

DISTRIBUTION MAPS OF PACIFIC PLANTS

324. *Alseuosmiaceae* Airy Shaw

Name: *Alseuosmiaceae* Airy Shaw, Kew Bull. 18 (1965) 249.

Family: *Alseuosmiaceae*.

Taxonomy & distribution: The members of this small family were formerly included in the *Caprifoliaceae* but it seems best to treat *Alseuosmiaceae* as a family in its own right, allied to *Escalloniaceae* (Gardner 1978) or *Pittosporaceae* (Van Steenis 1986). The family consists of the following genera: *Alseuosmia* A. Cunn.: four species in New Zealand (Allan 1982); *Crispiloba* Steen.: monotypic, Queensland (Van Steenis 1984); *Wittsteinia* F. Muell. (incl. *Memecylanthes* Gilg & Schltr., *Pachydiscus* Gilg & Schltr. and *Periomphale* Baill.): one species in New Guinea (Van Steenis 1978), another in Victoria, Australia (Willis 1973) and perhaps three species in New Caledonia (Van Steenis 1984).

Habit: Shrubs, sometimes more or less scandent and occasionally epiphytic, with simple leaves arranged in spirals or pseudowhorls.

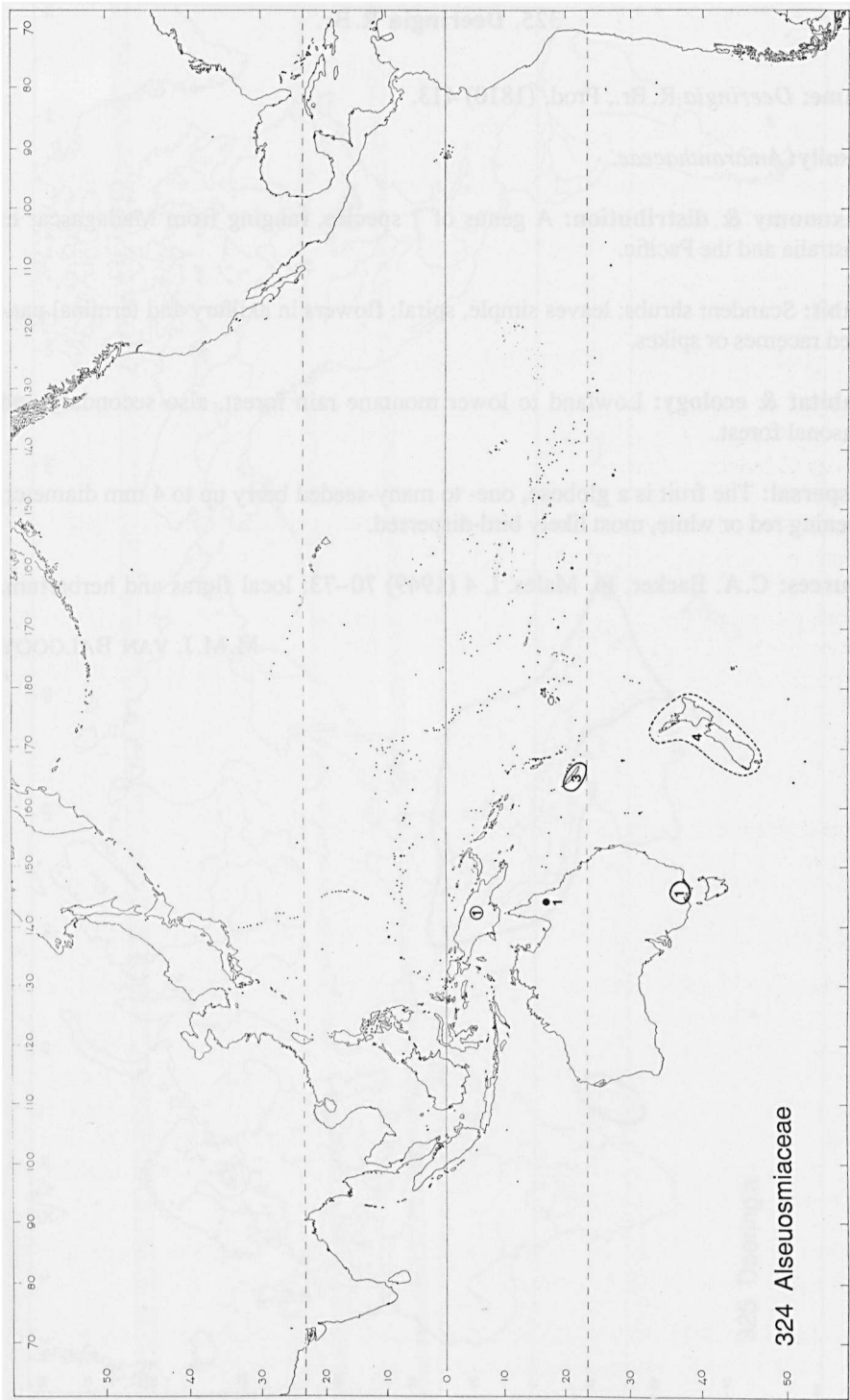
Habitat & ecology: Most species are found in the undergrowth of rain forest; the flowers are heavily scented and probably insect pollinated. *Wittsteinia* produces small cleistogamous flowers next to normal ones.

Dispersal: All genera have fleshy berries up to 2 cm diameter, blackish or red at maturity, containing a few seeds. Bird dispersal seems most likely.

Map: The broken line marks the boundary of *Alseuosmia*, the solid lines the disjunct areas of *Wittsteinia*, the dot represents the locality of *Crispiloba*.

Sources: J.H. Willis, Handb. Pl. Vict. 2 (1973) 496 ; R.O. Gardner, Blumea 24 (1978) 138–142; C.G.G.J. van Steenis, Blumea 24 (1978) 480–481; Blumea 29 (1984) 387–394; Fl. Males. I, 10 (1986) 335–336; H.H. Allan, Fl. New Zeal. 1 (1982) 554–558.

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325. *Deeringia* R. Br.

Name: *Deeringia* R. Br., Prod. (1810) 413.

Family: *Amaranthaceae*.

Taxonomy & distribution: A genus of 7 species, ranging from Madagascar to Australia and the Pacific.

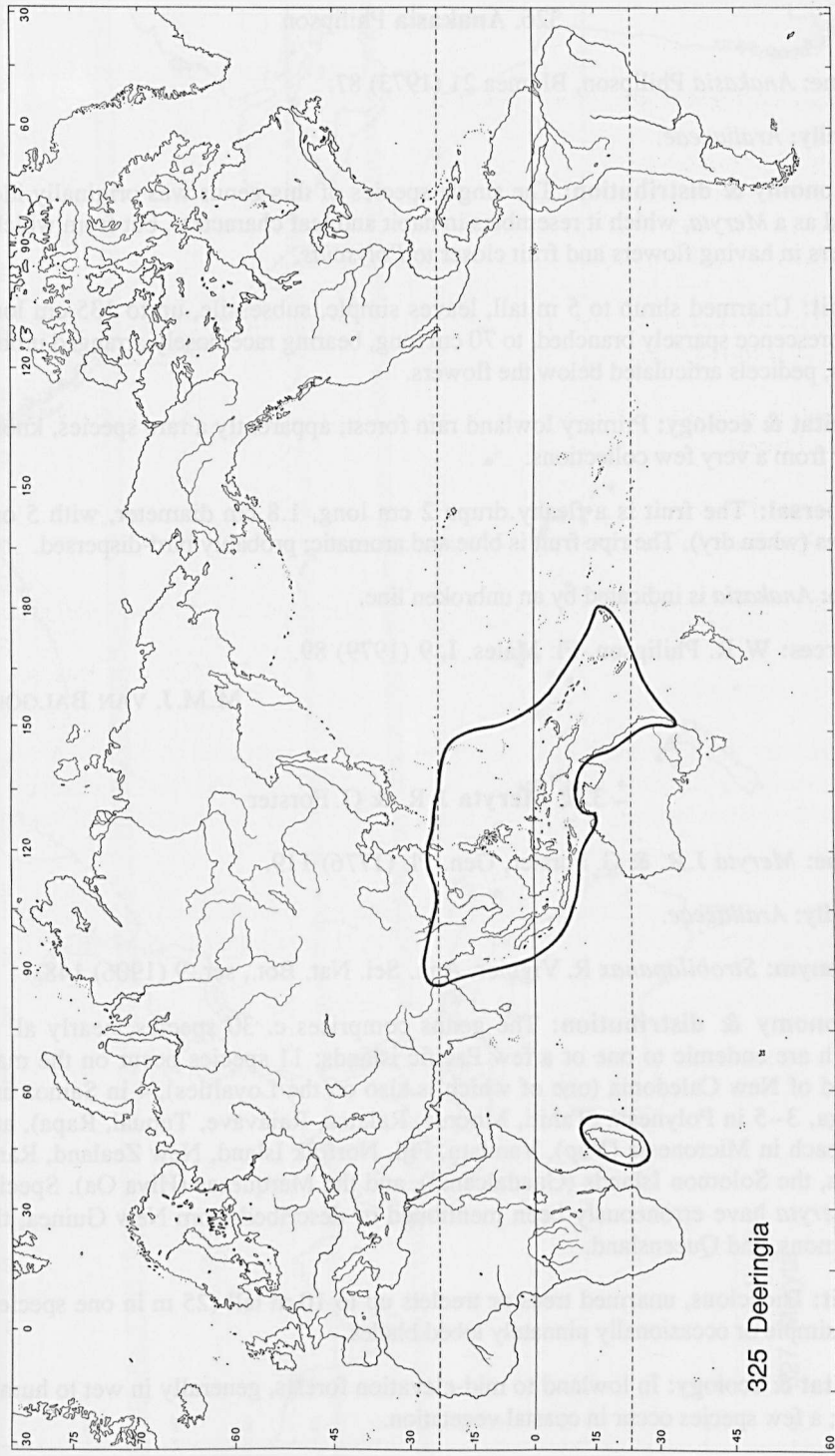
Habit: Scandent shrubs; leaves simple, spiral; flowers in axillary and terminal panicled racemes or spikes.

Habitat & ecology: Lowland to lower montane rain forest, also secondary and seasonal forest.

Dispersal: The fruit is a globose, one- to many-seeded berry up to 4 mm diameter, ripening red or white, most likely bird-dispersed.

Sources: C.A. Backer, Fl. Males. I, 4 (1949) 70–73; local floras and herbarium.

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326. *Anakasia* Philipson

Name: *Anakasia* Philipson, *Blumea* 21 (1973) 87.

Family: *Araliaceae*.

Taxonomy & distribution: The single species of this genus was originally identified as a *Meryta*, which it resembles in habit and leaf characters, but from which it differs in having flowers and fruit closer to *Polyscias*.

Habit: Unarmed shrub to 5 m tall, leaves simple, subsessile, up to 135 cm long. Inflorescence sparsely branched, to 70 cm long, bearing racemously arranged umbel-les, pedicels articulated below the flowers.

Habitat & ecology: Primary lowland rain forest; apparently a rare species, known only from a very few collections.

Dispersal: The fruit is a fleshy drupe 2 cm long, 1.8 cm diameter, with 5 or 6 ridges (when dry). The ripe fruit is blue and aromatic; probably bird-dispersed.

Map: *Anakasia* is indicated by an unbroken line.

Sources: W.R. Philipson, *Fl. Males.* I, 9 (1979) 89.

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327. *Meryta* J. R. & G. Forster

Name: *Meryta* J. R. & G. Forster, *Gen. Pl.* (1776) 119.

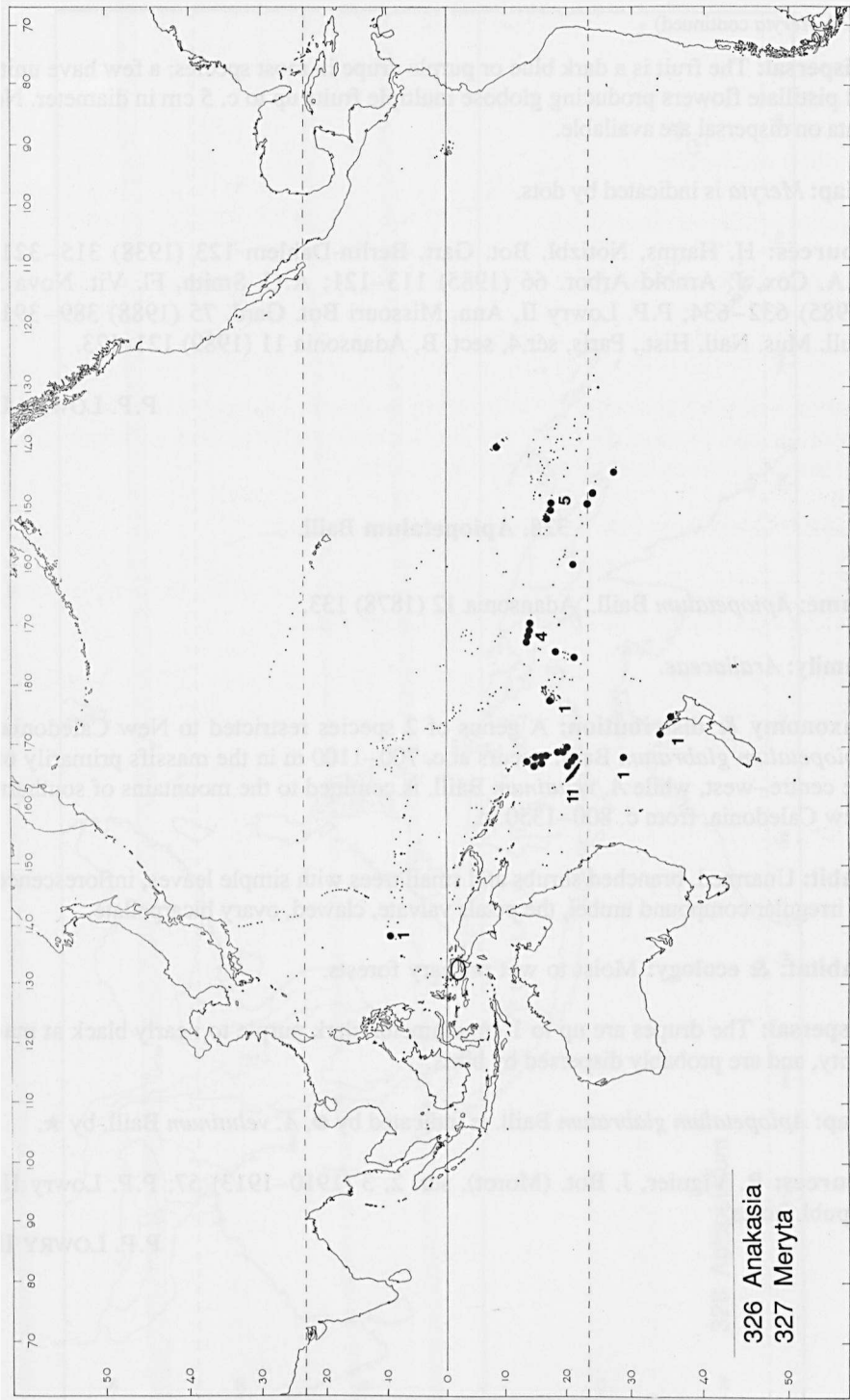
Family: *Araliaceae*.

Synonym: *Strobilopanax* R. Viguier, *Ann. Sci. Nat. Bot.*, ser. 9 (1906) 148.

Taxonomy & distribution: The genus comprises c. 30 species, nearly all of which are endemic to one or a few Pacific islands; 11 species occur on the main island of New Caledonia (one of which is also on the Loyalties), 4 in Samoa and Tonga, 3–5 in Polynesia (Tahiti, Moorea, Raiatea, Raiavave, Tubuai, Rapa), and one each in Micronesia (Yap), Vanuatu, Fiji, Norfolk Island, New Zealand, Rarotonga, the Solomon Islands (Guadalcanal), and the Marquesas (Hiva Oa). Species of *Meryta* have erroneously been mentioned or described from New Guinea, the Solomons, and Queensland.

Habit: Dioecious, unarmed trees or treelets up to 10 m tall (25 m in one species) with simple or occasionally pinnately lobed blades.

Habitat & ecology: In lowland to mid-elevation forests, generally in wet to humid areas; a few species occur in coastal vegetation.



(327. *Meryta* continued)

Dispersal: The fruit is a dark blue or purple drupe in most species; a few have united pistillate flowers producing globose multiple fruits up to c. 5 cm in diameter. No data on dispersal are available.

Map: *Meryta* is indicated by dots.

Sources: H. Harms, Notizbl. Bot. Gart. Berlin-Dahlem 123 (1938) 315–321; P.A. Cox, J. Arnold Arbor. 66 (1985) 113–121; A.C. Smith, Fl. Vit. Nova 3 (1985) 632–634; P.P. Lowry II, Ann. Missouri Bot. Gard. 75 (1988) 389–391; Bull. Mus. Natl. Hist., Paris, sér.4, sect. B, Adansonia 11 (1989) 121–123.

P.P. LOWRY II

328. *Apiopetalum* Baill.

Name: *Apiopetalum* Baill., Adansonia 12 (1878) 133.

Family: *Araliaceae*.

Taxonomy & distribution: A genus of 2 species restricted to New Caledonia. *Apiopetalum glabratum* Baill. occurs at c. 700–1100 m in the massifs primarily of the centre–west, while *A. velutinum* Baill. is confined to the mountains of southern New Caledonia, from c. 800–1350 m.

Habit: Unarmed, branched shrubs and small trees with simple leaves, inflorescence an irregular compound umbel, the petals valvate, clawed, ovary bicarpellate.

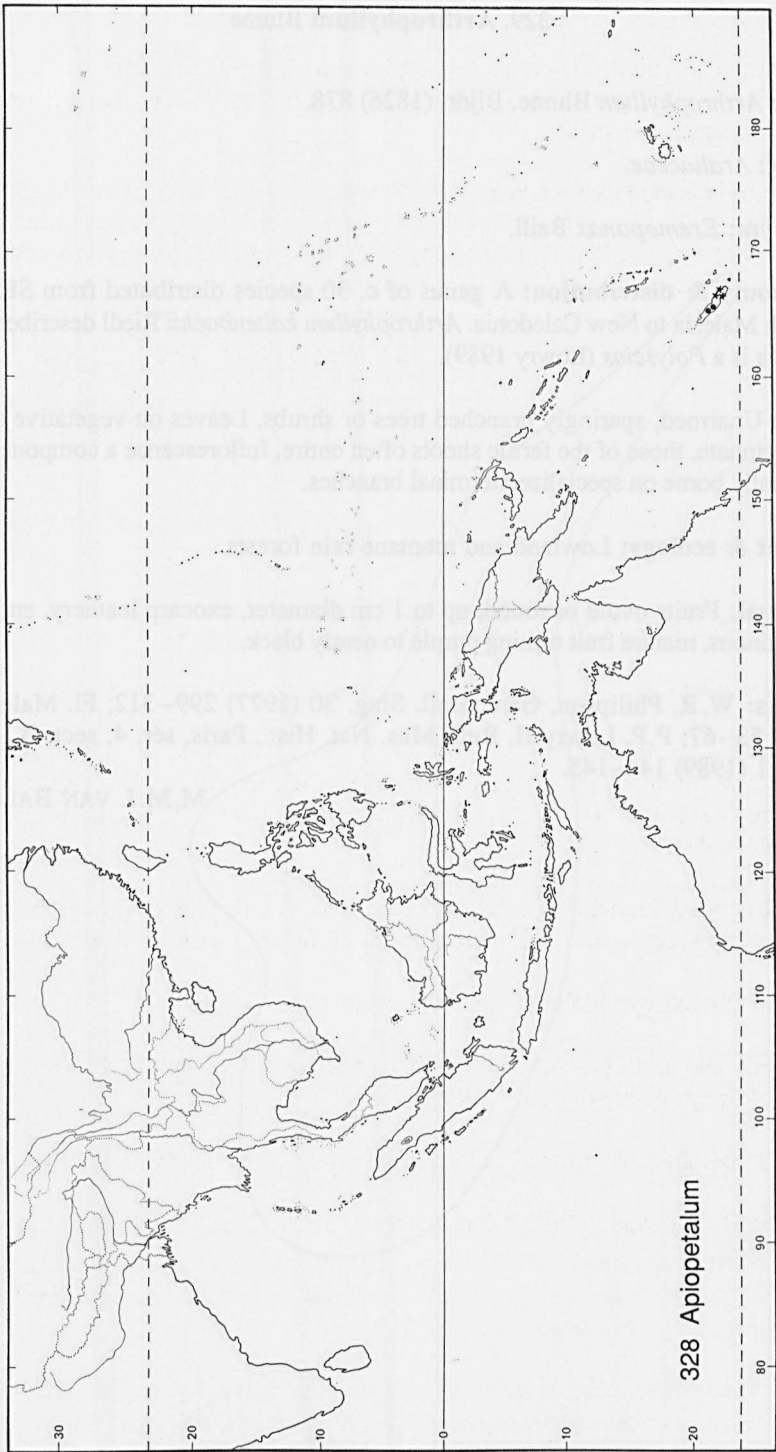
Habitat: & ecology: Moist to wet primary forests.

Dispersal: The drupes are up to 1 cm diameter, dark purple to nearly black at maturity, and are probably dispersed by birds.

Map: *Apiopetalum glabratum* Baill. is indicated by ●, *A. velutinum* Baill. by ★.

Sources: R. Viguier, J. Bot. (Morot), ser. 2, 3 (1910–1913) 57; P.P. Lowry II, unpubl. notes.

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329. *Arthrophyllum* Blume

Name: *Arthrophyllum* Blume, Bijdr. (1826) 878.

Family: *Araliaceae*.

Synonym: *Eremopanax* Baill.

Taxonomy & distribution: A genus of c. 30 species distributed from SE. Asia through Malesia to New Caledonia. *Arthrophyllum kaltenbachii* Riedl described from Vanuatu is a *Polyscias* (Lowry 1989).

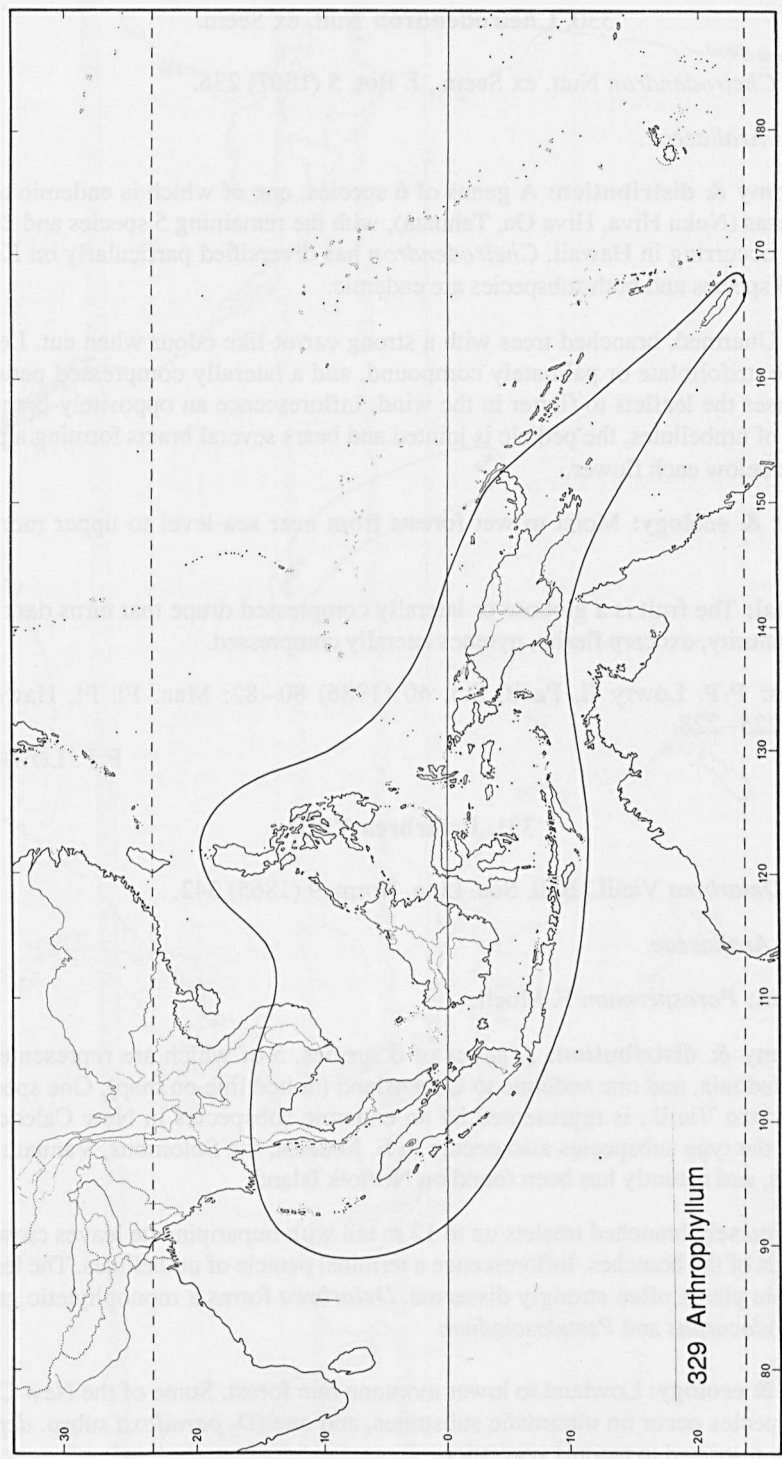
Habit: Unarmed, sparingly branched trees or shrubs. Leaves on vegetative shoots imparipinnate, those of the fertile shoots often entire. Inflorescence a compound umbel usually borne on specialized terminal branches.

Habitat & ecology: Lowland and montane rain forests.

Dispersal: Fruits ovoid or round, up to 1 cm diameter, exocarp leathery, endocarp cartilaginous, mature fruit turning purple to nearly black.

Sources: W.R. Philipson, Gard. Bull. Sing. 30 (1977) 299–312; Fl. Males. I, 9 (1979) 53–67; P.P. Lowry II, Bull. Mus. Nat. Hist., Paris, sér. 4, sect. B, Adansoniana 11 (1989) 144–145.

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330. *Cheirodendron* Nutt. ex Seem.

Name: *Cheirodendron* Nutt. ex Seem., J. Bot. 5 (1867) 236.

Family: *Araliaceae*.

Taxonomy & distribution: A genus of 6 species, one of which is endemic to the Marquesas (Nuku Hiva, Hiva Oa, Tahuata), with the remaining 5 species and 2 subspecies occurring in Hawaii. *Cheirodendron* has diversified particularly on Kauai, where 3 species and both subspecies are endemic.

Habit: Unarmed, branched trees with a strong carrot-like odour when cut. Leaves opposite, trifoliolate or palmately compound, and a laterally compressed petiolule that causes the leaflets to flutter in the wind. Inflorescence an oppositely-branched panicle of umbellules, the pedicle is jointed and bears several bracts forming a pseudocalyx below each flower.

Habitat & ecology: Moist to wet forests from near sea-level to upper montane areas.

Dispersal: The fruit is a globose or laterally compressed drupe that turns dark purple at maturity, exocarp fleshy, pyrenes laterally compressed.

Sources: P.P. Lowry II, Pacif. Sci. 40 (1986) 80–82; Man. Fl. Pl. Hawaii 1 (1990) 225–228.

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331. *Delarbrea* Vieill.

Name: *Delarbrea* Vieill., Bull. Soc. Linn. Norm. 9 (1865) 342.

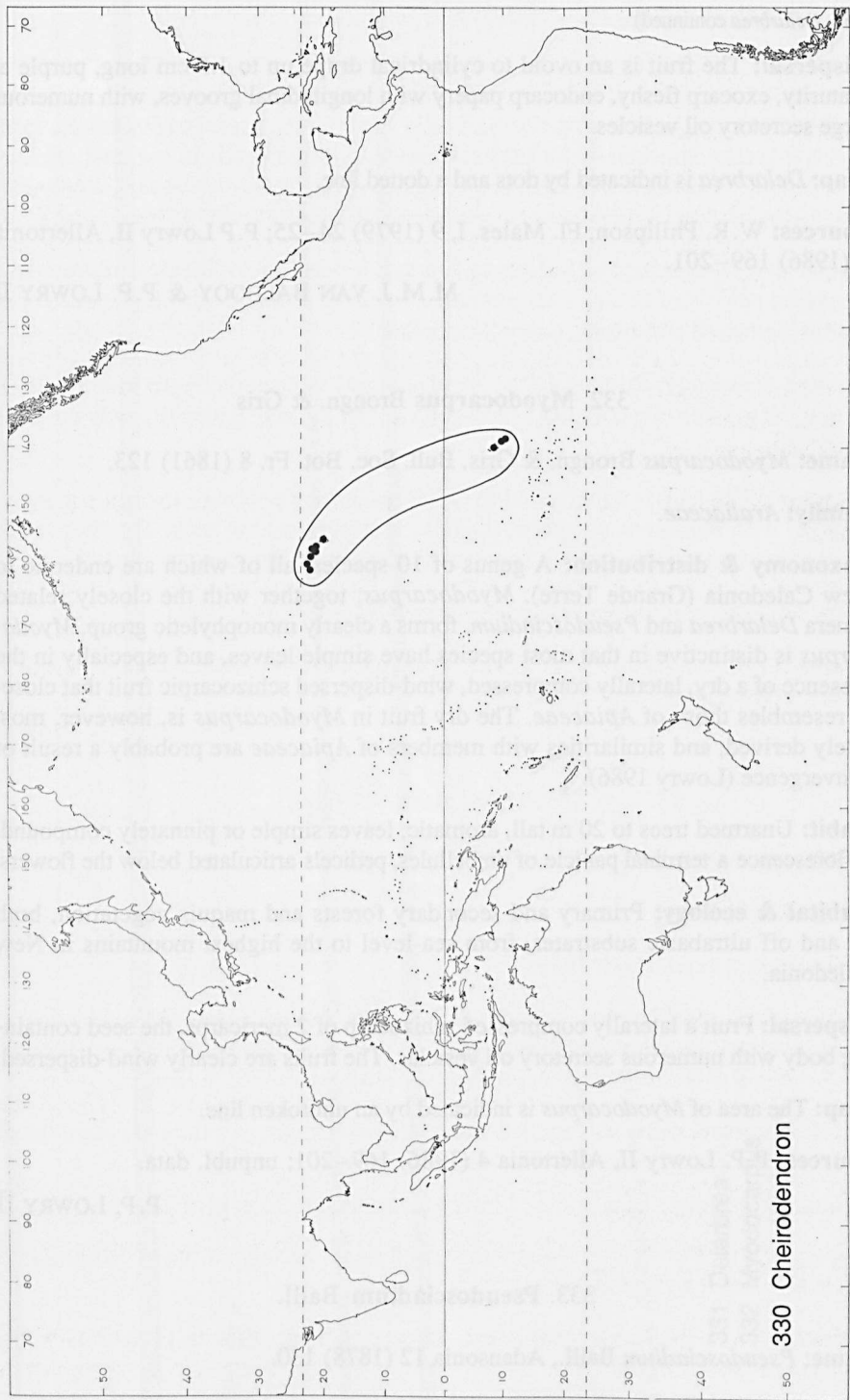
Family: *Araliaceae*.

Synonym: *Porospermum* F. Muell.

Taxonomy & distribution: A genus of 6 species, 5 of which are represented in New Caledonia, and one endemic to Queensland (dotted line on map). One species, *D. paradoxa* Vieill., is represented by an endemic subspecies in New Caledonia, whereas the type subspecies also occurs in E. Malesia, the Solomons, Vanuatu, the Loyalties, and recently has been found on Norfolk Island.

Habit: Sparsely branched treelets up to 12 m tall with imparipinnate leaves crowded at the ends of the branches. Inflorescence a terminal panicle of umbellules. The leaves in juvenile plants often strongly dissected. *Delarbrea* forms a monophyletic group with *Myodocarpus* and *Pseudosciadium*.

Habitat & ecology: Lowland to lower montane rain forest. Some of the New Caledonian species occur on ultramafic substrates, and one (*D. paradoxa* subsp. *depauperata*) is restricted to maquis vegetation.



(331. *Delarbrea* continued)

Dispersal: The fruit is an ovoid to cylindrical drupe up to 1.5 cm long, purple at maturity, exocarp fleshy, endocarp papery with longitudinal grooves, with numerous large secretory oil vesicles.

Map: *Delarbrea* is indicated by dots and a dotted line.

Sources: W.R. Philipson, Fl. Males. I, 9 (1979) 24–25; P.P Lowry II, Allertonia 4 (1986) 169–201.

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332. *Myodocarpus* Brongn. & Gris

Name: *Myodocarpus* Brongn. & Gris, Bull. Soc. Bot. Fr. 8 (1861) 123.

Family: *Araliaceae*.

Taxonomy & distribution: A genus of 10 species, all of which are endemic to New Caledonia (Grande Terre). *Myodocarpus*, together with the closely related genera *Delarbrea* and *Pseudosciadium*, forms a clearly monophyletic group. *Myodocarpus* is distinctive in that most species have simple leaves, and especially in the presence of a dry, laterally compressed, wind-dispersed schizocarpic fruit that closely resembles those of *Apiaceae*. The dry fruit in *Myodocarpus* is, however, most likely derived, and similarities with members of *Apiaceae* are probably a result of convergence (Lowry 1986).

Habit: Unarmed trees to 20 m tall, aromatic, leaves simple or pinnately compound. Inflorescence a terminal panicle of umbellules, pedicels articulated below the flowers.

Habitat & ecology: Primary and secondary forests and maquis vegetation, both on and off ultrabasic substrates, from sea-level to the highest mountains in New Caledonia.

Dispersal: Fruit a laterally compressed schizocarp of 2 mericarps, the seed containing body with numerous secretory oil vesicles. The fruits are clearly wind-dispersed.

Map: The area of *Myodocarpus* is indicated by an unbroken line.

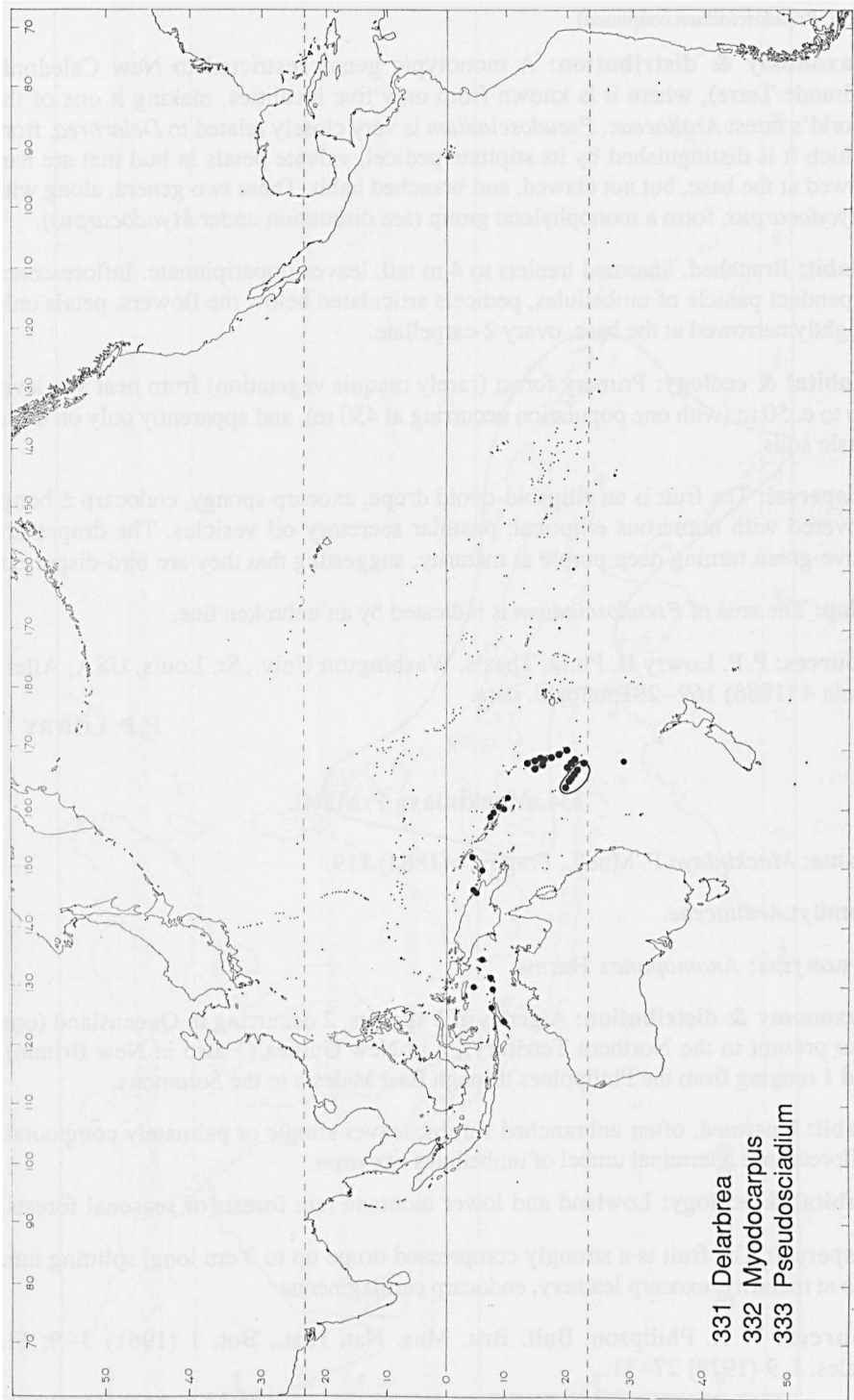
Sources: P.P. Lowry II, Allertonia 4 (1986) 169–201; unpubl. data.

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333. *Pseudosciadium* Baill.

Name: *Pseudosciadium* Baill., Adansonia 12 (1878) 130.

Family: *Araliaceae*.



(333. *Pseudosciadium* continued)

Taxonomy & distribution: A monotypic genus restricted to New Caledonia (Grande Terre), where it is known from only five localities, making it one of the world's rarest *Araliaceae*. *Pseudosciadium* is very closely related to *Delarbrea*, from which it is distinguished by its stipitate pedicel, valvate petals in bud that are narrowed at the base, but not clawed, and branched habit. These two genera, along with *Myodocarpus*, form a monophyletic group (see discussion under *Myodocarpus*).

Habit: Branched, unarmed treelets to 4 m tall, leaves imparipinnate. Inflorescence a pendant panicle of umbellules, pedicels articulated below the flowers, petals only slightly narrowed at the base, ovary 2-carpellate.

Habitat & ecology: Primary forest (rarely maquis vegetation) from near sea-level up to c. 50 m (with one population occurring at 450 m), and apparently only on ultra-basic soils.

Dispersal: The fruit is an ellipsoid-ovoid drupe, exocarp spongy, endocarp \pm bony, covered with numerous elliptical, pustular secretory oil vesicles. The drupes are olive-green turning deep purple at maturity, suggesting that they are bird-dispersed.

Map: The area of *Pseudosciadium* is indicated by an unbroken line.

Sources: P.P. Lowry II, Ph.D. Thesis, Washington Univ., St. Louis, USA; Allertonia 4 (1986) 169–201; unpubl. data.

P.P. LOWRY II

334. *Mackinlaya* F. Muell.

Name: *Mackinlaya* F. Muell., Fragm. 4 (1864) 119.

Family: *Araliaceae*.

Synonyms: *Anomopanax* Harms.

Taxonomy & distribution: A genus of 5 species, 2 occurring in Queensland (one also present in the Northern Territory), 2 in New Guinea (1 also in New Britain), and 1 ranging from the Philippines through East Malesia to the Solomons.

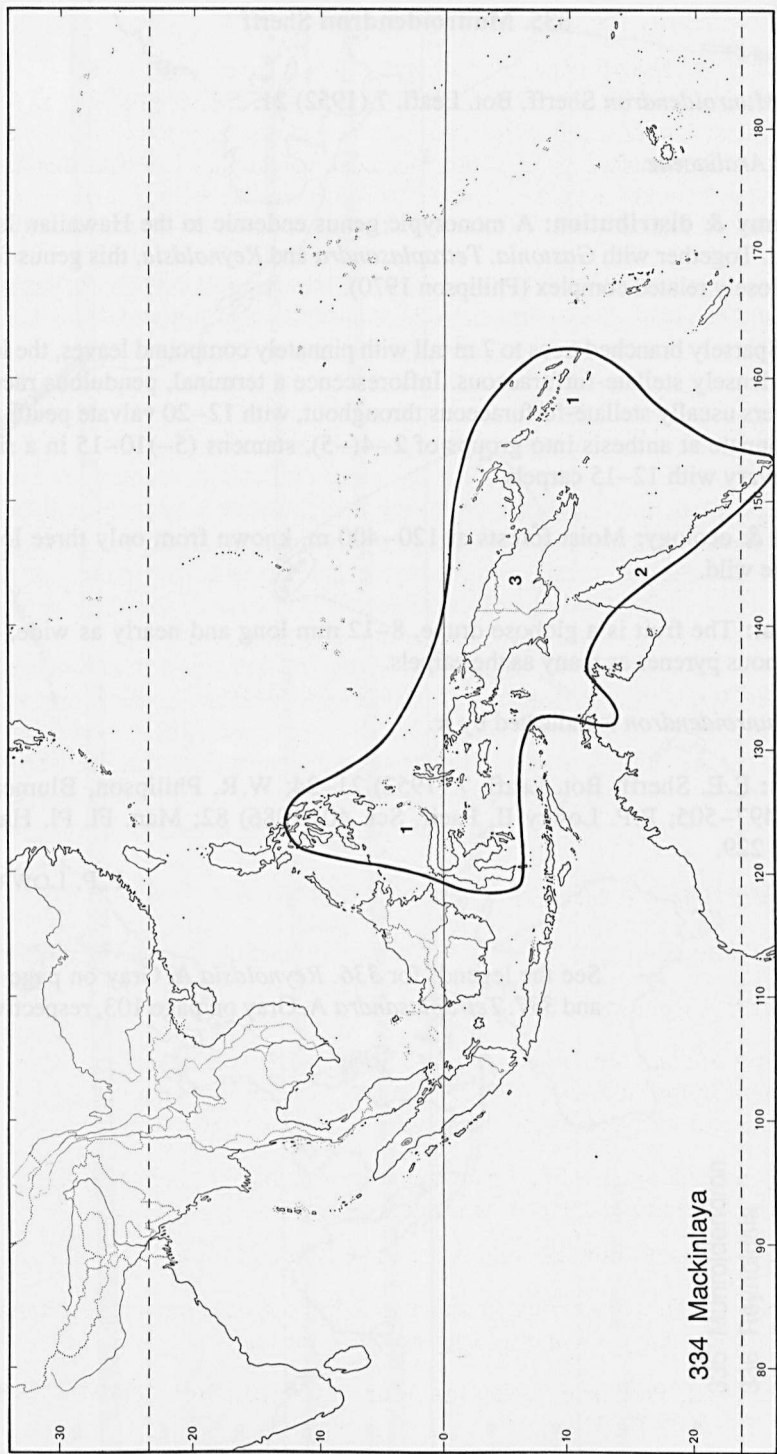
Habit: Unarmed, often unbranched shrubs, leaves simple or palmately compound. Inflorescence a terminal umbel of umbellules or cymes.

Habitat & ecology: Lowland and lower montane rain forests or seasonal forests.

Dispersal: The fruit is a strongly compressed drupe up to 3 cm long, splitting into two at maturity, exocarp leathery, endocarp cartilagineous.

Sources: W.R. Philipson, Bull. Brit. Mus. Nat. Hist., Bot. 1 (1961) 3–9; Fl. Males. I, 9 (1979) 27–31.

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335. *Munroidendron* Sherff

Name: *Munroidendron* Sherff, Bot. Leafl. 7 (1952) 21.

Family: *Araliaceae*.

Taxonomy & distribution: A monotypic genus endemic to the Hawaiian Island of Kauai. Together with *Gastonia*, *Tetraplasandra* and *Reynoldsia*, this genus forms a very closely related complex (Philipson 1970).

Habit: Sparsely branched trees to 7 m tall with pinnately compound leaves, the lower surface densely stellate-furfuraceous. Inflorescence a terminal, pendulous raceme, the flowers usually stellate-furfuraceous throughout, with 12–20 valvate petals variously connate at anthesis into groups of 2–4(–5), stamens (5–)10–15 in a single whorl, ovary with 12–15 carpels.

Habitat & ecology: Moist forests at 120–400 m, known from only three localities in the wild.

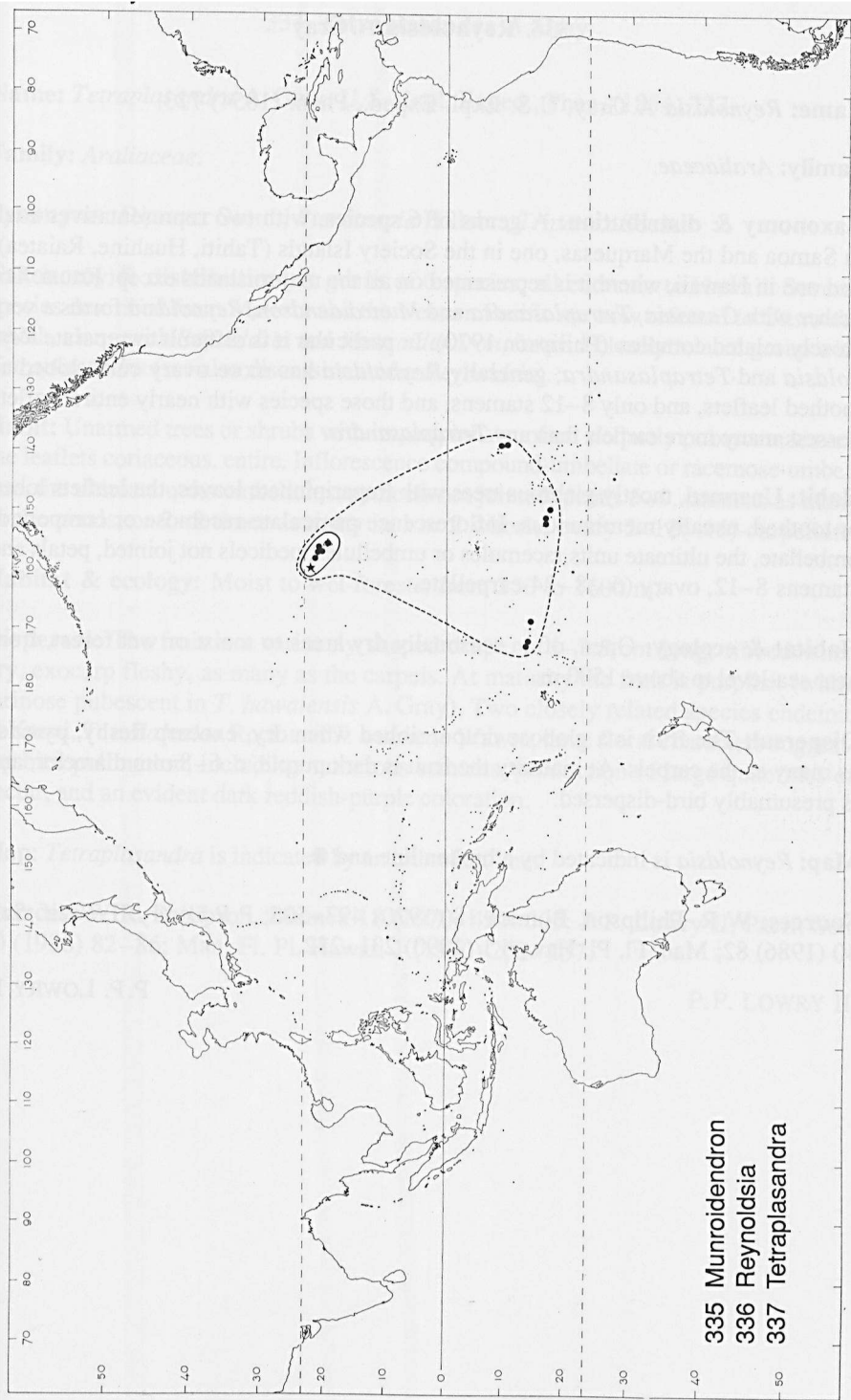
Dispersal: The fruit is a globose drupe, 8–12 mm long and nearly as wide, with cartilaginous pyrenes as many as the carpels.

Map: *Munroidendron* is indicated by ★.

Sources: E.E. Sherff, Bot. Leafl. 7 (1952) 21–24; W.R. Philipson, *Blumea* 18 (1970) 497–505; P.P. Lowry II, *Pacif. Sci.* 40 (1986) 82; *Man. Fl. Pl. Hawaii* 1 (1990) 229.

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See the legends for 336. *Reynoldsia* A. Gray on page 102, and 337. *Tetraplasandra* A. Gray on page 103, respectively.



336. *Reynoldsia* A. Gray

Name: *Reynoldsia* A. Gray, U.S. Expl. Exped., Phan. (1854) 723.

Family: *Araliaceae*.

Taxonomy & distribution: A genus of 6 species, with two representatives each in Samoa and the Marquesas, one in the Society Islands (Tahiti, Huahine, Raiatea), and one in Hawaii, where it is represented on all the major islands except Kauai. Together with *Gastonia*, *Tetraplasandra* and *Munroidendron*, *Reynoldsia* forms a very closely related complex (Philipson 1970). In particular it is difficult to separate *Reynoldsia* and *Tetraplasandra*; generally *Reynoldsia* has more ovary cells, lobed or toothed leaflets, and only 8–12 stamens, and those species with nearly entire leaflets possess many more carpels than any *Tetraplasandra*.

Habit: Unarmed, mostly glabrous trees with imparipinnate leaves, the leaflets lobed or toothed, usually membranous. Inflorescence paniculate-racemose or compound-umbellate, the ultimate units racemules or umbellules, pedicels not jointed, petals and stamens 8–12, ovary (6–)8–24-carpellate.

Habitat & ecology: Open, often seasonally dry areas to moist or wet forest, from near sea-level to above 1500 m.

Dispersal: The fruit is a globose drupe, ribbed when dry, exocarp fleshy, pyrenes as many as the carpels. At maturity the fruit is dark purple, c. 6–8 mm diameter, and is presumably bird-dispersed.

Map: *Reynoldsia* is indicated by a broken line and ●.

Sources: W.R. Philipson, *Blumea* 18 (1970) 497–505; P.P. Lowry II, *Pacif. Sci.* 40 (1986) 82; *Man. Fl. Pl. Hawaii* 1 (1990) 231–232.

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337. *Tetraplasandra* A. Gray

Name: *Tetraplasandra* A. Gray, U.S. Expl. Exped., Phan. (1854) 727.

Family: *Araliaceae*.

Synonyms: *Dipanax* Seem., *Pterotropia* Hillebr., *Tripanax* Seem.

Taxonomy & distribution: A genus of 6 species, all endemic to Hawaii. Several species described from Malesia and the western Pacific are now referred to *Gastonia*, which, along with *Reynoldsia* and *Munroidendron*, forms a closely related group with *Tetraplasandra* (see also discussion under *Reynoldsia*).

Habit: Unarmed trees or shrubs with imparipinnate, often stellately pubescent leaves, the leaflets coriaceous, entire. Inflorescence compound-umbellate or racemose-umbellate, the ultimate units umbellules, pedicels not jointed, petals 5–9, stamens as many as the petals, or 2–8 times as many in 1 or 2 whorls, ovary 2–12(–16)-carpellate.

Habitat & ecology: Moist to wet forests, from 250 to 1600 m.

Dispersal: The fruit is a variously shaped drupe, c. 1–2.5 cm long, ribbed when dry, exocarp fleshy, as many as the carpels. At maturity the fruit is purplish (white farinose pubescent in *T. hawaiiensis* A. Gray). Two closely related species endemic to Kauai, *T. waialealae* Rock and *T. waimeae* Wawra, have floral characters suggesting bird pollination, including numerous stamens, production of large quantities of nectar, and an evident dark reddish-purple coloration.

Map: *Tetraplasandra* is indicated by an unbroken line.

Sources: W.R. Philipson, *Blumea* 18 (1970) 497–505; P.P. Lowry II, *Pacif. Sci.* 40 (1986) 82–86; *Man. Fl. Pl. Hawaii* 1 (1990) 232–237.

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338. *Polyscias* J.R. & G. Forster

Name: *Polyscias* J.R. & G. Forster, Gen. Pl. (1776) 63.

Family: *Araliaceae*.

Synonyms: *Nothopanax* Miq., *Tieghemopanax* R. Viguier, *Bonnierella* R. Viguier.

Taxonomy & distribution: A genus of c. 150 species occurring throughout much of the Old World tropics, with principal centres of diversity in the Pacific Islands (especially New Caledonia), Malesia, and Madagascar. *Polyscias* reaches its eastern limit on Tahiti and Raiatea, and extends westward across the Pacific and Malesia to Africa, but is not represented in continental Asia or the Americas, except by cultivated species.

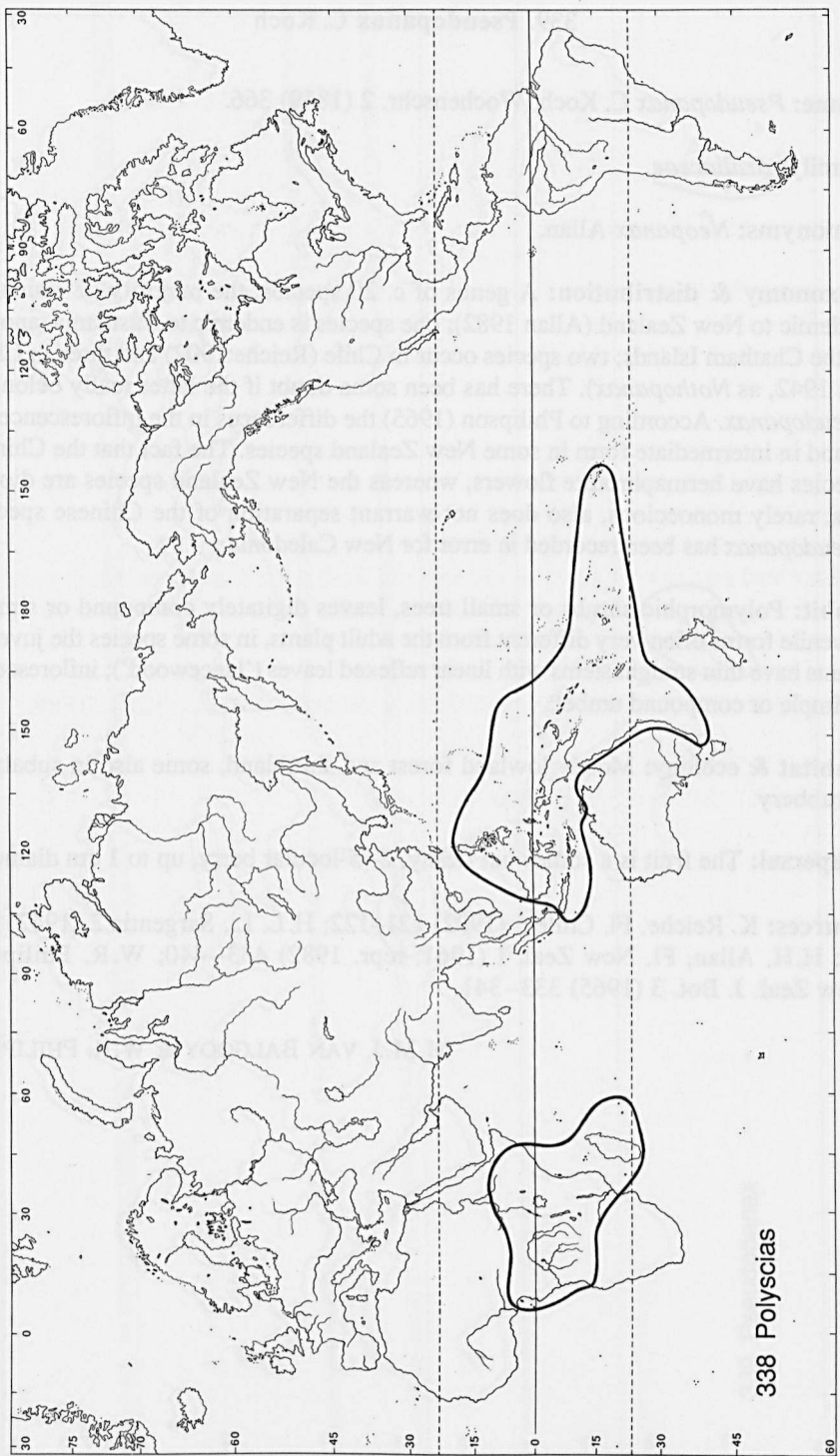
Habit: Unarmed trees or shrubs with imparipinnate (rarely unifoliolate or 2- or 3-pinnate) leaves. Inflorescence a panicle or corymb of umbellules, capitula or racemes, the pedicel articulated.

Habitat & ecology: Lowland to montane forests, both primary and secondary. Numerous segregate genera have been recognized in the past on the basis of rather minor features or in an artificial manner using characters that have evolved independently in separate lineages.

Dispersal: The fruit is a drupe, up to 1 cm long, crowned by a persistent calyx rim and the styles or stylopodium, and usually maturing to dark blue purple, suggesting dispersal by birds.

Sources: W.R. Philipson, Fl. Males. I, 9 (1979) 72–86; A.C. Smith, Nova 3 (1985) 634–642; P.P. Lowry II, Bull. Mus. Natl. Hist., Paris, sér. 4, sect. B, Adansonia 11 (1989) 137–152.

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339. *Pseudopanax* C. Koch

Name: *Pseudopanax* C. Koch, Wochenschr. 2 (1859) 366.

Family: *Araliaceae*.

Synonyms: *Neopanax* Allan.

Taxonomy & distribution: A genus of c. 20 species, the majority of which are endemic to New Zealand (Allan 1982); one species is endemic to Tasmania, another to the Chatham Islands; two species occur in Chile (Reiche 1902) and three in China (Li 1942, as *Nothopanax*). There has been some doubt if the latter really belong to *Pseudopanax*. According to Philipson (1965) the differences in the inflorescence are found in intermediate form in some New Zealand species. The fact that the Chinese species have hermaphrodite flowers, whereas the New Zealand species are dioecious, rarely monoecious, also does not warrant separation of the Chinese species. *Pseudopanax* has been recorded in error for New Caledonia.

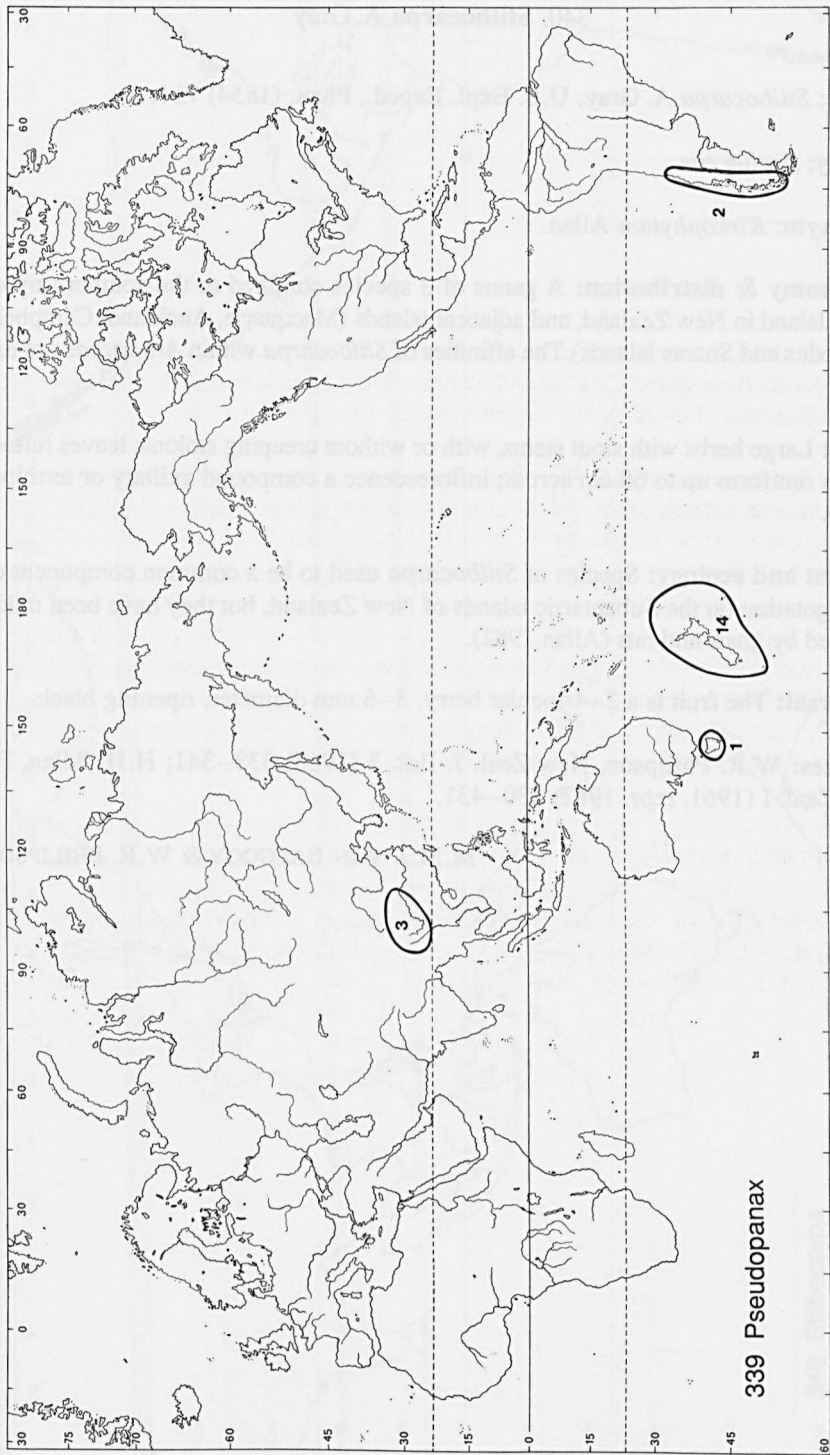
Habit: Polymorphic shrubs or small trees, leaves digitately compound or simple. Juvenile forms often very different from the adult plants, in some species the juvenile plants have thin straight stems with linear reflexed leaves ('lancewood'); inflorescence a simple or compound umbel.

Habitat & ecology: Mostly lowland forest and shrubland, some also in subalpine shrubbery.

Dispersal: The fruit is a somewhat fleshy, 2–5-locular berry, up to 1 cm diameter.

Sources: K. Reiche, Fl. Chile 3 (1902) 121–122; H.L. Li, Sargentia 2 (1942) 65–69; H.H. Allan, Fl. New Zeal. I (1961, repr. 1982) 433–440; W.R. Philipson, New Zeal. J. Bot. 3 (1965) 333–341.

M.M.J. VAN BALGOOY & W.R. PHILIPSON



340. *Stilbocarpa* A. Gray

Name: *Stilbocarpa* A. Gray, U.S. Expl. Exped., Phan. (1854) 714.

Family: *Araliaceae*.

Synonym: *Kirkophytum* Allan.

Taxonomy & distribution: A genus of 3 species confined to the southern tip of South Island in New Zealand, and adjacent islands (Macquarie, Auckland, Campbell, Antipodes and Snares Islands). The affinities of *Stilbocarpa* within *Araliaceae* are unclear.

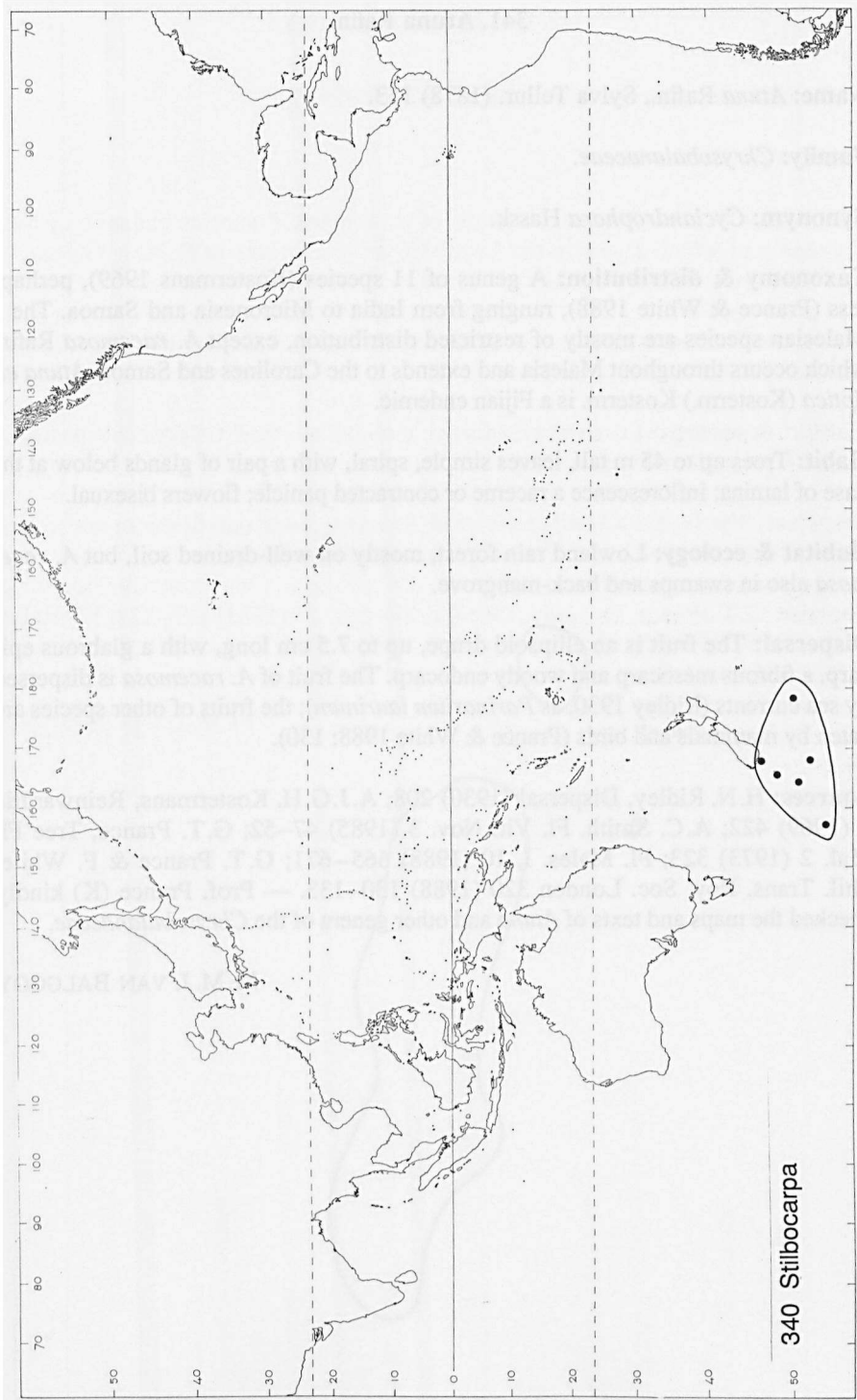
Habit: Large herbs with stout stems, with or without creeping stolons; leaves tufted, lamina reniform up to 60 cm across; inflorescence a compound axillary or terminal umbel.

Habitat and ecology: Species of *Stilbocarpa* used to be a common component of the vegetation on the Subantarctic islands of New Zealand, but they have been much depleted by goats and rats (Allan 1982).

Dispersal: The fruit is a 2–4-locular berry, 3–6 mm diameter, ripening black.

Sources: W.R. Philipson, *New Zeal. J. Bot.* 3 (1965) 333–341; H.H. Allan, *Fl. New Zeal. I* (1961, repr. 1982) 430–431.

M.M.J. VAN BALGOOY & W.R. PHILIPSON



341. *Atuna* Rafin.

Name: *Atuna* Rafin., Sylva Tellur. (1878) 153.

Family: *Chrysobalanaceae*.

Synonym: *Cyclandrophora* Hassk.

Taxonomy & distribution: A genus of 11 species (Kostermans 1969), perhaps less (Prance & White 1988), ranging from India to Micronesia and Samoa. The 5 Malesian species are mostly of restricted distribution, except *A. racemosa* Rafin. which occurs throughout Malesia and extends to the Carolines and Samoa. *Atuna elliptica* (Kosterm.) Kosterm. is a Fijian endemic.

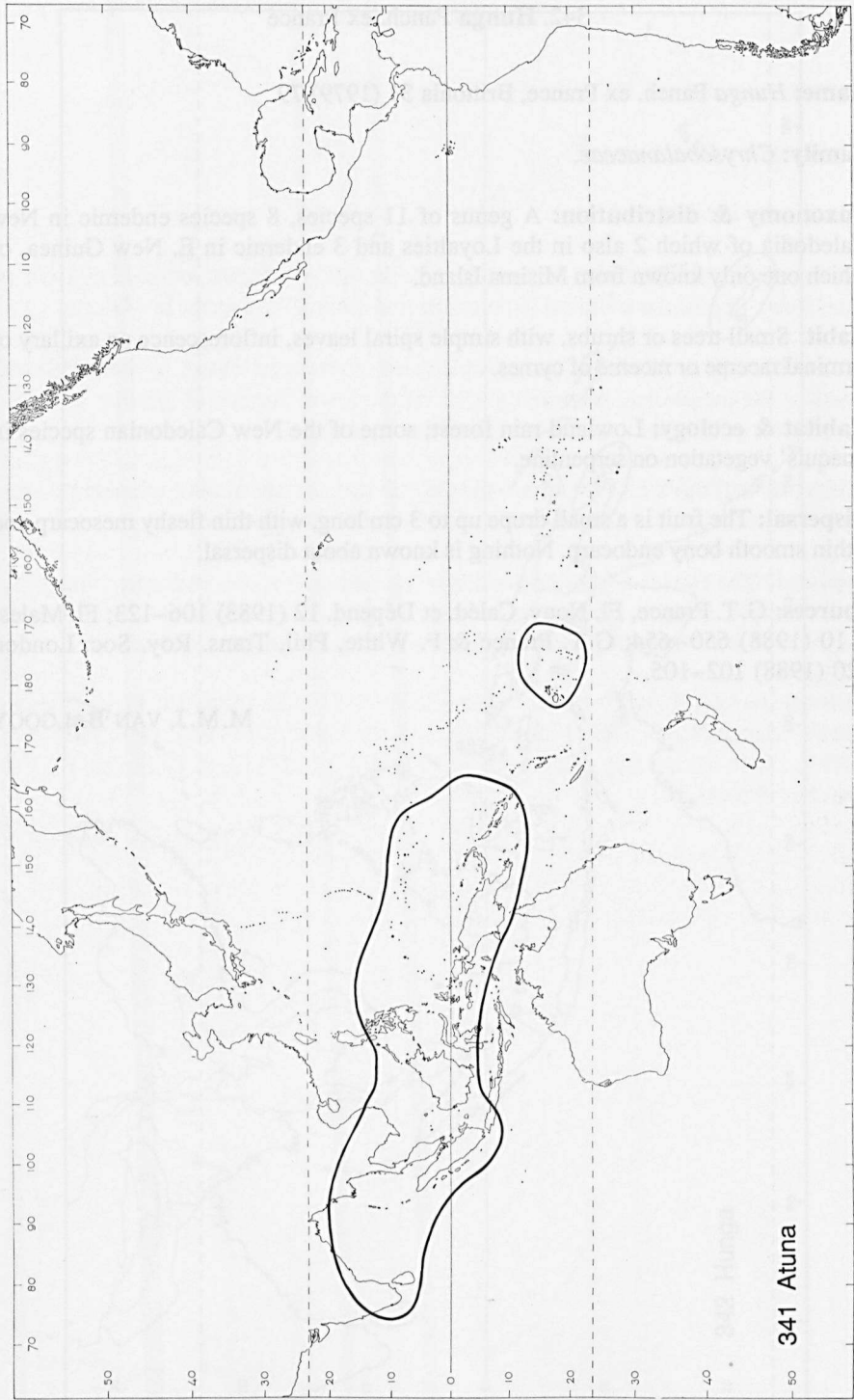
Habit: Trees up to 45 m tall, leaves simple, spiral, with a pair of glands below at the base of lamina; inflorescence a raceme or contracted panicle; flowers bisexual.

Habitat & ecology: Lowland rain forest, mostly on well-drained soil, but *A. racemosa* also in swamps and back-mangrove.

Dispersal: The fruit is an ellipsoid drupe, up to 7.5 cm long, with a glabrous epicarp, a fibrous mesocarp and woody endocarp. The fruit of *A. racemosa* is dispersed by sea currents (Ridley 1930, as *Parinarium laurinum*); the fruits of other species are eaten by mammals and birds (Prance & White 1988: 130).

Sources: H.N. Ridley, Dispersal (1930) 208; A.J.G.H. Kostermans, Reinwardtia 7 (1969) 422; A.C. Smith, Fl. Vit. Nov. 3 (1985) 47–52; G.T. Prance, Tree Fl. Mal. 2 (1973) 323; Fl. Males. I, 10 (1988) 665–671; G.T. Prance & F. White, Phil. Trans. Roy. Soc. London 320 (1988) 130–133. — Prof. Prance (K) kindly checked the maps and texts of *Atuna* and other genera of the *Chrysobalanaceae*.

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342. *Hunga* Panch. ex Prance

Name: *Hunga* Panch. ex Prance, Brittonia 31 (1979) 79.

Family: *Chrysobalanaceae*.

Taxonomy & distribution: A genus of 11 species, 8 species endemic in New Caledonia of which 2 also in the Loyalties and 3 endemic in E. New Guinea, of which one only known from Misima Island.

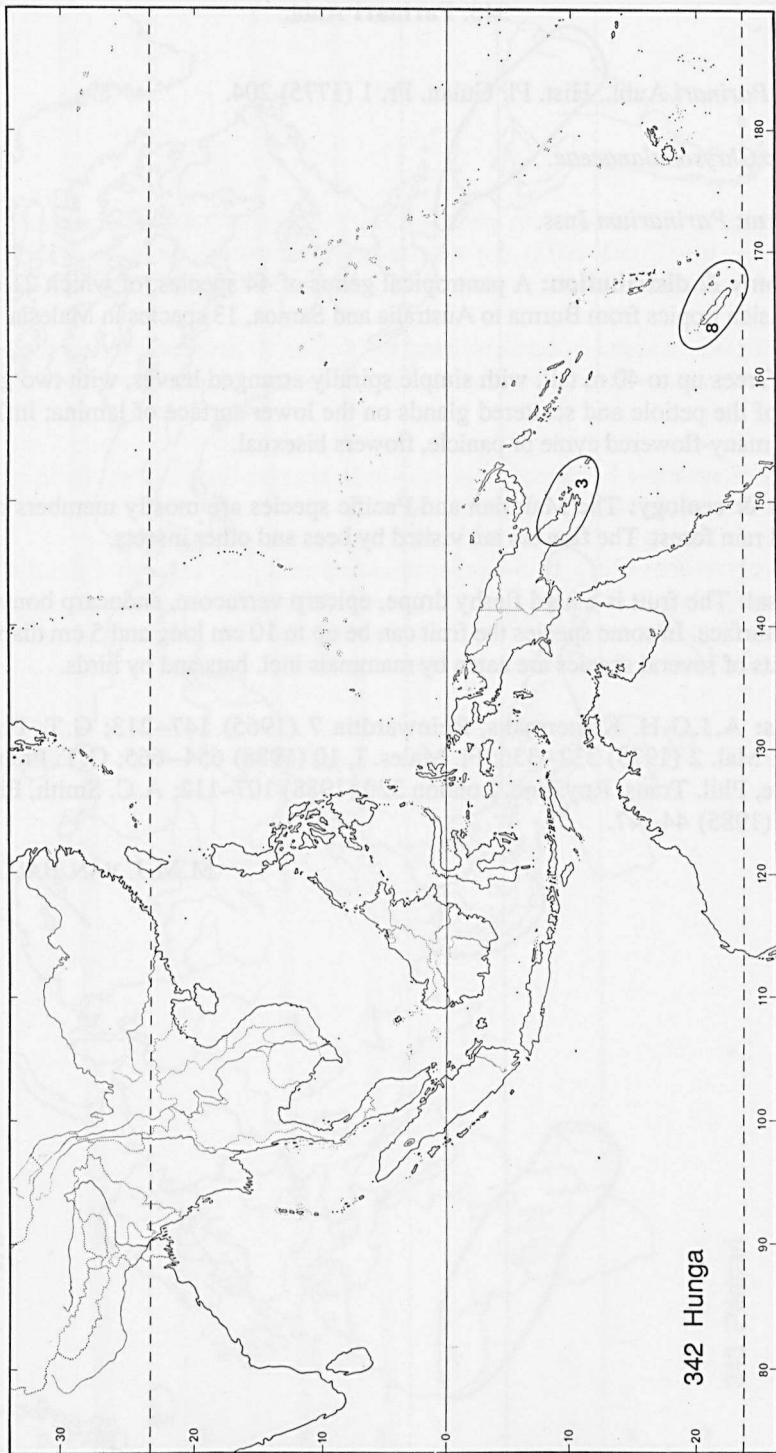
Habit: Small trees or shrubs, with simple spiral leaves, inflorescence an axillary or terminal raceme or raceme of cymes.

Habitat & ecology: Lowland rain forest; some of the New Caledonian species in 'maquis' vegetation on serpentine.

Dispersal: The fruit is a small drupe up to 3 cm long, with thin fleshy mesocarp and a thin smooth bony endocarp. Nothing is known about dispersal.

Sources: G.T. Prance, Fl. Nouv. Caléd. et Dépend. 12 (1983) 106–123; Fl. Males. I, 10 (1988) 650–654; G.T. Prance & F. White, Phil. Trans. Roy. Soc. London 320 (1988) 102–105.

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343. *Parinari* Aubl.

Name: *Parinari* Aubl., Hist. Pl. Guian. Fr. 1 (1775) 204.

Family: *Chrysobalanaceae*.

Synonym: *Parinarium* Juss.

Taxonomy & distribution: A pantropical genus of 44 species, of which 21 occur in the Asian tropics from Burma to Australia and Samoa, 13 species in Malesia.

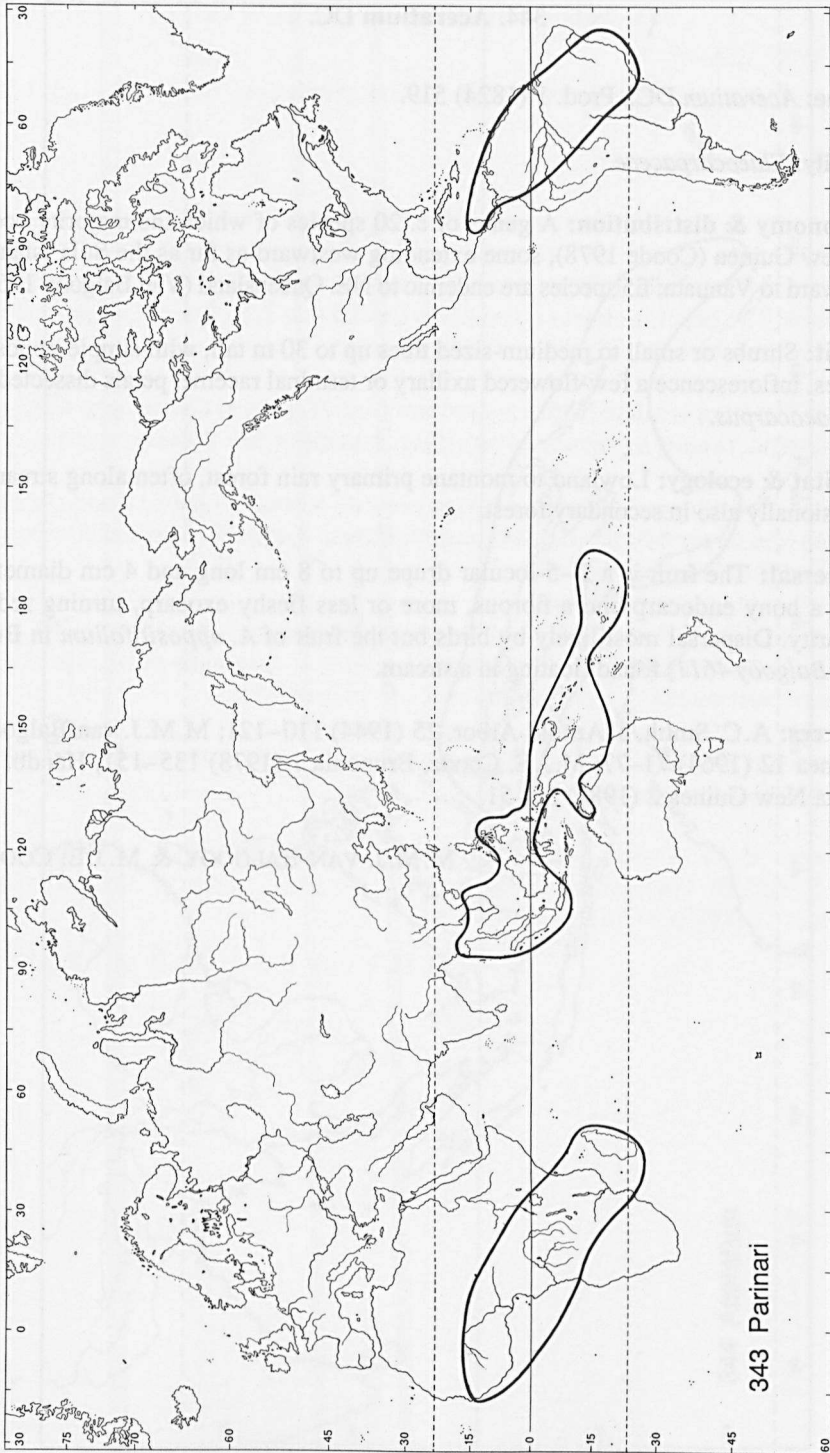
Habit: Trees up to 40 m tall, with simple spirally arranged leaves, with two glands on top of the petiole and scattered glands on the lower surface of lamina; inflorescence a many-flowered cyme or panicle, flowers bisexual.

Habitat & ecology: The Malesian and Pacific species are mostly members of the lowland rain forest. The flowers are visited by bees and other insects.

Dispersal: The fruit is a hard fleshy drupe, epicarp verrucose, endocarp bony with fibrous surface. In some species the fruit can be up to 10 cm long and 5 cm diameter. The fruits of several species are eaten by mammals incl. bats and by birds.

Sources: A.J.G.H. Kostermans, *Reinwardtia* 7 (1965) 147–213; G.T. Prance, *Tree Fl. Mal.* 2 (1973) 332–336; *Fl. Males.* I, 10 (1988) 654–665; G.T. Prance & F. White, *Phil. Trans. Roy. Soc. London* 320 (1988) 107–112; A.C. Smith, *Fl. Vit. Nov.* 3 (1985) 44–47.

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344. *Aceratium* DC.

Name: *Aceratium* DC., Prod. 1 (1824) 519.

Family: *Elaeocarpaceae*.

Taxonomy & distribution: A genus of c. 20 species of which the majority occur in New Guinea (Coode 1978), some extending westward as far as the Sula Islands, eastward to Vanuatu; five species are endemic to NE. Queensland (Van Balgooy 1964).

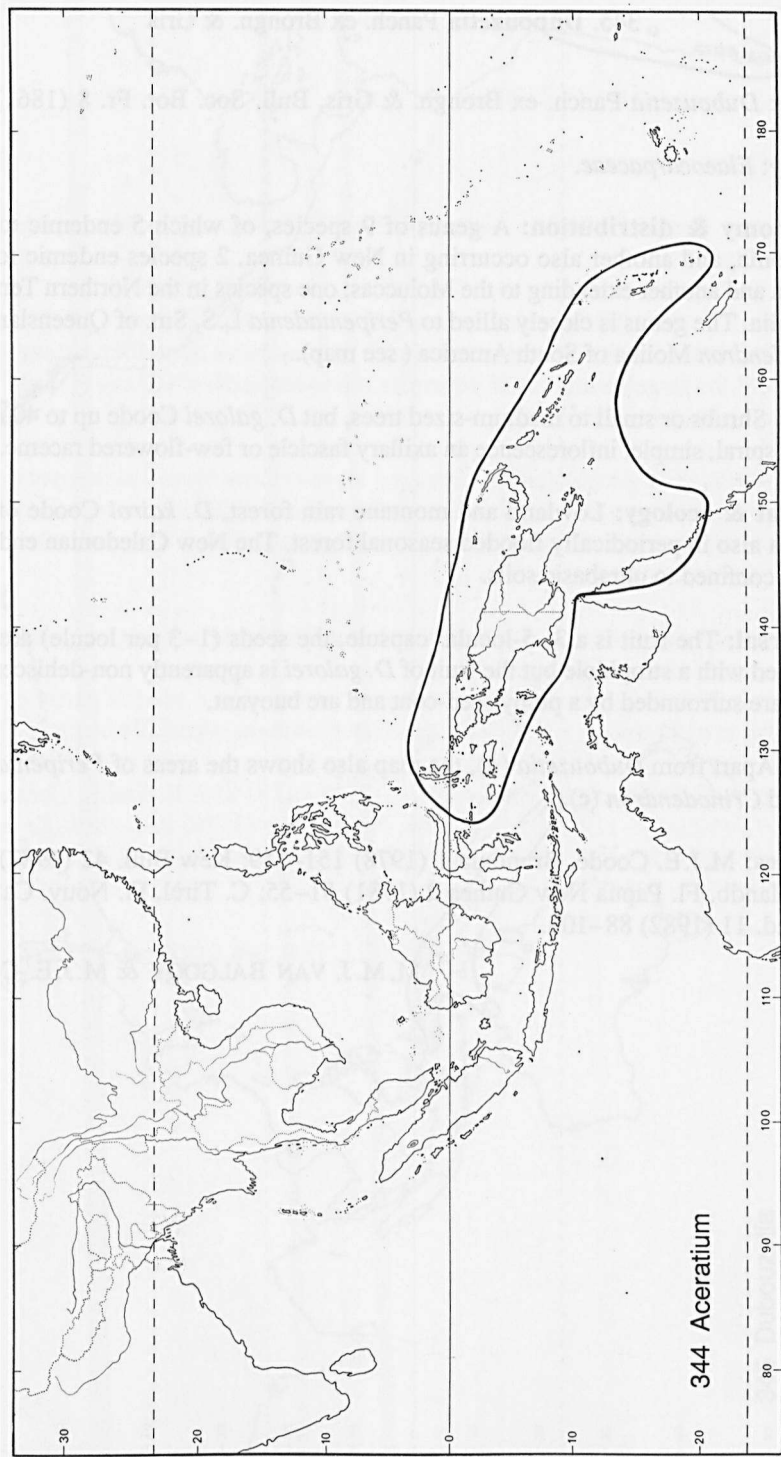
Habit: Shrubs or small to medium-sized trees up to 30 m tall, with simple opposite leaves, inflorescence a few-flowered axillary or terminal raceme, petals dissected as in *Elaeocarpus*.

Habitat & ecology: Lowland to montane primary rain forest, often along streams, occasionally also in secondary forest.

Dispersal: The fruit is a 2–5-locular drupe up to 8 cm long and 4 cm diameter, with a bony endocarp and a fibrous, more or less fleshy exocarp, turning red at maturity. Dispersal most likely by birds but the fruit of *A. oppositifolium* in Buru (*van Balgooy 4611*) found floating in a stream.

Sources: A.C. Smith, J. Arnold Arbor. 25 (1944) 110–121; M.M.J. van Balgooy, Blumea 12 (1964) 71–77; M.J.E. Coode, Brunonia 1 (1978) 135–151; Handb. Fl. Papua New Guinea 2 (1981) 39–51.

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345. *Dubouzetia* Panch. ex Brongn. & Gris

Name: *Dubouzetia* Panch. ex Brongn. & Gris, Bull. Soc. Bot. Fr. 8 (1861) 199.

Family: *Elaeocarpaceae*.

Taxonomy & distribution: A genus of 9 species, of which 5 endemic to New Caledonia, and another also occurring in New Guinea, 2 species endemic to New Guinea and another extending to the Moluccas; one species in the Northern Territory, Australia. The genus is closely allied to *Peripentadenia* L. S. Sm. of Queensland and *Crinodendron* Molina of South America (see map).

Habit: Shrubs or small to medium-sized trees, but *D. galorei* Coode up to 40 m tall; leaves spiral, simple; inflorescence an axillary fascicle or few-flowered raceme.

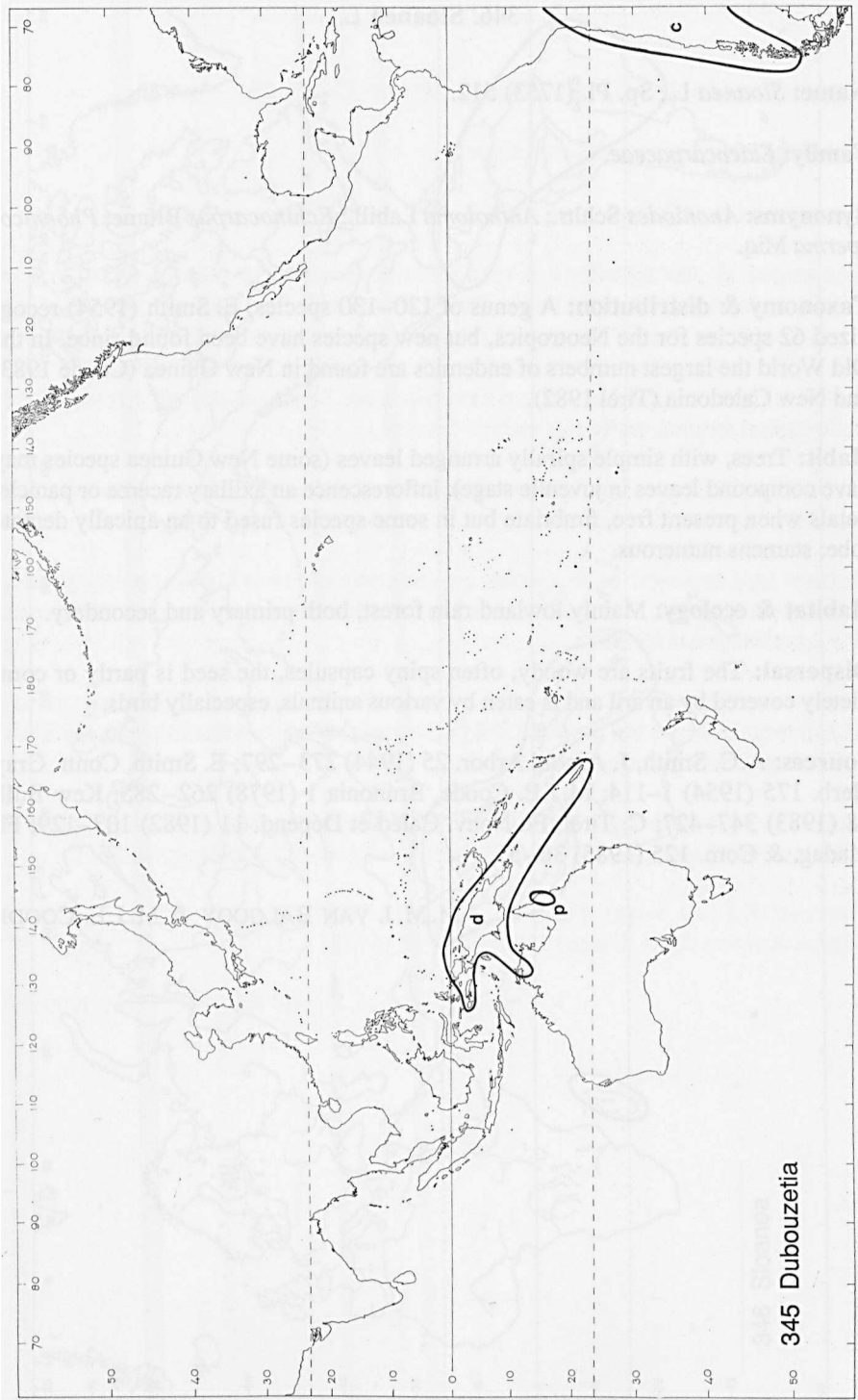
Habitat & ecology: Lowland and montane rain forest, *D. kairoi* Coode of New Guinea also in periodically flooded seasonal forest. The New Caledonian endemics are all confined to ultrabasic soils.

Dispersal: The fruit is a 3–5-locular capsule, the seeds (1–3 per locule) are often provided with a strophiole but the fruit of *D. galorei* is apparently non-dehiscent; the seeds are surrounded by a pulpy seed-coat and are buoyant.

Map: Apart from *Dubouzetia* (d), the map also shows the areas of *Peripentadenia* (p) and *Crinodendron* (c).

Sources: M.J.E. Coode, *Brunonia* 1 (1978) 151–159; *Kew Bull.* 42 (1987) 777–814; *Handb. Fl. Papua New Guinea* 2 (1981) 51–55; C. Tirèl, *Fl. Nouv. Caléd. et Dépend.* 11 (1982) 88–103.

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346. *Sloanea* L.

Name: *Sloanea* L., Sp. Pl. (1753) 512.

Family: *Elaeocarpaceae*.

Synonyms: *Anoniodes* Schltr.; *Antholoma* Labill.; *Echinocarpus* Blume; *Phoenicosperma* Miq.

Taxonomy & distribution: A genus of 120–130 species, E. Smith (1954) recognized 62 species for the Neotropics, but new species have been found since. In the Old World the largest numbers of endemics are found in New Guinea (Coode 1983) and New Caledonia (Tirèl 1982).

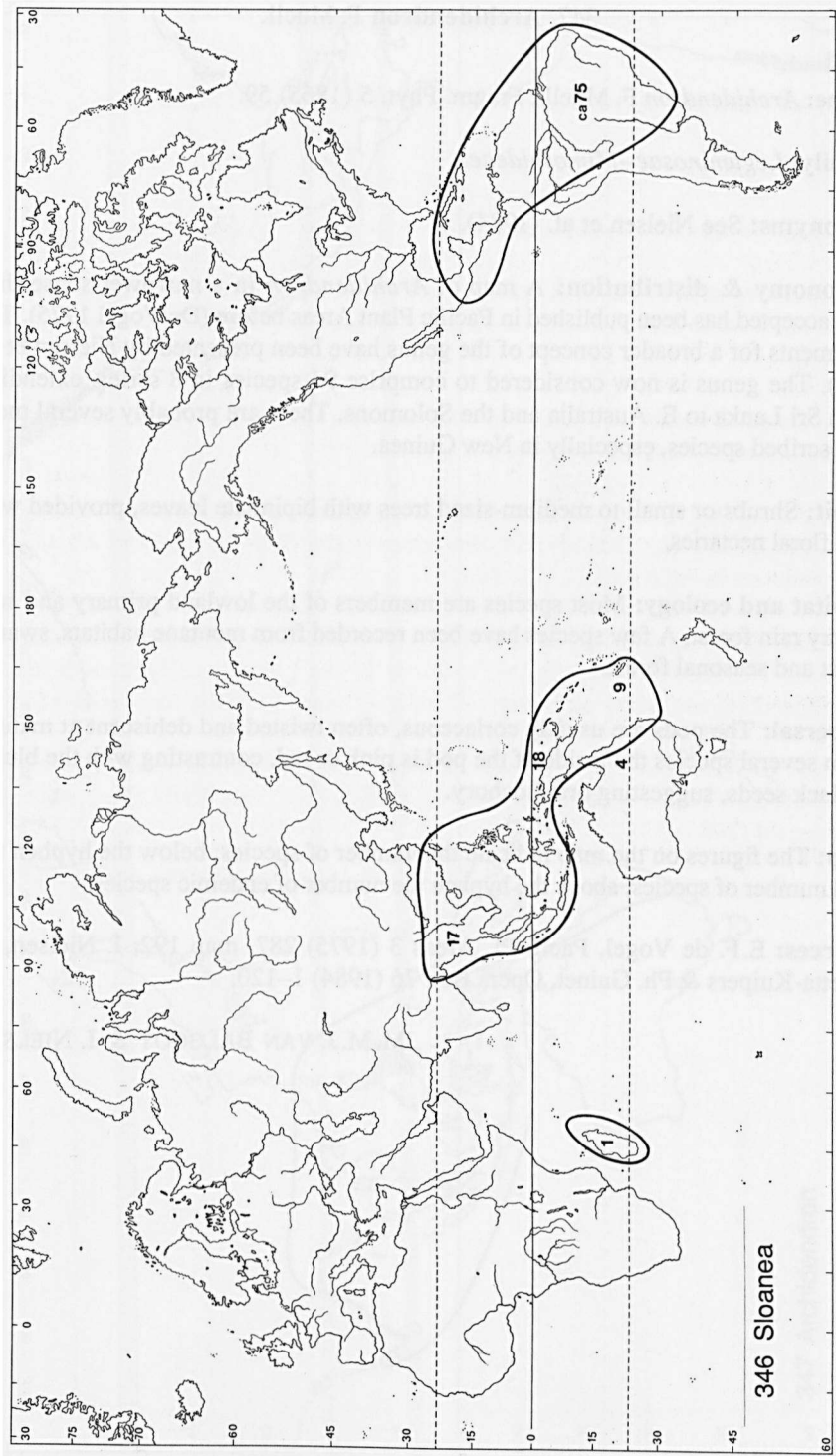
Habit: Trees, with simple spirally arranged leaves (some New Guinea species may have compound leaves in juvenile stage), inflorescence an axillary raceme or panicle, petals when present free, fimbriate but in some species fused to an apically dentate tube; stamens numerous.

Habitat & ecology: Mainly lowland rain forest, both primary and secondary.

Dispersal: The fruits are woody, often spiny capsules, the seed is partly or completely covered by an aril and is eaten by various animals, especially birds.

Sources: A. C. Smith, J. Arnold Arbor. 25 (1944) 273–297; E. Smith, Contr. Gray Herb. 175 (1954) 1–114; M. J. E. Coode, Brunonia 1 (1978) 262–285; Kew Bull. 38 (1983) 347–427; C. Tirèl, Fl. Nouv. Caléd et Dépend. 11 (1982) 103–129; Fl. Madag. & Com. 125 (1985) 36–51.

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347. *Archidendron* F. Muell.

Name: *Archidendron* F. Muell., *Fragm. Phyt.* 5 (1865) 59

Family: *Leguminosae–Mimosoideae*.

Synonyms: See Nielsen et al. (1984).

Taxonomy & distribution: A map of *Archidendron* in a narrower sense than here accepted has been published in *Pacific Plant Areas* before (De Vogel 1975). The arguments for a broader concept of the genus have been presented by Nielsen et al. (l.c.). The genus is now considered to comprise 94 species in 8 series, extending from Sri Lanka to E. Australia and the Solomons. There are probably several more undescribed species, especially in New Guinea.

Habit: Shrubs or small to medium-sized trees with bipinnate leaves, provided with extrafloral nectaries.

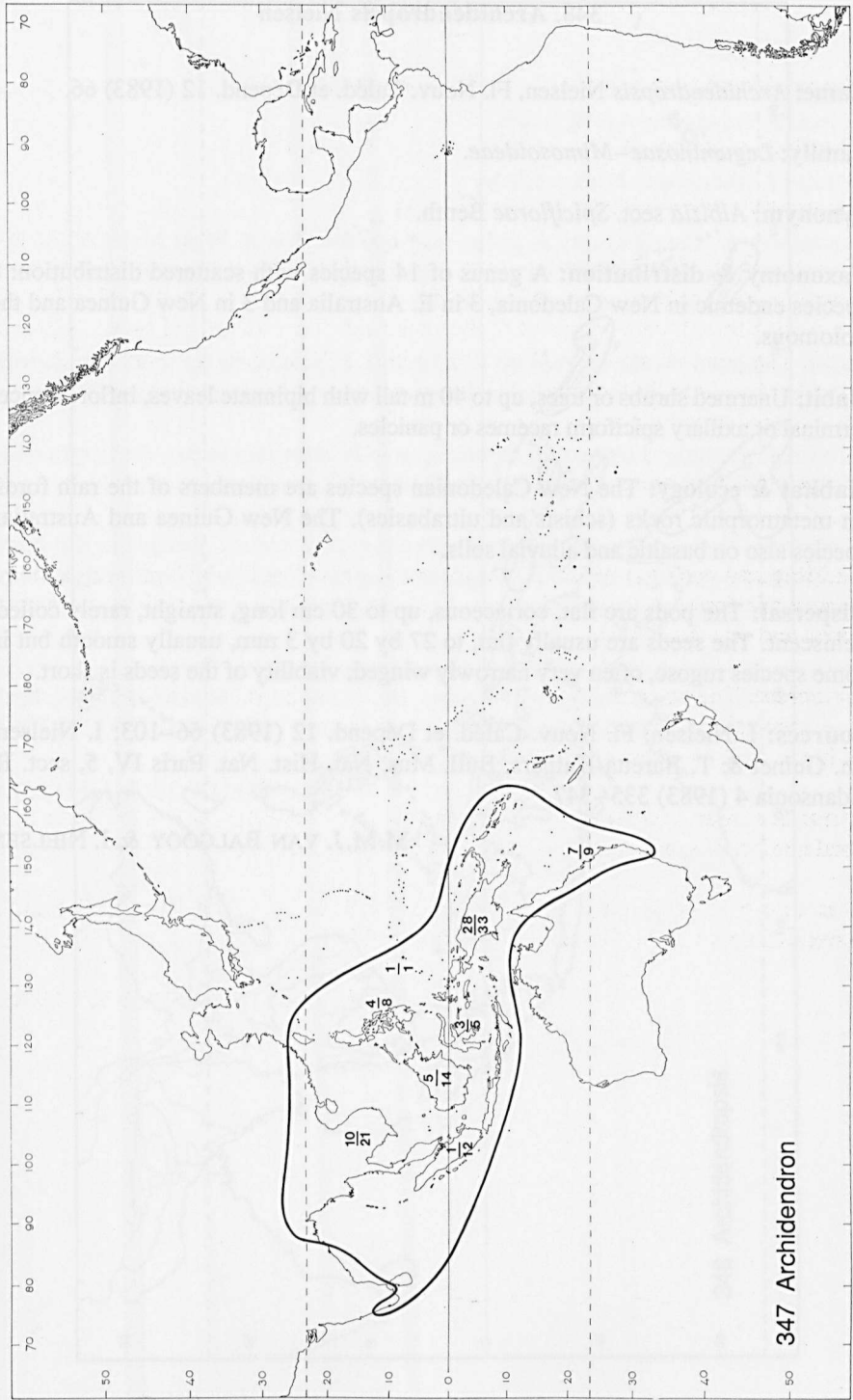
Habitat and ecology: Most species are members of the lowland primary and secondary rain forest. A few species have been recorded from montane habitats, swamp forest and seasonal forest.

Dispersal: The pods are usually coriaceous, often twisted and dehiscent at maturity. In several species the inside of the pod is pink or red, contrasting with the bluish or black seeds, suggesting ornithochory.

Map: The figures on the map indicate the number of species: below the hyphen the total number of species, above the hyphen the number of endemic species.

Sources: E.F. de Vogel, *Pacif. Pl. Areas* 3 (1975) 287, map 192; I. Nielsen, T. Baretta-Kuipers & Ph. Guinet, *Opera Bot.* 76 (1984) 1–120.

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347 *Archidendron*

348. *Archidendropsis* Nielsen

Name: *Archidendropsis* Nielsen, Fl. Nouv. Caléd. et Dépend. 12 (1983) 66.

Family: *Leguminosae–Mimosoideae*.

Synonym: *Albizia* sect. *Spiciflorae* Benth.

Taxonomy & distribution: A genus of 14 species with scattered distribution: 8 species endemic in New Caledonia, 3 in E. Australia and 3 in New Guinea and the Solomons.

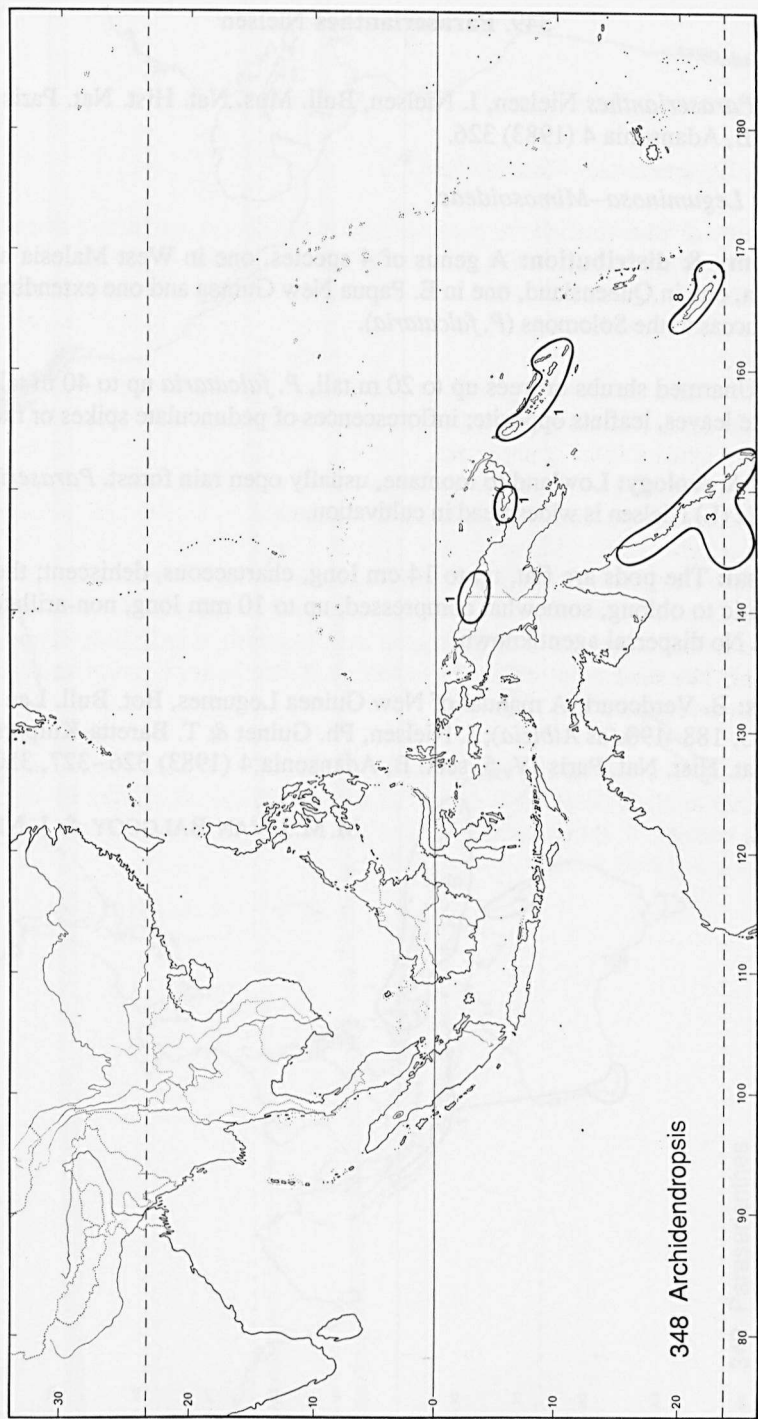
Habit: Unarmed shrubs or trees, up to 40 m tall with bipinnate leaves, inflorescences terminal or axillary spiciform racemes or panicles.

Habitat & ecology: The New Caledonian species are members of the rain forest on metamorphic rocks (schists and ultrabasics). The New Guinea and Australian species also on basaltic and alluvial soils.

Dispersal: The pods are flat, coriaceous, up to 30 cm long, straight, rarely coiled, dehiscent. The seeds are usually flat, to 27 by 20 by 3 mm, usually smooth but in some species rugose, often very narrowly winged; viability of the seeds is short.

Sources: I. Nielsen, Fl. Nouv. Caléd. et Dépend. 12 (1983) 66–103; I. Nielsen, Ph. Guinet & T. Baretta-Kuipers, Bull. Mus. Nat. Hist. Nat. Paris IV, 5, sect. B, Adansonia 4 (1983) 335–347.

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349. *Paraserianthes* Nielsen

Name: *Paraserianthes* Nielsen, I. Nielsen, Bull. Mus. Nat. Hist. Nat. Paris IV, 5, sect. B, Adansonia 4 (1983) 326.

Family: *Leguminosa–Mimosoideae*.

Taxonomy & distribution: A genus of 4 species, one in West Malesia and W. Australia, one in Queensland, one in E. Papua New Guinea and one extending from the Moluccas to the Solomons (*P. falcataria*).

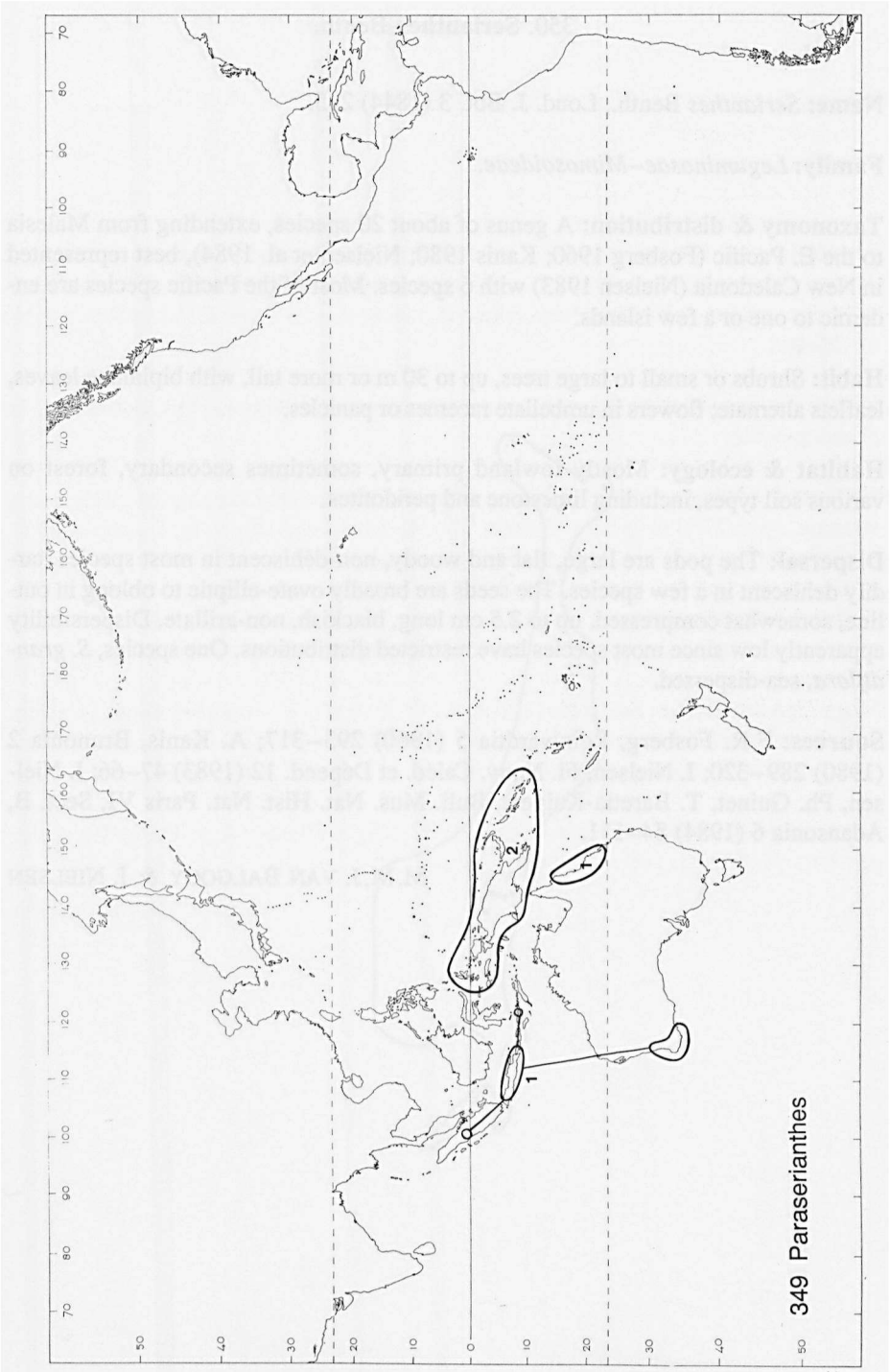
Habit: Unarmed shrubs or trees up to 20 m tall, *P. falcataria* up to 40 m tall, with bipinnate leaves, leaflets opposite; inflorescences of pedunculate spikes or racemes.

Habitat & ecology: Lowland to montane, usually open rain forest. *Paraserianthes falcataria* (L) Nielsen is widespread in cultivation.

Dispersal: The pods are flat, up to 14 cm long, chartaceous, dehiscent; the seeds are elliptic to oblong, somewhat compressed, up to 10 mm long, non-arillate, non-winged. No dispersal agent known.

Sources: B. Verdcourt, A manual of New Guinea Legumes, Bot. Bull. Lae (1979) 182–183, 188–190 (as *Albizia*); I. Nielsen, Ph. Guinet & T. Baretta-Kuipers, Bull. Mus. Nat. Hist. Nat. Paris IV, 5, sect. B, Adansonia 4 (1983) 326–327, 350–360.

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350. *Serianthes* Benth.

Name: *Serianthes* Benth., Lond. J. Bot. 3 (1844) 225.

Family: *Leguminosae*–*Mimosoideae*.

Taxonomy & distribution: A genus of about 20 species, extending from Malesia to the E. Pacific (Fosberg 1960; Kanis 1980; Nielsen et al. 1984), best represented in New Caledonia (Nielsen 1983) with 6 species. Most of the Pacific species are endemic to one or a few islands.

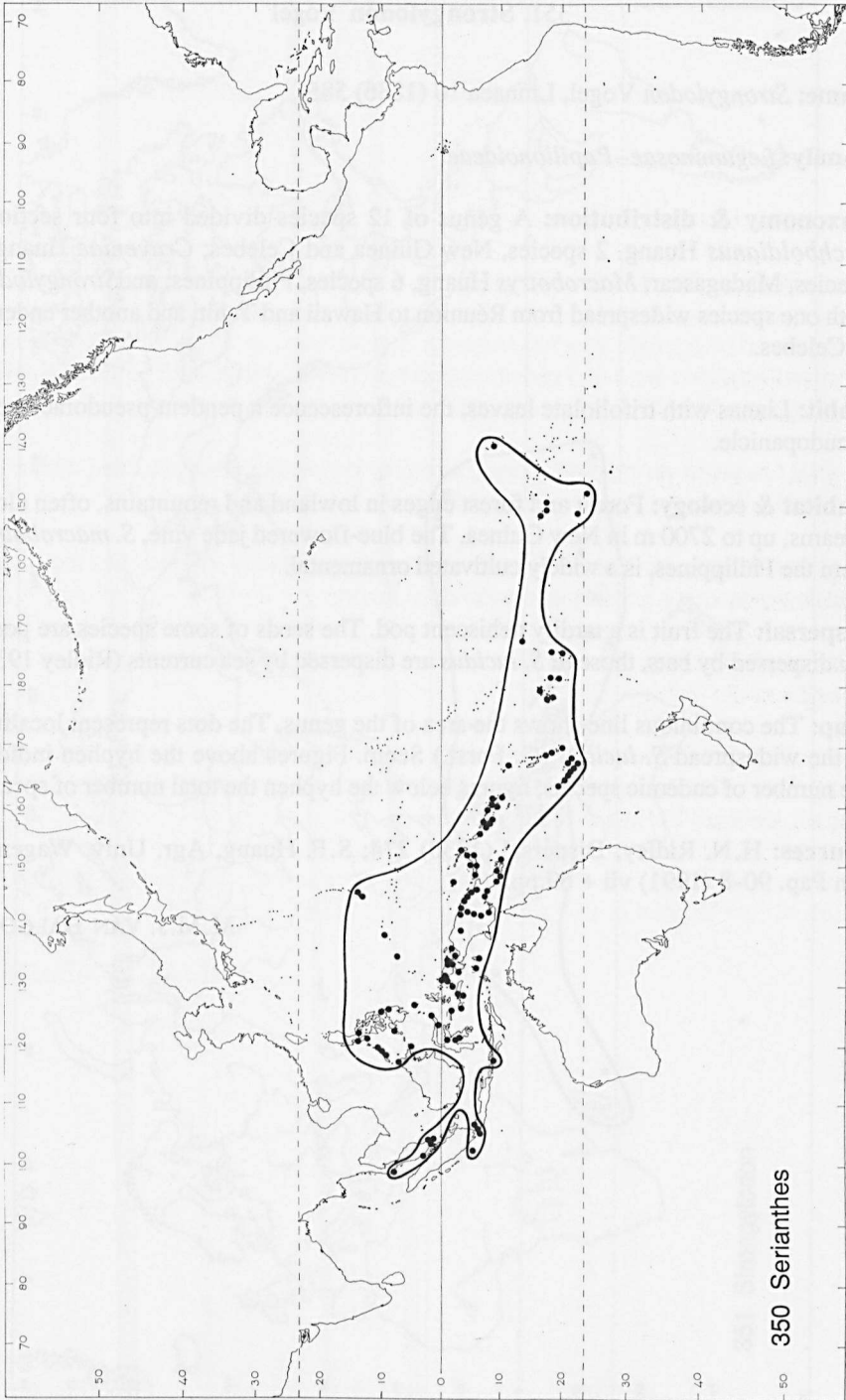
Habit: Shrubs or small to large trees, up to 30 m or more tall, with bipinnate leaves, leaflets alternate; flowers in umbellate racemes or panicles.

Habitat & ecology: Mostly lowland primary, sometimes secondary, forest on various soil types, including limestone and peridotites.

Dispersal: The pods are large, flat and woody, non-dehiscent in most species, tardily dehiscent in a few species. The seeds are broadly ovate-elliptic to oblong in outline, somewhat compressed, up to 2.5 cm long, blackish, non-arillate. Dispersibility apparently low since most species have restricted distributions. One species, *S. grandiflora*, sea-dispersed.

Sources: F.R. Fosberg, *Reinwardtia* 5 (1960) 293–317; A. Kanis, *Brunonia* 2 (1980) 289–320; I. Nielsen, *Fl. Nouv. Caléd. et Dépend.* 12 (1983) 47–66; I. Nielsen, Ph. Guinet, T. Baretta-Kuipers, *Bull. Mus. Nat. Hist. Nat. Paris VI, Sect. B, Adansonia* 6 (1984) 84–111.

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351. *Strongylodon* Vogel

Name: *Strongylodon* Vogel, *Linnaea* 10 (1836) 585.

Family: *Leguminosae*–*Papilionoideae*.

Taxonomy & distribution: A genus of 12 species divided into four sections: *Archboldianus* Huang, 2 species, New Guinea and Celebes; *Craveniae* Huang, 2 species, Madagascar; *Macrobotrys* Huang, 6 species, Philippines; and *Strongylodon*, with one species widespread from Réunion to Hawaii and Tahiti and another endemic in Celebes.

Habit: Lianas with trifoliolate leaves, the inflorescence a pendent pseudoraceme or pseudopanicule.

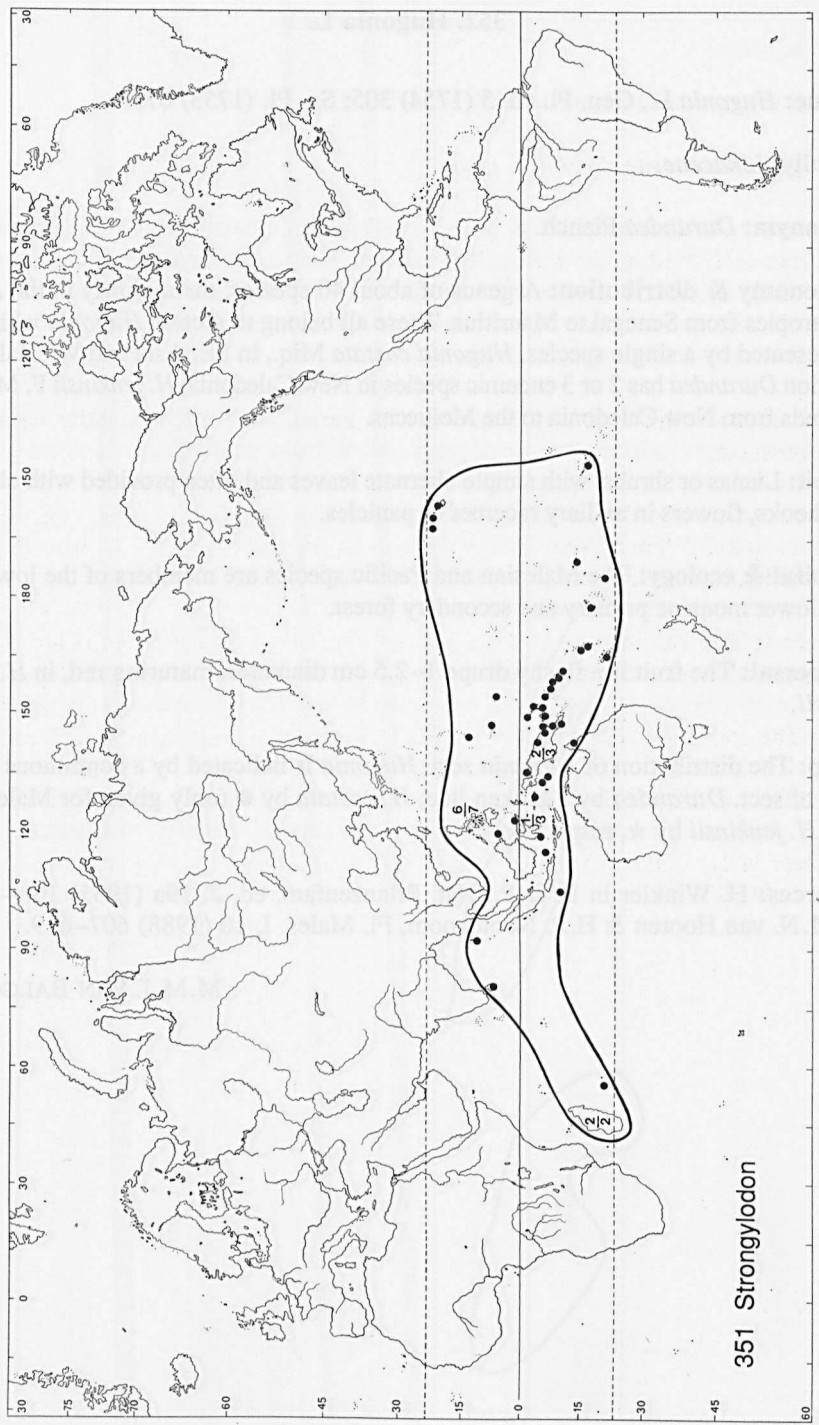
Habitat & ecology: Forest and forest edges in lowland and mountains, often along streams, up to 2700 m in New Guinea. The blue-flowered jade vine, *S. macrobotrys*, from the Philippines, is a widely cultivated ornamental.

Dispersal: The fruit is a tardily dehiscent pod. The seeds of some species are possibly dispersed by bats, those of *S. lucidus* are dispersed by sea currents (Ridley 1930).

Map: The continuous line shows the area of the genus. The dots represent localities of the widespread *S. lucidus* (G. Forst.) Seem. Figures above the hyphen indicate the number of endemic species, figures below the hyphen the total number of species.

Sources: H.N. Ridley, *Dispersal* (1930) 274; S.F. Huang, *Agr. Univ. Wageningen Pap.* 90-8 (1991) vii + 69 pp.

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352. *Hugonia* L.

Name: *Hugonia* L., Gen. Pl. ed. 5 (1754) 305; Sp. Pl. (1753) 675.

Family: *Linaceae*.

Synonym: *Durandea* Planch.

Taxonomy & distribution: A genus of about 40 species, the majority in the African tropics from Senegal to Mauritius. These all belong to section *Hugonia* which is represented by a single species, *Hugonia costata* Miq., in SE. Asia and W. Malesia. Section *Durandea* has 2 or 3 endemic species in New Caledonia; *H. jenkinsii* F. Muell. extends from New Caledonia to the Moluccas.

Habit: Lianas or shrubs, with simple alternate leaves and often provided with climbing hooks, flowers in axillary racemes or panicles.

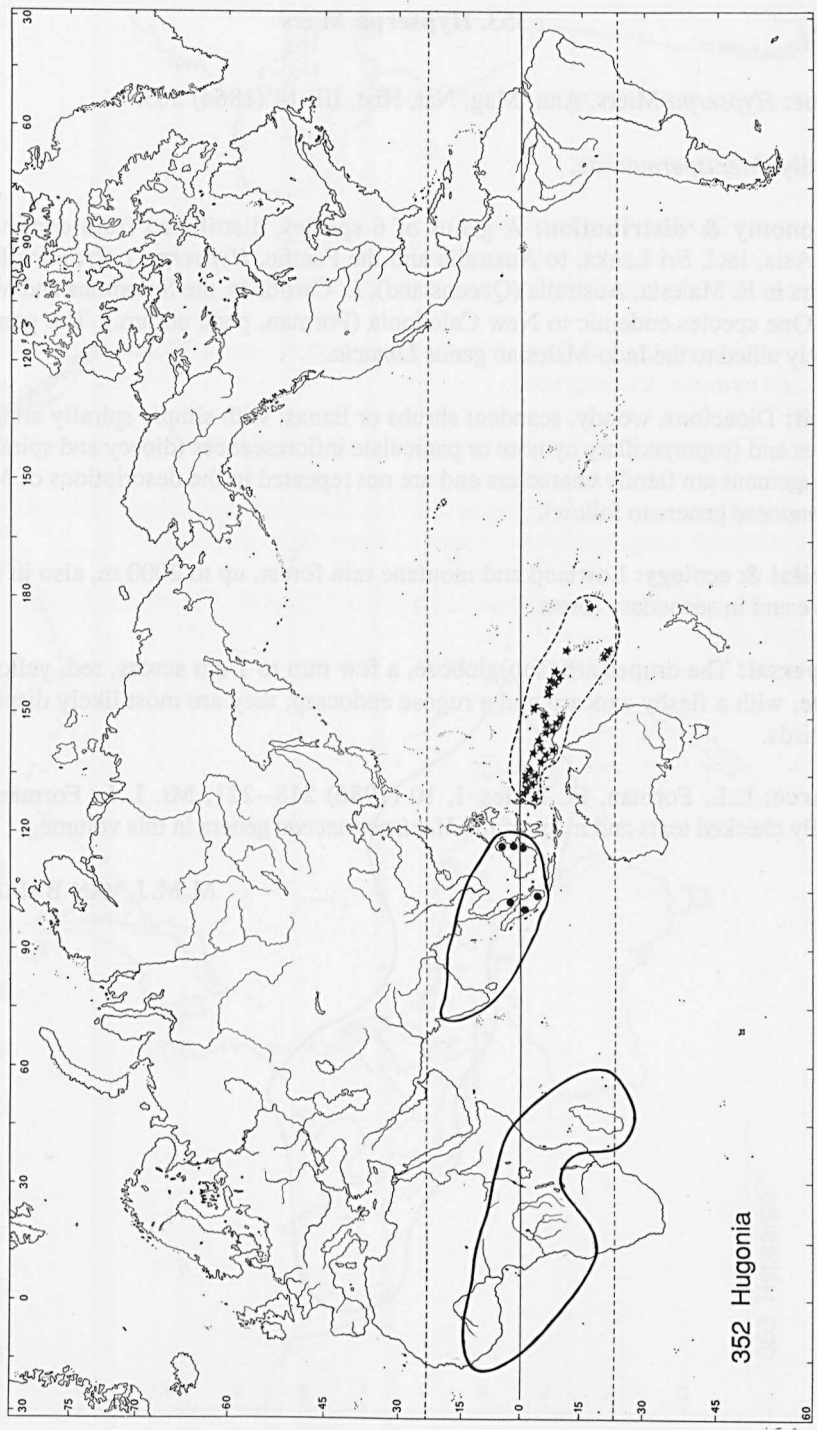
Habitat & ecology: The Malesian and Pacific species are members of the lowland and lower montane primary and secondary forest.

Dispersal: The fruit is a fleshy drupe 1–2.5 cm diameter, maturing red, in *H. jenkinsii*.

Map: The distribution of *Hugonia* sect. *Hugonia* is indicated by a continuous line, that of sect. *Durandea* by a broken line; *H. costata* by ● (only given for Malesia), and *H. jenkinsii* by ★, respectively.

Sources: H. Winkler in E. & P., Nat. Pflanzenfam. ed. 2, 19a (1931) 108–109; A.M.N. van Hooren & H.P. Nooteboom, Fl. Males. I, 10 (1988) 607–619.

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353. *Hypserpa* Miers

Name: *Hypserpa* Miers, Ann. Mag. Nat. Hist. III, 14 (1864) 363.

Family: *Menispermaceae*.

Taxonomy & distribution: A genus of 6 species, distributed from continental SE. Asia, incl. Sri Lanka, to Australia and the Pacific. *Hypserpa polyandra* Becc. occurs in E. Malesia, Australia (Queensland), E. Carolines, the Solomons and Vanuatu. One species endemic to New Caledonia (Forman, pers. comm.). The genus is closely allied to the Indo-Malesian genus *Limacia*.

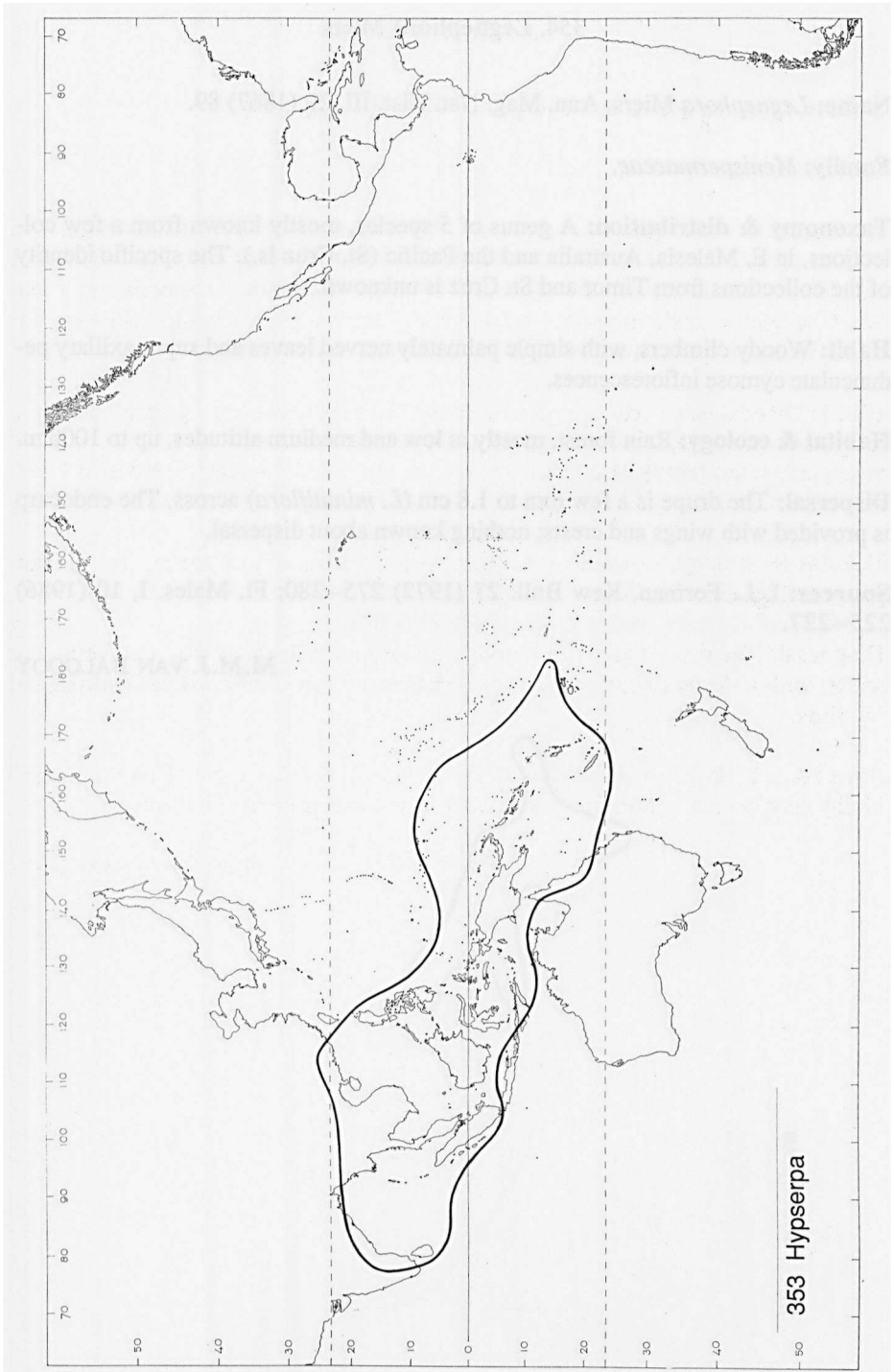
Habit: Dioecious, woody, scandent shrubs or lianas, with simple spirally arranged leaves and (supra)axillary cymose or paniculate inflorescences (dioecy and spiral leaf arrangement are family characters and are not repeated in the descriptions of *Menispermaceae* genera to follow).

Habitat & ecology: Lowland and montane rain forest, up to 2000 m, also in mangrove and in secondary forest.

Dispersal: The drupes are (sub)globose, a few mm to 1 cm across, red, yellow or white, with a fleshy exocarp and a rugose endocarp; they are most likely dispersed by birds.

Source: L.L. Forman, Fl. Males. I, 10 (1986) 218–221; Mr. L.L. Forman (K) kindly checked texts and maps of the *Menispermaceae* genera in this volume.

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354. *Legnephora* Miers

Name: *Legnephora* Miers, Ann. Mag. Nat. Hist. III, 29 (1867) 89.

Family: *Menispermaceae*.

Taxonomy & distribution: A genus of 5 species, mostly known from a few collections, in E. Malesia, Australia and the Pacific (St. Cruz Is.). The specific identity of the collections from Timor and St. Cruz is unknown.

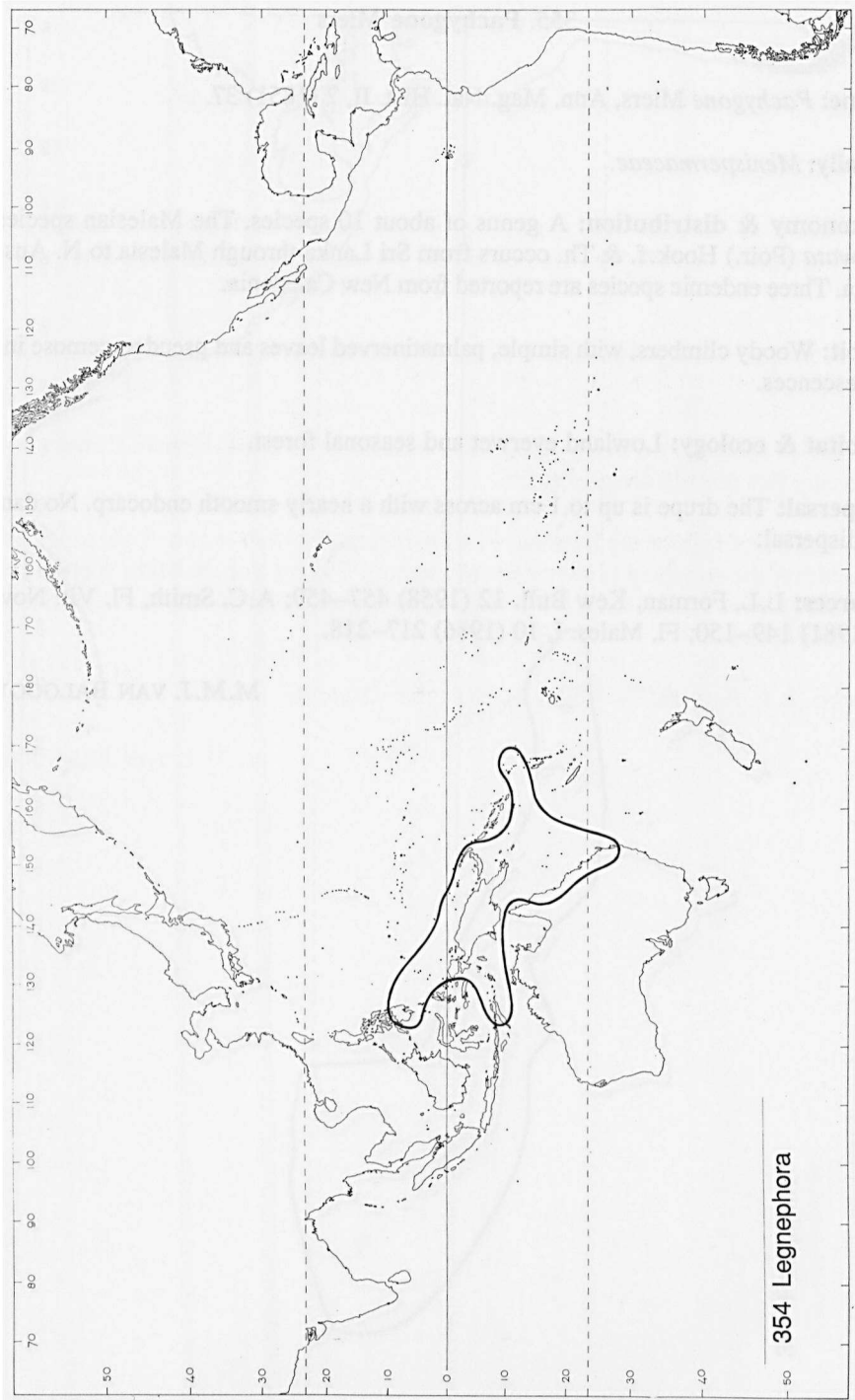
Habit: Woody climbers, with simple palmately nerved leaves and supra-axillary pedunculate cymose inflorescences.

Habitat & ecology: Rain forest, mostly at low and medium altitudes, up to 1000 m.

Dispersal: The drupe is a few mm to 1.8 cm (*L. minutiflora*) across. The endocarp is provided with wings and crests; nothing known about dispersal.

Sources: L.L. Forman, Kew Bull. 27 (1972) 275–280; Fl. Males. I, 10 (1986) 225–227.

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355. *Pachygone* Miers

Name: *Pachygone* Miers, Ann. Mag. Nat. Hist. II, 7 (1851) 37.

Family: *Menispermaceae*.

Taxonomy & distribution: A genus of about 10 species. The Malesian species *P. ovata* (Poir.) Hook. f. & Th. occurs from Sri Lanka through Malesia to N. Australia. Three endemic species are reported from New Caledonia.

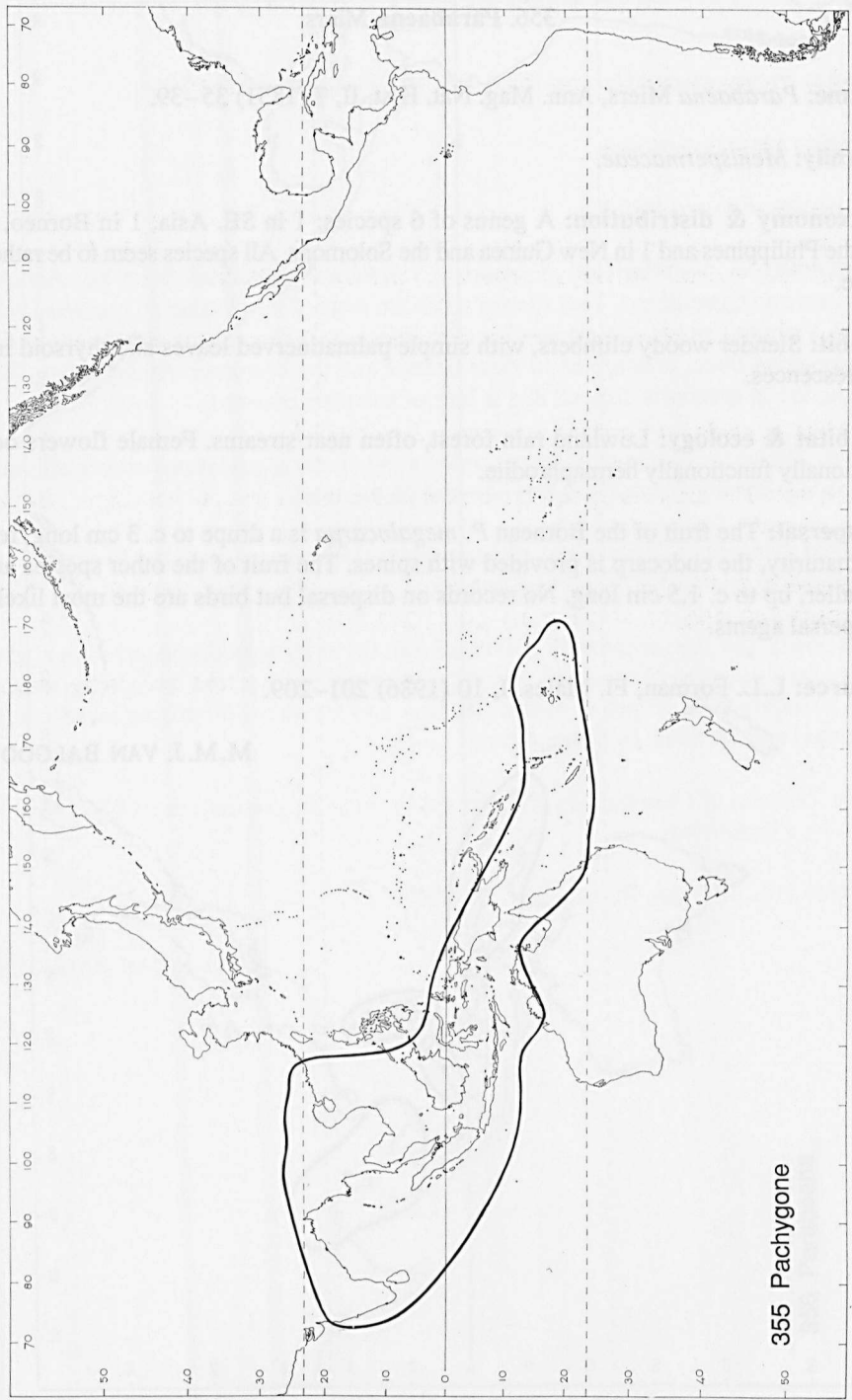
Habit: Woody climbers, with simple, palmatinerved leaves and pseudoracemose inflorescences.

Habitat & ecology: Lowland everwet and seasonal forest.

Dispersal: The drupe is up to 1 cm across with a nearly smooth endocarp. No data on dispersal.

Sources: L.L. Forman, Kew Bull. 12 (1958) 457–459; A.C. Smith, Fl. Vit. Nov. 2 (1981) 149–150; Fl. Males. I, 10 (1986) 217–218.

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356. *Parabaena* Miers

Name: *Parabaena* Miers, Ann. Mag. Nat. Hist. II, 7 (1851) 35–39.

Family: *Menispermaceae*.

Taxonomy & distribution: A genus of 6 species: 1 in SE. Asia, 1 in Borneo, 3 in the Philippines and 1 in New Guinea and the Solomons. All species seem to be rather rare.

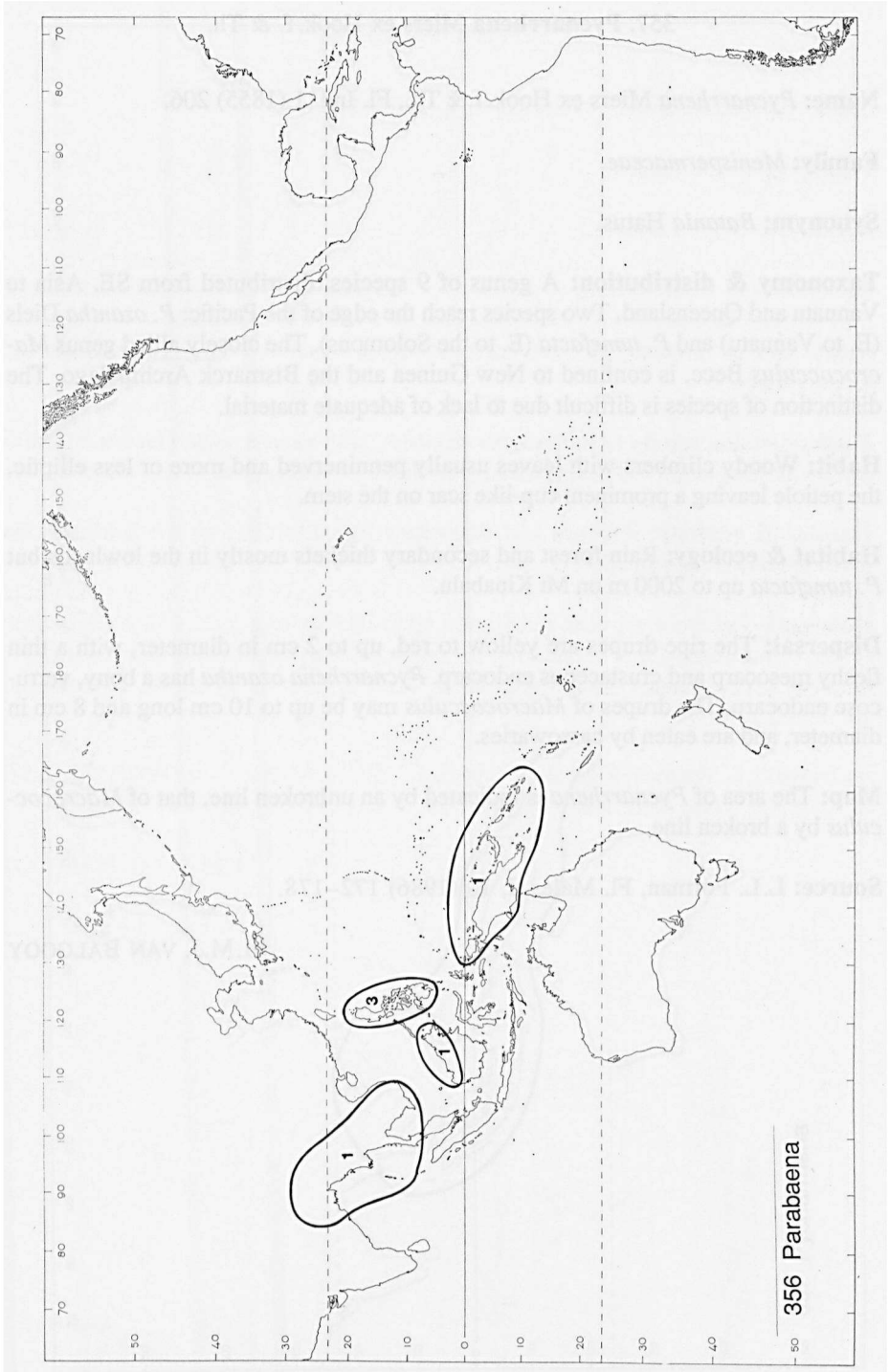
Habit: Slender woody climbers, with simple palmatinerved leaves and thyrsoïd inflorescences.

Habitat & ecology: Lowland rain forest, often near streams. Female flowers occasionally functionally hermaphrodite.

Dispersal: The fruit of the Bornean *P. megalocarpa* is a drupe to c. 3 cm long, red at maturity, the endocarp is provided with spines. The fruit of the other species are smaller, up to c. 1.5 cm long. No records on dispersal but birds are the most likely dispersal agents.

Source: L.L. Forman, Fl. Males. I, 10 (1986) 201–209.

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357. *Pycnarrhena* Miers ex Hook. f. & Th.

Name: *Pycnarrhena* Miers ex Hook. f. & Th., Fl. Ind. 1 (1855) 206.

Family: *Menispermaceae*.

Synonym: *Batania* Hatus.

Taxonomy & distribution: A genus of 9 species, distributed from SE. Asia to Vanuatu and Queensland. Two species reach the edge of the Pacific: *P. ozantha* Diels (E. to Vanuatu) and *P. tumefacta* (E. to the Solomons). The closely allied genus *Macrocculus* Becc. is confined to New Guinea and the Bismarck Archipelago. The distinction of species is difficult due to lack of adequate material.

Habit: Woody climbers with leaves usually penninerved and more or less elliptic, the petiole leaving a prominent cup-like scar on the stem.

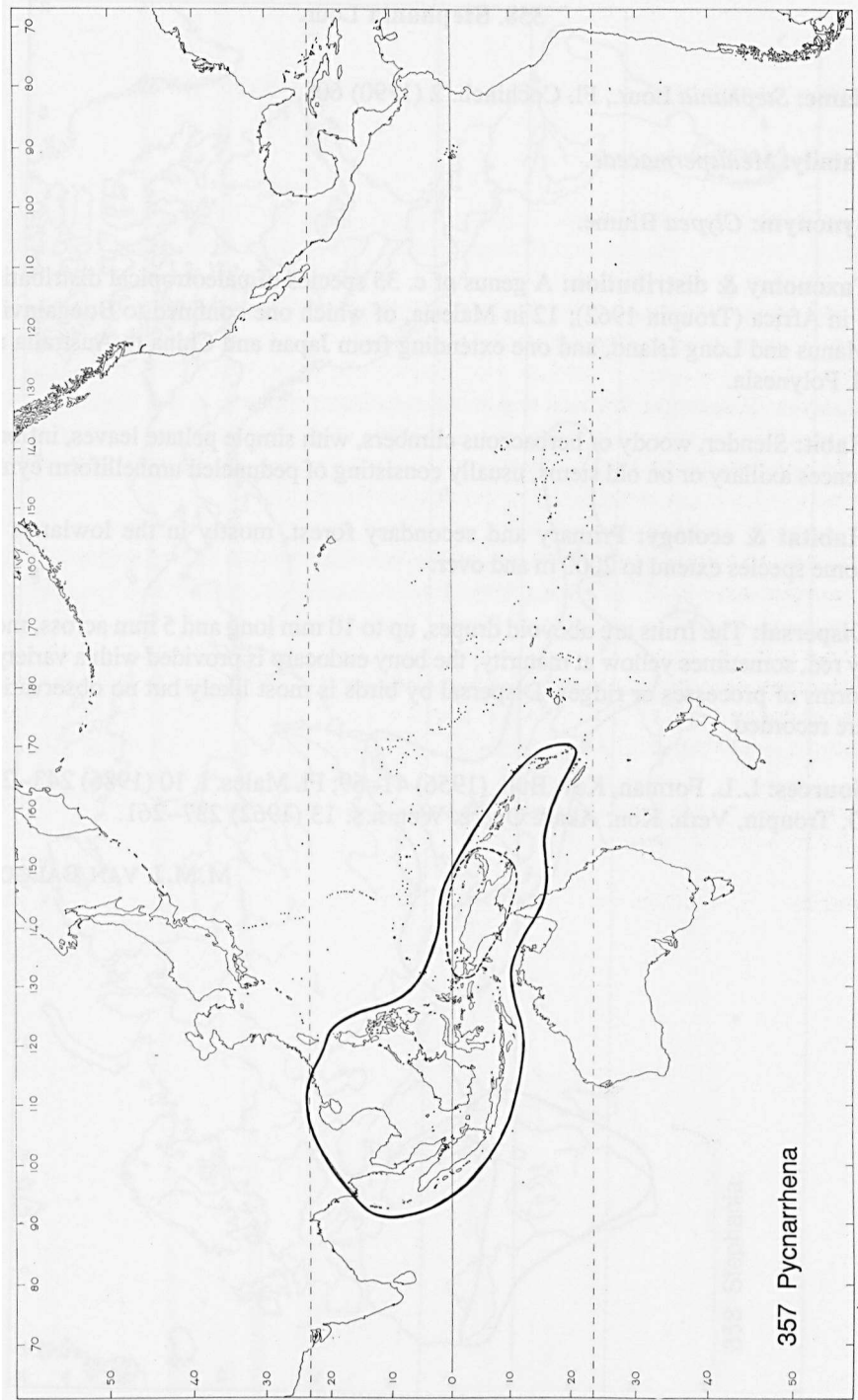
Habitat & ecology: Rain forest and secondary thickets mostly in the lowlands but *P. tumefacta* up to 2000 m on Mt Kinabalu.

Dispersal: The ripe drupes are yellow to red, up to 2 cm in diameter, with a thin fleshy mesocarp and crustaceous endocarp. *Pycnarrhena ozantha* has a bony, verrucose endocarp. The drupes of *Macrocculus* may be up to 10 cm long and 8 cm in diameter, and are eaten by cassowaries.

Map: The area of *Pycnarrhena* is indicated by an unbroken line, that of *Macrocculus* by a broken line.

Source: L.L. Forman, Fl. Males. I, 10 (1986) 172–178.

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358. *Stephania* Lour.

Name: *Stephania* Lour., Fl. Cochinch. 2 (1790) 608.

Family: *Menispermaceae*.

Synonym: *Clypea* Blume.

Taxonomy & distribution: A genus of c. 35 species of paleotropical distribution; 5 in Africa (Troupin 1962); 12 in Malesia, of which one confined to Bougainville, Manus and Long Island, and one extending from Japan and China to Australia and E. Polynesia.

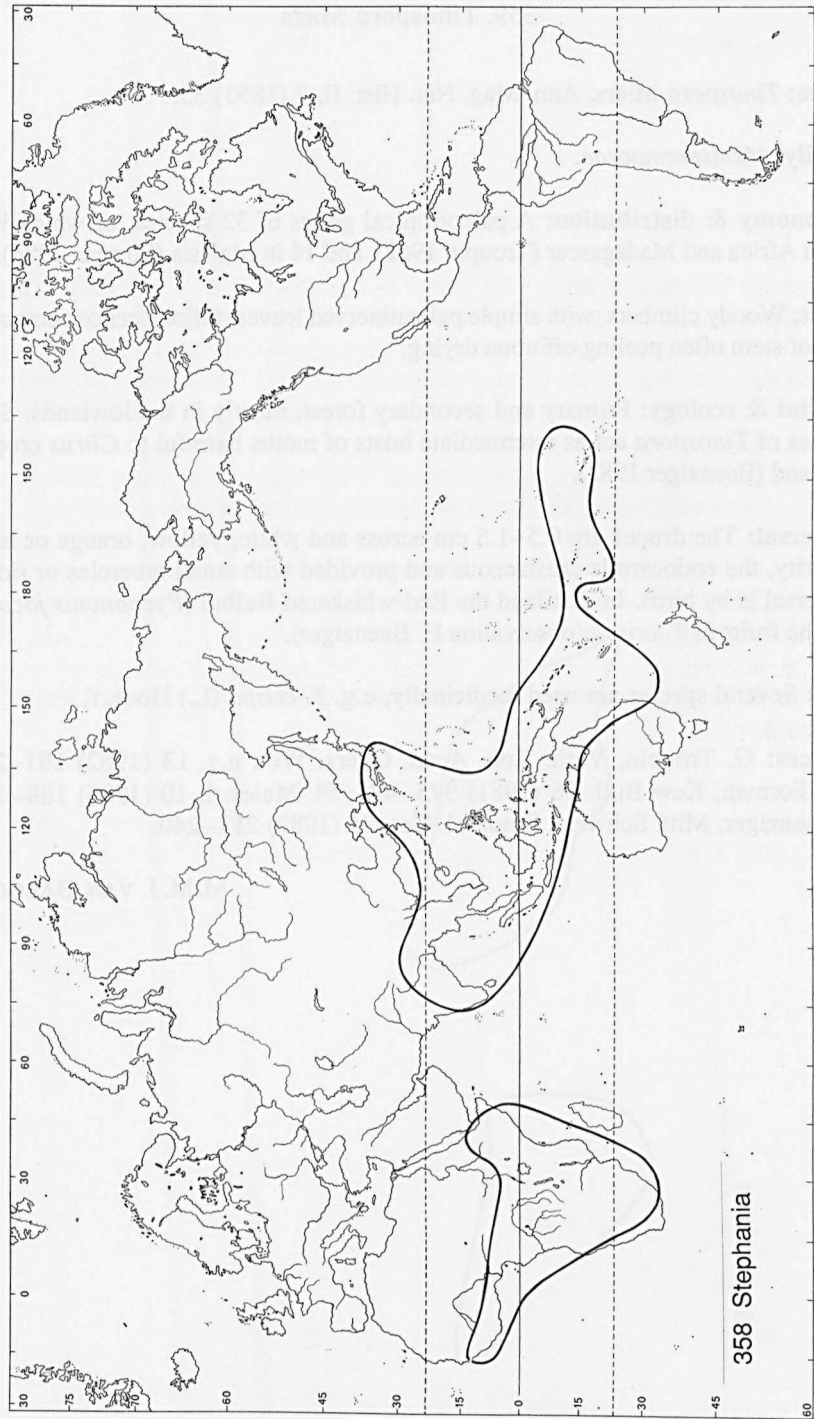
Habit: Slender, woody or herbaceous climbers, with simple peltate leaves, inflorescences axillary or on old stems, usually consisting of peduncled umbelliform cymes.

Habitat & ecology: Primary and secondary forest, mostly in the lowlands but some species extend to 2000 m and over.

Dispersal: The fruits are obovoid drupes, up to 10 mm long and 5 mm across, mostly red, sometimes yellow at maturity; the bony endocarp is provided with a variety of forms of processes or ridges. Dispersal by birds is most likely but no observations are recorded.

Sources: L.L. Forman, Kew Bull. (1956) 41–69; Fl. Males. I, 10 (1986) 243–253; G. Troupin, Verh. Kon. Akad. Overz. Wet. n.s. 13 (1962) 237–261.

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359. *Tinospora* Miers

Name: *Tinospora* Miers, Ann. Mag. Nat. Hist. II, 7 (1851) 35.

Family: *Menispermaceae*.

Taxonomy & distribution: A paleotropical genus of 32 species, of which 9 occur in Africa and Madagascar (Troupin 1962), and 14 in Malesia (Forman 1986).

Habit: Woody climbers, with simple palmatinerved leaves, inflorescence compound; bark of stem often peeling off upon drying.

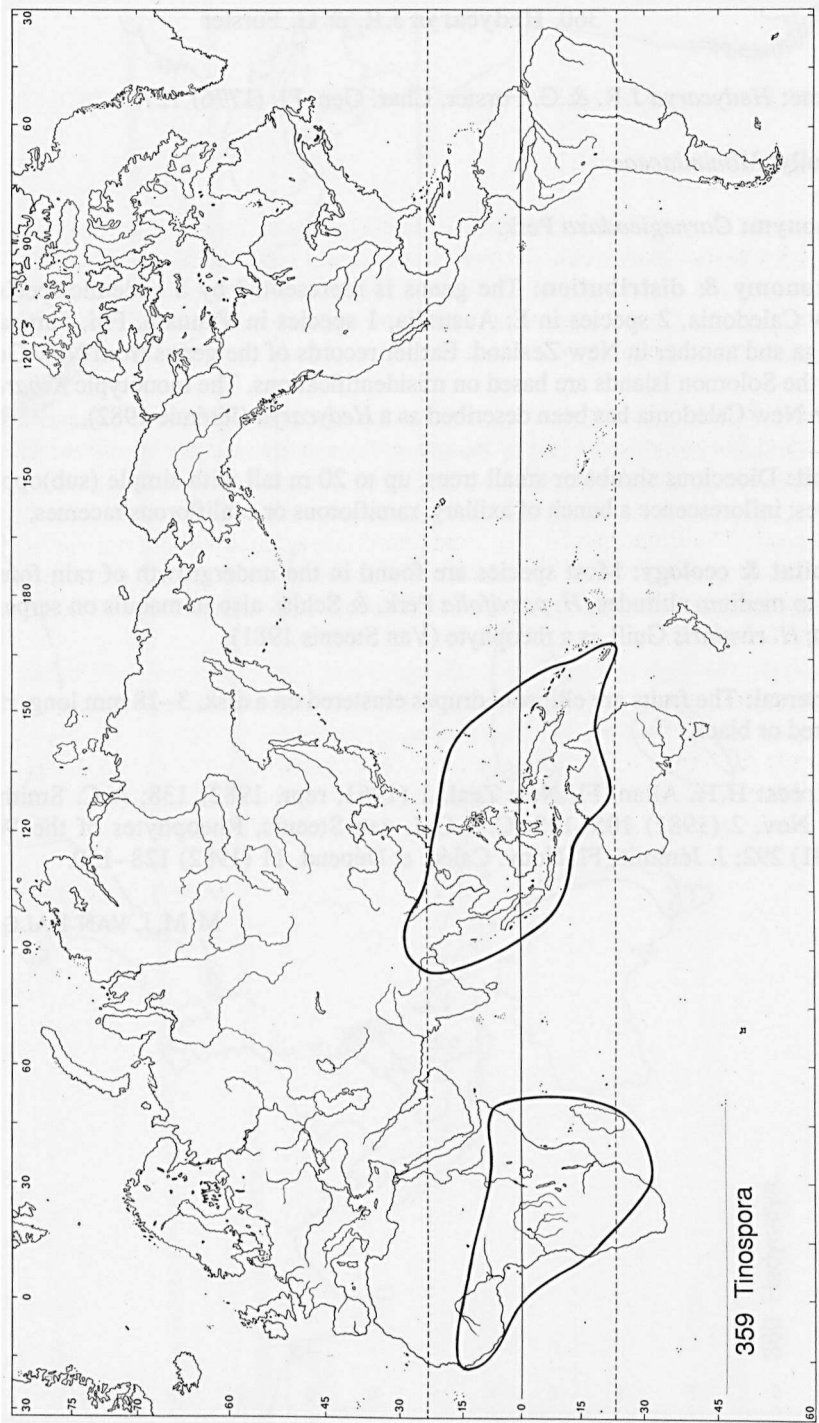
Habitat & ecology: Primary and secondary forest, mostly in the lowlands. Some species of *Tinospora* act as intermediate hosts of moths harmful to *Citrus* crops in Thailand (Baenziger 1982).

Dispersal: The drupes are 0.5–1.5 cm across and white, yellow, orange or red at maturity, the endocarp is crustaceous and provided with small tubercles or ridges. Dispersal is by birds. In Thailand the Red-whiskered Bulbul (*Pycnonotus jocosus*) eats the fruits of *T. crispa* (observation H. Baenziger).

Note: Several species are used medicinally, e.g. *T. crispa* (L.) Hook. f.

Sources: G. Troupin, Verh. Kon. Acad. Overz. Wet. n.s. 13 (1962) 191–207; L.L. Forman, Kew Bull. 36 (1981) 375–421; Fl. Males. I, 10 (1986) 188–201; H. Baenziger, Mitt. Schweiz. Entomol. Ges. 55 (1982) 213–240.

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360. *Hedycarya* J.R. & G. Forster

Name: *Hedycarya* J.R. & G. Forster, Char. Gen. Pl. (1776) 127.

Family: *Monimiaceae*.

Synonym: *Carnegieodoxa* Perk.

Taxonomy & distribution: The genus is represented by 8 endemic species in New Caledonia, 2 species in E. Australia, 1 species in Vanuatu, Fiji, Samoa and Tonga and another in New Zealand. Earlier records of the genus from New Guinea and the Solomon Islands are based on misidentifications. The monotypic *Kibaropsis* from New Caledonia has been described as a *Hedycarya* (Jérémie 1982).

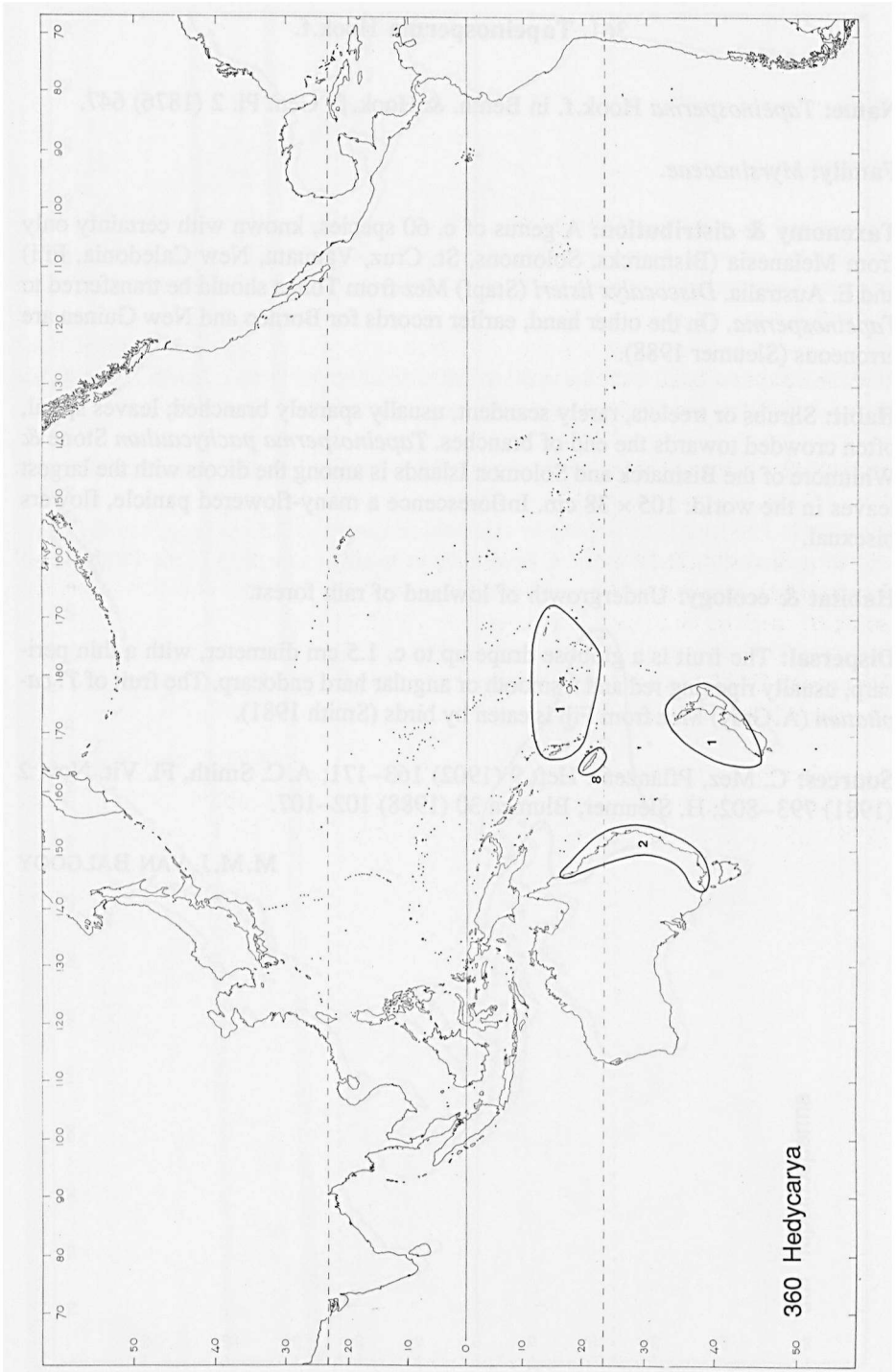
Habit: Dioecious shrubs or small trees, up to 20 m tall with simple (sub)opposite leaves; inflorescence a bunch of axillary, ramiflorous or cauliflorous racemes.

Habitat & ecology: Most species are found in the undergrowth of rain forest at low to medium altitudes, *H. parvifolia* Perk. & Schltr. also in maquis on serpentine soils; *H. rivularis* Guill. is a rheophyte (Van Steenis 1981).

Dispersal: The fruits are ellipsoid drupes clustered on a disk, 3–18 mm long, ripening red or black.

Sources: H.H. Allan, Fl. New Zeal. 1 (1961, repr. 1982) 138; A.C. Smith, Fl. Vit. Nov. 2 (1981) 105–108; C.G.G.J. van Steenis, Rheophytes of the World (1981) 292; J. Jérémie, Fl. Nouv. Caléd. et Dépend. 11 (1982) 128–150.

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361. *Tapeinosperma* Hook.f.

Name: *Tapeinosperma* Hook.f. in Benth. & Hook. f., Gen. Pl. 2 (1876) 647.

Family: *Myrsinaceae*.

Taxonomy & distribution: A genus of c. 60 species, known with certainty only from Melanesia (Bismarcks, Solomons, St. Cruz, Vanuatu, New Caledonia, Fiji) and E. Australia. *Discocalyx listeri* (Stapf) Mez from Tonga should be transferred to *Tapeinosperma*. On the other hand, earlier records for Borneo and New Guinea are erroneous (Sleumer 1988).

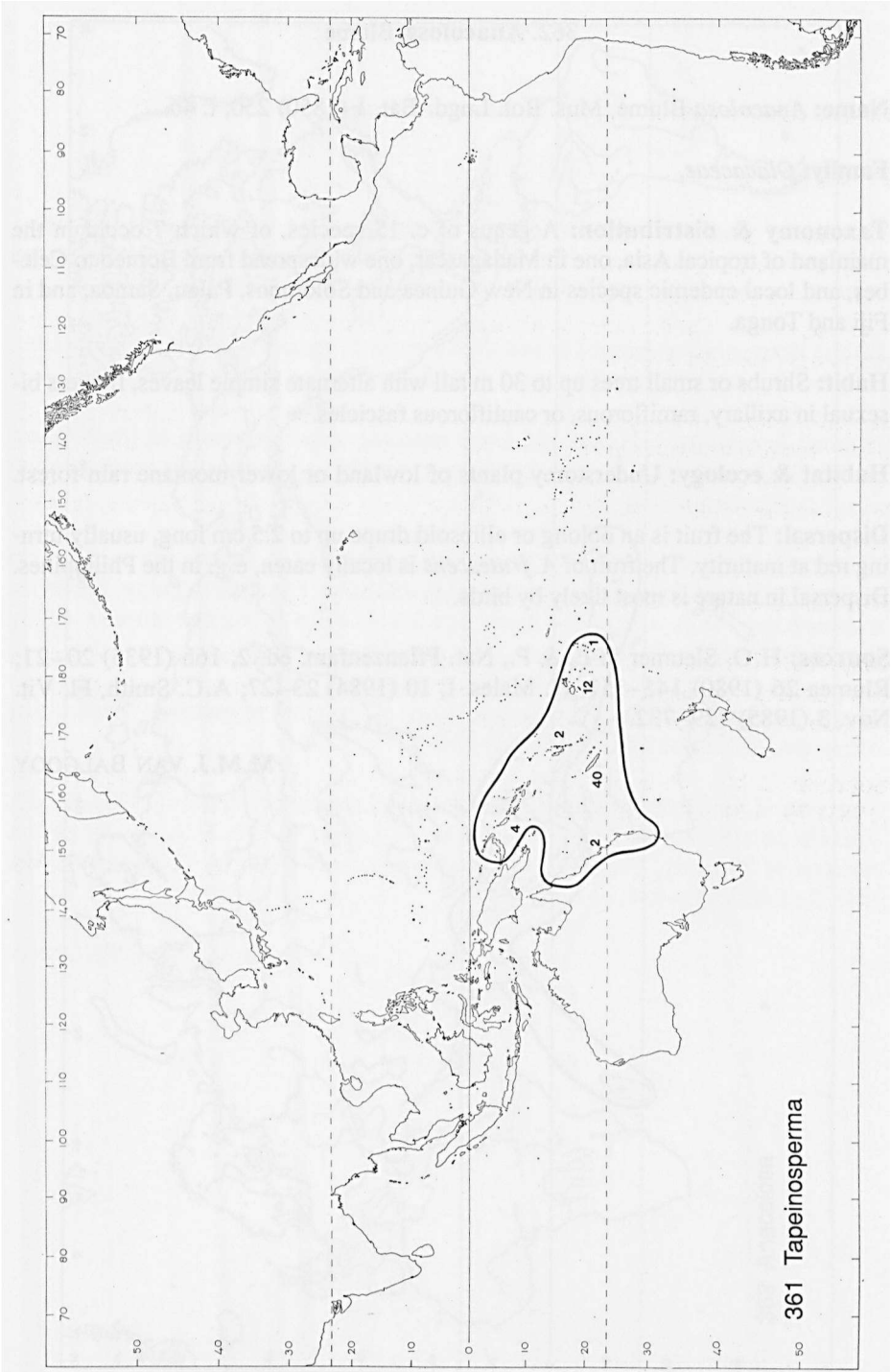
Habit: Shrubs or treelets, rarely scandent, usually sparsely branched; leaves spiral, often crowded towards the end of branches. *Tapeinosperma pachycaulum* Stone & Whitmore of the Bismarck and Solomon Islands is among the dicots with the largest leaves in the world: 105 × 38 cm. Inflorescence a many-flowered panicle, flowers bisexual.

Habitat & ecology: Undergrowth of lowland of rain forest.

Dispersal: The fruit is a globose drupe up to c. 1.5 cm diameter, with a thin pericarp, usually ripening red and a smooth or angular hard endocarp. The fruit of *T. capitatum* (A. Gray) Mez from Fiji is eaten by birds (Smith 1981).

Sources: C. Mez, Pflanzenr. Heft 9 (1902) 163–171; A.C. Smith, Fl. Vit. Nov. 2 (1981) 793–802; H. Sleumer, Blumea 30 (1988) 102–107.

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362. *Anacolosa* Blume

Name: *Anacolosa* Blume, Mus. Bot. Lugd.-Bat. 1 (1850) 250, t. 46.

Family: *Olacaceae*.

Taxonomy & distribution: A genus of c. 15 species, of which 7 occur in the mainland of tropical Asia, one in Madagascar, one widespread from Borneo to Celebes, and local endemic species in New Guinea and Solomons, Palau, Samoa, and in Fiji and Tonga.

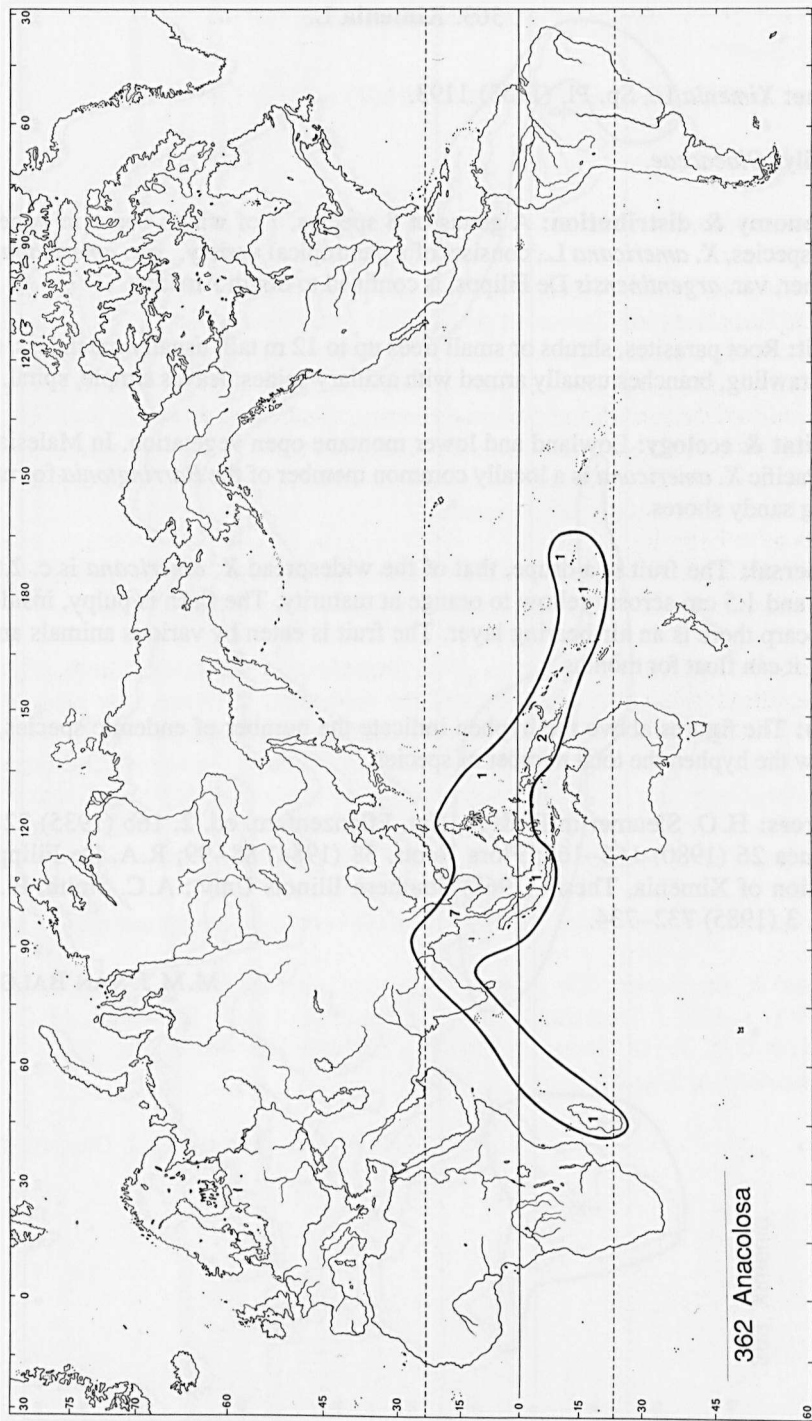
Habit: Shrubs or small trees up to 30 m tall with alternate simple leaves, flowers bisexual in axillary, ramiflorous, or cauliflorous fascicles.

Habitat & ecology: Understorey plants of lowland or lower montane rain forest.

Dispersal: The fruit is an oblong or ellipsoid drupe up to 2.5 cm long, usually turning red at maturity. The fruit of *A. frutescens* is locally eaten, e.g. in the Philippines. Dispersal in nature is most likely by birds.

Sources: H.O. Sleumer in E. & P., Nat. Pflanzenfam. ed. 2, 16b (1935) 20–21; Blumea 26 (1980) 145–151; Fl. Males. I, 10 (1984) 23–27; A.C. Smith, Fl. Vit. Nov. 3 (1985) 729–732.

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363. *Ximenia* L.

Name: *Ximenia* L., Sp. Pl. (1753) 1193.

Family: *Olacaceae*.

Taxonomy & distribution: A genus of 8 species, 7 of which occur in America. One species, *X. americana* L., consists of a pantropical variety, var. *americana*, and another, var. *argentinensis* De Filippis, is confined to South America.

Habit: Root parasites, shrubs or small trees up to 12 m tall, usually much less, erect or sprawling, branches usually armed with axillary spines; leaves simple, spiral.

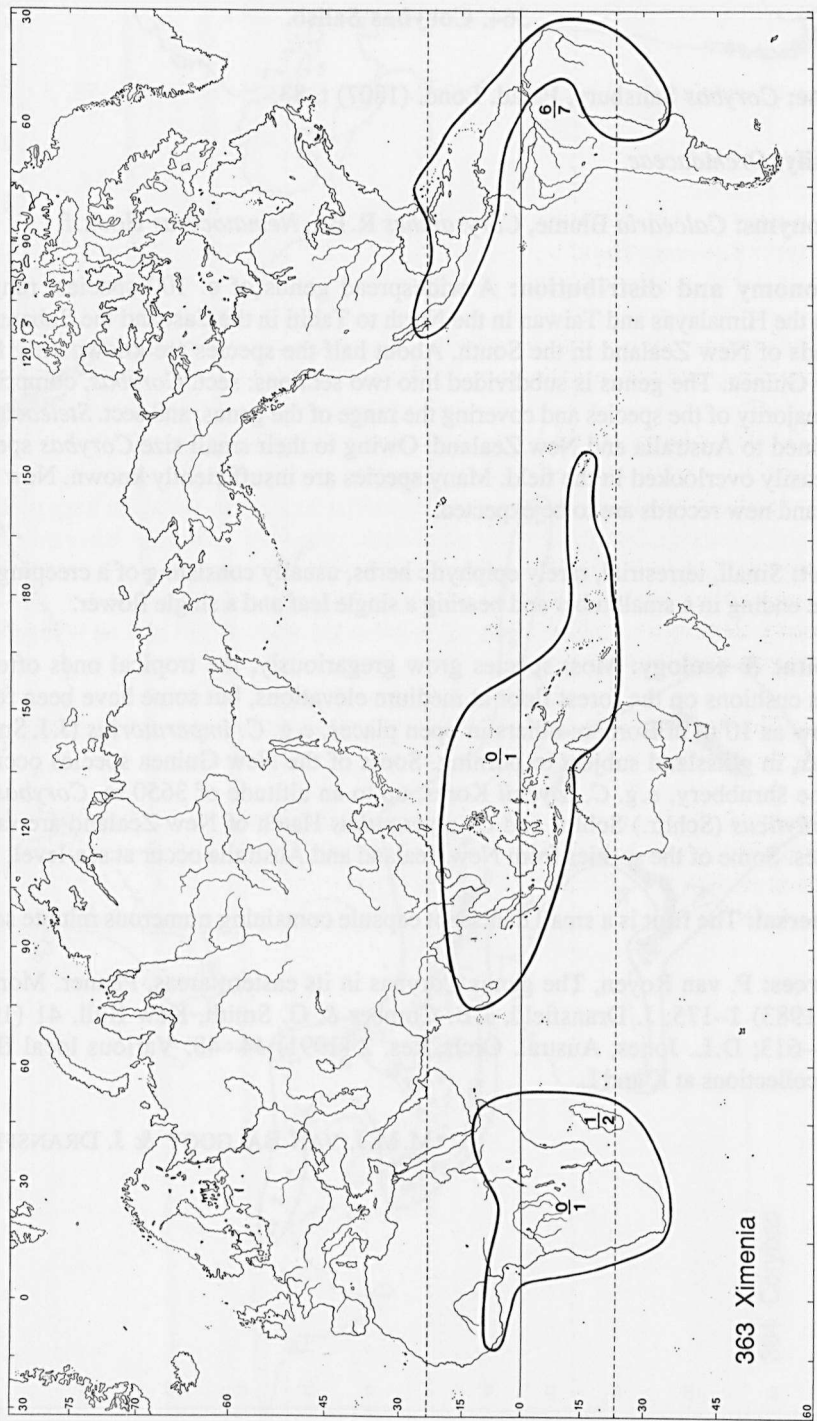
Habitat & ecology: Lowland and lower montane open vegetation. In Malesia and the Pacific *X. americana* is a locally common member of the *Barringtonia* formation along sandy shores.

Dispersal: The fruit is a drupe, that of the widespread *X. americana* is c. 2.5 cm long and 1.5 cm across, yellow to orange at maturity. The flesh is pulpy, inside the endocarp there is an air-bearing layer. The fruit is eaten by various animals and by man; it can float for months.

Map: The figures above the hyphen indicate the number of endemic species, that below the hyphen the total number of species.

Sources: H. O. Sleumer in E. & P., Nat. Pflanzenfam. ed. 2, 16b (1935) 22–23; Blumea 26 (1980) 166–168; Flora Neotr. 38 (1984) 88–99; R. A. De Filippis, A revision of *Ximenia*, Thesis (1968) Southern Illinois Univ.; A. C. Smith, Fl. Vit. Nov. 3 (1985) 732–734.

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364. *Corybas* Salisb.

Name: *Corybas* Salisbury, Parad. Lond. (1807) t. 83.

Family: *Orchidaceae*.

Synonyms: *Calcearia* Blume, *Corysanthes* R. Br., *Nematoceras* Hook. f.

Taxonomy and distribution: A widespread genus of c. 100 species, ranging from the Himalayas and Taiwan in the North to Tahiti in the East and the Subantarctic islands of New Zealand in the South. About half the species are known only from New Guinea. The genus is subdivided into two sections: sect. *Corybas*, comprising the majority of the species and covering the range of the genus, and sect. *Steleochoris*, confined to Australia and New Zealand. Owing to their small size *Corybas* species are easily overlooked in the field. Many species are insufficiently known. New species and new records are to be expected.

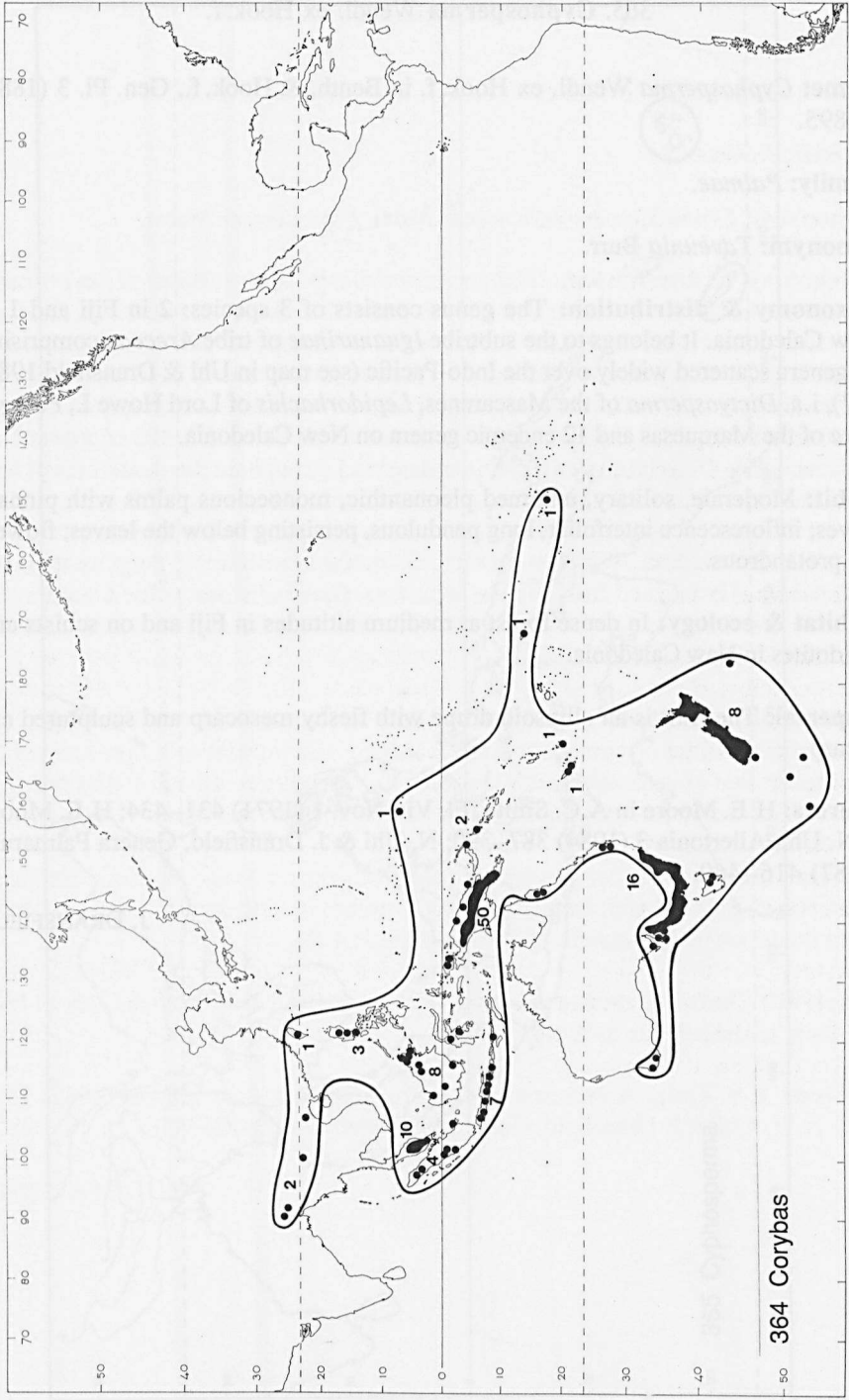
Habit: Small, terrestrial, rarely epiphytic herbs, usually consisting of a creeping rhizome ending in a small tuber and bearing a single leaf and a single flower.

Habitat & ecology: Most species grow gregariously, the tropical ones often in moss cushions on the forest floor at medium elevations, but some have been found as low as 10 m in Borneo, others in open places, e.g. *C. imperatorius* (J.J. Smith) Schltr. in grassland subject to burning. Some of the New Guinea species occur in alpine shrubbery, e.g. *C. royenii* Kores, up to an altitude of 3650 m. *Corybas saprophyticus* (Schltr.) Schltr. and *C. cryptanthus* Hatch of New Zealand are saprophytes. Some of the species from New Zealand and Australia occur at sea-level.

Dispersal: The fruit is a small dehiscent capsule containing numerous minute seeds.

Sources: P. van Royen, The genus *Corybas* in its eastern areas, Phaner. Monogr. 16 (1983) 1–175; J. Dransfield, J.B. Comber & G. Smith, Kew Bull. 41 (1986) 575–613; D.L. Jones, Austral. Orch. Res. 2 (1991) 44–48. Various local floras and collections at K and L.

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364 *Corybas*

365. *Cyphosperma* Wendl. ex Hook. f.

Name: *Cyphosperma* Wendl. ex Hook. f. in Benth. & Hook. f., Gen. Pl. 3 (1883) 895.

Family: *Palmae*.

Synonym: *Taveunia* Burr.

Taxonomy & distribution: The genus consists of 3 species: 2 in Fiji and 1 in New Caledonia. It belongs to the subtribe *Iguanurinae* of tribe *Areceae* comprising 26 genera scattered widely over the Indo-Pacific (see map in Uhl & Dransfield 1987: 417), i. a. *Dictyosperma* of the Mascarenes, *Lepidorhachis* of Lord Howe I., *Pelagodoxa* of the Marquesas and 12 endemic genera on New Caledonia.

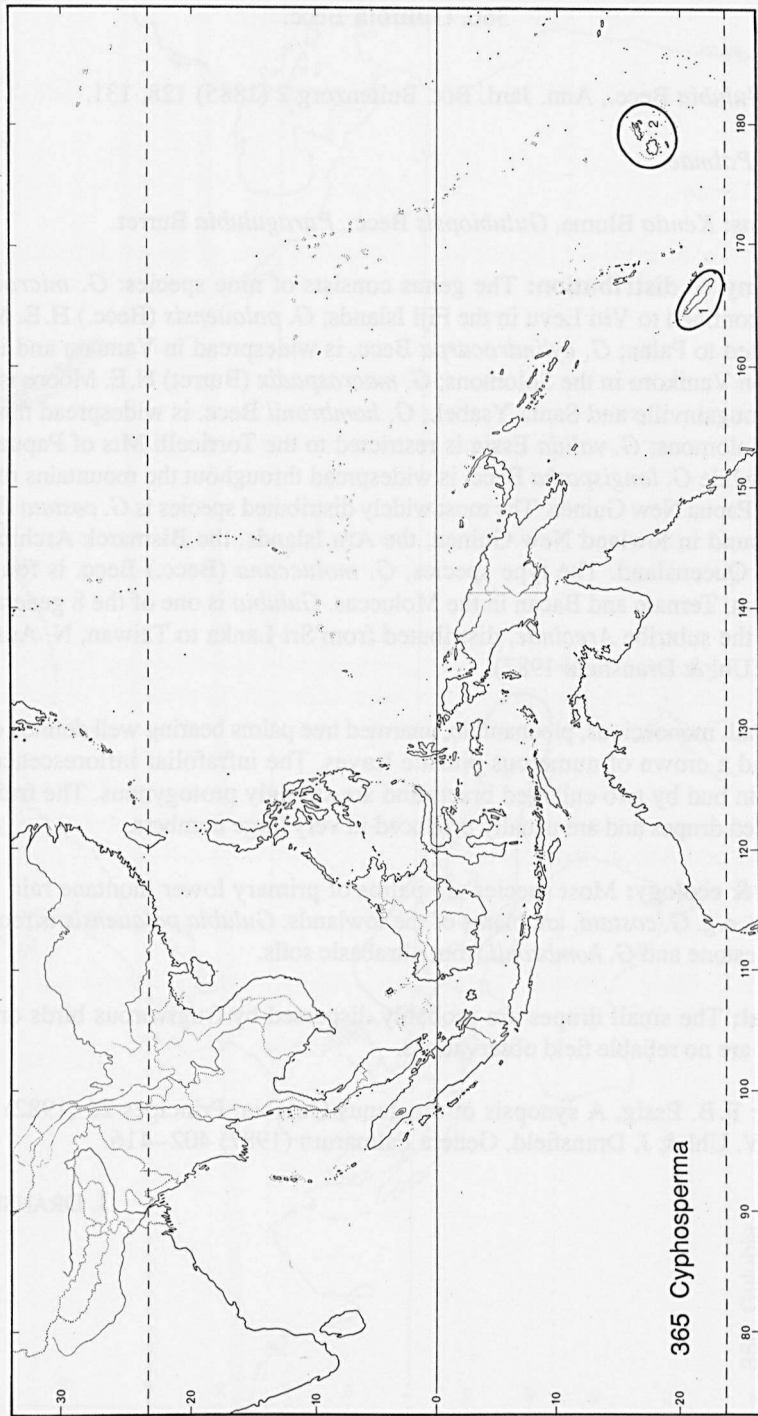
Habit: Moderate, solitary, unarmed pleoanthic, monoecious palms with pinnate leaves; inflorescence interfoliar, long pendulous, persisting below the leaves; flowering protandrous.

Habitat & ecology: In dense forest at medium altitudes in Fiji and on schists and peridotites in New Caledonia.

Dispersal: The fruit is an ellipsoid drupe with fleshy mesocarp and sculptured endocarp.

Sources: H. E. Moore in A. C. Smith, Fl. Vit. Nov. 1 (1971) 431–434; H. E. Moore & N. Uhl, Allertonia 3 (1984) 387–390; N. Uhl & J. Dransfield, Genera Palmarum (1987) 416–460.

J. DRANSFIELD



366. *Gulubia* Becc.

Name: *Gulubia* Becc., Ann. Jard. Bot. Buitenzorg 2 (1885) 128, 131.

Family: *Palmae*.

Synonyms: *Kentia* Blume, *Gulubiopsis* Becc., *Paragulubia* Burret.

Taxonomy & distribution: The genus consists of nine species: *G. microcarpa* Essig is confined to Viti Levu in the Fiji Islands; *G. palauensis* (Becc.) H.E. Moore is restricted to Palau; *G. cylindrocarpa* Becc. is widespread in Vanuatu and is also present on Vanikoro in the Solomons; *G. macrospadix* (Burret) H.E. Moore is present on Bougainville and Santa Ysabel.; *G. hombronii* Becc. is widespread throughout the Solomons; *G. valida* Essig is restricted to the Torricelli Mts of Papua New Guinea, while *G. longispatha* Becc. is widespread throughout the mountains of Irian Jaya and Papua New Guinea. The most widely distributed species is *G. costata* (Becc.) Becc., found in lowland New Guinea, the Aru Islands, the Bismarck Archipelago and NE. Queensland. The type species, *G. moluccana* (Becc.) Becc. is found on Halmahera, Ternate and Bacan in the Moluccas. *Gulubia* is one of the 8 genera constituting the subtribe *Arecinae*, distributed from Sri Lanka to Taiwan, N. Australia and Fiji (Uhl & Dransfield 1987).

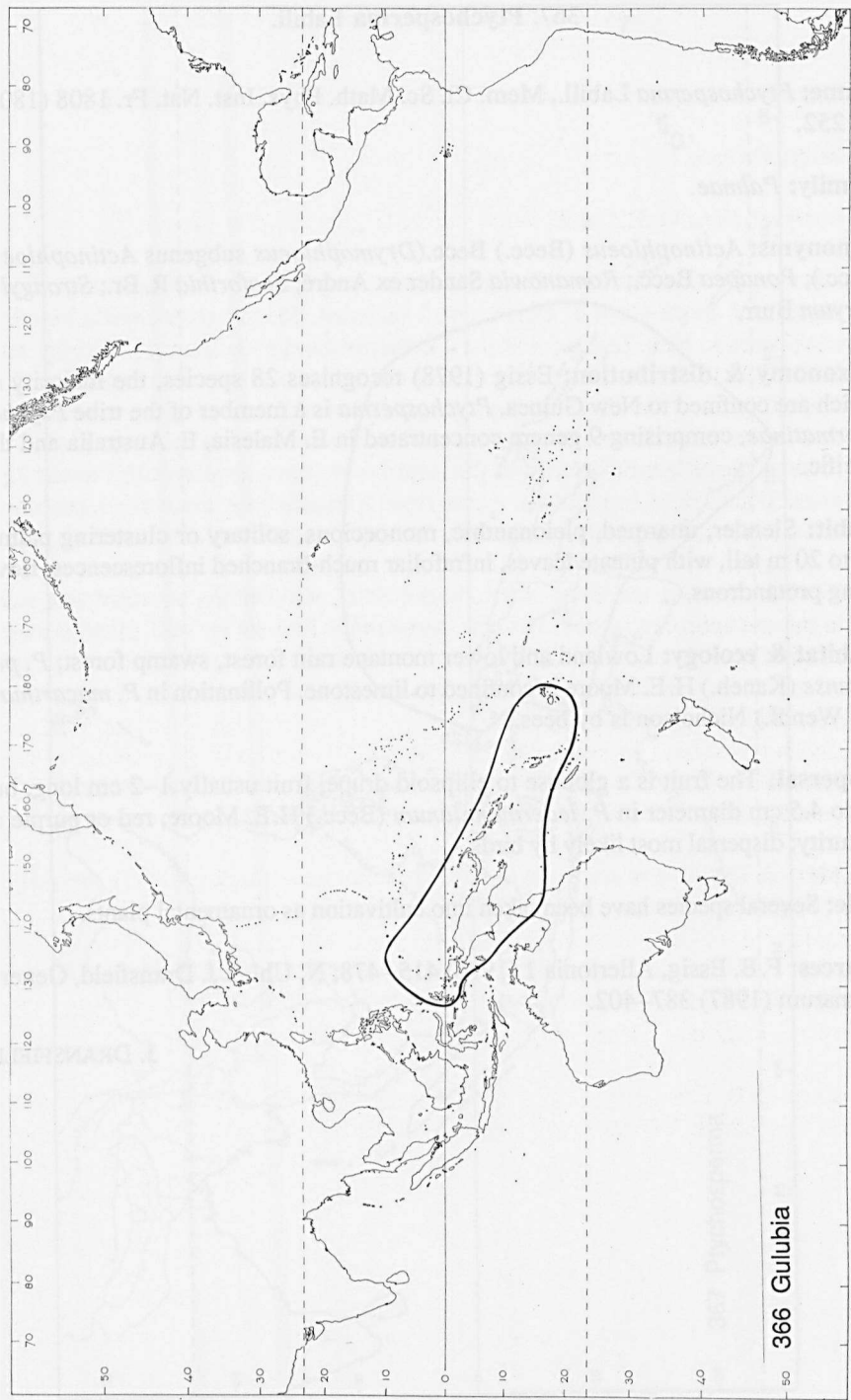
Habit: Tall, monoecious, pleonanthic, unarmed tree palms bearing well defined crown shafts and a crown of numerous pinnate leaves. The infrapinnate inflorescences are covered in bud by two enlarged bracts and are strongly protogynous. The fruits are one-seeded drupes and are usually produced in very large numbers.

Habitat & ecology: Most species are palms of primary lower montane rain forest but a few, e.g. *G. costata*, are plants of the lowlands. *Gulubia palauensis* is recorded from limestone and *G. hombronii* from ultrabasic soils.

Dispersal: The small drupes are probably dispersed by frugivorous birds or bats, but there are no reliable field observations.

Sources: F.B. Essig, A synopsis of the genus *Gulubia*. *Principes* 26 (1982) 159–173; N.W. Uhl & J. Dransfield, *Genera Palmarum* (1987) 402–416.

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367. *Ptychosperma* Labill.

Name: *Ptychosperma* Labill., Mem. Cl. Sc. Math. Phys. Inst. Nat. Fr. 1808 (1809) 252.

Family: *Palmae*.

Synonyms: *Actinophloeus* (Becc.) Becc. (*Drymophloeus* subgenus *Actinophloeus* Becc.); *Ponapea* Becc.; *Romanowia* Sander ex André; *Seaforthia* R. Br.; *Strongylocaryum* Burr.

Taxonomy & distribution: Essig (1978) recognises 28 species, the majority of which are confined to New Guinea. *Ptychosperma* is a member of the tribe *Psychospermatinae*, comprising 9 genera concentrated in E. Malesia, E. Australia and the Pacific.

Habit: Slender, unarmed, pleioanthic, monoecious, solitary or clustering palms, up to 20 m tall, with pinnate leaves, infrafoliar much-branched inflorescences; flowering protandrous.

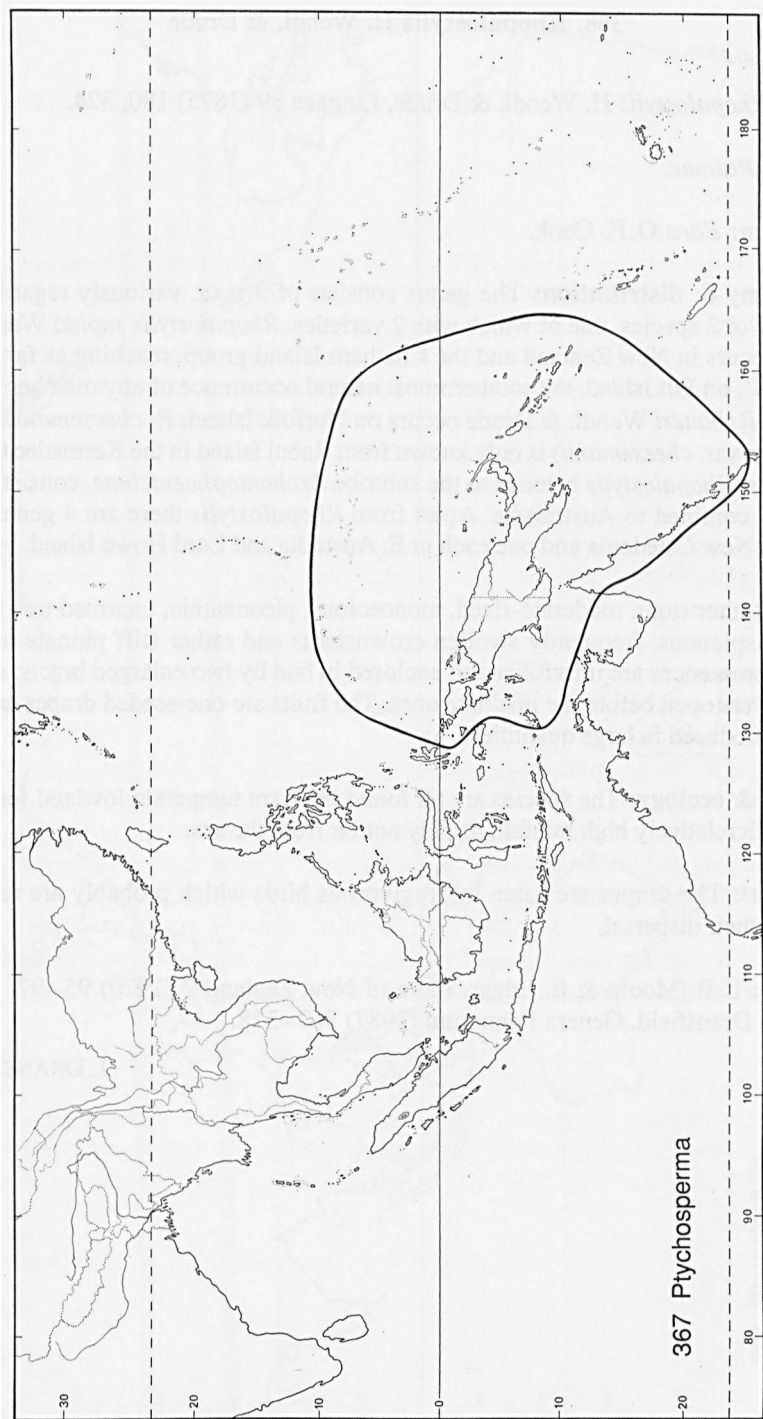
Habitat & ecology: Lowland and lower montane rain forest, swamp forest; *P. palauense* (Kaneh.) H.E. Moore is confined to limestone. Pollination in *P. macarthurii* (H. Wendl.) Nicholson is by bees.

Dispersal: The fruit is a globose to ellipsoid drupe, fruit usually 1–2 cm long, but up to 4.5 cm diameter in *P. ledermannianum* (Becc.) H.E. Moore, red or purple at maturity; dispersal most likely by birds.

Note: Several species have been taken into cultivation as ornamental plants.

Sources: F.B. Essig, *Allertonia* 1 (1978) 415–478; N. Uhl & J. Dransfield, *Genera Palmarum* (1987) 387–402.

J. DRANSFIELD



368. *Rhopalostylis* H. Wendl. & Drude

Name: *Rhopalostylis* H. Wendl. & Drude, *Linnaea* 39 (1875) 180, 324.

Family: *Palmae*.

Synonym: *Eora* O.F. Cook.

Taxonomy & distribution: The genus consists of 3 taxa, variously regarded as 3 species or 2 species, one of which with 2 varieties. *Rhopalostylis sapida* Wendl. & Drude occurs in New Zealand and the Chatham Island group, reaching as far south as 44° 18', on Pitt Island, the southernmost natural occurrence of any member of the *Palmae*; *R. baueri* Wendl. & Drude occurs on Norfolk Island; *R. cheesemaniae* Becc. (*R. baueri* var. *cheesemaniae*) is only known from Raoul Island in the Kermadec Group of Islands. *Rhopalostylis* belongs to the subtribe *Archontophoenicinae*, consisting of 7 genera confined to Australasia. Apart from *Rhopalostylis* there are 4 genera endemic to New Caledonia and one each in E. Australia and Lord Howe Island.

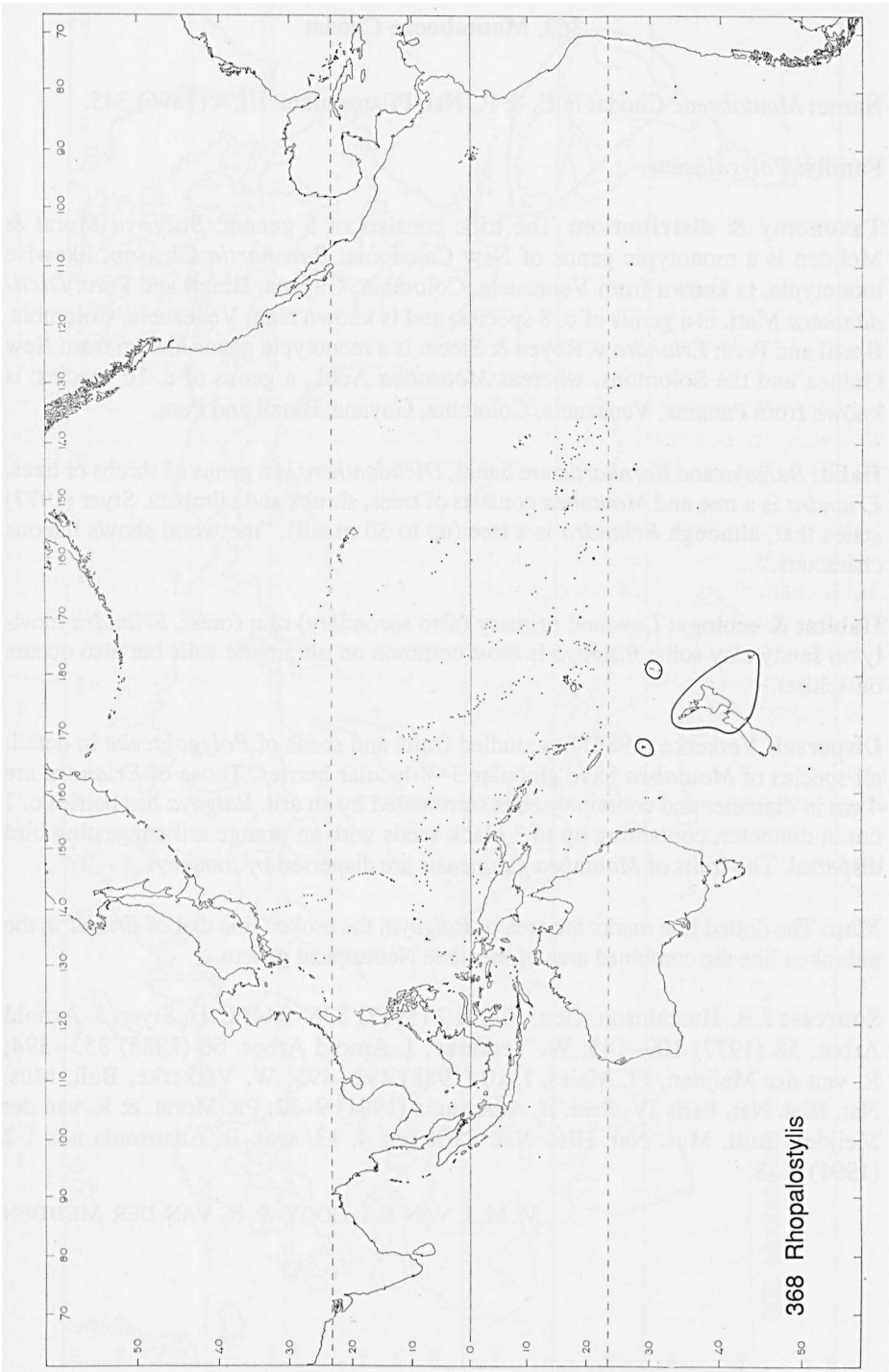
Habit: Rather stout, moderate-sized, monoecious, pleoanthic, unarmed tree palms with conspicuous, frequently swollen crownshafts and rather stiff pinnate leaves. The inflorescences are infrafoliar and enclosed in bud by two enlarged bracts; staminate flowers open before the pistillate ones. The fruits are one-seeded drupes and are usually produced in large quantities.

Habitat & ecology: The species are all found in warm temperate lowland forest in areas with relatively high rainfall, usually not far from the sea.

Dispersal: The drupes are eaten by frugivorous birds which probably are responsible for their dispersal.

Sources: L.B. Moore & E. Edgar, *Flora of New Zealand* 2 (1970) 95–97; N.W. Uhl & J. Dransfield, *Genera Palmarum* (1987) 367–378.

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368 *Rhopalostylis*

369. Moutabeeae Chodat

Name: *Moutabeeae* Chodat in E. & P., Nat. Pflanzenfam. III, 4 (1896) 345.

Family: *Polygalaceae*.

Taxonomy & distribution: The tribe consists of 5 genera: *Balgoya* Morat & Meijden is a monotypic genus of New Caledonia; *Barnhartia* Gleason, likewise monotypic, is known from Venezuela, Colombia, Guyana, Brazil and Peru; *Diclidanthera* Mart. is a genus of c. 8 species, and is known from Venezuela, Colombia, Brazil and Peru; *Eriandra* v. Royen & Steen. is a monotypic genus known from New Guinea and the Solomons, whereas *Moutabea* Aubl., a genus of c. 10 species, is known from Panama, Venezuela, Colombia, Guyana, Brazil and Peru.

Habit: *Balgoya* and *Barnhartia* are lianas, *Diclidanthera* is a genus of shrubs or trees, *Eriandra* is a tree and *Moutabea* consists of trees, shrubs and climbers. Styer (1977) states that, although *Eriandra* is a tree (up to 30 m tall), "the wood shows lianous characters."

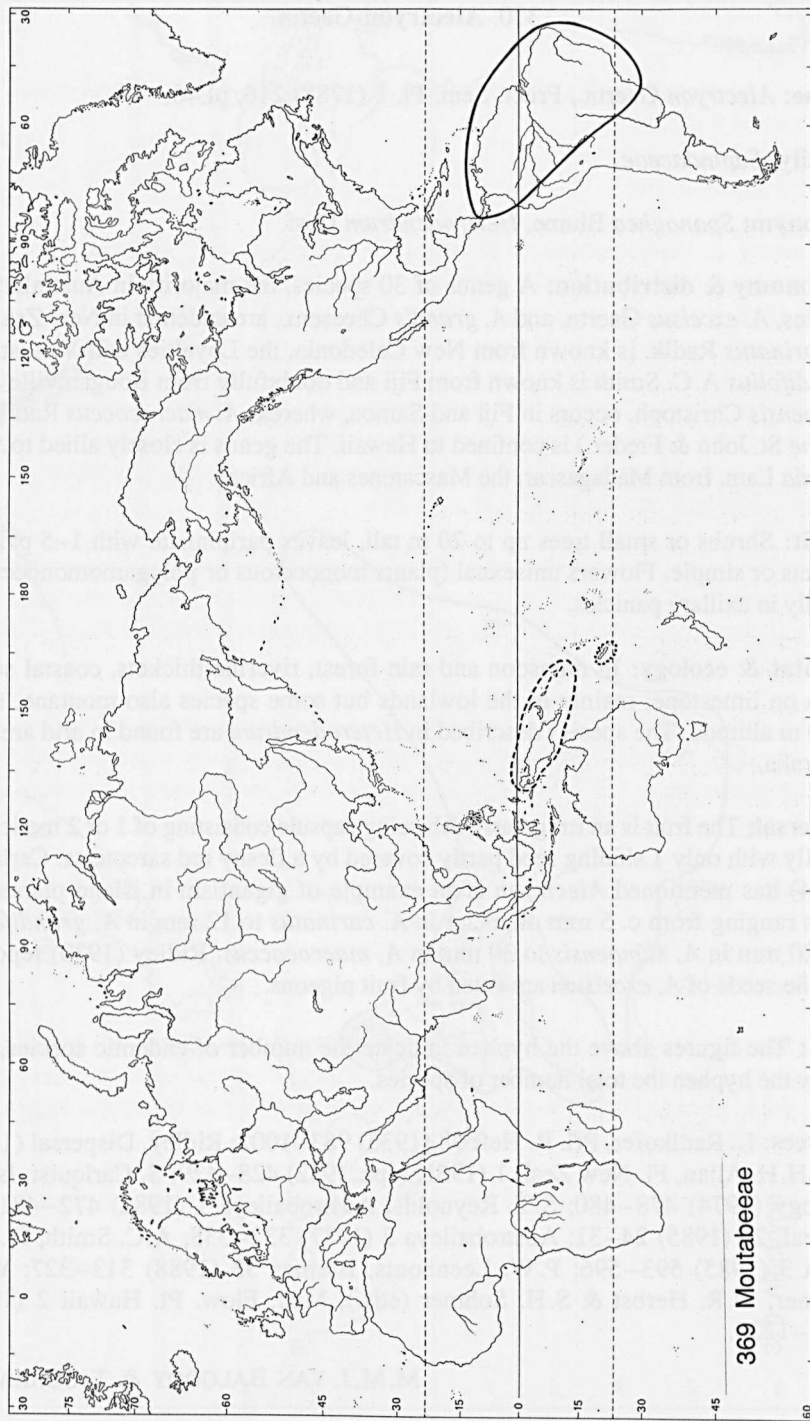
Habitat & ecology: Lowland primary (also secondary) rain forest, *Eriandra* mostly on sandy clay soils; *Balgoya* is most common on ultramafic soils but also occurs on schists.

Dispersal: Verkerke (1985) has studied fruits and seeds of *Polygalaceae* in detail; all species of *Moutabea* have globular 3–8-locular berries. Those of *Eriandra* are 4 cm in diameter and contain 4 seeds surrounded by an aril. *Balgoya* has berries c. 1 cm in diameter, containing up to 3 black seeds with an orange aril suggesting bird dispersal. The fruits of *Moutabea guianensis* are dispersed by monkeys.

Map: The dotted line marks the area of *Balgoya*, the broken line that of *Eriandra*, the unbroken line the combined area of the three Neotropical genera.

Sources: J.B. Hutchinson, Gen. Fl. Pl. 2 (1967) 336–344; C.H. Styer, J. Arnold Arbor. 58 (1977) 109–145; W. Verkerke, J. Arnold Arbor. 66 (1985) 353–394; R. van der Meijden, Fl. Males. I, 10 (1988) 492–493; W. Verkerke, Bull. Mus. Nat. Hist. Nat. Paris IV, Sect. B, Adansonia (1991) 9–12; Ph. Morat. & R. van der Meijden, Bull. Mus. Nat. Hist. Nat. Paris sér. 4, 13, sect. B, Adansonia nos 1-2 (1991) 3–8.

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370. *Alectryon* Gaertn.

Name: *Alectryon* Gaertn., Fruct. Sem. Pl. 1 (1788) 216, pl.46.

Family: *Sapindaceae*.

Synonym: *Spanoghea* Blume, *Heterodendrum* Desf.

Taxonomy & distribution: A genus of 30 species, the majority in Australia; two species, *A. excelsus* Gaertn. and *A. grandis* Cheesem., are endemic in New Zealand; *A. carinatus* Radlk. is known from New Caledonia, the Loyalties and Vanuatu; *A. grandifolius* A.C. Smith is known from Fiji and doubtfully from Bougainville I.; *A. samoensis* Christoph. occurs in Fiji and Samoa, whereas *A. macrococcus* Radlk. (*A. mahoe* St. John & Freder.) is confined to Hawaii. The genus is closely allied to *Stadmannia* Lam. from Madagascar, the Mascarenes and Africa.

Habit: Shrubs or small trees up to 20 m tall, leaves paripinnate with 1–5 pairs of leaflets or simple. Flowers unisexual (plants monoecious or polygamomonoecious) usually in axillary panicles.

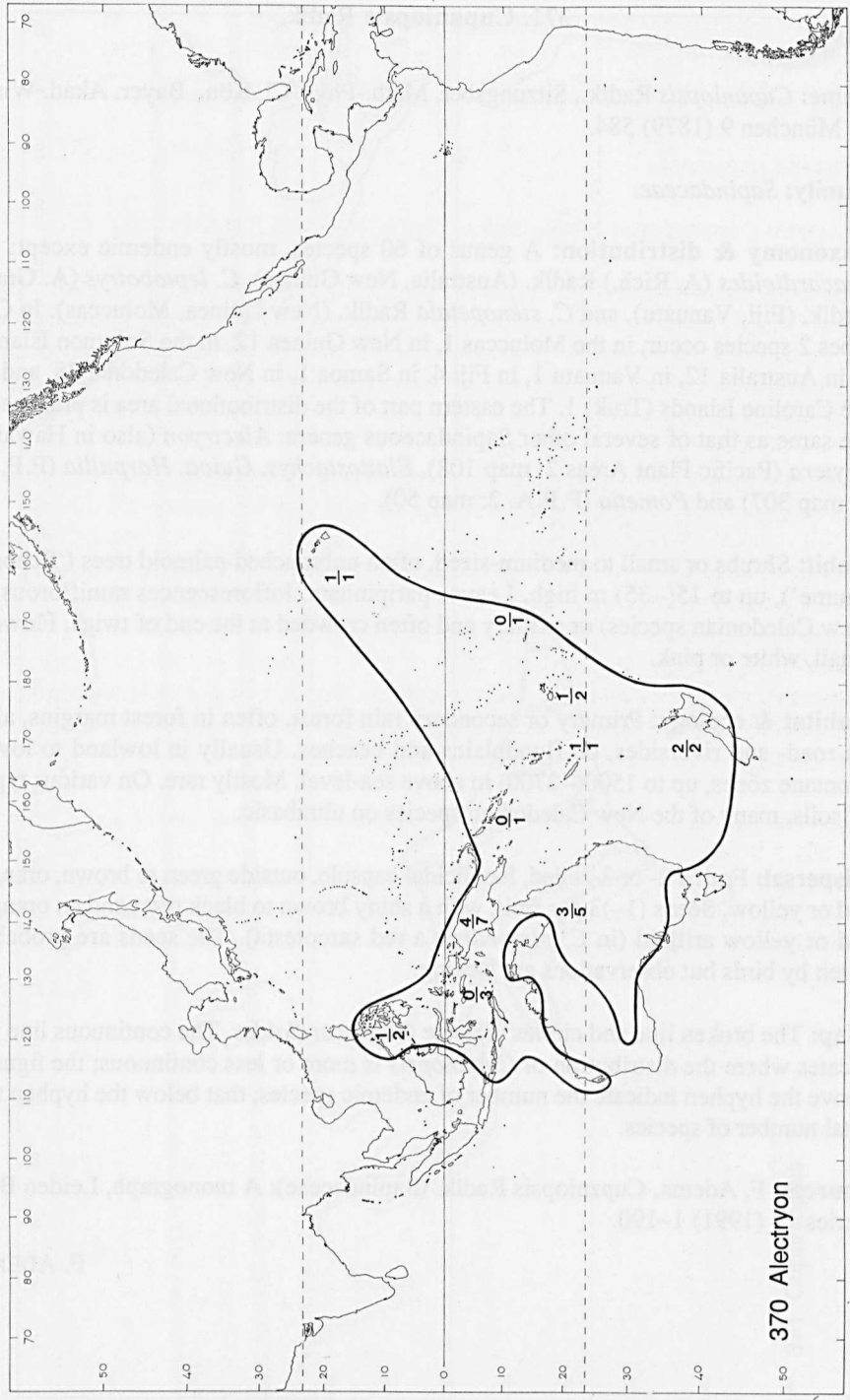
Habitat & ecology: In monsoon and rain forest, riverine thickets, coastal scrub, often on limestone; mainly in the lowlands but some species also montane, up to 2000 m altitude. The species described in *Heterodendrum* are found in arid areas of Australia.

Dispersal: The fruit is an irregularly dehiscent capsule consisting of 1 or 2 mericarps, usually with only 1 shining seed partly covered by a fleshy red sarcotesta. Carlquist (1974) has mentioned *Alectryon* is an example of gigantism in island plants, the seeds ranging from c. 5 mm diameter in *A. carinatus* to 12 mm in *A. grandifolius* and 20 mm in *A. samoensis* to 30 mm in *A. macrococcus*. Ridley (1930) reported that the seeds of *A. excelsus* are eaten by fruit pigeons.

Map: The figures above the hyphen indicate the number of endemic species, that below the hyphen the total number of species.

Sources: L. Radlkofer, Pfl. R. Heft 98 (1933) 983–1002; Ridley, Dispersal (1930) 501; H.H. Allan, Fl. New Zeal. 1 (1961, repr. 1982) 428–429; S. Carlquist, Island Biology (1974) 478–480; S.T. Reynolds, Austrobaileya 1 (1982) 472–481; Fl. Austral. 25 (1985) 24–31; Austrobaileya 2 (1987) 332–338; A.C. Smith, Fl. Vit. Nova 3 (1985) 593–596; P.W. Leenhouts, Blumea 33 (1988) 313–327; W.L. Wagner, D.R. Herbst & S.H. Sohmer (eds.), Man. Flow. Pl. Hawaii 2 (1990) 1224–1225.

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370 *Alectryon*

371. *Cupaniopsis* Radlk.

Name: *Cupaniopsis* Radlk., Sitzungsber. Math.-Phys. Cl. Kön.. Bayer. Akad. Wiss. München 9 (1879) 584.

Family: *Sapindaceae*.

Taxonomy & distribution: A genus of 60 species, mostly endemic except: *C. anacardioides* (A. Rich.) Radlk. (Australia, New Guinea), *C. leptobotrys* (A. Gray) Radlk. (Fiji, Vanuatu), and *C. stenopetala* Radlk. (New Guinea, Moluccas). In Celebes 2 species occur, in the Moluccas 1, in New Guinea 12, in the Solomon Islands 1, in Australia 12, in Vanuatu 1, in Fiji 4, in Samoa 1, in New Caledonia 28, and in the Caroline Islands (Truk) 1. The eastern part of the distributional area is practically the same as that of several other Sapindaceous genera: *Alectryon* (also in Hawaii), *Arytera* (Pacific Plant Areas 2: map 108), *Elattostachys*, *Guioa*, *Harpullia* (P.P.A. 4: map 307) and *Pometia* (P.P.A. 2: map 50).

Habit: Shrubs or small to medium-sized, often unbranched palmoid trees ('Schopfbäume'), up to 15(-35) m high. Leaves paripinnate. Inflorescences ramiflorous (4 New Caledonian species) or axillary and often crowded at the end of twigs. Flowers small, white or pink.

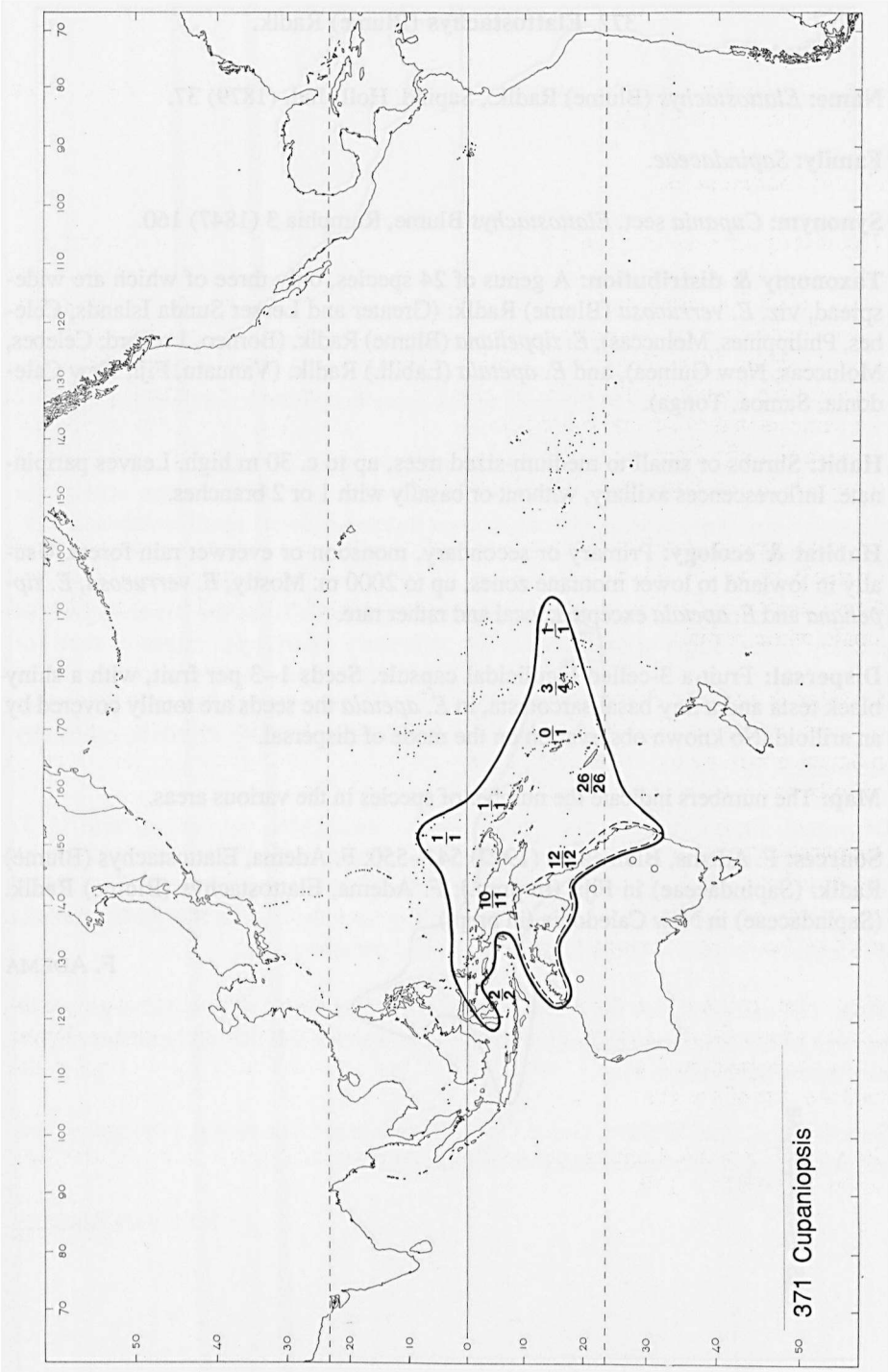
Habitat & ecology: Primary or secondary rain forest, often in forest margins, also on road- and riversides, on floodplains and beaches. Usually in lowland to lower montane zones, up to 1500(-2700) m above sea-level. Mostly rare. On various types of soils, many of the New Caledonian species on ultrabasic.

Dispersal: Fruit a 2- or 3-celled, loculicidal capsule, outside green to brown, orange, red or yellow. Seeds (1-)3 per fruit, with a shiny brown to black testa and an orange, red or yellow arilloid (in *C. platycarpa* a red sarcotesta). The seeds are probably eaten by birds but observations are lacking.

Map: The broken line and circles indicate *C. anacardioides*. The continuous line indicates where the distribution of *Cupaniopsis* is more or less continuous; the figures above the hyphen indicate the number of endemic species, that below the hyphen the total number of species.

Sources: F. Adema, *Cupaniopsis* Radlk. (Sapindaceae): A monograph, Leiden Bot. Series 14 (1991) 1-190.

F. ADEMA



371 *Cupaniopsis*

372. *Elattostachys* (Blume) Radlk.

Name: *Elattostachys* (Blume) Radlk., Sapind. Holl.-Ind. (1879) 37.

Family: *Sapindaceae*.

Synonym: *Cupania* sect. *Elattostachys* Blume, Rumphia 3 (1847) 160.

Taxonomy & distribution: A genus of 24 species, only three of which are widespread, viz. *E. verrucosa* (Blume) Radlk. (Greater and Lesser Sunda Islands, Celebes, Philippines, Moluccas), *E. zippeliana* (Blume) Radlk. (Borneo, 1 record; Celebes, Moluccas, New Guinea), and *E. apetala* (Labill.) Radlk. (Vanuatu, Fiji, New Caledonia, Samoa, Tonga).

Habit: Shrubs or small to medium-sized trees, up to c. 30 m high. Leaves paripinnate. Inflorescences axillary, without or basally with 1 or 2 branches.

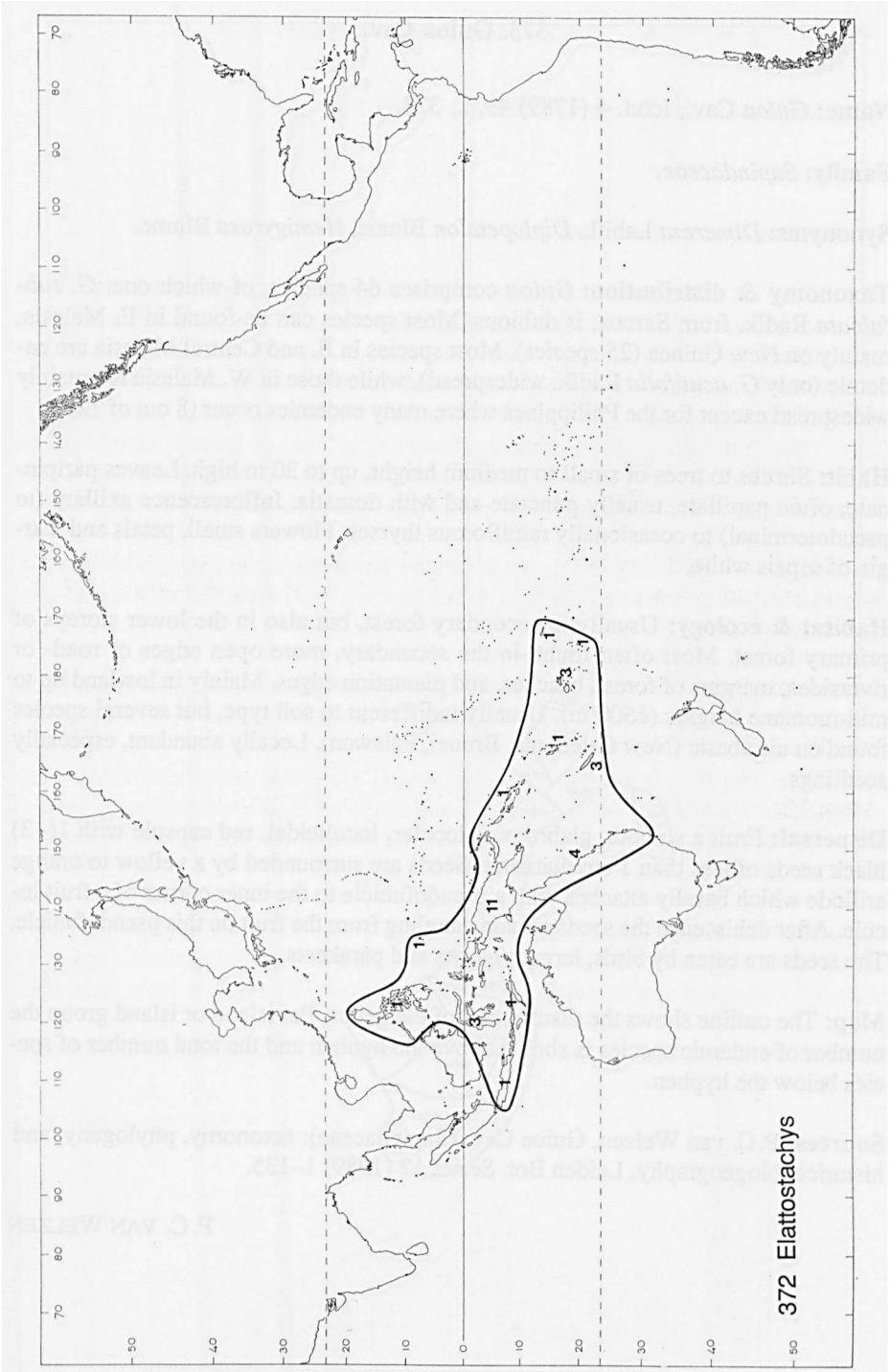
Habitat & ecology: Primary or secondary, monsoon or everwet rain forest. Usually in lowland to lower montane zones, up to 2000 m. Mostly, *E. verrucosa*, *E. zippeliana* and *E. apetala* excepted, local and rather rare.

Dispersal: Fruit a 3-celled loculicidal capsule. Seeds 1–3 per fruit, with a shiny black testa and a tiny basal sarcotesta, in *E. apetala* the seeds are totally covered by an ariloid. No known observation on the mode of dispersal.

Map: The numbers indicate the number of species in the various areas.

Sources: F. Adema, Blumea 36 (1992) 541–550; F. Adema, *Elattostachys* (Blume) Radlk. (Sapindaceae) in Fiji. (in prep.); F. Adema, *Elattostachys* (Blume) Radlk. (Sapindaceae) in New Caledonia (in prep.).

F. ADEMA



373. *Guioa* Cav.

Name: *Guioa* Cav., Icon. 4 (1789) 49, t. 373.

Family: *Sapindaceae*.

Synonyms: *Dimereza* Labill., *Diplopetalon* Blume, *Hemigyrosa* Blume.

Taxonomy & distribution: *Guioa* comprises 64 species, of which one, *G. subfalcata* Radlk. from Samoa, is dubious. Most species can be found in E. Malesia, mainly on New Guinea (25 species). Most species in E. and Central Malesia are endemic (only *G. acutifolia* Radlk. widespread), while those in W. Malesia are mainly widespread except for the Philippines where many endemics occur (8 out of 12).

Habit: Shrubs to trees of small to medium height, up to 30 m high. Leaves paripinnate, often papillate, usually punctate and with domatia. Inflorescence axillary (to pseudoterminal) to occasionally ramiflorous thyrses. Flowers small, petals and margin of sepals white.

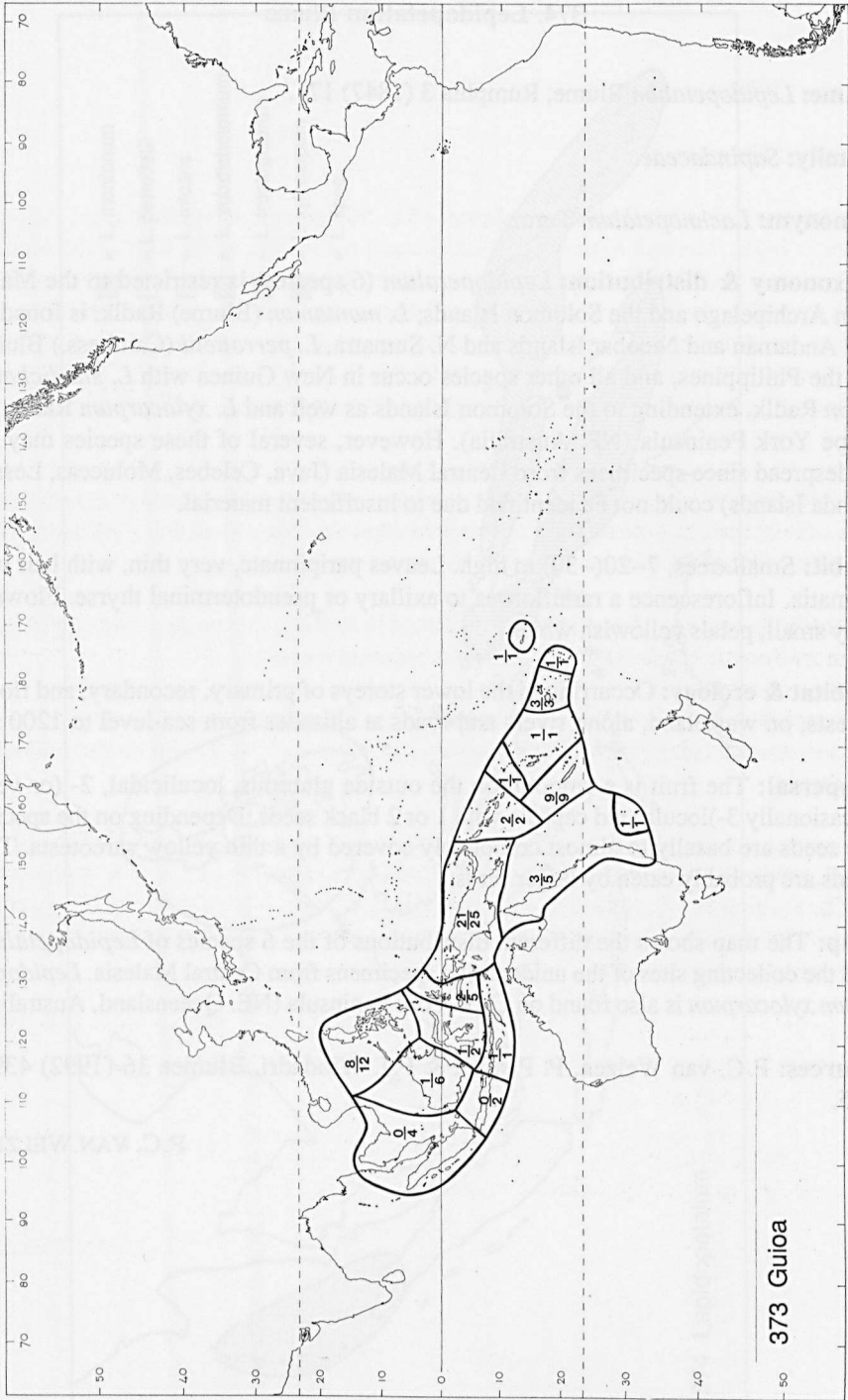
Habitat & ecology: Usually in secondary forest, but also in the lower storeys of primary forest. Most often found in the secondary, more open edges of road- or riversides, margins of forest, beaches, and plantation edges. Mainly in lowland up to mid-montane heights (1500 m). Usually indifferent to soil type, but several species found on ultrabasic (New Caledonia, Brunei, Palawan). Locally abundant, especially seedlings.

Dispersal: Fruit a smooth, glabrous, 3-locular, loculicidal, red capsule with 1(-3) black seeds of less than 1 cm diameter. Seeds are surrounded by a yellow to orange arillode which basally attaches with a pseudofuncle to the inner corner of a fruit locule. After dehiscence the seeds remain dangling from the fruit on this pseudofuncle. The seeds are eaten by birds, larger pigeons and parakeets.

Map: The outline shows the distribution of the genus. Per island or island group the number of endemic species is shown above the hyphen and the total number of species below the hyphen.

Sources: P. C. van Welzen, *Guioa* Cav. (Sapindaceae): taxonomy, phylogeny, and historical biogeography, Leiden Bot. Series 12 (1989) 1-135.

P. C. VAN WELZEN



374. *Lepidopetalum* Blume

Name: *Lepidopetalum* Blume, Rumphia 3 (1847) 171.

Family: *Sapindaceae*.

Synonym: *Lachnopetalum* Turcz.

Taxonomy & distribution: *Lepidopetalum* (6 species) is restricted to the Malasian Archipelago and the Solomon Islands; *L. montanum* (Blume) Radlk. is found in the Andaman and Nicobar Islands and N. Sumatra, *L. perrottetii* (Cambess.) Blume on the Philippines, and all other species occur in New Guinea with *L. subdichotomum* Radlk. extending to the Solomon Islands as well and *L. xylocarpum* Radlk. to Cape York Peninsula (NE. Australia). However, several of these species may be widespread since specimens from Central Malesia (Java, Celebes, Moluccas, Lesser Sunda Islands) could not be identified due to insufficient material.

Habit: Small trees, 7–20(–30) m high. Leaves paripinnate, very thin, with hair tuft domatia. Inflorescence a ramiflorous to axillary or pseudoterminal thyrse. Flowers very small, petals yellowish white.

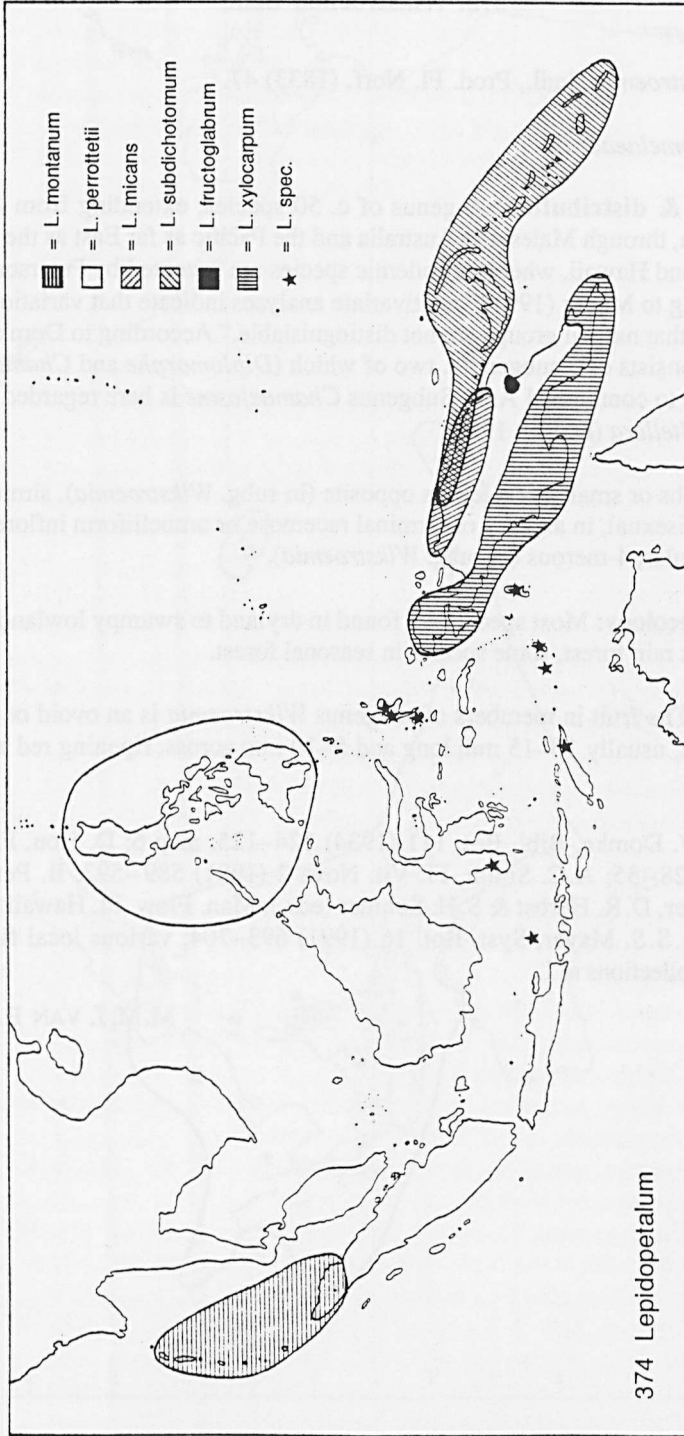
Habitat & ecology: Occurring in the lower storeys of primary, secondary, and flood forests, on wasteland, along rivers and roads at altitudes from sea-level to 1200 m.

Dispersal: The fruit is a smooth, on the outside glabrous, loculicidal, 2- (or very occasionally 3-)locular red capsule with 1 or 2 black seeds. Depending on the species the seeds are basally to almost completely covered by a thin yellow sarcotesta. The seeds are probably eaten by larger birds.

Map: The map shows the different distributions of the 6 species of *Lepidopetalum* and the collecting sites of the unidentified specimens from Central Malesia. *Lepidopetalum xylocarpum* is also found on Cape York Peninsula (NE. Queensland, Australia).

Sources: P.C. van Welzen, P. Piskaut & F.J. Windadri, *Blumea* 36 (1992) 439–465.

P.C. VAN WELZEN



375. *Wikstroemia* Endl.

Name: *Wikstroemia* Endl., Prod. Fl. Norf. (1833) 47.

Family: *Thymelaeaceae*.

Taxonomy & distribution: A genus of c. 50 species, extending from Afghanistan to Japan, through Malesia to Australia and the Pacific as far East as the Marquesas Islands and Hawaii, where 12 endemic species are accepted by Peterson (1990), but according to Mayer (1991) "multivariate analyses indicate that variation is continuous and that natural groups are not distinguishable." According to Domke (1934) the genus consists of 3 subgenera, two of which (*Diplomorphe* and *Chamaejasme*) are confined to continental Asia. Subgenus *Chamaejasme* is here regarded as a distinct genus *Stellera* (D. Hou 1960).

Habit: Shrubs or small trees, leaves opposite (in subg. *Wikstroemia*), simple; flowers uni- or bisexual; in axillary or terminal racemose or umbelliform inflorescences, perianth tubular, 4-merous (in subg. *Wikstroemia*).

Habitat & ecology: Most species are found in dryland to swampy lowland to montane everwet rain forest, some species in seasonal forest.

Dispersal: The fruit in members of subgenus *Wikstroemia* is an ovoid or ellipsoid fleshy drupe, usually 10–15 mm long and 5–10 mm across, ripening red and eaten by birds.

Sources: W. Domke, *Bibl. Bot.* 111 (1934) 124–125, map 6; D. Hou, *Fl. Males.* I, 6 (1960) 28–35; A. C. Smith, *Fl. Vit. Nova* 2 (1981) 589–592; B. Peterson in W. L. Wagner, D. R. Herbst & S. H. Sohmer (eds.), *Man. Flow. Pl. Hawaii* 2 (1990) 1282–1291; S. S. Mayer, *Syst. Bot.* 16 (1991) 693–704; various local floras and herbarium collections at L.

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