BLUMEA 21 (1973) 377—380

A NEW SPECIES OF DIMOCARPUS (SAPINDACEAE) FROM AUSTRALIA

P. W. LEENHOUTS
Rijksherbarium, Leiden, Netherlands

SUMMARY

Dimocarpus australianus, a new species from Queensland, is described. It is compared with its nearest allies, *D. foveolatus* (Philippines) and *D. fumatus* (Indo-China to the Philippines, Borneo, and Java). This is also a new generic record for Australia.

After the publication of my revision of *Dimocarpus* (Blumea 19, 1971: 113—131) I received an unnamed Sapindacea from Queensland which appeared to represent an interesting new species of this genus. At the same time, this is a new generic record for Australia.

Dimocarpus australianus Leenh., *nov. spec.*

Arbor mediocris. *Ramuli* teretes, 1.5—2 mm diam., novelli cinerascentes vel fulvi, maturi cinerei, cito glabrescentes. *Folia* 2- vel 3-jugata, glabra. *Petioli* 2—4 cm longi, teretes; petioluli 2—5 mm longi, supra sulcati. *Foliola* oblongo-elliptica, 6.5—9.5 cm longa, 2.25—4 cm lata, tenuiter coriacea, sicco supra griseo-viridia, subtus flavo-virentia, axillis nervorum secundariorum subtus glandula nuda, axillis venarum venularumque subtus ad marginem interdum glanduli parvi rari ornata; basis plusminusve aequalis, acuta vel raro obtusa, paullo decurrens; margo repandus; apex obtusus; costa supra sulcata; nervi secundarii inter sese 0.5—1 cm distantes, a costa angulo ca. 60° abeuntes, subcurvati, ante marginem arcuato-connati, supra leviter sulcati; venae venulaeque inter se non differentes, supra minute reticulatae, subtus parce conspicuae. *Thyrsi* ca. 10—12 cm longi, pedicellis dense, ceterum sparse minute fasciculato-stellato-puberuli; rami pauci, erecto-patentes; cymuli subsessiles, usque ad 7-flori; pedicelli teneri, 2 mm longi; bracteae lanceolatae, usque ad 1.5 mm longae. *Lobi calycis* ca. 2.5 mm longi, 1.5 mm lati, intus apice excepto glabri. *Petala* 5, elliptica, 1.5—1.75 mm longa, 0.5—0.75 mm lata, extus glabra, margine basi ciliata, apice glanduloso-ciliolata, intus paulum supra basi laxe lanata. *Discus* sparse puberulus. *Filamenta* staminodiorum laxe lanata. *Pistillum* didymum; ovarium profunde bipartitum, puberulum; stylus puberulus ovario aequilongus; stigma subbilobatum.

Small to medium tree. *Twigs* terete, 1.5—2.5 mm ⌀, greyish- to yellowish brown, later ashgrey, early glabrescent. *Indumentum* consisting of minute stellate tufts of few hairs. *Leaves* with (1) 2 or 3 leaflets per side, glabrous. *Petiole* 2—4 cm long, terete or towards the base flattened above; petiolules 2—5 mm long, grooved above. *Leaflets* oblong-elliptic to sometimes slightly ovate, 6.5—9.5 × 2.25—4 cm, ratio 2.5—3, thin-coriaceous, beneath with a naked gland in part of the nerve axils and exceptionally with a small gland near the margin in the axil of a vein, above greyish-green, beneath yellowish-green; base ± equal-sided, acute, rarely blunt, slightly decurrent; margin repandous; apex blunt; midrib grooved above; nerves 0.5—1 cm distant along midrib, angle to midrib *ca.* 60°, slightly curved, looped and joined near the margin, above finely grooved; veins and veinlets mutually nearly alike, above minutely reticulate, beneath less conspicuous. *Inflorescences* terminal and in the upper leaf axils, 10—16 cm long, with few erecto-patent, long,

Fig. 1. *Dimocarpus australianus* Leenh. — a. Flowering branch; b. domatia on lower side of leaflet; c. petal from inside; d. stamen; e. galled staminode; f. disk and pistil; g. pistil one part of which grows out after fertilization. (a—c, f from *Gittins 2162*; d, e & g from *Smith 11847*. a × 2/3; b ×12; c—f ×8; g ×2.5).

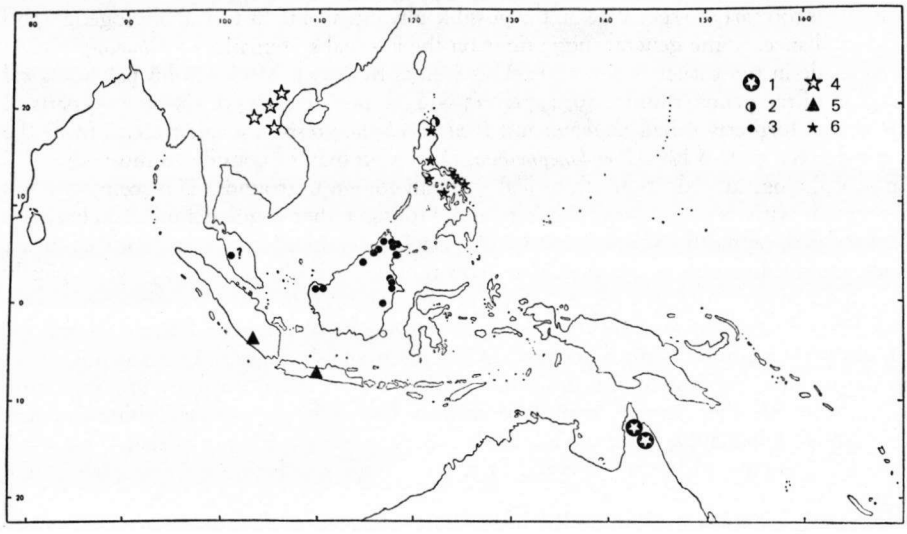

Fig. 2. Distribution of *Dimocarpus* (*Pseudonephelium*). 1: *D. australianus*; 2: *D. foveolatus*; 3—6: *D. fumatus* (3: ssp. *fumatus*; 4. ssp. *indochinensis*; 5: ssp. *javensis*; 6: ssp. *philippinensis*).

straight branches, thinly, the pedicels more densely puberulous; cymules nearly sessile, up to *ca.* 7-flowered; pedicels *ca.* 2 mm, slender; bracts lanceolate, up to 1.5 mm. *Calyx*: lobes 2.5—3 × 1.5—2 mm, inside puberulous in the upper half or only at the apex. *Petals* 5, elliptic, 1.5—2 × 0.5—0.9 mm, slightly unguiculate, outside glabrous to thin-woolly near the base, densely woolly ciliate in the lower, glandular-ciliolate in the upper part, inside with a hair rim slightly above the base to woolly above the claw, thinning out to slightly below the apex. *Disk* sparsely puberulous to velutinous. *Stamens* 7 or 8, exserted; filament 3.5 mm, sparsely hairy in the lower half; anther 0.8 mm. *Pistil* 2-merous; ovary deeply 2-parted, puberulous to velutinous, becoming slightly warty when growing out; style about as long as ovary, short-hairy; stigma slightly 2-lobed. *Fruits* unknown.

QUEENSLAND. Cook Distr. *C. H. Gittins 2162*, 6 miles S. of Helenvale on Shipton's Flat Road, 28-8-1970, ♀ fl., Type (BRI; iso in L); *L. S. Smith 11847*, McIlwraith Ra., on eastern spur, *ca.* 14 miles ENE. of Coen, 12-10-1962, fl. (BRI, L).

Ecology: Rain forest; alt. *ca.* 200 m.

Dimocarpus australianus belongs to that part of the genus that was originally described as *Pseudonephelium*. Its nearest allies are doubtless *D. foveolatus* (known from a single collection from Luzon, Philippines) and, slightly more distant, *D. fumatus* (known from continental SE. Asia and W. Malesia up to and including the Philippines, Borneo, and Java). The three species can be differentiated as follows:

1a. Apex of leaflets acuminate. Petals 0(—4). . . . . **D. fumatus** (Bl.) Leenh.
b. Apex of leaflets blunt. Petals 5. 2
2a. Base of leaflets rounded; nerves prominulous above. Petals longer than calyx. **D. foveolatus** (Radlk.) Leenh.
b. Base of leaflets angular; nerves finely grooved above. Petals shorter than calyx. **D. australianus** Leenh.

It seems too early to speculate on the possible phylogeny and historical phytogeography of this alliance. Some general suggestions on the internal systematics of *Dimocarpus* have been made in my earlier paper (p. 115), as well as by Mr. J. Muller in his palynological revision of the genus (Blumea 19, 1971: 133—145, especially p. 145). Of the two parts of the genus, formerly called *Euphoria* and *Pseudonephelium* resp., the latter seems to be the more derived one. Within *Pseudonephelium*, *D. fumatus* may be considered most advanced on morphological (reduction of corolla) and palynological grounds. This seems in good agreement with its rather great plasticity and with the rather vague delimitation between its four geographically well-separated subspecies, in contrast, however, with its rather wide area of distribution. *D. foveolatus* seems morphologically as well as palynologically more primitive than *D. fumatus*. As I remarked before (1971: p. 115) it may be considered a link between the *Euphoria* and the *Pseudonephelium* part of the genus. Morphologically, *D. australianus* is intermediate between *D. foveolatus* and *D. fumatus*, but it stands nearer to the former. Its geographical position, which is very isolated not only in comparison with its nearest allies but even compared with the rest of the genus, is surprising and very interesting. Apparently, *Pseudonephelium*, though being the younger branch of *Dimocarpus*, is still old enough that once it could bridge the wide gap between West Malesia and Queensland.

A further point of interest are the insect galls on the staminodes in *L. S. Smith 11847*: the filaments are strongly swollen in their basal half and velutinous like the disk and the pistil.

My colleague Mr. J. Muller (Rijksherbarium, Leiden) kindly studied the pollen from a few well-developed anthers of the paratype *Smith 11847*. He informed me that it can be assigned to pollen subtype E as previously described by him (Muller, Blumea 19, 1971: 133—145) and which was found in Philippine populations of *Dimocarpus longan* var. *malesianus*.