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Materials for a revision of Lauraceae VI*

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Herbarium Bogoriense, Bogor, Indonesia

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Abstract

Kostermans A. J. G. H. 1990. Materials for a revision of Lauraceae VI*. Bot. Helv. 100: 33–36.

Four new species are described in the genus *Cryptocarya* R. Br. The genera *Dahlgrenodendron* v.d. Merwe & v. Wyk and *Povedadaphne* Burger are reduced to *Cryptocarya* and *Octotea*, respectively.

Cryptocarya darusensis Kosterm., spec. nov.

Arbor parva ramulis gracilibus minutissime adpresse puberulis, foliis alternantibus chartaceis oblongis acuminatis basi breve cuneatis utrinque dense minutissime areolatis, supra glabris nervo mediano cum nervis filiformibus prominulis in sulcis, subtus sparse minutissime adpresse puberulis, nervo mediano cum nervis paucis subadscendentibus pergracilibus prominulis, petiolis brevibus, gracilibus, infructescentiis axillaribus sat dense minutissime puberulis, paniculatis, brevibus, fructibus parvis nitidis globosis.

Typus: NGF 33749 (L) Daru Island, Papua New Guinea.

Tree, height 7 m. Twigs slender, sparsely, microscopically adpressed puberulous. Leaves scattered, chartaceous, oblong, 2 × 5 – 4 × 11 cm, acuminate, base cuneate; both surfaces densely, very minutely areolate; above dull, midrib and nerves thin, slightly raised in a groove; below paler, sparsely, microscopically adpressed puberulous, midrib and nerves thin, prominent, nerves 4–7 pairs, erect-patent, arcuate, ascendent; secondary veins invisible. Petioles slender, 4–8 mm long, adpressed puberulous.

Infructescence axillary, paniculate, microscopically, adpressed puberulous, slender, up to 10 cm long. Fruit globose, glossy, 8–10 mm diam.; pedicel short, thick.

Distribution/Ecology: Only known from the type locality, Daru Island in W. Papua New Guinea in secondary regrowth, everwet, tropical rainforest.

Papua New Guinea, Western Distr., Daru Island, alt. 17 m, Lat. 9°07'S; Long. 143°20'W, Aug., fr., NGF 33749 (A, BO, BRI, CANB, K, L: holo).

* Part I in Reinwardtia 7: 291–356. 1968; part II ibid. 8: 451–536; part III ibid. 8: 21–96. 1970; part IV ibid. 9: 97–115. 1974; part V ibid. 10: 439–469. 1988.

***Cryptocarya dipterocarpifolia* Kosterm., spec. nov.**

Arbor parva ramulis inconspicue pulverulente puberulis, foliis alternantibus per-rigide coriaceis glabris late ellipticis basi apiceque rotundatis bullatis supra nervis impressis subtus conspicue prominentibus, nervis secundariis parallelis, paniculis fructiferis magnis sub lente minutissime dense pulverulente puberulis, laxis, fructibus globosis lenticellis magnis pallidis cereberrimis.

Typus: NGF 45828 (L)

Tree, 7 m tall. Bark brown. Wood white. Twigs not very thick, stiff, microscopically densely brown powdery puberulous; apical bud without bud scales, the folded leaf initials pulverulently puberulous. Leaves scattered, glabrous, very stiffly coriaceous, broadly elliptic, 11 × 18 cm, base and apex rounded, bullate, midrib above in a narrow slit, nerves and secondary veins slender, impressed; below paler, smooth, midrib stout, prominent, nerves rather slender, prominent, rather patent, shallowly S-curved, c. 15 pairs, near the margin arcuate, secondary veins thin, prominent, parallel, c. 2–3 mm apart.

Infructescence stout, up to 20 cm long, laxly paniculate, microscopically, densely pulverulently brown-puberulous, branches stiff, patent, up to 10 cm long. Fruit globular, smooth, black with numerous spot-like, pale lenticels. Pedicel short.

Distribution/Ecology: Only known so far from the type locality, submontane tropical rainforest.

Note: The leaves resemble strongly those of *Dipterocarpus* species.

Papua New Guinea, near Base camp, Kiungo Subdistr., Western Distr., alt. 800 m, 5°14'S, Long. 141°12'E, Nov., fr., NGF 45828 (BO, BRI, CANB, K, L: holo, SYDN).

***Cryptocarya elongata* Kosterm., spec. nov.**

Arbor mediocris, ramulis apicem versus dense minutissime puberulis, foliis alternantibus subaggregatis coriaceis glabris oblongis, utrinque minutissime reticulatis (supra inconspicue), basi breve cuneatis, apice acuminatis, supra sublaevibus nervo mediano impresso, nervis obscuris impressis, subtus nervo mediano prominente, venis numerosis erectopatentibus prominentibus, venis secundariis nullis, petiolis brevibus, paniculis apicalibus multifloris laxis dense minutissime puberulis, floribus subglomerulatis, dense minutissime pilosis.

Typus: Hartley 12215 (L)

Tree, up to 23 m tall and 40 cm dbh. Outer bark dark brown, quite smooth; inner bark yellowish brown. Twigs stiff, rather thin, smooth, bearing the scattered leaves apically; terminal bud without bud scales, young leaves minutely, densely sericeous, twigs apically obscurely, densely, very minutely puberulous. Leaves scattered and subaggregate, glabrous, coriaceous, oblong, 5 × 18 – 7 × 27 – 8 × 40 cm, both surfaces very minutely reticulate, but above obscure, glossy, rather smooth, apex obscurely shortly broadly acuminate, base shortly cuneate to rounded, above midrib conspicuously impressed, nerves filiform, impressed, below pale glaucous (fresh), reticulation very minute, midrib prominent, nerves prominent, erect-patent, 15–20 pairs, near the margin arcuate, secondary nerves not visible. Petioles c. 15 mm long.

Panicles subterminal multiflowered, densely, very minutely rusty pubescent, main peduncle stout, up to 10 cm long with few up to 10 cm long branches. Flower buds yellow. Anthers with filaments.

Distribution/Ecology: West and East New Guinea, lowland tropical rainforest, in wet, often inundated areas or along rivers.

Vernacular names: Mafkwa (Sidai language), Walas (Bibia), Kiskis (Amele), Garus (Dumpu), Uri (Faita).

W. Irian, Vogelkop, Manokwari, Sidai, ster., BW 1723 (L); Papua New Guinea, Madang Subdistr., Ramu valley, c. 5 miles S.E. Faita Airstrip, lower slopes Bismarck Range, alt. 200 m, ster., Saunders 379 (L); near Butibum river, about 7 miles N. of Lae, Morobe Distr., alt. c. 30 m, Sept., buds, Hartley 12215 (L).

***Cryptocarya flavisperma* Kosterm., spec. nov.**

Arbor parva ramulis apicem versus sulcatis, foliis alternantibus chartaceis glabris oblongis vel subovato-oblongis obscure acuminatis vel acutis basi breve cuneatis, supra laevibus nervo mediano nervisque impressis, subtus pallidioribus nervo mediano prominente nervis sat paucis nervis secundariis filiformibus prominulis subparallelis horizontalibus reticulatione nulla, petiolis sat brevibus, infructescentis extra-axillaribus brevissimis glabris, fructibus subglobosis lateraliter subcompressis, magnis, seminibus flavis.

Typus: NGF 41059 (L)

Tree, 10 m tall, dbh. 7.5 cm. Bark straw brown, inner bark brown. Wood cream. Twigs apically sulcate, glabrous, smooth, not very thick. Leaves scattered, chartaceous, glabrous, oblong to subovate-oblong, $5 \times 20 - 8 \times 23$ cm, acutish or subacuminate, base shortly cuneate; above smooth, dull, midrib and nerves impressed, below paler (whitish green when fresh), smooth, midrib prominent, nerves c. 9 pairs prominent, rather erect, arcuate; secondary veins filiform, more or less parallel and horizontal, c. 3–4 mm apart. Petiole 10–15 mm, concave above.

Infructescence extra-axillary, 1–1.5 cm long, thick, with few, thick, 5 mm long branches, glabrous, each branch bearing one fruit on a thick, woody, 3 mm long pedicel. Fruit subglobose, roughish, rusty brown, laterally compressed, longer than broad with a few vague longitudinal ribs, up to 3.5 cm wide, 2.5 cm thick, and 3 cm high. Seed yellow.

Distribution/Ecology: Mountain species, only known from the type locality in mixed secondary tropical rainforest.

Papua New Guinea. Western Highlands Distr., Kopiago Subdistr., near Augusta R., 9 miles from Kopiago Lake, alt. 4300 ft., Lat. $5^{\circ}22'S$, Long. $142^{\circ}33'E$, fr., NGF 41059 (A, BO, BRI, K, L: holo, SING).

Reduction of the genus *Dahlgrenodendron* v.d. Merwe & v. Wyk

Dahlgrenodendron was based on a single species: *Beilschmiedia natalensis* Ross (Bothalia 11 (1973) 118), a rare tree from Natal in S. Africa.

The species is close to *Cryptocarya* R. Br., but differs according to its authors mainly by the morphology of the pollen.

I doubt whether the pollen character weighs heavily enough to create on it a new genus. Of most of the hundreds of *Cryptocarya* species the pollen has not been described.

However, the opposite leaves and also the sessile anthers (but with only 3 or 6 fertile stamens) point to a relationship with *Aspidostemon* Rohwer and Richter (Bot. Jahrb. Syst. 109 (1987) 71–79) (I have treated these as sections of *Cryptocarya*).

For the moment, it seems wiser to refer the Natal species to *Cryptocarya*.

By its opposite leaves it seems to be related to *Aspidostemon* of Madagascar, but the 9 fertile stamens and the shape of the stamens point to *Cryptocarya*. So far it seems intermediate between these two genera.

Cryptocarya natalensis (Ross) Kostermans, comb. nov. – *Beilschmiedia natalensis* Ross (basionym, *Bothalia* 11 (1973) 118) – *Dahlgrenodendron natalense* (Ross) v.d. Merwe & v. Wyk., *S. Afric. Tijdschr. Plantk.* 54 (1988) 80–88.

Reduction of the genus *Povedadaphne* Burger

Povedadaphne Burger (*Brittonia* 40 (1988) 275–283) was based on a specimen from Costa Rica (*Povedadaphne quadriporata* W. Burger).

As Burger stated himself, the species differs from *Ocotea* only by the shape of the stamens.

He also indicated that there is a reticulated relationship between the genera of Lauraceae. Hence a single feature, like that of the shape of the anthers, is not acceptable as a base for creating a new genus.

There seems to be a discrepancy in the drawing: in Fig. C, a drawing of the stamens, the anther pores are arranged in an arc, whereas in the Fig. B, the diagram and Fig. D, a flower seen from above, the pores are arranged in pairs above each other.

Burger did not grasp the basis of the generic system, which I presented in 1957: (*Reinwardtia* 4: 193–256): the development of the hypanthium under the fruit. Stamen characters are of secondary importance and last comes the number of anther cells, which in the same genus may vary between two and four.

Ocotea quadriporata (Burger) Kostermans, comb. nov. – *Povedadaphne quadriporata* Burger (basionym), *Brittonia* 40: 277, f. 1, 1988).