

Isomerocarpa differs from *Daphnandra* in the presence of the above-mentioned involucrate bracteoles, in having the tepals 8 and the members of both series similar in number and texture (the tepals of *Daphnandra* being 10–15, those of the inner series more numerous, larger, and thinner in texture than those of the outer), in the somewhat produced and conspicuously flattened anther-connective, in the essentially basal rather than pendulous ovule, and in having the fruiting receptacle dehiscent into three or four subequal valves (rather than inequilaterally along one side as in *Daphnandra*).

A closer relative of the new genus appears to be the Australian *Atherosperma* Labill., which agrees with the New Guinean plants in having paired bracteoles beneath each flower. *Isomerocarpa*, however, differs from *Atherosperma* in having its flowers hermaphrodite rather than dioecious or polygamo-monecious, in having its stamens 4–9 rather than 10–16 and its filaments inconspicuous (those of *Atherosperma* being slender and obvious), in its produced anther-connective, and in its ellipsoid fruiting receptacle (that of *Atherosperma* being either subglobose or urceolate). The staminate flowers of *Atherosperma* completely lack both staminodes and carpels, the receptacle being flattened, while the pistillate flowers have more numerous (at least 25) carpels than those of *Isomerocarpa*. The staminodes of *Atherosperma*, present only in pistillate flowers, are arranged on the inner surface of the receptacle above the carpels, while the new genus has the staminodes on the distal outer surface of the receptacle.

Isomerocarpa, a member of the Subfamily Atherospermoideae, Tribe Laurelieae, according to Perkins' treatment, seems to have as strong a combination of characters as any of the five genera of this relationship treated in the *Pflanzenreich*. These genera, although small, are well marked and will presumably seem quite acceptable to future monographers. The name of the new genus refers to the fact that the fruiting receptacle splits into equal valves.

***Isomerocarpa novoguineensis* (Perk.) comb. nov.**

Daphnandra novoguineensis Perk. Bot. Jahrb. 52: 217. f. 5. 1915.

NORTHEASTERN NEW GUINEA: Morobe District, Ogeram nang, alt. about 1800 m., *Clemens* 4598 (tall tree in forest hills, the trunk 38–60 cm. diam., the buds greenish white), 4796, 5456; Yunzaing, alt. about 1400 m., *Clemens* 3853 (tall tree, the trunk 60 cm. diam. or more; fruit green; tree growing with *Calophyllum* sp.). BRITISH NEW GUINEA: Central Division, Ononge Road, alt. 500 m., *Brass* 3913 (gray-barked tree in rain-forest, the leaves thick, dark, pale beneath; flowers brown;

fruit green, hard). NETHERLANDS NEW GUINEA: Balim River, *Brass & Versteegh 11194* (on forested slopes at 2160 m.; tree 26 m. high, the trunk 60 cm. diam., the crown fairly wide-spreading, the bark thick, gray, 18 mm. thick, the wood brown; flowers red; fruits green); 4 km. southwest of Bernhard Camp, Idenburg River, alt. 900 m., *Brass 13085* (common subsidiary tree 10–12 m. high, in mossy forest; flowers yellow, with red stamens); 15 km. southwest of Bernhard Camp, Idenburg River, *Brass & Versteegh 11948* (tree 25 m. high, frequent in primary forest at 1590 m. alt., the trunk 44 cm. diam., the crown not wide-spreading, the bark 11 mm. thick, dark brown, the sap-wood yellow, the heart-wood brown-yellow; fruits light green), *11984* (tree 31 m. high, frequent in primary forest on the slope of a ridge at 1900 m. alt., the trunk 60 cm. diam., the crown not wide-spreading, the bark 12 mm. thick, rough, fissured, the sap-wood light yellow, the heart-wood brown-yellow; flowers red).

The species has previously been reported only from Northeastern New Guinea. The above-cited specimens agree well with the original description, although they may equally well be referred to *Daphnandra Perkinsiae* Gilg & Diels. From a comparison of the two descriptions I am inclined to doubt the existence of two species, as the differences in leaf-size, texture, apex, and punctuation mentioned by Gilg and Diels seem very slight. In general, it appears that specimens from higher elevations have thicker and smaller leaf-blades, but I fail to find specific differences among those cited. The reduction cannot definitely be made without examination of the two types.

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PLANTAE PAPUANAE ARCHBOLDIANAE, VI*

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THE Papuan material under study contains representatives of several families with but a few numbers each. In some groups considered below the material is entirely from Netherlands New Guinea (Third Archbold Expedition), the Fly River collections having previously been named and recorded, while in others our total material of the family is considered. Included also are a few specimens, misplaced in the original hasty ordering up of the collections for reference, representing families previously considered. The new species and the range extensions here recorded were detected in our effort to complete the identifications of the material in certain of these smaller families. As far as we know, no representatives of the genera *Elaeagnus*, *Crypteronia*, *Duabanga*, and *Callitriche* have previously been reported from New Guinea. *Elaeagnus* and *Callitriche* were to be expected, as both have long been known as occurring in Malaysia and in Australia. *Duabanga* and *Crypteronia* are small genera characteristic of Malaysia, New Guinea perhaps representing the southeastern limits of their geographic range.

ULMACEAE

Celtis Linnaeus*Celtis similis* sp. nov.

Arbor 8 m. alta, trunco 25 cm. diametro; ramulis brunnescentibus glabris, novellis adpresse pubescentibus, pilis flavescentibus; foliis subcoriaceis petiolatis, pro more affinium eximie trinerviis, lanceolato- ad ovato-ellipticis, 2.5–5 cm. longis, 1.2–2.2 cm. latis, basi subrotundatis vel obtusis paullo obliquis, apice saepe longe acuminatis, acumine 0.4–1.2 cm. longo, acuto vel subapiculato, margine integris vel supra medium remote serratis, supra glabris vel novellis parce pubescentibus, subtus praecipue in costa nervisque primariis parce pubescentibus, axillis plerumque minute fasciculato-barbatis; costa recta in tertia parte supera nervos utrinsecus 1–2 emittente, nervis basalibus 2 superne evanescentibus, exterius $\pm$ 4 venas laterales arcuatim anastomosantes emittentibus; venularum reticulo $\pm$ inconspicuo; stipulis ipsis non visis; petiolo

*(Botanical Results of the Richard Archbold Expeditions) See Jour. Arnold Arb. 20: 324–345. 1939; op. cit. 21: 163–200, t. 1. 1940; op. cit. 292–327; op. cit. 511–527; op. cit. 22: 32–59. 1941.

1.5–3 mm. longo, adpresse pubescente; cymis axillaribus fructiferis $\pm$ 1 cm. longis, pedunculis 3–5 mm. longis, pubescentibus; drupis late ellipsoideis, leviter compressis, apice pubescentibus obtuse apiculatis, putamine 2 mm. longo, 2.5 mm. lato, ruguloso.

NETHERLANDS NEW GUINEA: Balim River, *Brass & Versteegh 11168* (TYPE), December 1938, alt. 1600 m., relic strip of primary forest on river bank (tree 8 m. high, 25 cm. diameter; bark gray; fruit green).

Celtis similis is undoubtedly closely related to *C. rubrovenia* Elmer of the Philippine Islands. The leaves, petioles and fruits are a little smaller than in the latter species, and the new growth is densely pubescent. Further, the leaves lack the punctulations characteristic of the Philippine species, and differ also in that, usually, minute tufts of hairs are present in the axils of the larger veins on the lower surface.

***Celtis Kajewskii* sp. nov.**

Arbor usque 25 m. alta; ramulis cinereo-brunnescentibus glabris, innovationibus pubescentibus; foliis subcoriaceis, petiolatis, trinerviis, ovato-ellipticis, 10–19 cm. longis, 6–10 cm. latis, apice ($\pm$ fractis) probabiliter acuminatis, basi rotundato-obtusis vel brevissime cuneatis, paullo obliquis, margine integris, supra glabris vel costa nervisque parce pubescentibus, subtus praecipue in costa venisque parce pubescentibus; costa recta, nervis primariis 2 tantum conspicuis a basi ad apicem laminae arcuatim productis, exterius venas laterales plures intra marginem arcuatim anastomosantes emittentibus, venularum reticulo supra manifesto, subtus prominulo; stipulis ipsis non visis; petiolo 7–10 mm. longo, $\pm$ adpresse pubescente; cymis fructiferis usque 5 cm. longis; drupis elongato-ovoideis subtetragonis, 2 cm. longis, $\pm$ 1.5 cm. latis, stigmate bilobo coronatis, parce pubescentibus vel glabris.

SOLOMON ISLANDS: Guadalcanal, Berande, *Kajewski 2445* (TYPE), January 1931, common in rain-forest at sea level (very large tree up to 25 m. high, with straight stem and little buttressed or not; fruit orange-colored when ripe, 2.5 cm. long, 1.6 cm. broad, oval shaped with a point at the end). NEW BRITAIN: Keravat Experiment Station, near Rabaul, *Kanehira 3964*.

The characters of this species approach those of *C. Zippelii* (Blume) Planchon as given in the description; in the latter, however, the two main nerves do not extend to the apex of the leaf, and the leaves are glabrous.

***Parasponia* Miquel**

***Parasponia rigida* sp. nov.**

Arbor usque 6 m. alta; ramulis teretibus, adpresse pubescentibus vel glabris; foliis coriaceis alternis petiolatis lanceolatis haud ovatis, usque

8.5 cm. longis, 2.3 cm. latis, basi rotundatis paullo obliquis, apice acute acuminatis, margine in sicco leviter revolutis serrulatis, trinerviis, supra scabridulis (pilis basi bulbosis vel pustulatis), rugosis, costa atque 2 nervis adpresse pubescentibus, subtus adpresse pubescentibus ac manifeste dense reticulatis; nervis basilaribus usque ad apicem productis arcuatis, exterius venas laterales plures longiuscule arcuatas intra marginem anastomosantes emittentibus, costa interdum unam venam lateralem emittente; petiolo $\pm$ 8 mm. longo, adpresse pubescente; stipulis in costis adpresse pubescentibus in unam stipulam intrapetiolarem circiter 8 mm. longam bicuspidatam connatis; cymis axillaribus, circiter 1 cm. longis; rhachi adpresse pubescente; bracteis ovatis, fere acuminatis, circiter 1 mm. longis; floribus parvis monoicis; δ : perianthio 5-partito, laciniis imbricatis late obovato-ellipticis, 1.6 mm. longis, 1.2 mm. latis, obtusiusculis puberulis ciliatis; staminibus 5, filamentis 0.8 mm. longis, antheris 0.7 mm. longis, thecis oblongis, curvatis; pistilli rudimento 0.8 mm. longo angulato-obconico, apice medio paullo impresso, receptaculo hirsuto; η : pedicellatis, pedicellis 1–1.5 mm. longis; perianthio 1.2 mm. longo, laciniis ovatis, puberulis, ciliatis; drupis ovoideis 2–2.4 mm. longis, 2.2 mm. latis, stigmatibus marcescentibus coronatis, basi perianthio suffultis.

NETHERLANDS NEW GUINEA: 18 km. southwest of Bernhard Camp, Idenburg River, *Brass* 12459 (TYPE), February 1939, alt. 2150 m., mossy forest, dominating young forest at the foot of a rock-slide (tree up to 6 m. high; branches flat-spreading; fruit red).

This species is very close to *Parasponia melastomatifolia* J. J. Sm. differing chiefly in the lanceolate leaves with a serrulate margin. The δ and η inflorescences are on different branchlets, and the outer lateral veins are long-arcuate before anastomosing.

***Parasponia simulans* sp. nov.**

Arbor 4–5 m. alta; ramulis teretibus, adpresse pubescentibus ad glabratibus; foliis subcoriaceis vel chartaceis, alternis petiolatis lanceolatis interdum elongato-ovatis, 5.5–11 cm. longis, 1.7–4 cm. latis, basi rotundatis paullo obliquis, apice acute acuminatis, margine in sicco leviter revolutis crenulato-serrulatis, trinerviis, supra vix scabridulis, costa parce pubescente, subtus costa venis venulisque adpresse pubescentibus, dense manifesteque reticulatis, novellis subtus pubescentibus; costa recta, nervis primariis 2 tantum, conspicuis, a basi ad apicem laminae arcuatim productis, exterius venas laterales plures breviter arcuatim anastomosantes emittentibus; petiolo 6–12 mm. longo, adpresse pubescente; stipulis in unam intrapetiolarem circiter 7 mm. longam bi-

cuspidatam adpresse puberulam connatis; inflorescentiis axillaribus, $\pm$ 1 cm. longis; rhachi adpresse pubescente; floribus monoicis; δ : perianthio 5-partito, laciniis obovato-ellipticis, $\pm$ 1.5 cm. longis, 1.2 cm. latis, adpresse pubescentibus, ciliatis; staminibus 5, filamentis 1.5 cm. longis, antheris 0.8 mm. longis, ovoideis, thecis oblongis, curvatis; pistilli rudimento angulato-clavato; receptaculo dense hirsuto; η : perianthio δ conformi; drupis ovoideis 2.5 mm. longis, stigmatibus marcescentibus 0.8 mm. longis coronatis, putamine late subgloboso-ovoideo, 1.4 mm. longo, 1.8 mm. lato.

NETHERLANDS NEW GUINEA: 4 km. southwest of Bernhard Camp, Idenburg River, *Brass* 13072 (TYPE), March 1939, alt. 850 m., common in seral rain-forest (tree 4–5 m. high).

Unquestionably *Parasponia melastomatifolia* J. J. Sm., *P. rigida* and this species are very closely related. Unfortunately we have only the plate and the original description of the first to compare with our species. *Parasponia simulans* appears to be separable from *P. melastomatifolia* J. J. Sm. by the lanceolate leaves with crenulate-serrulate margin and the relatively smooth upper surface. Comparing *P. simulans* with *P. rigida* Merr. & Perry, the following differences appear: the inflorescence of the former is more open, staminate and pistillate flowers are in the same inflorescence; the leaves are thinner, the lower surface is much less pubescent, the venation is less elevated, and the veins extending outward from the main nerves are only shortly arcuate.

ROSACEAE

Parastemon A. de Candolle

Parastemon Versteeghii Merr. & Perry, Jour. Arnold Arb. **21**: 197. 1940.

NETHERLANDS NEW GUINEA: Hollandia, *Brass* 8948, July 1938, alt. 20 m., common in dry open second growths (bushy tree 6–7 m. tall; fruits very numerous, white).

This specimen has practically mature fruits 1.7 cm. long, 0.7 cm. diameter. Their structure agrees entirely with that of the fruit of *P. urophyllus* A. DC. as delineated by Boerlage and Koorders, Ic. Bog. **1**: t. 97. 1901.

MELIACEAE

Dysoxylum Blume

Dysoxylum Whiteanum sp. nov.

Arbor alta; foliis alternatis, 50–60 cm. longis, 3–5-jugis, pari- atque impari-pinnatis, novellis dense adpresse pubescentibus mox glabratibus, petiolatis, petiolo usque 10 cm. longo, supra applanato, glabrato; foliolis

suboppositis petiolulatis chartaceis, oblongis vel inferioribus oblongo-ellipticis, 6.5–20 cm. longis, 4–6 cm. latis, basi, foliolo terminali excepto, oblique brevissime cuneatis, apice obtusis abrupte in acumen angustum $\pm$ 1 cm. longum productis utrinque glabris; venis primariis utrinsecus 12–21 obliquis, supra manifestis, subtus vix prominulis; petiolulis 1–1.8 cm. longis, terminali 3–3.5 cm. longo; racemis fasciculatis pendentibus, in axillis foliorum vel in ramulis defoliatis, usque 19 cm. longis, rhachi ac bracteis minutis adpresse pubescentibus; floribus albis sessilibus; calyce crateriformi circiter 4 mm. longo, leviter 4-lobato, adpresse pubescente, lobis vix 1 mm. longis liberis, apice parce pubescente excepta glabris; tubo stamineo circiter 6 mm. longo, utrinque glabro 8-fido, laciniis 2 mm. longis apice emarginatis, antheris 8 inter lacinias affixis, circiter 1.5 mm. longis; tubulo cylindrico 2 mm. longo, crenulato, extus margine $\pm$ dense pubescente excepta glabro, intus parce pubescente; ovario dense adpresse pubescente, 4-loculari, stylo adpresse pubescente, stigmate discoideo.

BRITISH NEW GUINEA: Lower Fly River, east bank opposite Sturt Island, *Brass 8005* (TYPE), October 1936, rain-forest, common on river-flats flooded by tides (profusely flowering tall canopy tree with widely flanged base; bark reddish brown, lenticellate; leaves to 50–60 cm. long; flowers white, in pendent racemes, fasciculate in leaf-axils and lateral on smaller branches).

In several characters this species suggests *Dysoxylum Pettigrewianum* F. M. Bail. It may be distinguished from the latter by the longer pendent inflorescences, the incised (rather than crenulate) apex of the staminal tube, the shorter and less hairy tubular disk, and the oblong or oblong-elliptic rather than lanceolate leaflets.

Dedicated to Mr. C. T. White in appreciation of his extensive contributions to the knowledge of the botany of northeastern Australia and his interest in the flora of New Guinea.

***Dysoxylum micranthum* sp. nov.**

Arbor gracilis parva; ramulis glabris lenticellatis, lenticellis albescentibus, innovationibus minute pubescentibus mox glabratis; foliis alternis, 3-jugis, pari-pinnatis, petiolatis; petiolo 2.5–4.5 cm. longo et rhachi 4–6 cm. longa glabris; foliolis oppositis, sessilibus vel subsessilibus, chartaceis, lanceolatis, 7–13.5 cm. longis, 2.3–3.5 cm. latis, utrinque angustatis, basi longe angustaque cuneatis atque paullo obliquis, apice obtuse acuminatis, acumine $\pm$ 5 mm. longo, utrinque glabris; venis primariis utrinsecus 11–14, obliquis marginem versus adscendentibus, manifestis vel inconspicuis; paniculis axillaribus vel supra-axillaribus, usque 9 cm. longis, ramis brevibus vix 1 cm. longis; floribus parvis, alabastris circiter 2 mm. longis, pedicellis circiter 0.5 mm. longis; calyce

0.8 mm. longo, 4-5-dentato, margine inconspicue ciliolato; petalis 4-5, late ovatis, 1.8 mm. longis, 1.2 mm. latis, acutiusculis, glabris, tubo stamineo in parte inferiore adnatis; tubo stamineo $\frac{1}{2}$ longitudinem petalorum subaequante, 8-10-fido, glabro; antheris 8-10, oblongis, semi-inclisis; tubulo urceolato, 0.6 mm. longo, extus glabro, intus infra marginem pubescente; ovario subgloboso, 0.8 mm. longo, minute pubescente, 3-loculari; stylo glabro, circiter 1 mm. longo, stigmatе crasso discoideo.

SOLOMON ISLANDS: San Cristobal, Star Harbor, *Brass 3114* (TYPE), October 1932, alt. 100 m., rain-forest (slender small tree with green flowers).

In the abruptly pinnate leaves and the very small flowers, this species shows some resemblance to the genus *Pseudocarapa* Hemsl.; nevertheless, on account of the free disk we have placed it in *Dysoxylum* Blume. Possibly it has an affinity with *D. arborescens* (Blume) Miq. At present we cannot suggest a species closely resembling it.

CALLITRICHACEAE

Callitriche Linnaeus

Callitriche papuana sp. nov.

Planta submersa; foliis caulinis et ramalibus linearibus uninerviis, apice profunde lunate excisis; floribus ♂ non visis; fl. ♀: ovario juvenili 0.3 mm. longo, stylis 1 cm. longis erectis vel subdivergentibus; ovario submaturo 1 cm. longo, stylis 2.2 cm. longis; fructibus maturis subsessilibus vel brevissime pedicellatis, 1.4-1.6 cm. longis, 1.2-1.4 cm. latis, suborbicularibus vel paullo longioribus quam latioribus, convexis, apice leviter cordatis, marginibus binis subapproximatis parallelis tenuiter subalatis, carinis latis acutiusculis.

NETHERLANDS NEW GUINEA: Lake Habbema, *Brass 9541* (TYPE), August 1938, alt. 3225 m., submerged (green) aquatic rooting in outer shallows of lake.

Apparently this is the first collection of *Callitriche* from New Guinea. We have been unable to match the material with any herbarium specimens or with any of the descriptions of Asiatic or Australian species. It is most like *C. stagnalis* Hegelm., but the latter has fruits more broadly winged and the apex of the leaves is emarginate rather than roundly incised.

AQUIFOLIACEAE

Ilex Linnaeus

Ilex scabridula sp. nov.

Scandens; ramis longis pendentibus; ramulis subferrugineis scabridulis ± angulatis gracilibus; foliis valde coriaceis glabris, ovatis ad oblongis,

3–7 cm. longis, 1.4–3 cm. latis, basi obtusis vel rotundatis, apice acuminatis vel interdum acutis, acumine 0.5–1 cm. longo, subapiculato, margine integris vel in parte tertia superiore 2–4-serrulatis, subtus glanduloso-punctatis; costa media supra canaliculata, subtus prominula; venis primariis supra obscuris, subtus utrinsecus 6–9 prominulis rectis vel juxta marginem arcuatim confluentibus, minoribus interdum majoribus intermixtis; petiolo 2.5–4 mm. longo, nigrescente glabro; racemis solitariis axillaribus, 1.5–3.5 cm. longis, rhachi parce pubescente, pedicellis circiter 3 mm. longis, parce pubescentibus, basi bracteatis, bracteis subrotundatis, $\pm$ 1 mm. longis; calyce 4–5-mero glabro, lobis rotundatis margine parce atque obsolete ciliolatis; corolla rotata, petalis oblongis apice rotundatis vel obtusis, circiter 2.5 mm. longis; staminibus fl. δ petalis fere aequalibus, antheris ovoideis, 0.8 mm. longis; pistillodio subangulato-pulviniformi, medio apiculato, circiter 0.8 mm. diametro; staminodiis fl. η quam petalis brevioribus, antheris minutis; ovario obtuse ellipsoideo, compresso, 6–10-loculari, stigmate magno crasso discoideo elliptico, 1.2 mm. longo, 0.4 mm. lato; drupis ellipsoideis, 3 mm. longis, 2.5 mm. diametro, obsolete longitudinaliter sulcatis.

NETHERLANDS NEW GUINEA: 9 km. northeast of Lake Habbema, *Brass* 10502, 10775, 11006 (TYPE), October 1938, alt. 2800 m. and 2900 m., frequent in mossy forest of moist valleys (large liane with pendent branches forming long hanging masses of foliage; flowers white; fruit small, black).

Although somewhat resembling *Ilex spicata* Blume, this species is readily distinguished by the scabridulous branchlets; the glandular dots on the lower surface of the leaves are fairly numerous and readily seen with a hand lens; while the leaf-margin is sometimes remotely serrate towards the apex of the leaf.

***Ilex Versteeghii* sp. nov.**

Arbor usque 21 m. alta glabra; ramis teretibus cinereis, plerumque lenticellatis; ramulis brunnescentibus subangularibus; foliis valde coriaceis subnitidis, ellipticis vel oblongis, 3.5–7(–11) cm. longis, 1.5–3.5 cm. latis, basi obtusis vel late cuneatis interdum rotundatis, apice obtusis vel retusis vel subemarginatis, margine integris plerumque revolutis, supra olivaceo-viridibus, subtus pallidioribus vel brunnescentibus non punctatis; costa supra canaliculata, subtus prominente; venis primariis utrinsecus 6–9, supra impressis, subtus prominulis, rectis ad marginem curvatis atque anastomosantibus; petiolo 4–8(–14) mm. longo, atro; inflorescentiis axillaribus, breviter pedunculatis, plerumque bis interdum ter dichotomis, 3–13-floris, pedunculo 3–7 mm. longo, pedicellis $\pm$ 3 mm. longis; floribus 5-meris; calyce glabro, lobis rotundatis minute ciliolatis;

corolla rotata, lobis oblongis rotundatis, circiter 3 mm. longis; staminibus fl. ♂ quam petalis paullo brevioribus, antheris ovoideis, 1 mm. longis; pistillodio depresso angulato-conico; staminodiis fl. ♀ non visis; ovario depresso ovoideo, 4–6-loculari, stigmate crasso discoideo, inconspicue 5-lobato, circiter 1 mm. diametro; drupis ovoideis vel subglobosis, 4 mm. longis, 3.5 mm. diametro.

NETHERLANDS NEW GUINEA: Balim River, *Brass & Versteegh 11192* (TYPE), December 1938, alt. 2180 m., forests of the slopes (tree 17 m. high, 35 cm. diameter; fruits red); *Brass 11662*, December 1938, alt. 1600 m., scattered over grassy deforested slopes (shrub 2 m. high; leaves smooth and shining, margins recurved; flowers white); 9 km. northeast of Lake Habbema, *Brass 10262, 10263, 10654*, October 1938, alt. 2800 m., common in substage of valley forests and also in old secondary forests (tree 10–15 m. high; flowers white); *Brass & Versteegh 10455*, October 1938, alt. $\pm$ 2930 m., frequent in mossy forest on ridge (tree 20 m. high, 28 cm. diameter; flowers white); Bele River, 18 km. northeast of Lake Habbema, *Brass 11290*, November 1938, alt. 2350 m., fagaceous forest of slopes, frequent in young seral growths (tree 2–3 m. high; leaves stiff, convex); 6 km. southwest of Bernhard Camp, Idenburg River, *Brass & Versteegh 12576*, February 1939, alt. 1350 m., frequent in primary forest (tree 21 m. high, 48 cm. diameter).

Brass 11290 is somewhat aberrant in having very long leaves. The branchlets of *Brass & Versteegh 12576* (a sterile specimen) are much lighter in color than those of the other collections. Possibly the following two collections from Balim River also belong in this species: *Brass 11771, 11772*, December 1938, alt. 1800 m. and 1700 m., common in brushy growths on dry, stony, long deforested slopes (shrub or small tree 1–3 m. high; leaves smooth and shining; flowers white). The leaves are smaller than those of the other collections, but we have not yet found any specific differences.

In the grayish branchlets and the entire impunctate leaves, *Ilex Versteeghii* is closely allied to *I. Archboldiana* Merr. & Perry; the latter, however, is a compact tree with denser foliage; the leaves are smaller, and the mesocarp is much thinner than in *I. Versteeghii*.

CELASTRACEAE

Celastrus Linnaeus

***Celastrus novoguineensis* sp. nov.**

Probabiliter frutex scandens, glaber; ramulis teretibus vel apicem versus subangulatis, atrobrunneis, lenticellatis, lenticellis numerosis,

pallidis; foliis alternis, tenuiter coriaceis, oblongis ad ellipticis, 13–16 cm. longis, 5–7.5 cm. latis, basi obtusis vel rotundatis, apice obtusiusculis vel acutiusculis, margine minutissime remotiusculeque serrulatis, leviter revolutis, in sicco plerumque pallide viridescentibus; costa supra subplana subtus prominula; venis primariis utrinsecus 7–8 patentibus arcuatim adscendentibus, utrinque manifestis $\pm$ prominulis, reticulo laxiusculo $\pm$ distincto; paniculis terminalibus, 15–20 cm. longis, ramis 3–6 cm. longis, divaricatis vel oblique adscendentibus; ramulis usque 1–1.5 cm. longis; pedicellis 1 mm. longis; bracteis deltoideis, 0.6 mm. longis; floribus parvis; calyce 2 mm. longo, 5-lobato, lobis brevibus, rotundatis; petalis 5, ellipticis 2.5 mm. longis, staminibus 5 in margine disci locatis, filamentis brevissimis vix ullis, antheris 1 mm. longis, oblongis, subauriculatis; disco cupuliformi, 1 mm. longo, non crasso; ovario subgloboso, 0.8 mm. longo, 1.1 mm. diametro, 3-loculari; stylo brevi; stigmatibus quam stylo latiore 3-lobulato, lobulis bifidis; capsulis loculicide trivalvis, valvis 1 cm. longis, extus inconspicue transverseque corrugatis; seminibus $\pm$ ellipsoideis, 8 mm. longis.

NORTHEASTERN NEW GUINEA: Ogeramang, *Clemens* 5152 (TYPE), 5394, January and February 1937, alt. $\pm$ 1750 m.; Yoangen, *Clemens* 6606, June 1937, alt. $\pm$ 1250 m.

In some characters this species suggests *Celastrus papuanus* Warb., but the latter has smaller leaves and a racemose panicle with very short branches (only 6–8 mm. long). *Clemens* 3523, a fragmentary specimen from Yunzaing may also belong here.

Perrottetia Humboldt, Bonpland & Kunth

Perrottetia traumatophylla sp. nov.

Arbor 5–7 m. alta, glabra; ramulis brunnescentibus lenticellatis, lenticellis numerosis ovalibus pallidis; foliis alternis 2–3 cm. remotis, chartaceis vel subcoriaceis, oblongo-ellipticis utrinque angustatis, 9–15 cm. longis, 3.5–6 cm. latis, basi obtuse cuneatis, apice breviter acuminatis apiculatis, margine integris vel interdum apicem versus remote minuteque denticulatis, costa supra subplana, subtus prominente; venis primariis utrinsecus 7–8 supra manifestis interdum depressis, subtus perspicuis, oblique arcuatim patentibus adscendentibus, intra marginem 2–3 mm. anastomosantibus, venulis paucis manifestis; petiolo circiter 7 mm. longo; paniculis axillaribus, 4–9 cm. longis, sub lente pulvereo-papillois, bracteis minutis deltoideis, pedicellis fructiferis vix 1 mm. longis; floribus perparvis, ovario excepto 5-meris; calycis lobis triangularibus vix

1 mm. longis, pulvereo-papillois; petalis paullo longioribus, apice acutis, pulvereo-papillois; staminibus brevissimis, in disci margine insertis; disco crassiusculo; ovario ovoideo, biloculari, stylo crassiusculo, stigmatе bilobo; baccis 3–4 mm. diametro, bilocularibus, 4-spermis; seminibus 2–2.5 mm. longis, testa rugulosa.

NETHERLANDS NEW GUINEA: 9 km. northeast of Lake Habbema, *Brass 10968* (TYPE), October 1938, alt. 2750 m., common in forest openings on the lower slopes (flat branching tree 5–7 m. high; flowers green); Bele River, 18 km. northeast of Lake Habbema, *Brass 11528*, November 1938, alt. 2400 m., common in forest undergrowth (tree 5–6 m. high; flowers green).

Perrottetia traumatophylla shows some likeness to *P. nervosa* Ridl. in the few prominent primary veins anastomosing well within the margin of the leaves. The leaves, however, are not rounded at the base, the petals are longer than the sepals, the inflorescence is much longer, and the fruit is a little larger than that of *P. nervosa* Ridl. On the lower surface of the leaves, particularly near the veins, many minute punctures indicate the presence of domatia; hence, the specific name *traumatophylla*.

SABIACEAE

Meliosma Blume

Meliosma Schlechteri sp. nov.

Ramuli subangulati, apicem versus $\pm$ ferrugineo-hirsuti; foliis imparipinnatis, alternis, 3–5-jugis; petiolo rhachique 8–20 cm. longis, ferrugineo-hirsutis, pilis detergibilibus; petiolulis 5–7 mm. longis, terminali 1.2 cm. longo, hirtellis; foliolis coriaceis, oppositis, oblongo-ellipticis, 4–9.5 cm. longis, 2.6–4 cm. latis, basi obtusis vel subrotundatis leviter obliquis vel superioribus cuneatis, apice obtuse acuminatis apiculatis, acumine 3–7 mm. longo, margine integris vel apicem versus remote minuteque 3–5-dentatis, supra glabris, subtiliter reticulatis, costa plerumque pubescentibus, subtus distincte reticulatis, praecipue costa venisque breviter pilosis, axillis inter venas ac costam $\pm$ fasciculato-barbatis; venis primariis utrinsecus 7–9, supra impressis, subtus prominulis; inflorescentiis $\pm$ 30 cm. longis, divaricatim ramosis, hirtellis, floribus tantum glabris; sepalis rotundatis, glanduloso-ciliatis; petalis exterioribus obovato-orbicularibus, interioribus dorso filamentorum adnatis, utrinque in appendiculam brevem productis; staminodiis connatis; disco subannulari quam ovario glabro paullo breviorе, margine irregularilobato, lobis subulatis.

NORTHEASTERN NEW GUINEA: woods of Kani, *Schlechter* 18292 (TYPE) September 1908, alt. 1000 m.

This species is undoubtedly very closely related to *Meliosma humilis* Merr. & Perry. It differs in its practically entire and much more coriaceous leaves. It is also much less pubescent than the latter species.

RHAMNACEAE

Ventilago Gaertner

Ventilago papuana sp. nov.

Planta magna scandens; ramulis puberulis fuscis, innovationibus $\pm$ dense pubescentibus; foliis tenuiter coriaceis, late ellipticis, 4.5–12 cm. longis, 2.5–7 cm. latis, basi rotundatis, apice abrupte acuminatis, acumine 0.5–1.5 cm. longo, 0.3–0.5 cm. lato, obtuso, margine integris vel obsolete remoteque crenulatis, maturis utrinque glabris, novellis subtus puberulis, in utraque pagina dense manifesteque reticulatis; venis primariis utrinsecus 6–8 curvato-adscendentibus; petiolo 6–9 mm. longo tereti vel minute canaliculato, puberulo vel glabro; racemis 4–13 cm. longis, axillaribus atque subterminalibus, minute pubescentibus; axi hinc inde anguloso; floribus exiguis, fasciculatis, pedicellatis; pedicellis 1 mm. longis; calyce extus minute pubescente, lobis acutis circiter 1 mm. longis; petalis obovato-deltoideis emarginatis; staminibus quam petalis paululo longioribus; disco prope stylum parce pubescente, caeterum glabro; stylo bipartito basi pubescente, apice vix incrassato; fructibus immaturis usque 4 cm. longis alis inclusis, basi puberulis, ala oblonga, $\pm$ reticulatim venosa; semine non viso.

BRITISH NEW GUINEA: Lower Fly River, east bank opposite Sturt Island, *Brass* 7973 (TYPE), October 1936, occasional on the ridges (rain-forest canopy liane; flowers yellow).

In some characters this species suggests *Ventilago cernua* Tul. from Rawak Island. The latter species, however, has much shorter petioles (about 3 mm. long) and fewer and somewhat more ascending primary veins. We are indebted to Monsieur R. Metman, Muséum d'Histoire Naturelle, Paris, who, previous to the outbreak of hostilities, very kindly lent us a flower and a leaf from the type of *Ventilago cernua* Tul. for comparison with our material.

Another collection which may belong to this species is *Brass* 14058, Bernhard Camp, Idenburg River, April 1939, alt. 50 m., rain-forest of flooded river plain (common large liane in forest edges). This specimen has spreading rather than appressed pubescence on the inflorescence, and is without fruits.

Colubrina Richard ex Brongniart**Colubrina papuana** sp. nov.

Arbor magna; ramulis atro-fuscis, innovationibus fulvo-pubescentibus mox glabratis; foliis alternis membranaceis integris, ellipticis ad oblongis, 5–10 cm. longis, 2–5 cm. latis, basi obtusis, in apicem obtusum recurvum angustatis, maturis utrinque glabris, novellis subtus $\pm$ pubescentibus mox glabratis, penninerviis; venis primariis utrinsecus 5–7, oblique adscendentibus; petiolo 0.5–1.5 mm. longo, puberulo ad glabro; paniculis ad ramulorum apicem axillaribus, circiter 4 cm. longis, axi ramulisque puberulis ad glabratis; floribus ante anthesim glabris pedicellatis, pedicellis 1.5 mm. longis; calyce ad medium 5-fido, lobis vix 2 mm. longis, acutis, intus cristatis; petalis $\frac{1}{2}$ longitudinem calycis loborum subaequantibus, margine incurvis; staminibus brevibus, probabiliter petalis subaequilongis; disco crasso 5-lobato, in margine brevissime libero; ovario in disco submerso calyci adnato, triloculari, stylo crassiusculo apice 3-lobato, lobis brevibus recurvis; fructibus depresso-globosis, leviter trisulcatis, circiter 1–1.5 cm. diametro, basi calycis patella suffultis, introrse dehiscentibus; epicarpio in sicco vix 0.4 mm. crasso, endocarpio crustaceo-sublignoso; semine compresse globoso, 1 cm. longo latoque 6 mm. crasso, testa rubra, puncticulata.

NETHERLANDS NEW GUINEA: Hollandia, *Brass 8986* (TYPE), August 1938, alt. 100 m., rain-forest (common large canopy tree; trunk spurred; bark corky-fibrous, rough; wood yellowish; flowers cream-colored; fruit orange); Bernhard Camp, Idenburg River, *Brass & Versteegh 14005*, April 1939, alt. 75 m., occasional on the lower slopes of primary rain-forest (tree 25 m. high; flowers yellow; fruit red).

BRITISH NEW GUINEA: Lake Daviumbu, Middle Fly River, *Brass 7459*, August 1936, common tree of rain-forest canopy (bark pale brown; fruit orange-colored; seeds red).

Although the general aspect of the collections suggest *Rhamnus*, on account of the thick disk and the partly inferior ovary, the plant seems to fall in the genus *Colubrina*. The valves of the fruit are coarser and firmer in texture than those of *C. asiatica* Brongn.

It is to be noted that Lauterbach, Bot. Jahrb. **57**: 326–340. 1922, does not include *Colubrina*? *Beccariana* Warb. in his treatment of the Rhamnaceae of Papuasias.

THYMELEACEAE

Gyrinops Gaertner

Gyrinops Ledermannii Domke, Notizbl. Bot. Gart. Berl. **11**: 349. 1932.

NETHERLANDS NEW GUINEA: 2 km. southwest of Bernhard Camp,

Idenburg River, *Brass* 13672, March 1939, alt. 750 m., rain-forest of the slopes (slender treelet 2 m. high; flowers white).

This collection seems to be a reasonably good match for the description of *Gyrinops Ledermannii* Domke, founded on a fruiting specimen of Ledermann from Northeastern New Guinea. *Brass* 13672 shows a flowering branch and a young growing shoot. The leaves of the latter are 10.5–21 cm. long and 3–5.5 cm. broad, the larger ones are acuminate-caudate, the acumen being 2.5 cm. long, all are sparsely pilose beneath. This is a considerable variation from the measurements of the leaves of the type-specimen. The fascicles contain 3–6 flowers, the calyx-tube is 3 mm. long, the pistil is scarcely more than 3 mm. long, somewhat densely short-pilose, the ovary and stipe are hardly 2 mm. long, compressed obconical, the style and stigma are 13 mm. in length. The other floral characters and measurements coincide with those given in the original description.

Phaleria Jack

Phaleria subcaudata sp. nov.

Frutex magnus; foliis oppositis anguste obovato-oblongis, circiter 23 cm. longis, 7 cm. latis, petiolatis, basi obtusis vel late cuneatis, apice sub-abrupte longe acuminatis, acumine $\pm$ 2 cm. longo, integris chartaceis glaberrimis; costa subtus prominula; venis primariis utrinsecus 10–12 patenti-obliquis prope marginem anastomosantibus; venulis numerosis laxe reticulatis; inflorescentiis subumbelliformibus terminalibus probabiliter axillaribus; pedunculis circiter 5 mm. longis bracteatis; floribus numerosis albidis; involucri foliolis breviter ellipticis obtusis glabris; perianthii tubo infra angustissimo, apicem versus ampliato, extus glabro, intus minute parceque puberulo, $\pm$ 18 mm. longo, limbo quadrilobo, lobis 7 mm. longis obtusis margine tantum $\pm$ pubescentibus; staminibus longe exsertis, antheris ellipticis 0.6 mm. longis; stylo paullo exserto quam filamentis brevior; ovario parce puberulo; fructibus ignotis.

BRITISH NEW GUINEA: Central Division, Kubuna, *Brass* 5657 (TYPE), November 1933, alt. 100 m., rain-forest (large straggling bush, very showy white flowers).

In foliar characters this species suggests *Phaleria capitata* Jack and *P. calantha* Gilg. It differs from the former in the larger number of primary veins, from the latter in the leaf-outline, and from both in having the perianth lobes pubescent only along the margins.

Phaleria Perrottetiana (Decne.) F. Vill. Novis. App. Fl. Filip. 183. 1880; Merr. Enum. Philipp. Fl. Pl. 3: 131. 1923.

Drimyspermum Perrottetianum Decne. Ann. Sci. Nat. II. Bot. 19: 38. 1843.

BRITISH NEW GUINEA: Western Division, Daru Island, *Brass* 6057, 6240, fairly common in light rain-forest (shrub 1–2 m. or more high; flowers white, fragrant; fruit red, fleshy); Lake Daviumbu, Middle Fly River, *Brass* 7657, occasional in rain-forest undergrowth (shrub or small tree 2–2.5 m. high; bark tough, fibrous; fruit smooth, red).

These specimens were determined in 1937 by Dr. W. Domke. The species has been collected previously in the Philippines and Borneo; this seems to be the first record for New Guinea. Possibly two collections from the Solomon Islands (*Kajewski* 2698, Guadalcanal Island, and *Kajewski* 2237, Bougainville Island) also belong here. The specimens show only very young buds.

Wikstroemia Endlicher

Wikstroemia venosa sp. nov.

Frutex $\pm$ 1 m. altus; ramulis hornotinis $\pm$ dense minuteque pubescentibus, annotinis fusco-purpureis glabris; foliis chartaceis vel leviter coriaceis, oppositis, lanceolatis vel lanceolato-ellipticis vel fere ovatis, 2–7 cm. longis, 1–3 cm. latis, basi late obtusis vel subrotundatis, apice acutis vel acutiusculis interdum obtusiusculis, utrinque glabris vel initio costa subtus $\pm$ pilosis; venis primariis distincte manifestis subirregularibus utrinsecus 7–10 patentibus deinde curvato-adscendentibus; petiolo brevi, 1–2.5 mm. longo pubescente; floribus viridibus vel flavis, pluribus, subspicatis vel subfasciculatis, saepissime inflorescentiis terminalibus interdum axillaribus; pedunculo 2–4 mm. longo, rhachi usque 11 mm. longo, adpresse pubescentibus, pedicellis brevissimis pubescentibus; perianthii tubo circiter 6.5 mm. longo et 1 mm. diametro, extus fere glabro, lobis 4 oblongis 2–2.5 mm. longis extus puberulis; antheris 8, lineari-oblongis, 1 mm. longis, filamentis brevissimis, eis seriei superioris faucem vix attingentibus, seriei inferioris paullo supra medium affixis; disci squama unica 1 mm. longa, apice biloba; pistillo 1.2 mm. longo, ovario fere glabro apice parce strigilloso, stylo 0.2 mm. longo, stigmatibus capitatis; fructibus ellipsoideis utrinque leviter angustatis, 6–8 mm. longis, apice parce strigillosis.

NETHERLANDS NEW GUINEA: Balim River, *Brass* 11667 (TYPE), December 1938, alt. 1600 m., deforested slopes, occasional on grassy banks of streams (shrub $\pm$ 1 m. high; flowers green; fruit red, fleshy); southern slopes of Balim Valley, *Brass* 11612, alt. 1700 m. (grassland shrub; flowers green). BRITISH NEW GUINEA: Central Division, Laloki River, Rona, *Brass* 3577, April 1933, alt. 450 m., on or about rocks on savannah, common (compact small tree with tough brown bark; lower leaf-surface glaucous; flowers yellow).

This species seems to be most like *Wikstroemia foetida* (L.f.) A. Gray, the leaves are firmer with a strongly marked venation, the inflorescence is spicate, occasionally subfasciculate. Possibly belonging to this species or surely closely allied to it is *Brass* 3473, Cape Prieto, Ysabel, Solomon Islands. The inflorescence here is longer-pedunculate and more loosely flowered. The genus is very much in need of critical revision.

Kelleria Endlicher

Kelleria patula sp. nov.

Suffrutex ramosissimus; caulibus vagantibus, decumbentibus; ramis erectis vel adscendentibus glabris cicatricatis; foliis alternis, inferioribus patentibus interdum reflexis, superioribus laxè imbricatis, lanceatis vel lineari-subulatis, 4–6 mm. longis, 1.5 mm. latis, obtusis, late sessilibus, convexis, 7–9-striatis, marginibus et apicibus sericeo-villosis; floribus $\pm$ 6 apice ramulorum confertis; pedicellis brevissimis pilosis; perianthio piloso, tubo subinfundibulari, 3 mm. longo circiter 1 mm. diametro, 8-venoso; lobis 1.2 mm. longis, patulis oblongis obtusis intus glabris; staminibus 4 cum perianthii lobis alternantibus, vix 1 mm. longis; faucis squamis ellipticis, discretis, basi loborum binatim inter staminum insertionem affixis; disco hypogyno nullo; ovario 1 mm. longo oblongo sessili, apice piloso, stylo 2.4 mm. longo, stigmate globoso parvo; fructibus ignotis.

NETHERLANDS NEW GUINEA: 11 km. northeast of Wilhelmina-top, *Brass & Myer-Drees* 9806 (TYPE), September 1938, alt. 3400 m., alpine grassland, plentiful on sandy banks of stream (bushy shrub 20–40 cm. high); *Brass & Myer-Drees* 9671, September 1938, alt. 3400 m., rather dry grassy place (very small shrub; corolla white, anthers orange-yellow; leaves grayish; twigs reddish brown).

This species differs from *Kelleria ericoides* (Hook. f.) Domke and *K. papuana* Domke in the coarser decumbent habit and the slightly larger and spreading rather than erect appressed leaves. Both the latter species have an erect habit and leaves rather stiffly erect and closely appressed.

ELAEAGNACEAE

Elaeagnus Linnaeus

Elaeagnus triflora Roxb. Fl. Ind. 1: 459. 1821; Servettaz, Beih. Bot. Centralbl. 25(2): 104. 1909.

NETHERLANDS NEW GUINEA: Balim River, *Brass* 11703, December 1938, alt. 1600 m., in a relic strip of *Castanopsis* forest (large scrambling

shrub; flowers white; fruit red, fleshy); 4 km. southwest of Bernhard Camp, Idenburg River, *Brass* 13273, March 1939, alt. 850 m., seral rain-forest (scandent shrub with yellowish flowers). NORTHEASTERN NEW GUINEA: Sattelberg, *Clemens* 169, 468, October 1935, alt. about 900 m., forest hill (scandent over trees; fruit tomato-red; flowers yellow, very fragrant).

We have not found any previous record of the presence of this genus in New Guinea, but it is to be expected as it has long since been reported from Malaysia and Australia. The specimens here cited represent the subsp. *tetragonia* Servett.

LYTHRACEAE

Rotala Linnaeus

Rotala mexicana Cham. & Schlecht. *Linnaea* 5: 567. 1830; Koehne, *Bot. Jahrb.* 1: 150. 1881, *Pflanzenr.* 17 (IV. 216): 29. 1903; Val. *Bull. Dept. Agr. Ind. Néerl.* 10: 36. 1907.

BRITISH NEW GUINEA: Western Division, Mabaduan, *Brass* 6536, April 1936, a wet season ephemeral plant growing on wet soil around pools in savannah-forest.

Since Mansfeld's treatment of the Lythraceae of Papuasias begins with the statement that this family is represented in New Guinea by *Ammannia*, *Pemphis* and *Lagerstroemia*, it seems worth while to record this second collection (leaves both decussate and whorled) of *Rotala mexicana* Cham. & Schlecht. from British New Guinea, and also to call attention to Valetton's previously published record of this species from Merauke, Netherlands New Guinea.

Lagerstroemia Linnaeus

Lagerstroemia Archeriana F. M. Bailey, *Syn. Queensl. Fl.* 196. 1883; Koehne, *Bot. Jahrb.* 4: 408. 1883; F. M. Bail. *Queensl. Fl.* 2: 678, *t.* 24. 1900; Koehne, *Pflanzenr.* 17 (IV. 216): 264. 1903.

BRITISH NEW GUINEA: Western Division, Daru Island, *Brass* 6239.

The collection is a good match for *Brass* 888 which Mr. C. T. White indicated as identical with *Lagerstroemia Archeriana* F. M. Bail. Koehne, in his treatment of the Lythraceae, assigned the species to section *Trichocarpidium* Koehne under the major caption, "Calyx aut ecostatis aut costis v. alis v. plicis sepalorum numero duplo munitus." The contrasting caption, "Calyx costis v. alis v. auriculis a latere complanatis tot quot sepalis munitus," separating the section *Pterocalymma*



Merrill, Elmer D. and Perry, Lily M. 1941. "Plantae Papuanae Archboldianae, VI." *Journal of the Arnold Arboretum* 22(2), 253–270.

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