 1–2 mm, each with a hooked persistent style on a stylopodium.

Sources: A.W. Hill, J. Linn. Soc. Bot. 47 (1927) 525–551; Kew Bull. (1929) 119–121; M.L. Green, Kew Bull. (1929) 92; R.A. Perez-Moreau, Lilloa 1 (1937) 283–306; S.T. Blake, Proc. Roy. Soc. Qld. 70 (1959) 46; H.H. Allan, Fl. New Zeal. 1 (1961) 463–465; J. Raynal, Adansonia II, 17 (1917) 151–154, map.

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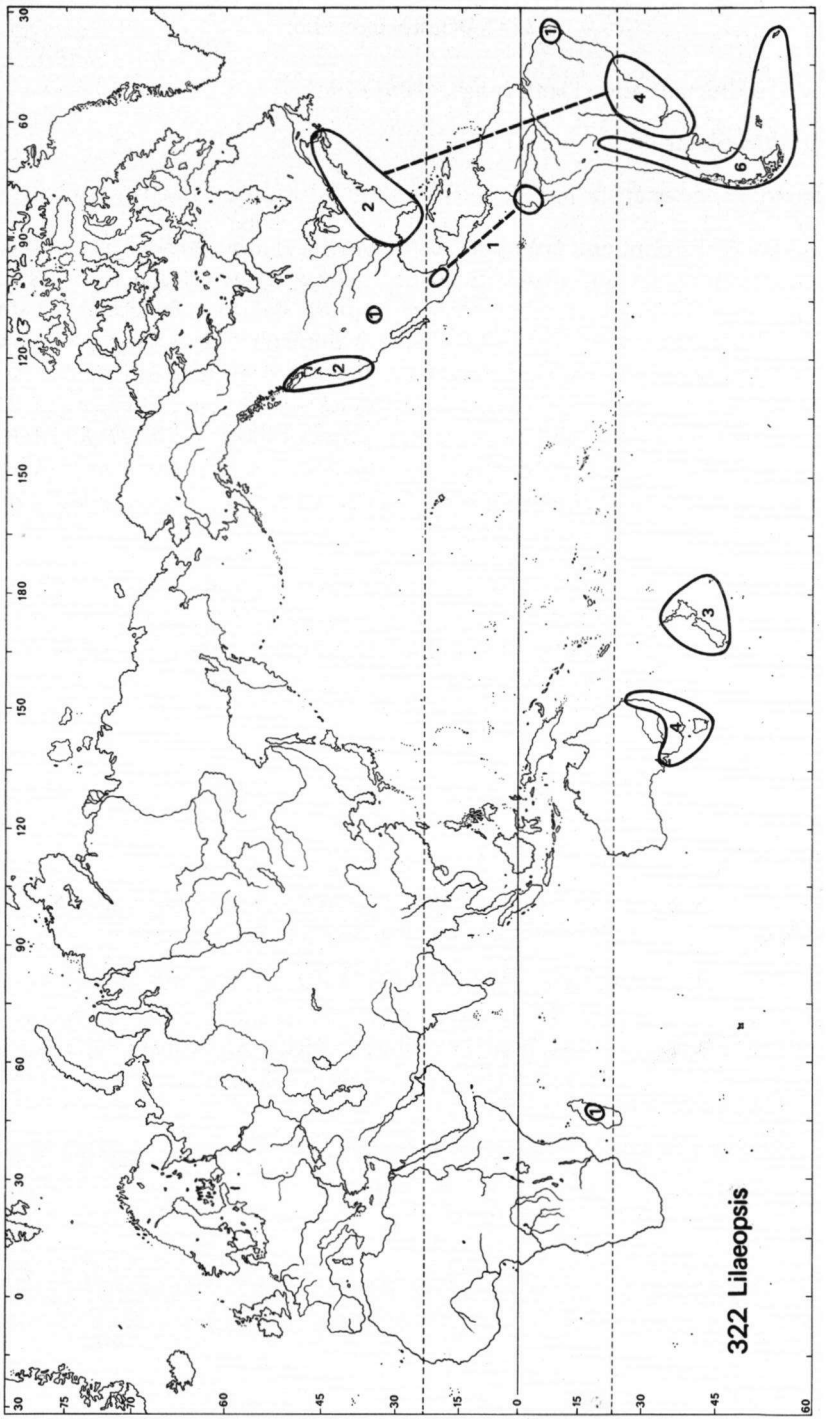
322 Lilaeopsis

323. Dendrocnide Miq.

Name: Dendrocnide Miq., Plant. Jungh. (1851) 29.

Family: *Urticaceae.*

Synonym: *Laportea* auctt. p.p.

Taxonomy & distribution: According to the monograph by Chew (1969) this genus consists of 36 species, and two sections. Sect. *Dendrocnide* (10 spp.) is of restricted distribution, extending from China through western Malesia as far east as the Moluccas, with the centre of species development in the Philippines (8 spp., 4 endemic). Sect. *Sarcopus* (26 spp.) is widespread from India through Indo-China, Malesia and Australia to the Pacific, centering in New Guinea with 12 spp. (3 endemic). Three species, *D. vitiensis* (Seem.) Chew, *D. harveyi* (Seem.) Chew and *D. latifolia* (Gaud.) Chew are only found in the Pacific Islands, the latter reaching the Solomons. Drake (1893) mentions *Laportea photiniphylla* Wedd., which is a synonym of *D. vitiensis* for Tahiti. Apparently the species has not been found on the island later.

Habit: Shrubs or trees usually less than 15 m but exceptionally up to 35 m tall, with simple, spirally arranged leaves and axillary, racemose, pedunculate inflorescences. Flowers unisexual. Most species are provided with irritating hairs.

Habitat & ecology: Lowland primary and midmontane forest up to 1500 m, often on limestone and in secondary forest.

Dispersal: The fruit is an asymmetrically ellipsoid to ovoid warted achene up to 5 mm diam. According to Ridley (1930) the fruits of *D. stimulans* (L.f.) Chew are eaten by birds (*Pycnonotus brunneus*).

Map: The figure above the hyphen indicates the number of endemic species, the one below the hyphen the number of non-endemic species.

Sources: E. Drake del Castillo, Fl. de la Polyn. Franç. (1893) 197; H.N. Ridley, Dispersal of Pl. (1930) 482; T.G. Yuncker, B.P. Bish. Mus. Bull. 220 (1950) 101–102; W.L. Chew, Gard. Bull. Singapore 25 (1969) 1–104; F.R. Fosberg, M.H. Sachet & R. Oliver, Micronesica 15 (1979) 58; collections in L and BISH (communicated by Dr. S.H. Sohmer).

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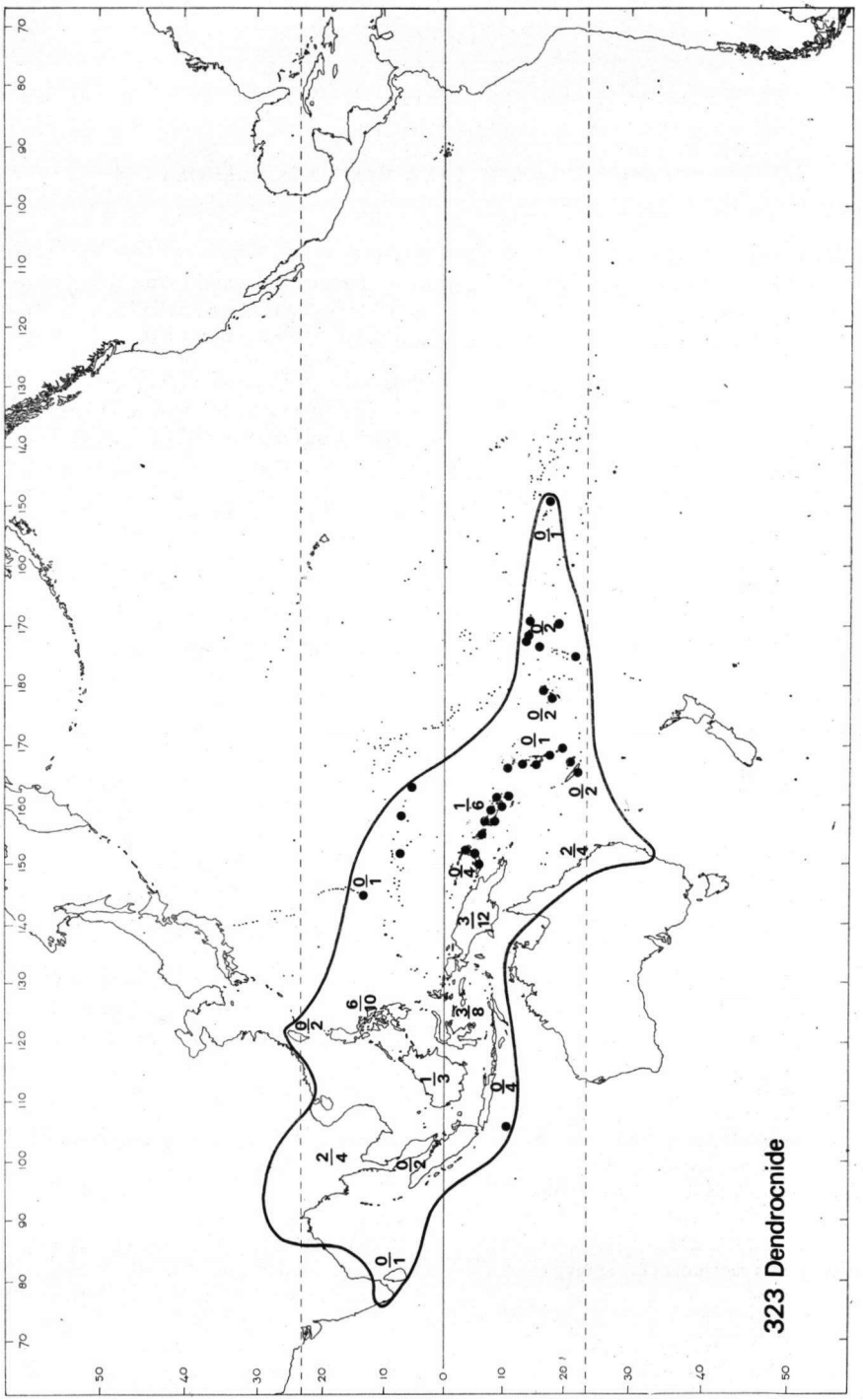
323 Dendrocnide