

THE GENUS *CARALLIA* (RHIZOPHORACEAE) IN CEYLON

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SUMMARY

Apart from the common *Carallia brachiata* (Lour.) Merr. and the rare *C. calycina* Benth. (reduced by DING HOU, but re-instated correctly by MACNAE & FOSBERG), two further Ceylonese species are described: *C. orophila* sp. nov. (based on *C. calycina* var. *b.* Thw.) and *C. paucinervia* sp. nov.

1. INTRODUCTION

TRIMEN (1894) enumerated two species of *Carallia*, the common, wet-lowland species *C. brachiata* and *C. calycina*, which was recorded once from the Sinharaja Forest, Ceylon. Trimen included in *C. calycina* the var. *b.* Thw., a taxon of the lower montane forest, which is here considered to represent a proper species, *C. orophila* sp. nov. ASHTON (1981) enumerated two specimens of this taxon under *Syzygium umbrosum*, Myrtaceae.

DING HOU (1958) fused *C. brachiata* and *C. calycina*, but MACNAE & FOSBERG (1981) correctly separated them again; the two species can be very easily distinguished by leaf and flower characters.

2. THE CEYLONESE SPECIES OF *CARALLIA*

Key to the species

1. Flowers sessile. Petals 7–8 *C. brachiata*
1. Flowers pedicellate. Petals 4
 2. Number of lateral nerves 5 (–7) pairs *C. paucinervia*
 2. Number of lateral nerves usually more than 20 pairs
 3. Leaves $2\frac{1}{2}$ –5 cm, obovate, obtuse or very shortly, obtusely apiculate *C. orophila*
 3. Leaves 6–10 cm, oblong, rarely ovate-oblong, distinctly obtusely acuminate *C. calycina*

1. *Carallia paucinervia* Kosterm., sp. nov.

Arbor in omnibus partibus glabris, foliis coriaceis oblongis vel ellipticis parvis brevissime late obtuse acuminatis basi cuneatis, supra nervo mediano subimpressis nervis lateralibus obscuris, subtus pallidioribus nervo mediano subprominentibus nervis lateralibus 5–7 paribus erecto-patentibus tenuibus in nervis

marginalibus tenuibus connectis, rete obscuris, petiolis sat gracilibus sat brevibus, inflorescentiis axillaribus paucifloris bracteatis, floribus breve pedicellatis post anthesin bracteis magnis suffultis.

Typus: Ceylon, Adam's Peak Jungle, Kostermans 27061 (L holo, G, PDA).

Tree 15 m tall and up to 80 cm dbh. with smooth, hard, light brown, $\frac{1}{2}$ mm thick bark; live bark 3 mm, light dusty brown. Wood white. Flush brown-red. Twigs cylindrical. Stipules not seen. Leaves coriaceous, oblong to elliptic, $2 \times 4 - 2\frac{1}{2} \times 6 - 4 \times 5$ cm, very shortly, broadly obtusely, obscurely acuminate, sometimes obtuse or emarginate, base cuneate, slightly decurrent, midrib slightly impressed, lateral nerves faint; below much paler, midrib prominulous (near its base prominent), the 5 (-7) pairs of thin lateral nerves erect-patent, at 2-3 mm from the margin arcuately connected into a thin marginal vein; reticulation lax, obscure. Petiole slender, up to 1 cm long, medially channeled above.

Inflorescences single or fascicled in the axils of apical leaves, very few-flowered, up to 3 cm long with 0-2 short branches, each branchlet with a large, concave, caducous, 5 mm long bract. Flowers 1-3 together, shortly pedicelled, at the pedicel base a large, concave, 4-5 mm long bract, which protects the reddish green (fresh) bud.

Distribution: Thus far found only on a spur to Adam's Peak Rock on a flat, rather peaty rock outcrop and near the Fishing hut of Moray Tea Estate on the same slope of Adam's Peak, at 1500-1900 m. altitude.

Note: Both known collections have immature flower buds. The species looks strikingly like a *Syzygium*; it has also transparent leaf dots. It differs from the two other Ceylonese species mainly by the few lateral nerves.

Specimens examined: Adam's Peak Jungle, above Moray Tea Estate, Maske-liya Distr., near Fishing Hut, alt. 1500 m, Nov., buds, Kostermans 27061, typus (G, L, PDA); at 1900 m altitude on open, flat, rather peaty rock outcrop, Nov., buds, Kostermans 27058 (G, L, PDA).

2. *Carallia orophila* Kosterm., sp. nov.

Carallia calycina, var. *b.* THWAITES, *Enum. Pl. Zeyl.* 121. 1859. — C.P. 2588, Dinbulla & Rambodde, Sept. 1852, fl. (PDA).

Carallia calycina Auct. (non Benth.) Macnae & Fosb. in DASSANAYAKE (editor), *Rev. Handb. Fl. Ceyl.* 2: 497. 1981, quoad C. P. 2588.

Syzygium umbrosum Auct. (non Thw.) ASHTON in DASSANAYAKE, l.c. 2: 439 & 440. 1981, quoad Kostermans 25027 and 25037.

Arbor ramulis cylindricis glaucis, foliis rigide coriaceis obovatis vel subrotundatis vel obovato-oblongis obtusis minute apiculatis, basi attenuatis, utrinque nervis lateralibus plurimis erecto-patentibus prominulis, supra nervo mediano vix impressis, subtus prominentibus, petiolis tenuibus brevibus, inflorescentiis axillaribus glabris perpaucifloris, floribus breve pedicellatis bracteis duabus suffultis parvis, lobis calycibus ut in *C. calycinum* sed brevioribus, stigmatibus vix divisus.

Typus: Ceylon, Knuckles Mts., Kostermans 24027 (L holo, PDA).

Tree 25 m tall, up to 80 cm dbh. Bark very densely fissured and cracked into rectangular pieces, 4 mm thick, dark orange brown; live bark up to 10 mm thick, orange, ridged inside. Twigs cylindrical, grey-glaucous. Stipules acute, 15 mm long. Leaves stiffly coriaceous, obovate to obovate-elliptic to sub-rotund, $2\frac{1}{2} \times 2\frac{1}{2}$ – $2\frac{1}{2} \times 3$ – $1\frac{1}{2} \times 2\frac{1}{2}$ – 4×5 cm, obtuse, obscurely apiculate, base tapered; above midrib prominent, the numerous, erect-patent lateral nerves (with intermediate ones) prominulous, connected at 1 mm from the margin into a double-tiered thin marginal vein, the outer one vague and often incomplete; reticulation lax, as strong as the lateral nerves. Petiole slender, 3–5 mm long.

Inflorescences axillary, glabrous, very few-flowered, consisting of a main peduncle of up to 3 cm long, bearing two divaricate branches of 7 mm, each with one flower, subtended by 2 triangular, acute, $1\frac{1}{2}$ mm long bracts. Pedicel short. Calyx tube obconical, 3–4 mm, the 4 lobes narrowly triangular, stiff, acute, 4 mm. Petals 4, fringed, clawed. Stigma hardly lobed. Fruit red, basal part white.

Distribution: Mountain areas, Rambodda, Dinbulla (Talawakelle), Knuckles Mountains (Madulkelle), from 800 m upwards.

Note: TRIMEN 1894 comments on this, that it does not even merits varietal rank of *C. calycina* but this was after superficial observation and only one specimen at hand. The species differs from *C. calycina* by the obovate (not oblong or ovate-oblong) obtuse, apiculate leaves (in *C. calycina* acuminate), the smaller flowers, the much smaller bracts at the pedicel base and the hardly divided stigma.

Superficially the leaves resemble those of *Syzygium umbrosum* (Myrtaceae) and other mountain species, which misled Ashton.

Specimens examined: Dinbulla, Talawakelle Distr., and Rambodda, fl. Sept. 1852, C.P. 2538 (PDA); Knuckles Mts., Madulkelle area, near Hemachandra's cardamon estate bungalow (via Lebanon Estate Pass trail), June, fl., Kostermans 25027 (typus) and 25037 (L, PDA).

REFERENCES

- ASHTON, P. in: DASSANAYAKE, M. D. (1981): *Revised Handbook to the Flora of Ceylon* 2: 440.
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TRIMEN, H. (1894): *Handbook to the Flora of Ceylon* 2: 154–156.