

LIGNEOUS PLANTS FROM THE SOLOMON ISLANDS (AND NEW GUINEA)

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In 1945 I was asked by the Government of the British Solomon Islands to accompany for a few months Mr. F. S. Walker of the British Colonial Forest Service on a survey of the forest resources of the territory. I arrived at Honiara, Guadalcanal, at the end of June and left there about the middle of November. A brief description of my trip was given in the *Australian Journal of Science* 9: 62-64, 1946 and since that time a general survey of the forests of the region has been published.*

A general account of botanising in the Solomon Islands has already appeared in this journal by S. F. Kajewski (*Jour. Arnold Arb.* 27: 292-304, 1946 with 3 sketch maps) so there is no need to give any general account of the flora here. Descriptions are now offered of several trees and shrubs considered previously undescribed and notes on others either previously unrecorded for the Solomon Islands or interesting for some other reason. In the course of this work I had occasion to consult the extensive undetermined material from New Guinea in the Queensland Herbarium and descriptions and accounts of some of these are incidentally given.

I am much indebted to the authorities of the Arnold Arboretum for offering to take care of the publication of the botanical results of the expedition especially as the descriptions of so many species from this region have already appeared in the pages of this journal.

The letters B.S.I.P. and N.G.F. preceding the collectors' numbers stand for British Solomon Islands Protectorate and New Guinea Forests respectively. The first precedes all specimens collected in the Solomon Islands by Mr. F. S. Walker and myself and the latter those made under the direction of Mr. J. B. McAdam, Conservator of Forests, Territory of Papua New Guinea, mostly during the war years by officers and men of the forest companies under his command.

Types of the new species here described are in the Queensland Herbarium, Brisbane, but in all cases isotype material is represented at the Arnold Arboretum and Kew (Eng.). In addition in most cases duplicate material has been sent to the Rijksherbarium, Leiden, and the Australian Herbarium, Canberra.

* *The Forests of the British Solomon Islands Protectorate.* F. S. WALKER. Published on behalf of the Government of the British Solomon Islands Protectorate by the Crown Agents for the Colonies, 4, Millbank, London, S.W.1, England. 1948. 186 pp. and 21 maps. Price 30/—.

ULMACEAE

Celtis Nymannii K. Schum. in Schum. & Lauterb. Fl. Deutsch. Schutzgeb. Südsee Nachtr. 240. 1905.

SOLOMON ISLANDS: Guadalcanal: near Nalimbu River, *F. S. Walker & C. T. White* B.S.I.P. 34, July 1945, in lowland riverine rain-forest (tree over 100 ft. high; bark grey, smooth with occasional horizontal ridges and finely longitudinally ridged with seriate lenticels).

The above collection is a good match for much material from New Guinea we have identified as *C. Nymannii* K. Sch. though all differ from the description in a few details noticeably in the size of the leaves (11–16 cm. long and 5–7 cm. broad in the type; 6–9 cm. long and 3–4.5 cm. broad in the Solomon Islands and all the New Guinea material seen by me).

MORACEAE

Ficus charadrophila Summerhayes in Jour. Arnold Arb. 10: 152. 1929; Diels in Bot. Jahrb. 67: 203. 1935.

Ficus Pullei Diels in herb.

SOLOMON ISLANDS: New Georgia: Le River, *F. S. Walker & C. T. White* B.S.I.P. 202, Oct. 1945, common along river bank, lowland rain-forest (dense, much-branched shrub, 4–6 ft.; leaves very glossy yellowish green in the living plant, but drying dull).

A considerable geographic extension of a common Papuan species. Our material is a good match for *Pulle* 122 from Netherlands New Guinea distributed from Berlin as *F. Pullei* Diels sp. nov. but apparently never published. Later Diels l.c. referred *Pulle*'s plant to *F. charadrophila* Summerhayes. Diels MS. name is published here in synonymy as some herbaria may have duplicates from Berlin, so distributed.

Parartocarpus involucrata (K. Schum.) Warburg ex Lauterb. & Schum. Fl. Deutsch. Schutzgeb. Südsee 267. 1901.

Artocarpus involucrata K. Schum. in Schum. & Hollr. Fl. Kais. Wilh. Land 37. 1889.

SOLOMON ISLANDS: Guadalcanal: Beaufort Bay, Kumbau River. *F. S. Walker* B.S.I.P. 238, Feb. 1946, ridge rain-forest (tree 90 ft., buttresses absent; bark grey-brown with large lip-like lenticels and small horizontal ridges, exudes a copious white latex; leaves dark glossy green above, paler beneath; fruit globose-oblong, about 2½ in. diam. in the specimen gathered but said to grow much larger; seeds — picked up from the ground — ovoid, compressed 1¼ in. long, 1 in. across, ¾ in. through). Santa Isabel: Kalina Bay, *F. S. Walker* B.S.I.P. 238A, Aug. 1946, lowland rain-forest on ridges or slopes, uncommon.

A natural range extension of a tree apparently fairly common in New Guinea. The above determination is based on Schumann's original description (l.c.) only. The leaves in the Solomon Islands plant are slightly smaller and the young shoots pubescent but these points are not of specific importance.

ANNONACEAE

Uvaria aff. *U. Rosenbergiana* Scheff.

SOLOMON ISLANDS: Malaita: near the Heho River, *F. S. Walker & C. T. White* B.S.I.P. 116, Aug. 1945, hill rain-forest (woody climber reaching to the tops of the tallest trees, fls. deep cream).

Possibly an undescribed species but we were only able to find one fully opened flower (damaged in drying) and several flower buds. These specimens differ from *U. Rosenbergiana* Scheff. in the leaves varying from shortly acuminate to gradually and markedly acute and being glabrous on the under surface, except for a few scattered stellate, almost furfuraeous hairs, and in the flowers being cream not purplish. I could find no trace of bracts on the peduncles.

Xylopia papuana Diels in Bot. Jahrb. 52: 180. 1914.

SOLOMON ISLANDS: Malaita: Buma. *F. S. Walker* B.S.I.P. 233 (fruits not quite ripe), Feb. 1946, littoral swamp, coral formation (tree 50 ft.; buttresses thin, plank-like; bark grey, shallowly longitudinally fissured).

The range extension of this common New Guinea species to the Solomon Islands was to be expected.

MYRISTICACEAE

Myristica Buchneriana Warb. in Bot. Jahrb. 13: 311. 1891.

SOLOMON ISLANDS: Guadalcanal: near Nalimbu River, *F. S. Walker & C. T. White* B.S.I.P. 36, (female fls. and frts.) July 1945, riverine rain-forest, (tree 110 ft., bark very dark almost black, mostly finely fissured).

I have based this determination on comparison with Papuan material determined for me at Berlin by Dr. Markgraf. Our specimens differ slightly from those in the still more glabrous character of the shoots and leaves and the still more indistinct nature of the lateral nerves on the lower side. The species was named from specimens with male flowers only. The leaf-base is described as rotund whereas in our specimens it is acute, but the species is common in New Guinea and shows considerable variation in this respect. It has not, so far as I know, been recorded for the Solomon Islands before.

LAURACEAE

Cryptocarya Alleniana, sp. nov.

Arbor 30 m. alta, cortice griseo-bruneo, partibus novellis densissime et breviter ferrugineo-pubescentibus, ramulis minute tomentosis subvalidis angularibus deinde teretibus sed ad nodos plus vel minus complanatis. Folia ovata, ovato-elliptica vel fere ovato-lanceolata, apice acuta vel acuminata, basi acuta vel fere obtusa oblique, supra glabra, subnitida, minutissime punctulata subtus minutissime areolata, in axillis nervorum breviter hirsuto-foveolata; nervis praecipuis 7-9 in utroque latere, supra impressis subtus valde elevatis, minutissime tomentosis; petiolo tomentoso 1.5 cm. longo; lamina 8-13 cm. longa, 4-7 cm. lata. Paniculae terminales

et in axillis superioribus dispositae, ad 10 cm. longae et 6 cm. latae, ramulis floribusque dense pubescentibus. Flores numerosi, breviter pedicellati, cum pedicello 3 mm. longi, lobis ovatis 1.5 mm. longis. Fructus ellipsoideus, 3.5 cm. longus, 2 cm. diam.

SOLOMON ISLANDS: Guadalcanal: Berande River, *Kajewski* 2413, Jan. 1931, common in rain-forest (tree up to 20 m., petals lt. green); Nalimbu River, *F. S. Walker* B.S.I.P. 4 (TYPE), June 1945, riverine forest (tree 90 ft., buttresses very small, 1 ft.; bark brown, shed in long curling strips leaving a pustular surface).

SOUTHEAST NEW GUINEA: Milne Bay, *L. S. Smith* N.G.F. 1378, March 1945, in a rather swampy flat (tree 140 ft. overall with spreading branched crown; trunk unbuttressed but flared slightly at the base to 4 ft. and with a few shallow channels; bark brownish; fls. cream).

In addition to the above I would place the following collections under this species. The specimens differ only in the main lateral nerves being less prominent underneath, not quite so regular and mostly a little further apart. All share the minute raised reticulation of the under surface of the leaf reminiscent more of *Endiandra* than *Cryptocarya* as a whole.

NORTHEAST NEW GUINEA: Lae, *J. Cavanagh* N.G.F. 6; *F. T. Vickery* N.G.F. 1403, July 1945 (tree 140 ft., buttressed, bark light grey). *Dadswell*, *Smith & White* N.G.F. 1531, July 1944, lowland rain-forest (tree 130 ft., narrowly buttressed or channelled to 5 ft.; bark greyish; fruits blackish); *C. K. Ingram* N.G.F. 940, Buna Hinterland, Dobodura Plain — Guira River — Saputa area, *Cavanagh & Fryar* N.G.F. 2039, Feb. 1945 (tree 120 ft., bark light grey, slightly roughened by close, very fine longitudinal fissures and numerous small pustules more or less arranged in longitudinal lines; sapwood white, heart-wood very light pinkish yellow).

Among previously described species from the New Guinea-Solomon Islands area the present species has its affinities in the group containing *C. Kajewskii* Allen, *C. Ledermannii* Teschner and *C. ovata* Teschner from all of which it is characterised by its larger leaves with more numerous lateral nerves, 3–5 in the species mentioned and 7–9 in *C. Alleniana* C. T. White. The specific epithet honours Dr. Caroline K. Allen in recognition of her work on the Lauraceae of the Papuan-Solomon Islands region.

Cryptocarya medicinalis, sp. nov.

Arbor ca. 25 m. alt., anteridibus ca. 1.25 m. alt., cortice bruneo laevi, ramulis validis, junioribus angulatis dense tomentosis deinde glabris verrucis rotundis dispersis notatis. Folia subcoriacea, lanceolata vel elliptico-lanceolata, apice subacuta, basi cuneata, supra glabra, infra albicantia et pilis dispersis tenuiter obsita; nervis lateralibus utrinque 5–8 supra impressis, subtus elevatis, venulis transversis et reticulatis supra subobscuris subtus prominulis; petiolo 1–1.5 cm. longo dense tomentoso; lamina 9.5–15 cm. longa, 3.5–6.5 cm. lata. Paniculae terminales et subterminales ad 11 cm. longae, ramulis et floribus densissime tomentosis. Flores sessiles 3 mm. longi.

SOLOMON ISLANDS: Guadalcanal: Beaufort Bay, Kumbau River, *F. S. Walker* B.S.I.P. 243, alt. 600 ft., foothill rain-forests, Feb. 1946 (tree

80 ft., buttresses plank-like about 4 ft. high, bole somewhat twisted; bark brown, smooth, with slightly lateral ridging, odour when cut sweet and fragrant; fls. brownish cream). The bark is crushed with water to make a native cough medicine.

In Teschner's arrangement of the genus in his account of the Lauraceae of New Guinea (Bot. Jahrb. 58: 404. 1924) the present species would come closest to *C. Engleriana* Teschn. but the two species can be distinguished as follows:

Leaves ovate, base slightly attenuate, glabrous below except on the nerves; panicle minutely tomentose.....*C. Engleriana*.
 Leaves lanceolate or elliptic-lanceolate, base cuneate, minutely pilose beneath; panicle densely tomentose.....*C. medicinalis*.

***Endiandra recurva*, sp. nov.**

Arbor 25 m. alta, cortice rufo-bruneo lenticellis numerosis asperato, ramulis validis rufescentibus. Folia subcoriacea, supra in vivo atro-viridia, subtus pallida, in sicco subtus glaucescentia colore roseo vel fere purpureo pallido suffusa, elliptica, margine leviter recurva, basi cuneata, apice valde recurva; nervis 4-5 utrinque elevatis, venis et venulis supra vix prominulis subtus leviter elevatis; lamina 9-12 cm. longa; petiolo crasso supra canaliculato 1-1.5 cm. longo. Inflorescentia subterminalis, 6-10 cm. longa, ramulis in sicco furvis vel fuscatis minute et sparse pubescentibus, pedunculis 3-4 mm. longis. Flores virides (fide coll.) vix 3 mm. longi, perianthii lobis subaequalibus extus glabrescentibus intus in parte inferiore medium versus dense pubescentibus; staminibus 3 atro-purpureis (fide coll.), antheris extrorsis, filamentis brevibus dense pubescentibus, glandulis 6 ad basim staminum; ovario glabro.

SANTA CRUZ GROUP: Vanikoro: near Lemon River, *F. S. Walker* B.S.I.P. 214, rain-forest, mostly secondary growth, Nov. 29, 1945 (tree 75 ft., buttresses 3 ft., rounded; bark reddish brown roughened by numerous lenticels; leaves dark green above, pale beneath; flowers green, stamens deep purple).

Among previously described species *E. recurva* seems most closely allied to *E. aneityensis* Guill. from the New Hebrides. This differs in having less coriaceous lanceolate leaves with the veins and veinlets forming ultimately much smaller and more numerous reticulations.

***Litsea racemosa*, sp. nov.**

Arbor 30 m. alta, anteridibus ad 1 m. altis, cortice aurantiaco-fulvo ("orange-brown" fide coll.) sed plerumque lichenibus plus vel minus occulto, laevi sed annulis elevatis et lenticellorum lineis paucis notato, ramulis primum angulatis mox teretibus, partibus novellis dense ferrugineo-tomentosis sed ramulis foliisque mox glabris. Folia subcoriacea, elliptica, apice subobtusata, utrinque glabra; costa supra impressa, infra valde elevata; nervis lateralibus utrinque ca. 10, supra paullum impressis, infra prominentibus; nervulis parallelis inter nervos tenuibus subobscuris sed sub lente manifestis; nervatio minutissime areolata; lamina 9-15 cm. longa, 5-7 cm. lata; petiolo 3-4 cm. longo. Flores fragrantis (fide coll.),

umbellulati; umbellis in racemos 2–3.5 cm. longos dispositis; pedunculis dense tomentosis ca. 1 cm. longis; bracteis involucribus 4, extrinsecus dense tomentosis, 5–6 mm. longis; floribus in umbellulis 4. Perianthium dense tomentosum, 6-lobatum, tubo 2 mm. longo, segmentis 3 mm. longis. Stamina in fl. masc. 12, ordinis primi et secundi eglandulosa, filamentis tenuibus perianthii segmenta leviter excedentibus; ordinis tertii et quarti glandulosis brevioribus et validioribus. Flores feminei et fructus ignoti.

SOLOMON ISLANDS: Ugi: *F. S. Walker* B.S.I.P. 272, March 1946, lowland rain-forest, coral formation (tree 90 ft., buttresses small, merging into the trunk about 3 ft. from the ground; bark orange-brown but much camouflaged by lichen patches, smooth with a few raised rings and slight roughening of lines of lenticels; fls. greenish, fragrant).

Among previously described species from the south-west Pacific the present one seems most closely allied to *L. Dielsiana* Teschner from North-east New Guinea which has shorter racemes (up to 1 cm.), shorter pedicels (0.5 cm.) and the perianth only sparsely villous.

CUNONIACEAE

Geissois pentaphylla, sp. nov.

Arbor 10 m. alta, cortice griseo-bruneo longitudinaliter rimoso, ramulis junioribus applanato-angulatis pubescentibus sed mox teretibus et glabris et foliorum delapsorum cicatricibus notatis et lenticellis asperatis. Folia 5-foliolata; petiolo communi valido primo pubescenti sed mox glabro vel glabrescenti 7–10 cm. longo; foliolis junioribus dense pubescentibus adultis glabris vel subtus ad nervos pilis paucis obsitis, lanceolatis apice acuminatis basi cuneatis margine serrulatis; nervis 8–10 subtus elevatis; lamina 12–16 cm. longa, 5–7 cm. lata; petiolulo 1–2 cm. longo; stipulis primo dense pubescentibus deinde glabrescentibus et ad 3 cm. longis sed mox deciduis. Racemi 6–9 cm. longi e ramulis vetustioribus in axillis foliorum delapsorum orientes; floribus miniatis (fide coll.) pedicellis 5–8 mm. longis; sepalis 5–6 mm. longis; staminibus 1.5 cm. longis; ovario glabro; disco crasso basi undulato-lobato. Capsula 2–2.3 cm. longa.

SANTA CRUZ GROUP: Vanikoro: near Lamia River, *F. S. Walker* B.S.I.P. 217, Nov. 1945, lowland rain-forest, on fern covered hillsides subject to fire (tree 30 ft., bark grey-brown, longitudinally cracked, flowers scarlet).

Among previously described species comes closest to *G. racemosa* Labill. from New Caledonia which differs in having the leaflets more elliptic than lanceolate and blunt at the apex.

ROSACEAE

Parinari papuanum, sp. nov.

Arbor 60 m., cortice fusco lenticellis pustularibus numerosis notato; ramulis junioribus angulatis fulvo-pubescentibus mox glabrescentibus vetustioribus glabris validis atro-griseis lenticellis pustularibus notatis. Folia petiolata, lanceolata, acuta vel indistincte acuminata, basi rotunda

vel subrotunda, primum supra pilis floccosis vestita denique glabra et subnitida, subtus dense cano-tomentosa, nervis lateralibus regularibus subtus valde elevatis ca. 20 in utroque latere; lamina 4–6 cm. longa, 1.5–3 cm. lata; petiolo valido 3–5 mm. longo, primum dense fulvo-piloso deinde glabro. Flores ignoti. Infructescentiae ramuli pervalidi sub fructu incrassati. Drupa duro-lignosa, atro-castanea lenticellis numerosis densissime notata, $7 \times 3.5 \times 3$ cm., endocarpio intus densissime et longe villosa.

NORTHEAST NEW GUINEA: Aiyura, alt. ca. 2000 m. *L. S. Smith* N.G.F. 1004, Oct. 1944 (leaves only), mountain rain-forest (tree 100 ft. overall, bark very pale brown, smooth except for coarse pustular lenticels). Aiyura, *L. S. Smith* N.G.F. 1019, Oct. 1944, (TYPE, leaves and fruit) mountain rain-forest (tree 120 ft., bole cylindrical, unbuttressed; bark brownish with numerous rough pustular lenticels).

Very close to *P. costatum* Bl. differing in the greater number of nerves on each side of the midrib and the much larger fruit.

Parinari salomonense, sp. nov.

Arbor 30 m. alt.; ramulis junioribus angularibus fulvo-pubescentibus vetustioribus teretibus validis atro-vinosis vel fere nigris, lenticellis albis magnis numerosis plus vel minus dense notatis. Folia petiolata, lanceolata, apice acuminata, basi cuneata, juniora supra nitida, costa media pubescentia, ceterum glabra, subtus albo-tomentosa; vetustiora supra glabra, subtus cano-tomentosa, nervis lateralibus subtus prominentibus regularibus, 18–22 in utroque latere; lamina 8–10 cm. longa, 3.5–4 cm. lata; petiolo valido primum dense fulvo-villoso deinde glabro. Flores ignoti. Infructescentiae ramuli validi. Sepala sub fructu utrinque dense pilosa. Drupa duro-lignosa, atro-castanea, lenticellis numerosis parvis dense notata, irregulariter ellipsoidea, leviter compressa, plerumque $3.5-4 \times 2.5 \times 2$ cm. (sed vix matura); endocarpio intus dense et longe villosa; seminibus 1.7 cm. longis.

SOLOMON ISLANDS: New Georgia Group: Vanganu Island: *F. S. Walker & C. T. White* B.S.I.P. 149, Sept. 1945 (leaves only), lowland rain-forest (tree 100 ft., buttresses unbranched, rounded 5 ft. high, bark yellowish brown, smooth except for prominent pustules and shallow cracks or ridges of lenticels). New Georgia: near Munda, *F. S. Walker & C. T. White* B.S.I.P. 149(a), Oct. 1945 (TYPE, leaves and fruit) lowland rain-forest (tree 100 ft., bark character as in no. 149, fruit brown, shining, thickly dotted with pale lenticels).

Very close to *P. costatum* Bl. and *P. rubiginosum* Ridley of the Malay Archipelago, differing in the greater number of nerves on each side of the midrib.

Parinari sp.

Tree 60 m., bole narrowly buttressed for 9–10 ft.; bark very pale brown covered with large coarse pustular lenticels and here and there cracked longitudinally; branchlets at first angular and densely fulvous-pilose at length terete and glabrous and clothed with dark-grey-brownish bark and

dotted with more or less numerous lenticels. Leaves petiolate, ovate to elliptic-ovate or almost ovate-lanceolate, apex acuminate, base subrotund, the younger ones clothed with a floccose fulvous rather long pubescence above, at length nitid and glabrous, finely and closely canescent tomentose beneath, lateral nerves about 24 on each side of the midrib, much raised beneath, transverse veins clearly visible below, transverse veins and reticulations clearly visible above; lamina 10–12 cm. long, 5–6 cm. broad; petiole strong 0.7–1 cm. long, at first fulvous-pilose, at length glabrous.

NORTHEAST NEW GUINEA: near Aitape, a few miles S.E. of Tadjai airstrip, *L. S. Smith* N.G.F. 1193, Jan. 1945 (leaves only), lowland rain-forest (tall tree 130 ft. overall with heavy limbs and fairly spreading flat crown; bole narrowly buttressed for 9–10 ft., bark 1 in. thick, very pale brown, very densely covered with large coarse pustular lenticels and here and there cracked longitudinally).

Judging from descriptions this comes very close to *P. rubiginosum* Ridl. which differs in the much smaller number of lateral nerves on each side of the midrib. It is probable that this is a lowland form of *P. papuanum* C. T. White but unfortunately only sterile material is available.

LEGUMINOSAE

Adenanthera pavonina L. Sp. Pl. 348. 1753.

SOLOMON ISLANDS: Guadalcanal: near Point Cruz, *F. S. Walker & C. T. White* B.S.I.P. 124, Sept. 9, 1945, secondary rain-forest (tree 10 m., bark lt. brown).

Albizzia papuana, sp. nov.

Arbor 20 m. alta, cortice griseo laevi pustulis lenticellatis excepto ramulis puberulis. Folia alterna, rhachi cum petiolo puberula 15–28 cm. longa, petiolo ipso 8–12 cm. longo, supra basim glandula oblonga instructo; pinnis 3–6-jugis, rhachi cum petiolulo 9–12 cm. longa; pinnulis 4–7-jugis infra jugum supremum glandula saepe instructis foliolis utrinque plus vel minus sparse puberulis oblongo-ellipticis basi obliquis apice subacutis mucronulatis, nervis praecipuis patentibus ca. 8 in utroque latere; lamina 4–5 cm. longa, 1.5–2 cm. lata, petiolulo 2 mm. longo. Paniculae amplae, terminales et ex axillis superioribus orientes, ramis dense puberulis. Flores albi, in capitulos ca. 15-floros dispositi; calyce anguste cupulari pubescenti 5-dentato 3 mm. longo; petalis linearibus vel peranguste spathulatis in parte superiore dense pubescentibus 7 mm. longis; staminibus 2 cm. longis. Legumen ignotum.

PAPUA (British New Guinea): Iroboiva, alt. 3000–4000 ft., *C. E. Lane Poole* 432, Feb. 1923, in forests of ravines in otherwise grassy hill (medium tree, 3½ ft. girth, 60 ft. overall).

The affinities of the present species are with *A. tomentella* Miq. which is only known from Java. Though very close the two can be distinguished as follows:

Leaves 2–4-jugate, leaflets 3–6-jugate, pinnules scarcely inaequilateral, rhomboid-elliptic, the upper ones obovate, 2–12 cm. long, 1.5–6.5 cm. broad, apex acute, nerves ascending at an angle of about 30 degrees. *A. tomentella*.

Leaves 3-6-jugate, pinnae 4-7-jugate, pinnules distinctly inaequilateral, 4-5 cm. long, 1.5-2 cm. broad, oblong-elliptic, apex subacute, nerves spreading at an angle of about 60 degrees. *A. papuana*.

***Albizzia salomonensis*, sp. nov.**

Arbor ad 40 m. alta; trunco ad basim anteridifero; cortice griseo laevirimis transversis lenticellatis excepto; ramulis breviter pubescentibus. Folia alterna; rhachi cum petiolo velutina, 12.5-20 cm. longa, petiolo ipso 5-7 cm. longo, supra basim glandula pustuliformi instructo; pinnis 2-3-jugis, rhachi cum petiolulo, 6.5-13 cm. longa dense puberula, rhachi inter jugas omnes vel superiores glandula instructa; pinnulis 2-3-jugis foliolis ovatis vel late ellipticis vel fere obovato-ellipticis, supra viridibus breviter et tenuiter puberulis serius glabris, subtus glaucis breviter et plus vel minus dense puberulis nervis utrinque 6-8, lamina 5-10 cm. longa, 3.7-7.5 cm. lata, petiolulo 2-3 mm. longo. Paniculae axillares, ramulis puberulis; floribus albis in capitulos dispositis; calyce glabro 3 mm. longo anguste cupulari 5-dentato; petalis glabris 1 cm. longis; staminibus 1.5 cm. longis. Legumen (immaturum) plano-compressum, 35 cm. longum, apice acuminatum, acumine ipso breviter caudiformi, 2-2.5 cm. longo, basi cuneatum, margine incrassatum; valvis transverse crebre venosis.

SOLOMON ISLANDS: Bougainville: Empress Augusta Bay, Forest Survey No. 2. N.G.F. 588 (pods only) Nov. 1944 (tree 150 ft., 12 ft. 6 in. girth, buttresses large and spreading, reaching to a height of 12 ft.; bark grey, smooth but roughened by some pustules). Guadalcanal: Metepona River, F. S. Walker B.S.I.P. 11, June 1945, dominant in riverine rain-forest (tree 120 ft., girth 9 ft., spur roots and buttresses 4 ft., bark smooth, pale grey with small pustular lenticels). Malaita: near the mouth of the Hauhui River, F. S. Walker & C. T. White 83 (TYPE), Aug. 1945, in coastal fringe rain-forest (tree 130 ft., buttresses large, plank-like, leaving the trunk abruptly at a height of 9 ft.; bark grey pustular with transverse cracks or lenticels, but very smooth in appearance from a distance; fls. white).

The species here proposed is very similar in general appearance to *A. saponaria* Bl. but the two exhibit the following differences:

Calyx and petals pubescent; pod 7-18 cm. long, 2.5-3 cm. broad.
 *A. saponaria*.
 Calyx and petals glabrous, pod 30 cm. long or more and 6 cm. wide or more with a caudiform point at the apex. *A. salomonensis*.

ERYTHROXYLACEAE

***Erythroxylum salomonense*, sp. nov.**

Arbor 30 m. alta. Folia in vivo supra subnitida, subtus flavido-viridia, in sicco utrinque opaca, subtus distincte pallidiora, anguste lanceolata vel lineari-lanceolata, basi cuneata, apice subobtusae et elongate acuminata, nervis lateralibus subobscuris utrinsecus ca. 15, oblique patentibus; lamina 6-9 cm. longa, 1-2 cm. lata; petiolo 5-7 cm. longo; stipulis linearibus ca. 1 cm. longis. Flores in fasciculos 3-12-floros dispositi; pedicellis sulcatis cum 1.5 mm. calyce 6 mm. longis. Calyx campanulatus, profunde 5-dentatus, dentibus triangularibus. Petala viridi-albida bruneo notata lineari-

oblonga, 3 mm. longa, ligula in parte superiore irregulariter plicata. Urceolus stamineus truncatus, calyci aequilongus, filamentis subaequalibus. Ovarium cylindricum, costatum; stylis unitis.

SOLOMON ISLANDS: New Georgia Group: Vanganu Island: near the Kaukosi River, *F. S. Walker & C. T. White* B.S.I.P. 156, Sept. 1946, lowland rain-forest (tree 100 ft., bark reddish brown, tinged with mauve, shed in thin irregular pieces; fls. greenish white, petals flecked with brown).

The present species is undoubtedly very close to *E. ecarinatum* Burck. which differs in having the leaves always more or less glossy in the dried specimens and the main lateral nerves at right angles to the midrib.

RUTACEAE

Evodia Bonwickii F. Muell. *Fragm. Phytogr. Austr.* 5: 56. 1865.

SOLOMON ISLANDS: Malaita: near the Heho River, *F. S. Walker & C. T. White*, B.S.I.P. 82 (leaves only) Aug. 1945, in hill rain-forest (tree 80 ft., buttresses small, rounded, bark yellowish leather-brown, marked with spreading shallow lenticellar cracks); Malaita, near the Mannu passage, *F. S. Walker & C. T. White* B.S.I.P. 94, Aug. 1945, in secondary rain-forest (tree, bark as in 82; fls. scarlet, borne in great abundance on the older wood below the leaves).

The species was first described from N. E. Australia, both Lane-Poole and Brass collected it in New Guinea but so far as I know it has not been recorded previously from the Solomon Islands. It is an extremely handsome tree in flower.

Evodia viridiflora, sp. nov.

Arbor ca. 16 m. alta; cortice griseo-fusco oblecta, ramulis florentibus validis ad nodos complanatis et ca. 1 cm. diam. lenticellatis; lenticellis rotundis sed saepe in rimis longitudinalibus dispositis, partibus novellis pubescentibus sed mox glabris. Folia ampla, trifoliolata; petiolo 10–21 cm. longo, subtus rotundo, supra leviter canaliculato; foliolis tenuiter chartaceis breviter petiolulatis elliptico-lanceolatis, apice acutis vel gradatim acuminatis basi subobtusis vel in foliolo intermedio cuneato; nervis lateralibus utrinsecus 14; petiolulo 3 mm. longo; lamina 18–30 cm. longa, 9–15 cm. lata. Paniculae axillares, ad 15 cm. longae, ramulis tomentosis vel breviter pubescentibus. Flores viridi (fide coll.), hermaphroditi, breviter pedicellati; pedicellis calycibusque tomentosis; calyce 2 mm. diam. profunde lobato, lobis deltoideis vel triangularibus; petalis 3 mm. longis glabris anguste ovatis; staminibus petala aequalibus; disco carnosolobato glabro; ovario dense pubescenti vel fere hirsuto, stylo 4 mm. longo, in parte inferiore pilis longis paucis obsito, stigma capitato 4-lobato. Cocci liberi, valvis extus pubescentibus transverse venosis; seminibus nigris nitidis.

SOLOMON ISLANDS: Santa Anna: *F. S. Walker* B.S.I.P. 263, March 1946, lowland rain-forest, secondary growth (tree 50 ft., bark greyish brown, generally smooth but with shallow, wavy lenticellar cracks; fls. green; fruit globular, seed dark purple, almost black).

From the account of the New Guinea members of the genus by Lauterbach (Bot. Jahrb. 55: 224-240. 1918) I would place the present species next to *E. crassiramis* K. Schum. which differs in having sessile oblong or obovate leaflets, the lateral ones very oblique at the base, the rhachis of the inflorescence glabrous and the petals villous inside.

SIMARUBACEAE

Ailanthus Peekelii Melchior, Notizbl. Bot. Gard. Mus. Berl. 10: 893. 1930.

SOUTHEAST NEW GUINEA: Buna hinterland, about 7 m. N.W. of Embi Lakes, alt. 300 ft., *L. S. Smith* N.G.F. 1271 (male flowers), March 1945, rain-forest (tree 170 ft., unbuttressed; bark pale brown, densely covered with oblong or elliptic lenticels arranged in longitudinal rows, occasionally united into lines).

Only previously known from the Bismarck Archipelago. The specimens quoted above agree with the original description except that the leaves are only 3-4 (not 5-6)-jugate and the petals are shortly pubescent both inside and out.

Ailanthus Peekelii Melchior var. *glabra*, var. nov.

A typo foliis utrinque glabris, filamentis in floribus masculis glabris recedit.

NORTHEAST NEW GUINEA: near Lae, *K. Ingram* N.G.F. 693 (leaves only). Madang, *K. Mair* N.G.F. 1810 (TYPE of the variety), very young male flowers, Feb. 1945, rain-forest (tree 150 ft., unbuttressed, broad crown; bark light brown, reticulate fissures forming small scales; fls. small, white).

SOLOMON ISLANDS: Bougainville: Koniguru, Buin, *S. F. Kajerowski* 2106 (immature fls.) Aug. 1930, rain-forest (tree 20 m.). Choiseul: near Ruruvai, *F. S. Walker* B.S.I.P. 281 (leaves only), June 1946, lowland rain-forest (tree 90 ft., no buttresses, bark smooth, grey, closely longitudinally ridged). Santa Isabel: Borubiana Island, N.W. Passage, *F. S. Walker* B.S.I.P. 281(a) (one ripe carpel), Sept. 1946, inland semi-swamp forest, occasionally occurring in association with hill species in normal forest.

All the above specimens differ from *A. Peekelii* Melchior as originally described in being markedly more glabrous in all parts except perhaps the calyx and petals.

BURSERACEAE

Canarium Mehenbethene Gaertner, Fruct. et Sem. 2: 98. 1791, *excl. syn.*

Canarium commune L. Mant. 1: 127. 1767.

Canarium nungi Guillaumin, Jour. Arnold Arb. 12: 236. 1931.

SOLOMON ISLANDS: Guadalcanal: north coast, *F. S. Walker* B.S.I.P. 3, June 1945, riverine rain-forest (large tree, rarely over 100 ft.; buttresses large, rounded or plank-like; bark pale grey, smooth in appearance though roughened by numerous fine lenticels shed in flakes leaving a slightly dippled or faintly scroll-marked surface).

To the synonyms listed by Lam in his Burseraceae of the Malay Archipelago and Peninsula (Bull. Jard. Bot. Buitenz. ser. III, 12: 515. 1932)

I would add the above. This gives the species a range practically throughout the whole of Melanesia from New Guinea and the Bismarck Archipelago in the north to the New Hebrides in the south. It is very abundant in the Solomon Islands where it is mostly known as Ngali or Narli, in some islands with the variant Ngari. In New Guinea Ngalip or Garlip is the commonest name. These are mentioned among a host of native names as they have become almost universal among whites in the two territories concerned. At odd times the nuts have found their way in limited quantities on to the Australian market. They occur wild in abundance and are frequently sown or left standing about villages and on Rendova Island I remember a really magnificent avenue of these trees near a large village. They are frequently shelled, packed tight in net bags and slowly smoked, the bag being tightened as the kernels dry.

Haplolobus salomonensis, sp. nov.

Arbor 16 m. alta, cortice fulvo in fragmentis decorticato superficiem laevem vel leviter pustulatum reliquenti, ramulis lenticellatis subvalidis partibus, novellis minute tomentosis mox omnino glabris apud vel infra folia 0.6–0.7 mm. diam., medulla aresinifera. Folia glabra, $2\frac{1}{2}$ – $3\frac{1}{2}$ -jugata, petiolis striatis superne deplanatis basi incrassatis 3–5 cm. longis, medulla vasis resiniferis 1–3 percursa, rhachidibus cum petiolis 7–10 cm. longis, rhachidis partibus interjugalibus 3–4 cm. longis, nodis incrassatis; foliolis chartaceis ellipticis vel ovato-lanceolatis, basi plus minusve late acutis, in foliolis lateralibus inaequilateralibus, marginibus integris vel plus minusve crenatis, apice acuminatis, laminis 7–13 cm. longis, 3.5–7 cm. latis, petiolulis foliolorum lateralium 1–2 cm. longis, folioli terminalis 2–4 cm. longis; nervis secundariis gracilibus ca. 8 in sicco utrinque prominulis, nervis tertiariis laxe reticulatis, in sicco utrinque prominulis. Inflorescentia mascula (foeminea ignota) omnino glabra, axillaris vel subterminalis, late paniculata, 12–18 cm. longa e ima basi ramosa vel pedunculo brevi suffulta, ramulis gracilibus valde striatis, bracteis minutis paucis. Flores pedicellati; calyce late cupulari 2 mm. diam.; cum pedicello 2 mm. longo, segmentis 3 (raro 4) deltoideis valvatis. Petala 3 (raro 4) valvata, latissime ovata, 2 mm. longa. Stamina 6 (raro 8), aequalia, extus discum inserta, filamentis basim versus dilatatis. Discus prominens carnosus, plus minusve 12-lobatus vel -crenatus. Ovarii rudimentum magnum, glabrum, ovoideo-conicum.

SOLOMON ISLANDS: Guadalcanal: Beaufort Bay, Kumbau River, F. S. Walker B.S.I.P. 242, Feb. 1946, alt. 600 ft., ridge rain-forest (tree 50 ft., buttresses short, rounded; bark pale brown, shed in shaggy pieces leaving a pustular somewhat scroll-marked surface; leaves mid-green; fls. green).

The genus *Haplolobus* consists of 13 species, with the exception of one from Borneo and another from Celebes, all previously found in New Guinea. The extension of the genus to the Solomon Islands was to be expected.

Among previously described species the present one seems to be most

closely allied to *H. anisander* (Lauterb.) H. J. Lam. Like this it has very few resin canals in the pith of the petiole, though in addition there is a ring of very small ones immediately outside the phloem. The two species can be distinguished as follows:

Young parts dark furfuraceous pubescent, soon glabrate; branchlets rather slender and smooth, leaves lanceolate to ovate-lanceolate; inflorescence 7-8 cm., little branched with a peduncle $\frac{1}{4}$ - $\frac{1}{2}$ the length of the inflorescence; petals oblong.....*H. anisander*.
 Very young parts (terminal bud) minutely tomentose, whole branchlet very soon quite glabrous; branchlets fairly stout, roughened with lenticels; leaves elliptic to ovate-lanceolate; inflorescence 12-18 cm. long, much branched from the base, petals broadly ovate.....*H. salomonensis*.

EUPHORBIACEAE

Glochidion novo-guineense K. Schum. in Schum. & Lauterb. Nachtr. Fl. Deutsch. Schutzgeb. Südsee 287. 1905.

SOLOMON ISLANDS: New Georgia Group: Njapuana Island: *F. S. Walker & C. T. White* B.S.I.P. 139, Sept. 1945, coastal rain-forest, coral formation, little soil (tree 70 ft.; bark very dark brown, ragged appearance, shed in persistent, long, curling pieces; fls. green apparently all galled). New Georgia: Hombu Hombu, *F. S. Walker* 276, May 1946, coral sand near the beach (small tree, girth b.h. 4 ft., bark greyish brown, deeply and closely fissured; male flowers yellow; female fls. green; fruit green).

BRITISH NEW GUINEA: Milne Bay area, near Mapo, *L. S. Smith* N.G.F. 1335, March 1945, alt. 500 m., oak forest (small tree 50 ft., bark brownish, thin-corky, inner dark red fibrous; fls. greenish).

As remarked by Schumann l.c. an outstanding feature of the present species is its glabrous character throughout even on the youngest shoots. The Solomon Islands specimens agree with the New Guinea ones quoted above except that the lateral veins are weaker. As described by Schumann the specimens dry a dull grey-green. I have not seen authentic material for comparison but the specimens agree so well with the description I think there is no doubt about the identification.

Neoscortechinia Forbesii (Hook. f.), comb. nov.

Scortechinia Forbesii Hook f. in Hook. Icon. Pl. sub Pl. 1706. 1887.

NORTHEAST NEW GUINEA: near Aitape, near s.l. *L. S. Smith* N.G.F. 1210 Jan. 1945 (tree 30 m. or more high, bole narrowed buttressed at the base and with a few shallow channels to 6 m.; bark slightly mottled, brown and grey with shallow and irregular depressions where scales have been shed; fls. greenish brown; seeds with a bright red arillus which is white and pulpy inside).

SOLOMON ISLANDS: New Georgia: Vaimbu River, *F. S. Walker & C. T. White* B.S.I.P. 189, Oct. 1945, edge of swamp, lowland rain-forest (tree 25 m., buttresses branched, 1.5 m., spreading and arching over the surface of the ground; bole very irregularly fluted; bark dark brown, shed in irregular pieces). Malaita: Buma, *F. S. Walker* B.S.I.P. 233, Feb. 1946, littoral swamp, coral formation (tree 10 m., bark grey, shed in irregular flakes, leaving a somewhat dipped surface).

I would unite *N. arborea* (Elm.) Pax & Hoffm. with the above and regard it as a species stretching from the Philippine Islands, through the Malayan Archipelago to New Guinea and the Solomon Islands. Smith's specimen (N.G.F. 1210) was kindly compared for me with type material at Kew by Mr. V. S. Summerhayes who reported it was a very good match. I thought at the time that *Walker & White* B.S.I.P. 189 might be *N. arborea* (Elm.) Pax & Hoffm. Mr. Summerhayes who saw a sheet reported that he thought this differed in several characters from this species and that there was nothing in the Kew Herbarium to exactly match it. Since then I received a further specimen from the Solomon Islands (*Walker* B.S.I.P. 233) and these closely approached the New Guinea plant. Unfortunately the only specimen at Brisbane available to me labelled *N. arborea* (Elm.) Pax & Hoffm. is a sterile one from Borneo (Hort. Bog. bb. 19205). The leaves match those of *Walker & White* 189 moderately well. I cannot find that the combination *N. Forbesii* has been made before. If the Malayan and New Guinea plants are the same, the specific epithet *Forbesii* has priority. Hooker's original publication consisted only of a couple of lines but he quotes a type and I think publication would be deemed satisfactory by the International Rules.

Phyllanthus cuscutaeflorus S. Moore Jour. Bot. 43: 148. 1905.

SOUTHEAST NEW GUINEA: Haga, Laloki River, *L. J. Brass* 897, Jan. 1926, riverine rain-forest (tree 20 ft., with a grey, smooth bark, fls. pink).

This small tree is moderately common in the rain-forests of Northeast Queensland (Australia) but has not previously been recorded for New Guinea.

Buchanania solomonensis Merr. & Perry in Jour. Arnold Arb. 20: 530. 1941.

SOLOMON ISLANDS: Guadalcanal: near the Tenaru River, *F. S. Walker & C. T. White* B.S.I.P. 32 (leaves only), July 1935, foothill rain-forest (tree 70 ft., girth 2 ft. 9 in.; bark rough, dark brown, inner beef-red paling to pink near the sapwood). Near the Matepono River, *C. T. White* B.S.I.P. 49 (fls. & fts.), July 1945, riverine rain-forest (tree 40 ft., bark dark grey, inner beef-red with a dark amber-coloured exudate). MALAITA: near the Buma Mission, *F. S. Walker & C. T. White* B.S.I.P. 71 (leaves only), Aug. 1945, littoral swamp, shallow alluvium over coral (tree 84 ft., buttresses absent but spur roots forming a network above the ground, bark grey, inner bark beef-red, exudate mucilaginous, colourless).

The leaves of *Walker & White* 71 are definitely lanceolate instead of "oblanceolate" as in the other two and are also smaller. It is possible two species are represented though I doubt it. Merrill & Perry l.c. describe the gynoecium (from the remnants of a flower) as minutely pilose. In our flowering specimen the gynoecium is densely hirsute. It is possible that *B. mangoides* F. Muell. (very imperfectly known), *B. novo-hibernica* Lauterb. and *B. solomonensis* Merr. & Perry all represent geographical races of the one species.

ANACARDIACEAE

Mangifera salomonensis, sp. nov.

Arbor magnifica, ad 60 m. alta, trunco cylindrico ad 30 m. longo, cortice griseo-fusco sulcis lenticellatis notato, ramulis validis angulatis. Folia coriacea, nitida, lanceolata, acuta vel distincte acuminata et saepe costa media exserta mucronulata, basi cuneata; nervis lateralibus in foliis minoribus utrinque ca. 12 sed in foliis majoribus ad 22, venis reticulatis utrinque prominentibus; lamina 10–45 cm. longa, 4–15 cm. lata; petiolo 2–12 cm. longo, basi incrassato. Paniculae terminales vel ex axillis foliorum superiorum orientes, folia suprema superantes, ramis paucis pilis patentibus sparsissime obsitis; floribus singularibus vel in fasciculos 2–5-floros vel rarius in cymas (vel racemos) breves dispositis; pedicellis plus vel minus dense pilosis, 2–5 mm. longis; sepalis 4, ovatis 2 mm. longis; petalis 4 ovato-lanceolatis quam sepala duplo longioribus, apice reflexis, intus ad medium costulis 3 plus vel minus confluentibus, in parte inferiore indistinctis, in parte superiore incrassatis et minute tuberculatis vel papillois; stamine fertili solitario, petala aequante; staminodiis brevibus; disco carnosus cupuliformi, minute ruguloso vel papilloso; ovario glabro, oblique subgloboso; stylo laterali stamen aequante. Fructus ignotus.

SOLOMON ISLANDS: Guadalcanal: Tenaru River, *F. S. Walker* B.S.I.P. 5, June 1945, foothill forests near rivers (tree 120 ft., bole 60 ft., bark smooth, grey-brown, faintly cracked by lenticellate splits). Same locality and habitat, *F. S. Walker & C. T. White* 18 (TYPE), July 1945 (tree 180 ft., no buttresses, bark yellowish brown, smooth except for prominent lip-like, longitudinal lenticels arranged in longitudinal lines).

The present species comes into the group containing *M. quadrifida* Jack, *M. longipetiolata* King and *M. monandra* Merr. From all of these it differs in its peculiar type of inflorescence. The flowers are mostly in fascicles, and sometimes solitary along the main branches of the inflorescence; rarely a short cyme arises from the middle of the fascicle. In the other species mentioned the flowers are arranged in distinct racemes or cymes.

Pleiogynium papuanum C. T. White in Proc. Roy. Soc. Queensl. 45: 27, pl. 3. 1934.

SOLOMON ISLANDS: Makira (San Cristobal): Star Harbour, *F. S. Walker* B.S.I.P. 258, alt. 200 ft., March 1946, foothill rain-forest (tree 110 ft.; buttresses narrow, spreading, plank-like merging gradually into the trunk and reaching a height of 6 ft.; bark dark brown, longitudinally axe-cut fissured, shed in rather brittle, often rectangular flakes).

Only previously known from the type gathering which consisted of several branchlets with male flowers. The present specimens consist of a couple of branchlets with inflorescences carrying female flowers in very young bud. These on dissection however showed the typical ovary of *Pleiogynium* crowned by several (in the only flower examined — 8) short styles. The female inflorescences are apparently much smaller than the males but the branches are clothed with the same characteristic white

scurfy covering. I think there is little doubt of the Papuan and Solomon Islands plants being the same species.

RHAMNACEAE

Alphitonia zizyphoides (Spreng.) A. Gray in Bot. U. S. Expl. Exped. 1: 278. 1854 & t. 22. 1857.

SOLOMON ISLANDS: Guadalcanal: Gold Ridge alt. 1700 ft., *F. S. Walker & C. T. White* B.S.I.P. 54, July 1945, dominant tree in hill ridge rain-forest (tree 70 ft., bark grey, smooth but closely and finely longitudinally cracked).

The above determination is given with some hesitation. The specimens seem identical with material from Fiji and the New Hebrides. Unfortunately I have seen none from Polynesia and the type comes from Tonga. It would be expected that the Solomon Islands plant would be the same as the commonest New Guinea one — *A. moluccana* Teysm. & Binn. — but it seems quite distinct. S. F. Kajewski collected flowering specimens of *A. zizyphoides* (Spreng.) A. Gray on Guadalcanal and remarks on the strong "sarsaparilla" odour of the bark when peeled, a feature to be noticed in several species of the genus.

GONYSTYLACEAE

Gonystylus macrocarpus, sp. nov.

Arbor 33 m. alta, cortice rubro-fusco longitudinaliter rimoso fragmentis spongiosis fuso, ramulis subvalidis partibus novellis pubescentibus mox glabris cortice atro-fusco, irregulariter striato et interdum transverse fissis obtectis, lenticellis parvis, inconspicuis. Folia oblonga, oblongo-lanceolata vel raro lanceolata, tenuiter coriacea, apice obtusa, leviter et obtuse acuminata vel raro acuta, basi obtusa vel acuta margine leviter recurva, subnitida, in sicco pallido-fusca, utrinque glaberrima, costa media supra sulcata subtus valde elevata, nervis venis venulisque subtus conspicuis; lamina 8–15 cm. longa, 4–6 cm. lata; petiolo valido 1–1.5 cm. longo. Inflorescentiae thyrsiflorae (?) Flores non visi; calycis lobis (sub fructu) 0.5 cm. longis extus tomentosis intus dense hirsutis. Fructus magnus globosus vel subglobosus 7–10 cm. diam. valvis 4 dehiscens; valvis sublignosis extus rugulosis; pedicello valido ca. 2.5 cm. longo; semine vivo ca. 6.5 cm. longo, 5 cm. diam., (siccitate multum contracto); facie exteriori convexa, interiori 2-angulata vel in sicco plana vel leviter concava, testa tenuiter coriacea, fusca, arillata, arillo semine majore textura firmo sed siccitate tegumine tenuissime fibroso contracto.

SOLOMON ISLANDS: New Georgia: Le River, *F. S. Walker & C. T. White* B.S.I.P. 197, Oct. 1945, lowland rain-forest (tree 100 ft., no buttresses, bark red-brown, longitudinally cracked, shed in spongy flakes; leaves glossy green; fr. globose or nearly so, about 10 cm. diam., dehiscing in 3 valves, valves subwoody, each containing a large single pendulous seed, about 6.5 cm. long and 5 cm. diam., convex on the outer side, broadly 2-angled on the inner, divided into 2 parts: (1) a lower and outer portion, the seed proper,

covered with a thin leathery brown testa and (2) an upper and inner and somewhat larger portion consisting of a large white arillus of firm consistency, but shrivelling to a small hard fibrous body or to a thin fibrous skin in the dried state).

In the absence of flowers it is difficult to place the present species correctly in H. K. Airy Shaw's key in the Kew Bull. 1947 pp. 15-16 but I think there is no doubt its affinities lie with *G. Maingayi* Hook. fil. and *G. bancanus* (Miq.) Baill. The latter species has been recorded for New Guinea and the Philippines but Shaw (l.c. pp. 9 and 14) doubts if that species really occurs in either of those countries. It may be that *G. megacarpus* may later prove the same as the New Guinea tree.

I have quoted my field notes on the fruit in full as I can find no reference to the arillate character of the seed. In *G. megacarpus* this is large and of very firm, waxy, certainly not juicy consistency but shrivels so in the dried specimens that it would never be noted in any description drawn up from such.

I sent specimens with a query to Drs. Merrill and Perry at the Arnold Arboretum and they replied to the effect 24/10/47 that the fruit was larger than in any record they could find and further that they could not find much mention of the arillus of the seed but in Koorders & Valetton, Atlas Baumart. Java pl. 300, an arillus seemed to be shown in fig. L. I have distributed notes and copies of field sketches with the duplicates.

TILIACEAE

Trichospermum Peekelii Burret in Notizbl. Bot. Gard. Mus. Berlin, 9: 853. 1926; Merr. & Perry in Jour. Arnold Arb. 22: 340. 1939.

SOLOMON ISLANDS: Shortland Island: F. S. Walker B.S.I.P. 277, May 1946, lowland rain-forest (tree 100 ft., buttresses merely flanges from the spur roots, reaching a height of 7 ft. from the ground; bark yellowish grey-brown, generally smooth with longitudinal lines of lenticels, fls. grey in colour in bud stage, in open flower sepals whitish, petals mauve within).

Previously recorded from the Bismarck Archipelago and Bougainville this record extends its range slightly more to the south. The deeply cordate sometimes subauriculate leaf-base hiding the petiole and adjacent part of the branchlet seems a very distinctive character of the species.

STERCULIACEAE

Sterculia Parkinsonii F. Muell. in Austr. Jour. Pharmacy 1887 (Feb.), in Bot. Centralbl. 31: 20. 1887.

SOLOMON ISLANDS: Guadalcanal: Tenaru River, F. S. Walker & C. T. White B.S.I.P. 28, July 1945, lowland rain-forest (large tree; bark brown, smooth but covered with fine pustular lenticels); Beaufort Bay, F. S. Walker B.S.I.P. 240, Feb. 1947, lowland rain-forest (tree 100 ft., buttresses rounded, leaving the trunk abruptly at a height of 7 ft.; bark grey, generally smooth but with a few horizontal ridges and slight longitudinal cracking).

Both specimens are sterile but I think there is no doubt of the determinations; the leaves agree very well with those of the type sheet kindly sent me on loan from the National Herbarium, Melbourne, by Mr. A. W. Jessep. It is a common tree in New Guinea.

DILLENiaceae

Wormia salomonensis, sp. nov. (Sect. *Euwormia*).

Arbor ad 30 m. alta, ramulis glabris, cicatricibus annulatis notatis. Stipulae persistentes glabrae petiolo adnatae. Folia alterna, elliptica vel elliptico-lanceolata, utrinque glabra, margine integra vel indistinctissime undulato-crenata; nervis lateralibus validis, utrinsecus ca. 10; rete venularum supra obscuro subtus visibili sed vix prominulo; lamina 10–18 cm. longa, 3–8 cm. lata; petiolo 3–6 cm. longo, cum alis ad 1 cm. lato. Flores 3–5 in racemum flexuosum subterminalem dispositi, pedunculo et rhachi glabro, pedicellis 1.5–2 cm. longis glabris. Sepala 5, coriacea, imbricata, margine ciliolata, exteriora rubra, interiora exterioribus majora, ca. 2 cm. longa, 1.2 cm. lata, in parte superiore flava, in parte inferiore rubra. Petala ovato-oblonga, subcucullata, apice rotundata, basim versus angustata, sulphurea, mox decidua. Stamina numerosa aequalia vel subaequalia, 2.5 cm. longa. Carpella 5, libera, minute tomentosa.

SOLOMON ISLANDS: New Georgia Group: Vanganu Island: near the Keli River, *F. S. Walker & C. T. White* B.S.I.P. 145, (leaves and wood) Sept. 1945, common in lowland rain-forest (tree 110 ft. high, buttresses plank-like springing gradually from the trunk at a height of 6 ft.; bark rufous-brown, shed in small thick flakes, leaving a dipped surface). New Georgia: near Munda, *F. S. Walker & C. T. White* B.S.I.P. 145(a) (TYPE), Oct. 1945, lowland rain-forest (tree and bark as in no. 145; fls. in few-flowered racemes in the upper axils, outer sepals red, inner sepals yellow in the upper, red in the lower part; petals deep cream).

The present species is easily distinguished from others of the section *Euwormia* from New Guinea and the Solomon Islands by its glabrous character, elliptic-lanceolate leaves and small flowers. The specimens of 145(a) were gathered from two different trees the one with much smaller leaves than the other. The size of leaves, however, is a variable character in tropical trees. As the trees grow older and taller the leaves tend to become smaller. The smaller-leaved specimens were shot down from a particularly large tree.

GUTTIFERAE

Calophyllum paludosum, sp. nov.

Arbor 25 m. alta, gemmis exceptis glaberrima cortice fulvo pannis flavis notato ubi partibus papyraceis recente fusus est, leviter longitudinaliter rimoso, ramulis vix angulatis demum cortice cinereo lenticellato obtectis. Folia lanceolata, apice acuta vel indistincte acuminata, basi cuneata, firme papyracea vix chartacea, utrinque subnitida, margine leviter incrassata, costa valida utrinque elevata, nervis lateralibus creberrimis tenuibus (ad

40 per cm.) patentibus subrectis plus vel minus parallelibus plerumque sed non semper utrinque prominulis. Inflorescentiae (sub fructu) axillares, racemosae, pedunculo brevi (0.5 cm. longo) valido, pedicellis 2–2.3 cm. longis apice versus leviter incrassatis. Fructus pruinosis ellipsoideus vel oviodeus vel raro subglobosus 2–2.5 cm. longus, 1.2–2 cm. diam.

SOLOMON ISLANDS: New Georgia Island: Bupara River, *Walker & White* B.S.I.P. 192, Oct. 1945, lowland swamp rain-forest near the sea (tree 25 m., buttresses absent, bark brown with yellow patches where newly shed in papery pieces, slightly longitudinally cracked; leaves rather yellowish green to mid-green; fr. bluish purple, only one ripe fruit seen on the tree but many unripe green ones).

The present plant belongs to a group of rather small-leaved and small-fruited species of which *C. Cumingii* Pl. & Tr. of the Philippines, *C. neoebudicum* Guill. of the New Hebrides and *C. pulcherrimum* Wall. of south-east Asia are typical. Of these it seems to come nearest to the first mentioned but this has consistently shorter petioles. I hesitated to name the species in the absence of flowers and the impossibility in consequence of putting it in the correct group but a number of sheets were collected and have been widely distributed to the Arnold Arboretum, Kew, Leiden and elsewhere and there should be little difficulty in matching them by comparison.

DATISCACEAE

Octomeles sumatrana Miq. Fl. Ind. Bot. Suppl. 336. 1861–62.

Octomeles moluccana Teysm. & Binn. ex Hassk. in Abh. Naturf. Gesellsch. Halle 9: 208. 1866.

SOLOMON ISLANDS: New Georgia Group: Kolombagara Island: *F. S. Walker & C. T. White* B.S.I.P. 184, Oct. 1945, lowland rain-forest, wet alluvium (tree 120 ft., buttresses very large, spreading widely and branching, wall-like leaving the trunk about 20 ft. from the ground; bark yellowish grey-brown, covered with large scattered pustular lenticels; fls. pale green).

Gilg (Nat. Pflanzenfam. 2nd. ed. 21: 546. 1925) refers the common Papuan tree to *O. moluccana* Teysm. & Binn. but the above specimens according to the very minor differences given by him belong to *O. sumatrana* Miq. Schumann & Lauterbach (Fl. Deut. Schutzgeb. Südsee 457. 1901) and Merrill (Enum. Philipp. Fl. Pl. 3: 119. 1923) — where he gives the correct citation for *O. moluccana* — united the two species. My examination of Papuan and Solomon Islands specimens convinces me that they are right.

BARRINGTONIACEAE

Barringtonia salomonensis Rechinger in Fedde's Repert. 11: 183. 1913.

SOLOMON ISLANDS: Malaita: near the Buma Mission, *F. S. Walker & C. T. White* B.S.I.P. 74, Aug. 1945, inland swamp-forest (tree 70 ft., buttresses about 2 ft., branching into roots that spread widely over the surface of the ground, looping here and there into knob-like pneumatophores; bark yellow brown; fls. white).

SANTA CRUZ GROUP: Vanikoru: *F. S. Walker* B.S.I.P. 207, Nov. 1945, secondary growth planted as a hedge (tree 20 ft., bark grey, longitudinally fissured; fls. white).

The above determinations are based on Rechinger's description which is inadequate in that no measurements are given.

COMBRETACEAE

Terminalia Kaernbachii Warb. in Bot. Jahrb. 18: 201. 1894.

Terminalia Okari C. T. White in Proc. Roy. Soc. Queens. 34: 46. 1923.

SOLOMON ISLANDS: New Georgia: near Munda (probably cultivated), *F. S. Walker* B.S.I.P. 274, April 1946, secondary growth, probably an old garden (tree 50 ft., bark grey, longitudinally cracked; fruit enclosing an edible nut).

After some consideration I am inclined to regard *T. Kaernbachii* Warb. as a species showing considerable variation in size and shape of its fruits. Those of Walker's specimens from New Georgia agree perfectly with Warburg's description "Broadly ovoid, neither lobed nor winged, rounded at both ends but sometimes indistinctly apiculate at the apex, 8 cm. long, 6 cm. broad, 5½ cm. thick." *Terminalia Okari* C. T. White has obovoid fruits tapering at the base, distinctly apiculate at the apex, a very slight inclination to be angled on the edges and measuring about 13 × 7.5 × 5.5 cm. As now proposed *T. Kaernbachii* Warb. has a wide distribution through New Guinea and the Solomon Islands though it probably has been distributed largely through the agency of man.

MYRTACEAE

Metrosideros polymorpha Gaud. Bot. Voy. Uranie, 482, pl. 108 & 109. 1826-30.

Tree 5 m., branching, bark grey longitudinally cracked; branchlets glabrous or the very young ones slightly pubescent. Leaves glabrous on both sides, elliptic or lanceolate, apex acuminate, base cuneate, nerves crowded not markedly more prominent than the raised reticulations, intramarginal vein 1 mm. from the edge of the leaf; blade 5-6.5 cm. long, 2-2.5 cm. wide; petiole 5-8 mm. long. Flowers scarlet in a compact branching cyme shorter than the leaves, branches tomentose. Calyx shortly and minutely tomentose, broadly turbinate, 2 mm. diam. Petals about 2 mm. long. Stamens 1.5 cm. long. Capsule 3-valved, at least two-thirds superior, about 5 mm. diam. after dehiscence.

SOLOMON ISLANDS: Santa Cruz Group: Vanikoru: near Lania River, *F. S. Walker* B.S.I.P. 218, Nov. 1945, fern covered hillside subject to fire (small branching tree 15 ft.; bark grey, longitudinally cracked; fls. showy scarlet).

A slight increase in our knowledge of the distribution of this common Polynesian tree. As the species as now understood by most botanists represents an extremely polymorphous series or complex a short description of the Santa Cruz plant is published herewith.

Syzygium effusum (A. Gray) C. Muell. in Walpers, Ann. 4: 838. 1857.

SOLOMON ISLANDS: New Georgia: Bupara River, F. S. Walker & C. T. White B.S.I.P. 194, Oct. 1945, dominant — almost only tree — in Pandanus swamp, red clayey mud below detritus (tree 70 ft., buttresses very concave, extending high up the bole and fluting with spreading roots, looping and at first plank-like, eventually forming a strong network of pneumatophores over the ground; bark dark brown, shed in irregular flakes; leaves markedly dimorphic those on young trees and adventitious shoots lanceolate or elliptic-lanceolate; nerves about 10 on each side of the midrib but sometimes difficult to distinguish from the intermediate ones, impressed above, slightly raised beneath, looping and forming a prominent intramarginal vein 4–7 mm. from the edge; blade 9–11.5 cm. long, 3–5.5 cm. wide, petiole 0.7–1 cm. long; mature leaves on large trees broadly obovate, apex rounded, emarginate, base cuneate, minutely punctate beneath under a lens, nerves scarcely or not at all visible on either surface; blade 4.5–6.5 cm. long, 2.5–4.5 cm. wide; petiole 7 mm. or less in length).

The above determination is based on a comparison with *Kajewski* 2065 from Bougainville and recorded by Merrill & Perry (Jour. Arnold Arb. 23: 292. 1942). The above notes prepared in the field are published in detail as an extended description of the species. When collecting in a large Pandanus swamp in New Georgia I was struck by the great abundance of a myrtaceous tree 3–10 m. high with the lanceolate leaves described above and a careful search failed to show any signs of flower or fruit. I thought there was a possibility they represented the juvenile stage of another and much larger tree common in the area and the growth of adventitious shoots later showed this was the case. Not only do the leaf shapes in juvenile and adult trees differ but also the venation. Another remarkable feature is the size that the trees attain before the leaf shape changes. Extreme dimorphism is common in the leaves of Australian capsular fruited Myrtaceae especially in the genus *Eucalyptus* so that its occurrence among fleshy fruited ones (subfamily Myrtoideae) is to be expected.

Syzygium Walkeri Merr. & Perry, sp. nov.

Arbor $\pm$ 6 m. alta, glabra; ramulis cinereo-fuscis, teretibus, cortice levi, internodiis superioribus 3–4.5 cm. longis; foliis chartaceis, conferte et minute glanduloso-punctulatis, lanceolato-ellipticis, $\pm$ 12 cm. longis, $\pm$ 5 cm. latis, basi cuneatis, apice sensim longe acuminatis, acumine 2–2.5 cm. longo, basi 0.8–1 cm. lato, utrinque subconcoloribus, olivaceis, costa supra depressa, subtus conspicua, venis et venulis tenuibus, crebris, $\pm$ parallelis oblique subtransversis, in utraque pagina fere subaequaliter manifestis, vena intramarginali $\pm$ 1 mm. a margine distanti; petiolo $\pm$ 7 mm. longo, supra canaliculato, dorso rotundato; inflorescentiis cymoso-paniculatis, 4–5.5 cm. longis, usque 8 cm. latis, terminalibus e basi ramosis vel rhachibus 3–4-fasciculatis, ramis 2–3-ramosis, ramis et ramulis angulatis glanduloso-punctulatis, bracteis caducis; floribus sessilibus vel interdum verisimiliter pedicellatis, in ramulorum apice articulatis; calycis tubo conico-campanulato, 5 mm. longo, apice circiter 6 mm. diametro, basi vix 1 mm. stipitato, lobis late rotundatis, 1.5 mm. longis, 3 mm. latis, margine tenuibus; corolla

calyptratum caduca; staminibus 1 cm. longis, liberis; disco staminifero inconspicuo; stylo 1.3 cm. longo.

SOLOMON ISLANDS: Guadalcanal: Buru-Buru River, *F. S. Walker* B.S.I.P. 249 (TYPE), Mar. 4, 1946, riverine rain-forest (tree 20 ft. tall; bark orange-brown, shed in papery pieces with chalky layers between; calyx brownish red; petals white; stamens cream).

This species very closely resembles a specimen of *Eugenia pulchella* Roxb. (Cult. in Hort. Bot. Calcutta) which was probably taken from the same tree as the type. The latter was described as a native of the Moluccas. The two differ in the following characters: in Roxburgh's species the bark of the young branchlet is reddish brown and tends to shed in thin flakes; the leaves dry brownish and are opaque though punctulate on the lower surface; the inflorescence is axillary and terminal, fairly compact; the flowers are slightly longer, the calyx gradually tapering to a slender base. In the Guadalcanal material the bark is fuscous, somewhat cracked but firm; the olivaceous leaves are pellucid-punctulate under a lens against a strong light; the inflorescence is more open, the calyx broader at the apex, shorter, and abruptly narrowed into a very short stipitate base.

MELASTOMACEAE

Astronidium palauense (Kaneh.) Mkf. in Notizbl. Bot. Gard. Mus. Berlin 12: 49. 1934.

SOLOMON ISLANDS: Santa Isabel: Borubiana Island, *F. S. Walker* B.S.I.P. 306, Sept. 1946, common in lowland rain-forest (tree 50 ft.; bark brown, shed in untidy pieces).

I am indebted to Dr. Lily M. Perry for kindly comparing the above specimens with isotype material at the Arnold Arboretum.

Ochthocharis borneensis Blume, Mus. Bot. Lugd.-Bat. 1: 40. 1849.

SOLOMON ISLANDS: New Georgia Group: Vanganu Island: Kaikosi River, *C. T. White* B.S.I.P. 151, Sept. 1945, common along river bank, tidal (shrub 4 ft., petals white, tipped with pink).

ARALIACEAE

Boerlagiodendron tetrandrum, sp. nov.

Arbor parva, 6–7 m. alta; ramulis glabris fistulosis. Folia glabra, petiolata, petiolo 7–20 cm. longo, in sicco striato lenticellato, lenticellis saepe in lineis suberosis dispositis, vagina in appendicem 1–2 cm. longam intra et circum petiolum producta; lamina 3–5-lobata vel in foliis minoribus ovata integra vel subintegra, utrinque glabra, margine acute mucronato-serrata, in foliis 5-lobatis ad 25 cm. diam., in foliis integris 10 cm. longa et 6 cm. lata, apice acuminata vel acutissima. Umbella terminalis, radiis primariis ad 30 vel ultra, ad 9 cm. longis longitudinaliter striatis et minute ruguloso-scabris, apice in radiolos 3-partitis, radiolis aequalibus vel subaequalibus 3–4 cm. longis, radiolo intermedio umbellulam florum sterilium bacciformum ovoideorum ca. 5 cm. longorum gerente; pedicellis ca. 8 mm.

longis; radiolis lateralibus ramis lateralibus apice umbellulam ca. 20-floram gerentibus, pedicellis cum ovario costato 3–5 mm. longis. Calyx undulato-truncatus. Corolla 3 mm. longa, basi tubulosa, apice 4-loba. Stamina 4, filamentis leviter applanatis 2.5 mm. longis, antheris 2 mm. longis. Stigma crassum, globosum, breve; ovario multi-loculato sed saepe loculis plurimis abortivis.

SOLOMON ISLANDS: Makira: (San Cristobal): Anganiwai, *F. S. Walker* B.S.I.P. 260, March 1946, alt. 1100 ft., hill rain-forest (tree 20 ft., bark yellowish grey-brown, but with slight longitudinal lenticellar ridges).

Among the previously described species from the Papuasian region this species come closest to *B. barbatum* (Becc.) Harms which differs in having the leaves deeply 5–7-lobed, the base of the petioles manicate-cristate and the stamens 7 or more, rarely as few as 5.

MYRSINACEAE

Maesa edulis, sp. nov.

Frutex vel arbor parva ad 15 m. alta, partibus novellis leviter furfuraceo-pubescentibus celerrime glabris, ramulis vetustioribus lenticellis rotundis notatis. Folia papyracea, lanceolata vel elliptico-lanceolata, basi acuta, apice subacuta vel late et obscure acuminata, margine obscure et distanter crenulato-dentata; nervis lateralibus 6–7 in utroque latere, subtus prominulis; lamina 10–14 cm. longa, 4–8 cm. lata; petiolo ca. 1 cm. longo. Inflorescentiae racemosae glabrae; racemis 3–6 cm. vel rarius ad 11 cm. longis, 2–4-fasciculatis vel rarius singularibus; pedicellis 1 mm. longis, bracteis late ovatis, prophyllis 0.5 mm. longis. Flores glabri; sepalis ovatis subobtusis integris 1 mm. longis lineis elevatis pustulatis; corolla 2 mm. longa medium usque connata; staminibus inclusis, antheris late ovatis; ovario glabro. Bacca globosa, seminibus in pulpa dulci immersis.

NORTHEAST NEW GUINEA: Morobe, *J. Womersley* N.G.F. 2942, Dec. 1947, on grassy hills near the coast (small tree 25 ft., fruit reported to be edible by the natives).

SOLOMON ISLANDS: San Cristobal: *L. J. Brass* 2618 (TYPE), Aug. 1932, lowland rain-forest not common (tall dark-foliaged shrub, fls. green). Bougainville: Buin, Kugi-maru, *S. F. Kajewski* 1812, May 1930, common in rain-forest (small spreading tree; fls. bell-shaped with an orange center; fr. cream-transparent, black seeds visible from the outside). Malaita: Quoi-mon-apu, *S. F. Kajewski* 2324, Dec. 1930, common in rain-forest (small tree 7–8 m., fls. cream); near Auki, *F. S. Walker & C. T. White* 133, Aug. 1945, secondary forest (slender shrub 4 m., fr. cream or pale flesh-coloured, edible with a pleasant flavour). Guadalcanal: Berande River, *S. F. Kajewski* 2395, Dec. 1930, common in rain-forest (small tree up to 10 m.); Mamassa, Konga, alt. 400 m., *S. F. Kajewski* 2473, Feb. 1931, common in rain-forest (small tree up to 15 m., fls. green-yellow and semi-transparent when ripe).

On three of his labels Kajewski specially notes this as a common tree in the Pacific yet I cannot place it satisfactorily with any described species. On one of his Guadalcanal specimens 2395 he states "when a man is very

sick, the leaves are heated and placed in his bed, the patient then goes and lies down on them." In botanical sequence according to the monographic account by Mez (Pflanzenr. IV. 236. 1902) it would come nearest to *M. laevigata* Scheff, which differs in the leaves being glaucous above, the anthers acute and "scarcely" emerging. It is only known from Netherlands New Guinea.

***Rapanea salomonensis*, sp. nov.**

Arbor parva, 4 m. alta, ramulis validis glabris lenticellis numerosis notatis. Folia glabra, subcoriacea, obovato-elliptica vel obovato-lanceolata, apice obtusa, basim versus gradatim angustata, margine integra, utrinque opaca, subtus distincte pallidiora; nervis praecipuis ca. 14 in utroque latere tenuibus sed plerumque obscuris; petiolo 0.6–1 cm. longo; lamina 8–13 cm. longa, 3–5 cm. lata. Inflorescentiae e ramulis crassis breviter cylindricis formatae; pedicellis (sub fructu) 3 mm. longis. Calyx (sub fructu) glaber, profunde 4-lobatus, lobis vix 1 mm. longis. Petala non visa. Fructus pisiformis, in sicco 4 mm. diam., lineis glandulosis numerosis longitudinaliter dense striatus, in vivo primum viridis lineis punctisque rubris striatus, deinde purpureo-cyaneus.

SOLOMON ISLANDS: New Georgia Group: Njapuna Island: F. S. Walker & C. T. White B.S.I.P. 140, Sept. 1945, coastal rain-forest, coral formation, little soil (small tree 12 ft., fruits at first green streaked and dotted with red, when ripe purplish blue).

In Mez's monograph (Pflanzenr. IV. 236. 1902) this species seems to come closest to *R. myricifolia* (A. Gray) Mez which differs in the leaves being lanceolate or elliptic and acute or subacute at the apex. In general facies it much resembles *R. densiflora* (Scheff.) Mez of New Guinea and the Celebes but the leaves of this are markedly nigro-punctate on the lower surface. Both species have the same type of inflorescence.

SAPOTACEAE

***Burckella obovata* (Forster) Pierre, Not. Bot. Sap. 4. 1890.**

Burckella Cocco (Scheffer) Pierre l.c. 3.

Burckella Hollrungii (Schum.) Pierre l.c. 4.

Burckella Kajewskii (Guill.) H. J. Lam in *Blumea* 6(1): 39, 1942.

Bassia obovata Forster, Fl. Ins. Austr. Prodr. 35. 1786.

SOLOMON ISLANDS: Bougainville: Maimaiomino, *Kajewski* 2205, Sept. 1930, common in lowland rain-forest (tree up to 25 m. high). Guadalcanal: Berande River, *Kajewski* 2399, Jan. 1931, common in rain-forest at sea level (tree up to 20 m., fruit large green with deep furrows, up to 4 or 5 in. long, a delicious fruit worthy of cultivation); Nalimbu River, *Walker* 2 (leaves only) June 1945, lowland and riverine rain-forest (tree 104 ft. high, 7 ft. 2 in. girth above the plank-like buttresses). Same locality and habitat, *Walker* 6, June 1945 (tree 90 ft., 9 ft. girth, bark brown, fissured, copious white latex, fls. white, waxy). Malaita: near the Mannu Passage, *Walker & White* 88, Aug. 1945, lowland rain-forest (large tree buttressed to 6 ft., bark brown, closely longitudinally cracked, shed in irregular flakes by transverse cracks; fruit ellipsoid, edible, pleas-

antly flavoured, 5-celled but usually only one or two seeds maturing). New Georgia: Suritambana (Kusaki Pt.), *Walker & White* 188, Oct. 1945 (tree 100 ft., buttressed for 7 ft.; bark brown, closely and longitudinally cracked, shed in flakes across horizontal cracks; pedicels white, calyx white tinged with green, corolla white).

According to the above citations, this tree is very common in New Guinea, the Solomon Islands and the New Hebrides. It is preserved in the neighbourhood of villages and is sometimes planted in the gardens. The fruit is highly prized and has a sweet pleasant flavour. Kajewski's two specimens quoted above were determined by Lam (*Blumea* 6(1): 38. 1942) as *B. Cocco* (Scheffer) Pierre and the Walker and White collections by me as *B. Hollrungii* (Schum.) Pierre (see Walker Forests Brit. Sol. Isl. Protect. 169. 1948). If we regard *B. Hollrungii* as a distinct species then the latter specimens by their large flowers and elongate sharply keeled seeds must belong to it. Lam however in his paper on the Wild Pacific Sapotaceae (*Blumea* 6(1): 1-46. 1942) hints that the two species are identical and further that *B. Kajewskii* (Guill.) Lam and *B. obovata* (Forst.) Pierre may belong to the same. I think we are dealing with a somewhat polymorphic species widely spread over the Pacific and have in consequence adopted the oldest specific name reducing the others to synonymy. It is noteworthy that Kajewski who had an extensive field knowledge and particular interest in "village" plants of the Solomon Islands and New Hebrides remarked on one of his labels (2399) "This is a very widely spread tree over the Pacific." The fruits of *B. Cocco* (Scheff.) Pierre and *B. Hollrungii* (Schum.) Pierre have been described as round or pyriform but all the fruits I saw in the Solomons with few exceptions were ellipsoid 7.5-9 cm. long, and 4-4.5 cm. diam., occasionally a more globose fruit was seen but the ellipsoid shape was the usual one. Specimens from New Britain: Jacquinot Bay, *K. Mair* N.G.F. 1851, which have been distributed from the Queensland Herbarium, Brisbane as *B. Hollrungii* (Schum.) Pierre differ in being markedly smaller in all parts but I believe come under *B. obovata* (Forst.) Pierre as here understood. Baehni (*Candollea* 7: 424. 1938) proposes to unite *Burckella* Pierre with the older and larger genus *Madhuca* Gmelin but so far as I know has not yet proposed the new combinations. In view of the diverse ideas on the limits of genera in this family a monograph of it on a world basis is highly desirable.

***Chrysophyllum Roxburghii* G. Don. var. *papuanum*, var. nov.**

Chrysophyllum Roxburghii C. E. Lane Poole, For. Resources Pap. N. Guin. 131. 1935, vix G. Don.

Niemeyera papuana H. J. Lam in Nova Guinea 14: (Bot.) 557. 1932, pro parte.

A typo fructibus multo majoribus — in speciminibus siccatis ad 6 cm. diam., seminibus 3.5 cm. longis, 1.5 cm. latis — recedit.

SOUTHEAST NEW GUINEA: Buna hinterland, 7 miles N.W. of Embi Lakes, *L. S. Smith* N.G.F. 1269, Mar. 1945, alt. 300 ft., rain-forest (tree

130 ft., bole slightly channelled or fluted to 12 ft., bark greyish, slightly longitudinally fissured; fl. buds green; fruit green turning brown).

NORTHEAST NEW GUINEA: Yalu, *C. E. Lane Poole* 614, Dec. 1923 (tree 120 ft.; bark brown splashed with grey lichen, longitudinally lined and roughened, exudes a white latex; fruit a green to yellow "apple," smells of quince, $1\frac{3}{4}$ in. long, 2 in. diam., containing five flattened brown seeds); Lae, *Dadswell, Smith & White* N.G.F. 1515 and 1545 (1545 TYPE of var.), July 1944, rain-forest (tree 130 ft., bole channelled on the side up to 40 ft., bark dark grey with fairly small, reticulating, longitudinal ridges, exuding a latex when cut; leaves pale green); between Lae and Yalu, *Dadswell, Smith & White* N.G.F. 1520, July 1944, alt. 50 ft., rain-forest, sterile shoots from a suckering stump (tree, bark greyish, slightly longitudinally fissured, exudes latex freely; leaves dark green above, paler beneath, margin slightly undulate).

SOLOMON ISLANDS: Guadalcanal: Beaufort Bay, *F. S. Walker* B.S.I.P. 234, Feb. 1946, lowland rain-forest (tree 80 ft., buttresses very small—about 2 ft.; bark grey-brown with shallow longitudinal cracks; flowers small, petals greenish white, soon shed).

This tree which is very common in the lowland rain-forests of New Guinea was determined for Lane Poole by Francis and White as *Chrysophyllum Roxburghii* G. Don. and as such was described and recorded by him in his "Forest Resources of the Territories of Papua and New Guinea." Later Lam l.c. described it as a new species of *Niemeyera*. It now appears quite evident to me that Lane Poole l.c. in his description of his no. 614 matched the leaves and fruits correctly but in drying and labelling his specimens in the field associated a very different fruit with the same number. I have therefore taken the fruit labelled by Lane Poole no. 614 as the type of *Niemeyera papuana* Lam. though I find it hard to associate it with the otherwise monotypic *Niemeyera* from Australia. Lam himself drew attention to the discrepancy between Lane Poole's description and specimen. There is no doubt that the fruits collected by myself in company with Dadswell and Smith are correctly matched for I obtained some still attached to the branchlets and picked up the same in quantity beneath the trees. I spent some time over these specimens and had drawn up a description of them as a new species, the leaves seemed on the whole larger, the flowers more numerous in the axils and the fruit very much larger than in the species, but further examination failed to show any differences other than the last character and so I decided to give the Papuan and Solomon Islands tree only varietal rank.

***Palaquium firmum*, sp. nov.**

Arbor 33 m. alta, anteridibus ad 2 m. altis, cortice fusco lenticellarum rimis notato, ramulis validis foliorum delapsorum et inflorescentiarum caticibus notatis, partibus novellis dense fusco-tomentosis, stipulis mox deciduis. Folia coriacea, in sicco rigida, obovata, apice obtusa, basi acuta, utrinque glabra, nervis secundariis utrinque ca. 7 subtus leviter elevatis, 1.5–2 cm. inter se distantibus, venulis transversis obscuris (vix visibilibus); lamina 12–15 cm. longa, 5.5–8 cm. lata; petiolo valido 2–3 cm.

longo. Inflorescentiae (tantum cicatrices vidi) 3–7-florae; pedicellis fructigeris in axillis foliorum delapsorum solitariis, validis apicem versus incrassatis 2–2.5 cm. longis. Calyx fructiger ca. 1 cm. diam., sepalis 6 biserialibus, exterioribus deltoideis, interioribus suborbicularibus margine plus vel minus hyalinis minutissime ciliolatis. Fructus (immaturus) glaber, ellipsoideus, 2.5 cm. longus, 1.5 cm. diam.

SOLOMON ISLANDS: Guadalcanal: Beaufort Bay, Kombau River, *F. S. Walker* B.S.I.P. 246, Feb. 1946, hill rain-forest (tree 100 ft., buttresses plank-like reaching 6 ft.; bark grey or grey-brown, smooth with longitudinal cracks of lenticels, fibrous texture, exuding plentifully a thick white latex when cut).

In Lam's Key to the New Guinea species of *Palaquium* (Nova Guinea 14: 551–552. 1932) the present species would come closest to *P. tenuifolium* Warb. but the two can be distinguished as follows:

Leaves chartaceous, apex acuminate, lamina 16–20 cm. long, 7–9.5 cm.

broad, petioles 1.2–1.8 cm. long.....*P. tenuifolium*.

Leaves rigidly coriaceous, apex obtuse, lamina 12–15 cm. long, 5.5–8 cm.

broad, petioles 2–3 cm. long.....*P. firmum*.

***Palaquium salomonense*, sp. nov.**

Arbor 35 m. alta; cortice griseo vel griseo-fusco laevi lenticellarum rimis notato; latice albo; ramulis junioribus tenuibus sed mox crassiusculis; partibus novellis ferrugineo-pubescentibus mox glabris. Folia coriacea, anguste obovata, apice emarginata, rotundata vel rarius subacuta, basi cuneata, in foliis juvenilibus petiolo et laminae basi pubescentia mox glabra; costa media utrinque elevata; nervis secundariis utrinque ca. 10 sed in foliis adultis vix visibilibus; nervis tertiariis reticulationem elongatum formantibus; petiolo ca. 5 m. longo; lamina 4–7 cm. longa, 1.5–3 cm. lata. Inflorescentiae 1–3-florae, in axillis foliorum delapsorum positae; pedicellis subangulatis pubescentibus 4–6 mm. longis. Calyx 3 mm. diam., 2 mm. longus, lobis 3 exterioribus quam interiora latioribus glabris vel margine pilis paucis obsitis, lobis interioribus dense fusco-pubescentibus, margine hyalinis. Corolla 4 mm. longa, lobis intus pilis longis albis sparsissime obsitis. Stamina 12; filamentis quam petala brevioribus pilis longis paucis obsitis; antheris 2 mm. longis. Ovarium dense fusco-hirsutum, pistillo glabro vel basim versus pilis longis obsito.

SOLOMON ISLANDS: New Georgia: *F. S. Walker & C. T. White* B.S.I.P. 180, Oct. 1945, lowland rain-forest on broken coral (tree 110 ft.; buttresses narrow, plank-like; bark grey or grey-brown, smooth with longitudinal cracks of lenticels, plentifully exuding a thick white latex).

Palaquium salomonense C. T. White belongs to a small group of species comprising *P. cuneatum* Vidal from the Philippines, *P. microphyllum* King & Gamble from Malaya and *P. Ledermannii* Krause from New Guinea. It may be that all only represent geographical races of a single species.

***Planchonella costata* (Endl.) Pierre** ex H. J. Lam in *Blumea* 5: 5. 1942, vel aff.

SOLOMON ISLANDS: East Makira: Star Harbour, *F. S. Walker*

B.S.I.P. 267, March 1946, alt. 300 ft., hill rain-forest (tree 100 ft., buttresses rounded, reaching a height of 3–4 ft., merging gradually into the trunk; bark grey, closely shallowly longitudinally fissured).

At first glance I considered this an extreme form of *P. obovata* (R. Br.) H. J. Lam with very narrow leaves, subacute at the apex and tapering into a long slender petiole. The leaves including the 2–2.5 cm. long petiole into which the narrow blade very gradually tapers are mostly 9–12 cm. long and 2–2.5 cm. wide. Some are considerably smaller but they always retain a “lanceolate-spathulate” shape and are never obovate. The veins are finer and not so conspicuous as is usual in *P. costata* (Endl.) H. J. Lam but on the whole the specimens would come within the scope of the species as outlined by Lam l.c. pp. 5–9 especially his var. *vitiensis*. Only the very young leaf buds are pubescent whereas in *P. obovata* (R. Br.) Lam the leaves, except the older ones, are sericeous or ferruginous beneath or at least clothed with a few hairs. The specimens unfortunately bore only very few flowers from which the corollas had fallen. The flowers are solitary or in pairs and would fit either *P. obovata* (R. Br.) Lam or *P. costata* (Endl.) Pierre.

Planchonella sessiliflora, sp. nov.

Arbor 30 m., ramulis subvalidis ad nodos paullum complanatis apicem versus breviter griseo-tomentosis mox glaberrimis. Folia opposita vel subopposita, subcoriacea, lanceolata sed apice subobtusata vel vix acuta, glaberrima; costa media utrinque subvalida; nervis lateralibus tenuibus utrinque 10–12 supra leviter impressis saepe subobscuris, subtus leviter elevatis sed plerumque vix prominulis; venis et venulis supra minutissime reticulatis oculo inermi obscuris sed sub lente manifeste visibilibus; petiolo 0.5–1 cm. longo; lamina 5–12 cm. longa 2–4.5 cm. lata. Flores in axillis foliorum fasciculati, sessiles. Sepala suborbicularia, ca. 3 mm. diam., extus tenuiter pubescentia, intus glabra, margine minute et sparse ciliolata. Corolla glabra, 5 mm. longa (tubus 1 mm., lobi 4 mm.). Stamina filamenta faucibus affixa, staminodiis lanceolatis 2 mm. longis. Ovarium hirsutum, apicem versus in stylo valido gradatim angustatum.

SOLOMON ISLANDS: Guadalcanal: Beaufort Bay, Kombau River, *F. S. Walker* B.S.I.P. 237 (TYPE), Feb. 1946, alt. 800 ft., ridge rain-forest (tree 90 ft., buttresses absent but slight fluting present; bark dark red-brown, shed in untidy flakes, flowers greenish white); Santa Anna, *F. S. Walker* B.S.I.P. 265, March 1946, lowland rain-forest on broken coral (tree 100 ft., buttresses short and rounded, much branched near the ground, reaching a height of 8 ft. as flanges gradually merging into the trunk; bark red-brown, smooth—in young trees fissured, shed in soft curling flakes, corolla greenish).

Among previously described species from the Papuan region the present one in its opposite leaves, sessile flowers and floral structure comes closest to *P. Lauterbachiana* H. J. Lam. This differs in having larger leaves (18–22 cm. long, 7–10 cm. broad) of a thinner texture, and the lateral nerves plainly visible above and prominent beneath.

***Planchonella thyrsoidea*, sp. nov.**

Arbor ad 30 m. alta; ramulis validis; partibus novellis dense fusco-pubescentibus. Folia ramulorum apices versus conferta supra nitida deinde glabra basim versus et nervis praecipuis excepta, subtus nitidula perbreviter sericeo-tomentosa, obovata vel in speciminibus solomonensibus saepe peranguste obovata, apice leviter acuta et minute apiculata; nervis praecipuis in laminis latioribus utrinque 18–20, in laminis angustioribus et longioribus 22–26, subtus prominentibus inter se venis tenuibus parallelis conjunctis percursis; lamina in speciminibus papuanis 22–25 cm. longa, 8–10 cm. lata, in speciminibus solomonensibus 28–44 cm. longa, 9–13 cm. lata; petiolo valido, supra canaliculato, 1–1.5 cm. longo. Florum fasciculi in ramulos sine foliis 5–12 cm. longos axillares vel laterales infra foliis rarissime pauci eorum in axillis foliorum crebre dispositi; pedicellis dense hirsutis, 3–5 mm. longis. Calyx 4 mm. longus extus dense hirsutus, tubo glabro, lobis dense pubescentibus. Petala glabra 5 mm. longa, pallido-viridia. Stamina petala leviter excedentia, staminodiis brevioribus subulatis alternantia. Stylus glaber, disco pilis longis ochroleucis obsito.

NEW GUINEA: Manus Island: *H. Hebblethwaite* N.G.F. (TYPE) 562 foothills (tree 100 ft., bark dark grey with greenish blotches, slightly furrowed, plentifully exudes a white exudate; wood straw-coloured when fresh, turning pink later, moderately soft and light).

SOLOMON ISLANDS: Malaita: near the Hauhui River, *F. S. Walker & C. T. White* B.S.I.P. 84 (leaves only); August 1945, coastal fringe rain-forest (tree 100 ft., bark brown, smooth with longitudinal cracks, buttresses large, rounded, leaving the trunk gradually at a height of about 8 ft.). New Georgia Group: Kolombangara: near Ariel (Merusa) Cove, *F. S. Walker & C. T. White* B.S.I.P. 84a (flowers), Oct. 1945, lowland rain-forest (large tree, bark etc. as in no. 84; flowers very pale green).

The present species comes very close to *P. Kaernbachiana* (Engl.) H. J. Lam, and in Lam's key to the New Guinea species of *Planchonella* in his "Enumeration of the Sapotaceae, thus far known from New Guinea" (Nova Guinea 14: 559) can be fitted in as follows:

Leaves 15–24 cm. long, 8–12 cm. broad, hirsutely pubescent on the lower side; flowers borne in axils of the leaves; calyx pubescent both within and without.....*P. Kaernbachiana*, *P. Ledermannii*.
 Leaves 22–24 cm. long, 8–13 cm. broad, nitidulous and closely sericeous-tomentose on the lower side; flowers borne in leafless inflorescences, axillary or below the leaves, a very few sometimes in fascicles in the leaf-axils, calyx pubescent both within and without.....*P. thyrsoidea*.

The Solomon Islands specimens differ from the Papuan ones in the leaves being relatively longer and narrower, but the vestiture and floral structure is the same, and I have no hesitation in recording them as identical species.

***Pouteria Maclayana* (F. Muell.) Baehni in Candollea 9: 307. 1942.**

Lucuma Maclayana (F. Muell.) H. J. Lam in Bull. Jard. Bot. Buitenz. ser. III, 7: 221 & 268. 1925, 8: 476. 1927, in Nova Guinea 14: 567. 1932.

Bassia Maclayana F. Muell. in Vic. Nat. 1: 168. Feb. 1885 (nomen nudum); in Vict. Chemist Druggist 7: 93, April 1885 (fructus et seminis descriptio solum).

Illipe Maclayana F. Muell. Descript. Notes Pap. Pl. 6: 12. June 1885.

Bureauvella Maclayana Pierre, Not. Bot. Sapot. 16. 1890.

Tree 30 m., buttresses widely spreading, 2 m. or more high; bark grey-brown shallowly longitudinally cracked, latex sparse; branchlets usually rather stout, the upper or younger parts somewhat angled and clothed with rather long brown hairs, dense on the buds gradually disappearing with age. Leaves lanceolate to obovate-lanceolate or narrowly obovate, dark glossy green in the living plant, paler and somewhat dull in the dried specimens, texture (in dried specimens) papyraceous, apex acute, to a varying degree or less frequently quite rounded, base cuneate narrowed into a rather long and slender petiole; nerves 7-10 on each side of the midrib; petiole 2-5 cm. long, thinly pubescent with rather long hairs in the younger leaves, glabrous or nearly so in the older; blade 12-26 cm. long, 5-8 cm. wide, glabrous on both surfaces. Flowers(?). Fruit mostly depressed-globose, more rarely subglobose and longer than broad, up to 12 cm. or even more in diam.; clothed with a close brown floccose tomentum easily rubbed off but a certain amount of pubescence nearly always observable under a lens, seeds 5-6 embedded in a yellowish pulp, 6 cm. long 4 cm. broad including the 1 cm. broad pale-coloured rugose scar; testa dark chestnut brown, very nitid. In the dried specimens the pulp shrivels considerably or almost disappears leaving the thin epicarp with the loose seeds inside.

PAPUA: Western Division, Oriomo River, Wuroi, *L. J. Brass* (Archbold Expedition) 5905, Feb.-March 1934, rain-forest substage (slender tree 15 m.; bark grey, lenticellate; fruit large with hard pale brown seeds in a yellowish pulp).

NORTHEAST NEW GUINEA: Kar Kar Island near Madang, District of Madang, Territory of Papua, *K. Mair*, N.G.F. 1821, Feb. 1945, rain-forest (tree 70 ft., broad crown, horizontal branches; bark lt. to dk. brown, with regularly spaced longitudinal fissures, exudes white latex when cut; fruit lt. green with a light brown tomentum easily rubbed off, seeds 5 embedded in a firm, fleshy, edible mesocarp).

SOLOMON ISLANDS: New Georgia Group: Rendovo Island: *F. S. Walker & C. T. White* B.S.I.P. 171, Oct. 1945, foothill rain-forest (tree 30 m.; buttresses widely spreading, convex, 2 m. or more high; bark grey-brown, shallowly longitudinally cracked; latex sparse). Fauro Island: *F. S. Walker* B.S.I.P. 279, May 1946 (tree, buttresses rounded, reaching a height 25 ft. from the ground; bark smooth, greyish brown, finely transversely ringed, exuding a white latex when cut).

I have not given the very complex and full synonymy of this species as that has already been given by Lam and Baehni but have given what I consider a few essential references including the corrected citation to Mueller's original description which was wrongly quoted by Mueller himself (Descript. Notes Pap. Pl. 6: 12.) and again by Lam and Baehni.

The first and only description given by Mueller was in the Victorian Chemist and Druggist in April 1885 but leaves and flowers were unknown and he described only the fruit and the seed. Part of the type was kindly loaned to me by Mr. A. W. Jessep, Director, Botanic Gardens and National Herbarium, Melbourne, and as far as it goes the fruit and the seed of the New Guinea specimens and *Walker & White* B.S.I.P. 171 from the Solomon Islands match them perfectly. As the tree is imperfectly known I have given the above description drawn up from the type and the Solomon Islands and the New Guinea specimens quoted above. I have not seen flowers but Baehni l.c. gives a description copied in part from Pierre. He describes the ovary as glabrous. This is strange in view of the floccose tomentum with which the fruit is clothed, though it must be stated that the character is more pronounced in the immature fruits. The floccose tomentum is not often seen in dried or spirit specimens as it is easily removed with the slightest handling. It is unfortunate that such a big synonymy should have arisen over a species very imperfectly described by Mueller and it might be better to relegate his *Bassia MacLAYANA* to the list of "species dubiae" and accept a later and fuller description as the type of the species here described. In any case it is highly desirable that in any future monograph of the genus or family that the monographer should have access to all available material. There is no definite record of the tree as yet having been found in Australia.

Pouteria xylocarpa, sp. nov.

Arbor magna ad 35 m. alta; cortice fusco irregulariter sulcato; ramulis robustis junioribus sericeis deinde glabris. Folia petiolata, in juventute dense sericea mox glabra, lanceolata vel elliptico-lanceolata, papyracea, apice acuta, basi cuneata; nervis praecipuis 7-10 in utroque latere, venulis transversis et reticulatis utrinque prominulis; petiolo 2-3.5 cm. longo, supra canaliculato; lamina 12-20 cm. longa, 5.5-8.5 cm. lata. Flores parvi in fasciculo 3-7-floros dispositi; fasciculis axillaribus et e ligno vetustiore (in axillis foliorum delapsorum) ortis; pedicellis tenuibus sericeis. Sepala viridia, extus sericea, intus glabra, late ovato-rotunda, 2 mm. diam. Corolla alba, calycem leviter excedens. Stamina corolla breviora; filamentis applanatis; staminodiis late liguliformibus lobis alternantibus et eisdem brevioribus. Ovarium pilis longis albis facile disjunctis obsitum; stylo striato brevi. Fructus glaber, subglobosus, in sicco saepe plus vel minus 5-10 lobatus, 5-6 cm. diam.; pulpa in sicco lignea; seminibus 5, sed saepe 2-3 abortivis, 3 cm. longis, 1.7 cm. latis, 1 cm. diam., testa nitida atro-castanea, cicatrice anguste elliptica pallida, 2.5 cm. longa, 6 mm. lata.

BISMARCK ARCHIPELAGO: New Britain: Muntambu, Broken Bay, K. Mair N.G.F. 1883, (TYPE) May 1945, rain-forest in deep volcanic soil (tree 130 ft., bark brown, abundant deep and wide irregular fissures giving a grooved appearance; fls. small, calyx green, corolla white; fts. green, flat, globose, 2-2½ cm. diam., seeds dark brown, cotyledons fleshy, no endosperm).

SOLOMON ISLANDS: Bougainville: Buin, S. F. Kajewski 1892, June 1930, common in rain-forest (tree up to 20 m.).

I had at first placed this under *P. Maclayana* (F. Muell.) Baehni to which it is very closely allied. The fruits however are very distinct and the two species can be distinguished as follows:

Fruit mostly depressed-globose more rarely subglobose and longer than broad, depressed at the base, up to 12 cm. or even more in diam., clothed with a close brown tomentum, easily rubbed off but a certain amount of pubescence nearly always remaining; sarcocarp pulpy shrivelling greatly or almost disappearing in drying leaving a crustaceous epicarp. Seeds 5-6 cm. long, 4 cm. broad (including the 1 cm. high, rugose scar), 2 cm. diam.; scar practically as long as the seed, 1 cm. high, 2 cm. broad. *P. Maclayana*.
Fruit subglobose, shallowly but distinctly 5-lobed in the dried state, tapering at the base, 5-6 cm. diam., quite glabrous, becoming very hard and woody in drying, epicarp scarcely distinguishable; seeds 3 cm. long, 1.7 cm. broad, 1 cm. diam., scar narrow, practically the length of the seed, about 4 mm. high and 6 mm. broad. *P. xylocarpa*.

APOCYNACEAE

Ichnocarpus salomonensis, sp. nov.

Frutex alte scandens, ramulis pubescentibus mox glabris et cortice spadici obtectis. Folia opposita, petiolata, elliptica, basi cuneata, apice angustata sed vix acuta vel acuminata, costa media utrinque glabra; nervis secundariis tenuibus ca. 12 in utroque latere costae visibilibus sed vix prominulis prope marginem coniunctis; lamina 4-5.5 cm. longa, 2-3 cm. lata; petiolo 1-1.5 cm. longo. Inflorescentiae terminales et axillares foliis breviores, ramulis ultimis pedicellis bracteis calycibusque dense pubescentibus. Calyx campanulatus 5-dentatus cum pedicello 3 mm. longus. Corolla alba; tubo 2 mm. longo extus glabro intus in fauce barbato; lobis 3 mm. longis extus ad basim sparse pubescentibus intus glabris. Antherae e corolla leviter emergentes. Pistillum 3 mm. longum; stylo glabro, stigma oblongo, parte superiore acuminata, appendiculo elongato; ovario hirsuto, disco profunde 5-lobato. Folliculi ad 30 cm. longi; seminibus 2 cm. longis, coma ad 3.5 cm. longa ad apicem coronatis.

SOLOMON ISLANDS: Malaita: near the Heho River, F. S. Walker & C. T. White B.S.I.P. 117, Aug. 1945, hill rain-forest (woody climber, reaching tops of the tallest trees, all parts exuding a milky sap when cut; fls. white).

Very closely allied to the widely distributed *I. ovatifolius* A. DC. which is larger in all its parts though the reduction in size of leaves and inflorescence in Walker & White 117 may be due to the fact that it was collected from the top of a very large tree. The leaves and inflorescences of most rain-forest trees and lianes are often much reduced in the larger specimens. More fundamental differences are however as follows:

Midrib strigose-pubescent on the lower surface, anthers included.
..... *I. ovatifolius*.

Midrib glabrous on both surfaces, anthers slightly but distinctly exerted...
*I. salomonensis*.

VERBENACEAE

Gmelina salomonensis Bakhuizen in Jour. Arnold Arb. 16: 72. 1935.

SOLOMON ISLANDS: Guadalcanal: Gold Ridge, alt. 750 ft., *F. S. Walker & C. T. White* B.S.I.P. 59, July 1945, ridge rain-forest (tree 110 ft., buttresses rounded, not prominent, but rising high up the trunk; bark smooth, yellow-grey, shed in small pustular flakes; fruit purple-black). New Georgia: near Munda, *F. S. Walker & C. T. White* B.S.I.P. 169, Oct. 1945, lowland rain-forest, orange-brown clay (tree 110 ft., buttresses slight, running high up the trunk as broad flanges; bark yellowish grey, shed in small flakes; fls. blackish purple). Makira (San Cristobal): Makira Harbour, *F. S. Walker* B.S.I.P. 257, March 1946, foothill rain-forest (tree 80 ft., buttresses absent, bark as in no. 169; fls. pale mauve).

The number 59 is a good match for the type gathering but nos. 169 & 257 differ in the adult leaves being glabrous or the young and half-grown leaves having a slight pubescence on the midrib and main lateral nerves on the lower surface. The species is very close to *G. moluccana* (Bl.) Backer. Bakhuizen l.c. suggests it may be a hybrid between that species and *G. macrophylla* (R. Br.) Benth. The glabrous character of the New Georgia and San Cristobal specimens (nos. 169 & 257) suggest an approach to this latter species.

Vitex Hollrungii Warb. in Bot. Jahrb. 18: 208. 1894.

SOLOMON ISLANDS: Vanganu Island: Kaikosi River, *F. S. Walker & C. T. White* B.S.I.P. 153, Sept. 1945, overhanging water, tidal river bank (small tree 20 ft., fls. cream, 2-lipped, mid-lobe of larger lip suffused with mauve, otherwise cream).

Not previously collected in the Solomon Islands. I would regard it as intermediate between *Gmelina* and *Vitex* as it has the simple leaves of the former and the flowers of the latter genus. The fruits are also very distinctive. I hesitate to make a new genus, however, as Lam (Verben. Malay Archipel. 179. 1919) and later Lam and Bakhuizen van den Brink (Bull. Jard. Bot. Buitenz. ser. III, 3: 52. 1921) who have seen much material are content to leave it in *Vitex*. In the latter paper they synonymise *V. Clarkeana* King & Gamble and several other species that have been proposed with it. In this conception of the species it has a wide range from Malacca through the Malay Archipelago to New Guinea and the Solomon Islands.

Xerocarpa avicenniaefoliola H. J. Lam, Verb. Malay Archipel. 99, pl. 1. 1919.

SOLOMON ISLANDS: Choiseul: near Ologo River, alt. 150 ft., *F. S. Walker* B.S.I.P. 283, June 1946, lowland rain-forest (tree 80 ft., buttresses

in the form of small flanges up to 5 ft. high; bark smooth, yellowish grey-brown; fls. cream; anthers mauve).

Only previously known from the mainland of New Guinea.

GESNERIACEAE

Cyrtandra cymosa J. R. & G. Forst. Char. Gen. Pl. 6. 1772.

SOLOMON ISLANDS: Ula wa : *L. J. Brass* 2944, Oct. 1932, common in lowland rain-forest (small tree sparsely foliaged and stiffly branched; leaves fleshy, upper side rough with short hairs, lower very pale; fls. white; fr. pale brown, fleshy). Mala it a : near Mannu Anchorage, *F. S. Walker & C. T. White* B.S.I.P. 98, in coral sand, edge of beach rain-forest (shrub 1.25 m., fls. white).

The type comes from the New Hebrides. I have not seen a specimen from there but in *Kajewski* 452 from the Bank's Group, which might be regarded as an outlier of the New Hebrides, determined by Guillaumin (*Jour. Arnold Arb.* 13: 25. 1932) as only differing from the type in much longer petioles and scarcely undulate leaf margins the adult leaves are glabrous on both surfaces except along the midrib and main nerves. In both Solomon Islands specimens quoted above the upper surface of the leaf is clothed with scattered hairs and in addition in the Brass specimen the under surface is densely and softly tomentose. The amount of pubescence present is evidently only one of degree and I have not deemed the Solomon Islands plant to be worthy of even varietal rank.

Cyrtandra filibracteata B. L. Burt in Kew Bull. 1936: 463. 1936.

SOLOMON ISLANDS: New Georgia : Kolombangara Island near Ariel Cove, *F. S. Walker & C. T. White* B.S.I.P. 182, Oct. 1945, lowland rain-forest (upright shrub 4 m., fls. borne in dense many-flowered clusters on the main stem and branches, bracts numerous filiform, ciliate, calyx deep pink, corolla deep pink markedly zygomorphic).

I had drawn up a description of the above plant as a new species but on further examination considered the differences too small to allow its being separated. It differs from the description by Burt l.c. in the filiform bracts being glabrous at the base and pubescent for the rest of their length, and in the corolla being longer (up to 3 cm.), but these are minor characters. The plant is noteworthy because of the bracts which form dense persistent fascicles up to 6 cm. or more in diam. on the old wood long after the flowers have fallen. Burt does not mention this and a specimen from Bougainville (*Kajewski* 1854) which I would place as typical *C. filibracteata* Burt does not show this character. *Kajewski* gives the colour of the flowers as pink with cream tips. The flowers of *Walker & White* 182 are pink without any cream tips to the corolla. As remarked by Burt it comes into Schlechter's section *Macrocyrtandra* but it is so different from other members of that section that in any future monographic treatment I think a new section should be designated to contain it. Future collecting may prove that either there is more than one

species of *Cyrtandra* in the Solomon Islands with these filiform bracteate inflorescences or that we are dealing with one rather variable one.

RUBIACEAE

Dolicholobium Kajewskii Merr. & Perry in Jour. Arnold Arb. 25: 184. 1944.

SOLOMON ISLANDS: New Georgia: Le River, *F. S. Walker & C. T. White* B.S.I.P. 201, Oct. 1945, lowland rain-forest (upright shrub 2-3 m., fls. cream, turning deep pink before being shed).

Only previously known from the type gathering. This specimen differs from the type in that the stipules are hirsute only in the lower portion, the hairs thinly scattered or even entirely absent from the upper.

Tarenna buruensis (Miq.) Merr. in Philipp. Jour. Sci. 17: 474. 1921.

SOLOMON ISLANDS: Santa Anna, *F. S. Walker* B.S.I.P. 264, lowland rain-forest on coral, March 25, 1946 (tree 40 ft., bark pale brown only slightly cracked, fls. cream).

This specimen is not very good, being mostly in bud only. There are, however, two fully developed flowers and several nearly ripe fruits. The specimen agrees with material I have seen from New Guinea where it is a common tree as secondary growth and on the edge of rain-forests.

Timonius pulposus, sp. nov.

Arbor 6-7 m. alta, cortice griseo-fusco laevi lenticellis parvis numerosis notato; ramulis validis glabris, novellis compressis in sicco longitudinaliter rugulosis, internodiis 3-5 mm. longis; stipulis anguste triangularibus hirtellis 6-8 mm. longis mox deciduis. Folia breviter petiolata, elliptica vel elliptico-obovata, firme chartacea, apice acuminata, basim versus gradatim angustata sed basi ipsa obtusa vel obtuso-rotundata; lamina supra subnitida, glabra; costa media nervis lateralibus venisque subtus pilis longis sparse hirtellis; nervis lateralibus utrinsecus ca. 10 subtus valde elevatis; venis transversis subtus manifestis; petiolo valido 3-5 mm. longo; lamina 15-18 cm. longa, 4-9 cm. lata. Flores ignoti. Fructus longe pedunculatus, solitarius; dense tomentellus, globosus, calycis lobis 6 coronatus, in vivo ca. 4 cm. diam. cremeus, polyspermus, pulpa rubra mucosa vel succosa repletus (*Walker*), in sicco ca. 3 cm. diam.; pyrenis numerosis 7 mm. longis; pedunculo 3-4 cm. longo, sparse hirtello.

SOLOMON ISLANDS: Choiseul: Ologo River, *F. S. Walker* B.S.I.P. 285, June 1946, lowland rain-forest bordering mangrove (small tree 20 ft., bark greyish brown, smooth, except for numerous small lenticels; fruit cream, very soft and containing numerous seeds embedded in a red mucilaginous pulp).

The present species is intermediate between *T. laevigatus* Val. and *T. solomonensis* Merr. & Perry. It has the very shortly petiolate leaves of the former with the long pedunculate many-seeded fruit of the latter. It is possible as suggested by Merrill & Perry that *T. laevigatus* Val. may be found later to be a polymorphic species but like those authors I have

taken a narrower view of the species until much more material has been gathered. As at present understood the three species can be keyed out as follows:

- A. Stipules persistent with the leaves, petiole 7–20 mm. long.....
.....*T. solomonensis*.
- AA. Stipules quickly deciduous (only seen in the very young buds), petiole
3–5 mm. long.
 - B. Peduncle as long as the petiole.....*T. laevigatus*.
 - BB. Peduncle 6–8 times longer than the petiole.....*T. pulposus*.

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