COMBRETACEAE OF THE 1936 ARCHBOLD EXPEDITION (FLY RIVER, BRITISH NEW GUINEA)

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Combretum trifoliatum Vent., Choix de Pl. t. 58 (1808).

WESTERN DIVISION: Middle Fly River, Lake Daviumbu, fl. Sept. 1936, *L. J. Brass* 7709, rain-forest; large scrambling shrub, plentiful on shores of lake.

This species is widespread in the Indo-Malayan region from Assam and Indo-China to New Guinea, but it is apparently absent from the Philippines. The specimen collected extends the known range of the species southwards, as the only other New Guinea records are from the Sepik region in the north-east, in the former German colony.

Quisqualis indica L., Sp. Pl. ed. 2, 1: 556 (1762).

WESTERN DIVISION: Lower Fly River, east bank opposite Sturt Island, fl. Oct. 1936, *L. J. Brass* 8198, scrambling on river-banks and commonly climbing to the tops of tallest forest-trees; flowers white, later red.

This species, often cultivated in the tropics, is indigenous in the Indo-Malayan region and undoubtedly wild in New Guinea.

Terminalia Catappa L., Mant. 1: 128 (1767).

WESTERN DIVISION: coast between Oriomo and Fly Rivers, fl. March 31, 1936, *L. J. Brass* 6416, one of the chief components of beach-forests; large spreading tree with thick tessellate bark; flowers white.

Widespread coastal species in the Indo-Malayan and Polynesian regions; often planted in other parts of the Tropics.

Terminalia Copelandii Elm., Leaflets Philipp. Bot. 5: 1759 (1913).

WESTERN DIVISION: Lower Fly River, east bank opposite Sturt Island, fl. Oct. 1936, *L. J. Brass* 8027, very conspicuous flat-topped tree towering above general level of the flood-plain forests; trunk heavily buttressed; bark thick, brown, long-fissured, peeling in small suberose scales; wood brown, tough; flowers white; tree bare of leaves in Sept.-Oct.

If this is correctly identified it is an interesting discovery of a species hitherto known, as far as I am aware, only from Palawan, Philippine

Islands, where it grows in the coastal forests, presumably in very similar conditions to those in which it was found growing by Brass in Papua. The leaves, inflorescences and twigs agree very well with the Palawan species but in the absence of fruit, often of great taxonomic value in this genus, the identification must remain doubtful.

Terminalia cf. **Kaernbachii** Warb. in Bot. Jahrb. 18:201 (1893), ex descr.

WESTERN DIVISION: Palmer River, two miles below the junction of Black River, fr. June, 1936, *L. J. Brass* 6973, common, very conspicuous tree in riverine forests, 35 m. tall, straight bole, flange-buttressed base; bark grey flaky, inner purplish; leaves at ends of branchlets; fruits red, fleshy, sessile, solitary on peduncle.

I have seen no specimen of *T. Kaernbachii* but *Brass* 6973 agrees well with the description except that the fruit is a little smaller than in *T. Kaernbachii* (6.5 cm. long instead of 8 cm. long) and more flattened. *Terminalia Kaernbachii* is endemic to New Guinea.

Terminalia aff. **edulis** Blanco, Fl. Filip. ed. 2, 265 (1845).

WESTERN DIVISION: two miles below junction of Black River, fr. June, 1936, *L. J. Brass* 6970, tree 20 m., leaves thin, red when old, fruit green, compressed, about 2 cm. long, 1 cm. in diam.; same locality, fr. July, 1936, *L. J. Brass* 7288, principal primary forest tree on sandy silt-loams of river flood-plains, up to 30 m. tall with well-developed flank-but-tresses; bark thin, fibrous, suberose, with vertical furrows; same locality, fl. July, 1936, *L. J. Brass* 7350, abundant in forests of lower ridges; large semi-deciduous canopy-tree; trunk spur-buttressed; bark brown, thin, flaky, wood pale, of cedar-like appearance, leaves, (still young) concave; flowers white; Fly River, between junctions of Alice and Elevata Rivers, fr. Aug., 1936, *L. J. Brass* 7388, semi-deciduous tree attaining to 20 m., on river-banks.

These specimens show a close general resemblance to *T. edulis* Blanco, a common species in the Philippine Islands. The Papuan specimens, however, have a sparser indumentum at all stages, the leaves, petioles and twigs becoming practically glabrous. Collections from intermediate regions are required to show whether the range and variation are discontinuous or not.

Terminalia hypargyrea Laut. & K. Schum., Fl. Deutsch. Schutzgeb. Südsee, 467 (1901).

Terminalia sogerensis Bak. f. in Jour. Bot. 61, Suppl.: 14 (1923).

WESTERN DIVISION: Middle Fly River, Lake Daviumbu, fl. Sept.,

1936, *L. J. Brass* 7782, rain-forest, occasional near shores of lake; tree with spur-buttressed stem; bark thin, brown, exfoliating in thin suberose flakes; Lower Fly River, Gaima, fr. Nov., 1936, *L. J. Brass* 8315, substage tree 12 m. high, in light rain-forest; bark thin, suberose, slightly fissured; fruit red, compressed; Wassi Kussa River, Tarara, fr. Dec., 1936, *L. J. Brass* 8551, gallery extensions of rain-forest; tree 10–12 m.; branches horizontal; bark hard, fissured; wood yellow; fruit red, fleshy, covered with purplish bloom.

Endemic to New Guinea.

Terminalia* cf. *complanata K. Schum. & Hollr., Fl. Kais. Wilh. Land, 83 (1889).

WESTERN DIVISION: Daru Island, fr. April, 1936, *L. J. Brass* 6433, uncommon in rain-forest canopy-layer; large spur-buttressed tree, 20 m. high, spreading crown; bark yellow-brown, laminated, fibrous within, very thin pale brown outer corky later, wood tough, fibrous, stains paper yellow.

This differs from typical *T. complanata* in having a persistent ferruginous-sericeous indumentum on the branchlets and lower surfaces of the leaves. *Terminalia complanata* shows traces of a similar indumentum on the young parts but is rapidly glabrescent.

Terminalia complanata has been recorded from New Guinea and the Solomon Islands.

Terminalia crassifolia Exell, sp. nov.

Arbor ad 8 m. alta, ramulis 4–6 mm. in diam. crassis primo pubescentibus demum glabrescentibus. *Folia* ad apicem ramulorum conferta, petiolata, petiolo $\pm$ applanato, 7–13 mm. longo, primo sericeo demum appresse puberulo, lamina subcoriacea obovata apice rotundata nonnunquam breviter apiculata basi plerumque cuneata paullo inaequilaterali, 6–11 $\times$ 3.5–7.5 cm., supra minute inconspicue pustulata ceteroque glabra subtus ad nervos sparse appresse puberula ceteroque fere glabra, costa media subtus prominente, nervis lateralibus utrinque 9–11. *Flores* sessiles in spicas axillares ad 11 cm. longas dispositi, rachi pubescente. *Receptaculum* superius campanulatum (lobis inclusis) 3.5 $\times$ 2.5 mm., glabrescens, lobis (sepalis) deltoideis, 1.3 $\times$ 1.3 mm., glabris, inferius 2 mm. longum dense sericeum. *Discus* 4.5 mm. in diam. dense pilosotomentosus. *Stamina* 10, antheris subglobosis, 0.8 mm. in diam., filamentis 3 mm. longis. *Stylus* 4 mm. longus. *Fructus* ellipsoideus leviter compressus, in sicco 1.2–1.3 $\times$ 7–8 mm., primo dense demum sparse appresse puberulus.

WESTERN DIVISION: Mabaduan, fl. & fr. April, 1936, *L. J. Brass* 6478 (Typus in Herb. Mus. Brit.), common in light rain-forests on granite slope, densely foliated, horizontally branched tree, 6–8 m. tall, ripe fruit dark purple, somewhat compressed $\pm$ 1.5 cm. long, 1 cm. in diam.; Mabaduan, young fr., April, 1936, *L. J. Brass* 6527, common in savannah-forest substage; small tree, 7–8 m. high; unripe fruit compressed, minutely puberulent.

This species is very near to *T. Muelleri* Benth. from Queensland and the islands in the Gulf of Carpentaria. It differs in having a sericeous lower receptacle (glabrous in the Australian species) and slightly smaller fruits.

Terminalia sp.

WESTERN DIVISION: Lower Fly River, east bank, opposite Sturt Island, fl. Oct., 1936, *L. J. Brass* 8048, rain-forest; large spur-buttressed tree, common on lower ridges; bark brown, flaky-scaly, yellow when cut; wood yellow; flowers green; branchlets and petioles glaucous.

This is apparently a new species but I do not care to describe it without fruits. The leaves are similar to those of *T. papuana* Exell (but with longer petioles) and of *T. solomonensis* Exell.

Lumnitzera littorea (Jack) Voigt, Hort. Suburb. Calc. 39 (1845).

Pyrrhanthus littoreus Jack, Malay. Misc. II, 7: 57 (1822).

WESTERN DIVISION: Daru Island, fl. 29 Feb., 1936, *L. J. Brass* 6228, open places in better-drained parts of mangroves; shrub or small tree to 5 m.; bark rough, reddish brown; flowers white; Wassi Kussa River, Tarara, fl. & fr., Jan., 1937, *L. J. Brass* 8691, common small tree in mangroves; bark rough, fissured; flowers red.

This species occurs in mangrove-formations in tropical Asia, tropical Australia and Polynesia.

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