

NEW SPECIES IN ALECTRYON (SAPINDACEAE)

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Alectryon cardiocarpus Leenh., *spec. nov.*

A. reticulatus auct. non Radlk.: Rehder, J. Arnold Arbor. 14 (1933) 63.

Descriptio typi: Arbor 11 m alta, 20 cm diam. Ramuli teretes, 4–5 mm crassi, glabrati. Folia 4-jugata; petiolus teres, ca. 7,5 cm longus, 2 mm crassus; petioluli 4–5 mm longi, supra applanati; axes foliorum pilosi, glabrati. Foliola opposita, 9,5–16 cm longa, 5–6 cm lata, ratione ca. 2–3, ovata vel elliptica, pergamentacea, costa supra tomentosa, subtus sparse pilosa; basis paulum obliqua, in foliolis basalis rotundata, in apicalis acuta; margo serrato-dentatus; apex acutus; costa supra prominens; nervi laterales inter sese ca. 1 cm distantes, oblique patentes, subcurvati, utrinque prominentes; venae venulaeque laxae reticulatae. Infructescentiae axillares, paniculatae, ad 6 cm longae, sparse patente ramosae, dense pilosae, pedunculo ca. 5 mm longo, pedicellis perbrevis. Calyx ca. 1 mm altus, alte connatus. Fructus bicoccus, profunde cordatus, nec sulcatus nec carinatus vel angulatus, lobis globosis ca. 8 mm diam., dense fulvo-tomentulosis, pariete ca. 0,5 mm crasso. – Typus: C. Versteegh BW 4804, NW. New Guinea, Hamadi near Hollandia, 10-viii-1957, fr. (L).

Tree up to 11 m high by 20 cm d.b.h.; bark smooth, brown, conspicuously grey or white patched. Twigs terete, 4–5 mm thick, glabrescent. *Leaves* 3–5-jugate; petiole slightly flattened above, 6–7.5 cm long, 1.5–2.5 mm thick; petiolules 4–10 mm long, above broad and flat with the midrib raised; axes hairy, glabrescent. *Leaflets* (sub)opposite, 6.5–16.5 by 2.5–6 cm, 2–3.25 times as long as wide, widest about to below the middle, stiff-pergamentaceous; either glabrous, or sparsely hairy on both sides of the midrib, sometimes also with a few hairs on the nerves beneath; base hardly to very oblique, the acroscopic side broader and/or lower attached than the basiscopic side, rounded to acute, slightly attenuate or not; margin serrate-dentate from near the base; apex acute, mucronate; midrib above prominulous; nerves c. 1–1.5 cm distant, obliquely patent, slightly curved, ending in marginal teeth, prominulous on both sides; intercalated veins hardly developed, veins and veinlets laxly reticulate. *Inflorescences* axillary, panicles, up to c. 6 cm long, with few obliquely patent to patent, up to 6 cm long branches, rather many-flowered, densely hairy, the peduncle c. 5 mm long, the pedicels very short. *Calyx* 1–1.2 mm high, nearly

completely connate, inside sparsely hairy mainly at the base. Corolla absent. *Stamens*: filament 0.8–1.75 mm long, anther 1.25 mm long. *Pistil* 2-merous, stigma apparently grooved. *Fruits* 2-lobed, deeply cordate especially when young, smooth, the lobes globular, c. 8 mm in diam., densely fulvous-tomentellous, the wall c. 0.5 mm thick.

Paratypes. SE. New Guinea: *Brass 1618*, Eastern Dist., Bongwina R. (A, BRI), *LAE 70407*, Central Dist., Abau Subdist., c. 10 km E. of Kugiano (L); *Pullen 6718*, Central Dist., Rubulogo Creek area c. 18 miles N. of Port Moresby (BRI, L).

Ecology. In monsoon scrub and secondary forest, on coastal limestone rocks, river banks, and slopes, from sea level to 40 m altitude. Fl. May–June, fr. Aug.

Note. The present species is doubtless close to *A. ferrugineus* Radlk.; it differs primarily by the small, deeply cordate fruits. Furthermore, *A. ferrugineus* is as a whole far more coarse and more hairy, and the hairs are ferruginous, whereas in *A. cardiocarpus* they are rather fulvous.

***Alectryon kangeanensis* Leenh., spec. nov.**

Ramuli sulcati, 3,5–4,5 mm crassi. Folia 1–3-jugata; petiolus 1–5 cm longus, rhachique applanatus; petioluli ad 2 mm longi, lati, supra applanati. Foliola opposita vel alterna, 8–15 cm longa, 2,5–5 cm lata, ratione 2,5–4, ovata ad obovata, subtus glauca, costa utrimque sparse pilosa; basis aequilateralis ad subobliquis, acuta; apex anguste rotundatus; costa supra angulata, nervi laterales inter sese 0,5–1,5 cm distantes, subcurvati. Inflorescentiae 10–15 cm longae, subdense pilosae, pedunculo 2–6 cm longo, pedicellis ca. 3 mm longis. Calyx ca. 1 mm altus. Petala 0,5 mm longa, squamis dense hirsutis. Filamenta staminum florum masculorum 2 mm longa; anthera 1,5 mm longa. Fructus 0,75 × 1 cm, extus sparse tomentellus, intus glaber, pariete pergamentaceo. – *Typus*: C.A. Backer 29552, Indonesia, Kangean Archipelago, Island of Paliat, 5-v-1919, fl. fr. (L; iso in BRI, K, SING, U, UC).

Twigs grooved, 3.5–4.5 mm thick. *Leaves* 1–3-jugate; petiole 1–5 cm long, strongly flattened as is the rachis; petiolules 0–2 mm long, above broad and flat. *Leaflets* opposite to alternate, 8–15 by 2.5–5 cm, 2.5–4 times as long as wide, widest below to about or sometimes above the middle, glaucous below, on both sides mostly with some scattered hairs on the midrib; base equalsided to slightly oblique, acute; margin entire; apex narrowly rounded; midrib above angular, nerves 0.5–1.5 cm distant, slightly curved, all or the lower ones excepted looped and joined near the margin, above hardly, beneath distinctly prominent, intercalated veins often well developed, veinlets densely reticulate but on both sides hardly visible. *Inflorescences* axillary, thyrsoid, 10–15 cm long, fairly densely hairy, peduncle 2–6 cm long, pedicels c. 3 mm long. *Calyx* c. 1 mm high. *Petals* 0.5 mm long, scale densely hairy. *Stamens*: filament in male flowers 2 mm long; anther 1.5 mm long, dehiscence latrorse. *Fruits* 3- or 4-merous, 0.75 by 1 cm, outside sparsely tomentellous, inside glabrous, the wall pergamentaceous.

Known from the type only.

Note. The present species is distinctly nearest related to *Alectryon affinis* Radlk. and *A. connatus* Radlk., both known from SE. New Guinea (around Port Moresby), the latter moreover from Queensland. The three species can be keyed out as follows:

- 1 a. Leaflets subglabrous **A. kangeanensis**
 b. Leaflets at least beneath on the midrib densely tomentellous 2
 2 a. Leaflets \pm acuminate; nerves not distinctly connected; fruit wall hard, inside glabrous **A. affinis**
 b. Leaflets broadly rounded to slightly emarginate; nerves looped and joined; fruit wall pergamentaceous, inside hairy **A. connatus**

Alectryon myrmecophilus Leenh., *spec. nov.*

Descriptio typi: Arbor 12 m alta. Rami cavi myrmecophili. Ramuli profunde sulcati, 8 mm crassi, subglabri. Folia 3- vel 4-jugata; petiolus semiteres, 8–11 cm longus, 2,5 mm diam.; petioluli ca. 1 cm longi, supra excavati; axes foliorum sparse tomentulosi. Foliola subopposita ad alterna, 8–20 cm longa, 3,5–7 cm lata, ratio ca. 2,5–3, elliptica, papyracea, supra glabra, subtus in costa nervisque sparse puberula; basis aequilateralis acuta vel rotundata; margo integer; apex gradatim longe acute acuminatus; costa supra subprominens; nervi laterales inter sese 1–1,5 cm distantes, patentes, curvati, ad marginem liberi, supra subsulcati, subtus prominentes; venae transversae, venulae laxe reticulatae, inconspicuae. Infructescentiae axillares, thyrsoidae, ad 25 cm longae, base longe ramosae. Pistillum 2-merum. Fructus unilobati globosi, ca. 15 mm diam., subcarinati, dense ferrugineo-tomentulosi, pariete ca. 2 mm crasso. — **T y p u s:** *L. J. Brass 29489*, NE. New Guinea, Morobe Dist., Gurakor, 9-v-1959, fr. (L).

Tree up to 18 m by 30 cm d.b.h.; bark dark brown or grey green, smooth. Twigs deeply grooved, up to c. 8 mm thick, fairly densely to sparsely hairy, glabrescent, branchlets redbrown to black, hollow. *Leaves* 2–4-jugate; petiole semiterete to terete, 6–11 cm long, 2–2.5 mm thick; petiolules 3–10 mm long, above hollowed; axes fairly densely tomentellous, especially on the upper side of petiole and rachis, glabrescent. *Leaflets* subopposite to alternate, 7.5–20 by 3.5–7 cm, 2–3 times as long as wide, widest in the middle, papyraceous to pergamentaceous; glabrous or beneath slightly puberulous on midrib and nerves; base equalsided, acute to rounded, slightly attenuate; margin entire; apex tapering into a rather long and slender acute acumen; midrib above slightly raised; nerves 1–1.5 cm distant, spreading, curved, ending free, above slightly sunken, beneath prominent; intercalated veins exceptional, veins mainly transverse, veinlets laxly reticulate, rather inconspicuous. *Inflorescences* axillary, a widely branched thyrsus up to c. 25 cm long, branched from the base with up to c. 10 cm long obliquely patent branches, the flowers in stalked rather many-flowered cymules, fairly densely minutely hairy. *Calyx* 0.8 mm high, somewhat less than halfway connate, inside glabrous or sericeous. *Petals* if present 5, unguiculate, the plate kidney-shaped, 0.5 by 0.7 mm, outside glabrous, inside woolly. *Stamens:* filament short, anther 1 mm long. *Pistil* 2- or rarely 3-merous. *Fruits* mostly only 1 lobe developed, obovoid-globular, 16 by 14 mm, slightly carinate towards the style remnant, furthermore smooth, densely ferrugineous-tomentellous, the wall corky, c. 2 mm thick. *Seeds:* aril smooth.

Paratypes. NE. New Guinea: *NGF 4077*, Morobe Dist., Bulolo (BM, CANB, L); *5279*, ditto (BM, BRI, CANB, K, UC); *7406*, ditto (A, BRI, CANB, L); *7420*, ditto (A, BM, BRI, CANB, L); *45253*, Morobe Dist., Lae–Mumeng Road, Patep No. 2, 6°55' S, 146°35' E (L).

E c o l o g y. On river banks in forest at c. 650–1000 m altitude. Fl. June, Dec.; fr. Sept. The hollow branches are inhabited by ants.

N o t e. The present species resembles *A. fuscus* Radlk. from the Philippines which differs in the solid branchlets, the rounded leaflets, and the above slightly sunken midrib, however.