



Symplocos nicolsonii, (Symplocaceae) a new species from the Southern Western Ghats, India.

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Abstract: *Symplocos nicolsonii* Jagadeesan *et al.* closely allied to *Symplocos lancifolia* Siebold. & Zucc., from the Southern Western Ghats is described and illustrated here as a new species.

Key words: *Symplocos nicolsonii*; New species; Symplocaceae; Southern Western Ghats.

Introduction

The genus *Symplocos* Jacq. comprises about 250 - 300 species distributed from South to Southeast Asia, America, Australia and East Indies (Brand, 1901; Nootboom, 1975; Stahl, 1995). The official website of Kew Herbarium (The Plant List, A working list of plant species) enumerated 219 accepted taxa beneath the genus *Symplocos* Jacq. (<http://www.theplantlist.org/tpl1.1/search?q=Symplocos>: accessed on 28/06/2016). It consists of 32 taxa in India, mostly included under the section *Lodhra* G. Don, characterized with an articulation found between the pedicel and calyx tube, petals connate at base, terete staminal filaments and 3 - celled endocarp (rarely 1-celled) (Fritsch *et al.*, 2008). Nair *et al.*, 2014 enumerated 14 species and 11 subspecies for the genus *Symplocos* from the Western Ghats.

During the investigations on endemic flora of the Southern Western Ghats, the authors have come across an interesting *Symplocos* from the Mathikettan Shola National Park of the Idukki District in Kerala State. On critical taxonomic investigations and perusal of literature revealed that the taxon is morphologically distinct with other known species of the genus. On scrutiny, the newly collected plant specimen has been recognized under section *Lodhra* G. Don and allied to *Symplocos lancifolia* Siebold. & Zucc. The new taxon named as *Symplocos nicolsonii* is described herewith with photographs.

Symplocos nicolsonii R. Jagadeesan, A. Gangaprasad, S. P. Mathew, E. S. S. Kumar *et J.* Stephan *sp. nov.* (Fig.1.)

Diagnosis: *Symplocos nicolsonii* *sp. nov.* principally differs from *Symplocos lancifolia* in having elliptic-obovate brittle leaves, pubescent calyx tube, lacerate calyx, pubescent disc and grooved

endocarp. Detailed characterization is tabulated below (Table 1).

Type: India, Kerala State, Idukki District, Mathikettan Shola National Park, ± 2200 m, 12.03. 2016, R. Jagadeesan 8074, (Holotype: CAL; Isotype, TBGT, KUBH)

Paratype: India: Kerala, Idukki District, Mathikettan Shola, 2300 m, 21.04.2016 R. Jagadeesan 9026 (KUBH).

Evergreen trees up to 15 m tall; bark rough, brownish grey; blaze pale green-yellow; young branchlets pubescent with brownish hairs, stout with prominent leaf scars on maturity, Leaves simple, alternate, exstipulate, 2-5.5 × 1-3.5 cm, elliptic-obovate, acute to acuminate at apex, cuneate at base, glandular, serrated or rarely revolute at margin, brittle, midrib impressed above raised beneath, pubescent on nerves beneath; lateral veins 6 pairs, convergent forming intra marginal venation; petioles 5-7 mm long, brownish pubescent. Inflorescence axillary and terminal, spike 1-3.5 cm long; peduncle brownish pubescent. Flowers 2.5-4 mm across, bract 2-3.1 × 1-1.5 mm, ovate, acute at apex, margin ciliate, densely appressed purple-brown pubescent, caducous; bracteoles 2 on either side of the calyx, 2-2.4 × 0.9 - 1.1 mm, more or less similar to bract, lanceolate - elliptic, acute at apex, margin ciliate, caduceous. Calyx tube 1.5-1.7 × 1-3 mm, pubescent; lobes 5, 2 × 1 mm with dark purplish hairs, ovate, obtuse, margin lacerate. Petals 5, 2.5-3 × 1.7-2 mm, white or pale yellow, glabrous, broadly elliptic-oblong with 5 conspicuous nerves, obtuse at apex, entire at margin. Stamens 25, pentadelphous, as long as or shorter than corolla; filaments 1.5-3 mm; anthers 0.4 × 0.3 mm. Ovary 3-locular with 2 ovules in each locule; style 1.3 -2 × 0.3 mm, shorter than the corolla, stout, glabrous above, stigma flat

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or capitates; disk pentagonous, pubescent. Fruits 0.9 - 1.8 x 0.3–0.4 cm, ellipsoid-oblongoid, calyx persistent; mesocarp thick, fleshy; endocarp thin, 6-8 grooved, 1 seeded. Seeds 15 x 4 mm, oblong, yellowish brown.

Phenology: Flowering from December to March; fruiting from March to May.

Habitat and conservation status: Along the margins of the evergreen forest at 2200–2300 m elevation. We have located only three mature trees

within an area of about 05 sq km at Mathikettan Shola National Park. No special measures have so far been taken for its *ex-situ* conservation.

Distribution and Ecology: *Symplocos nicolsonii* is found to occur at the Mathikettan shola National Park in Idukki District, Kerala State, South India. The habitat of the new taxon is an evergreen forest and the associated species are *Bhesa indica* (Bedd.) Ding Hou, *Prunus ceylanica* (Wight) Miq., *Medinilla sahyadrica* Sujanapal & Sasidh., *Impatiens viscosa* Bedd. etc.

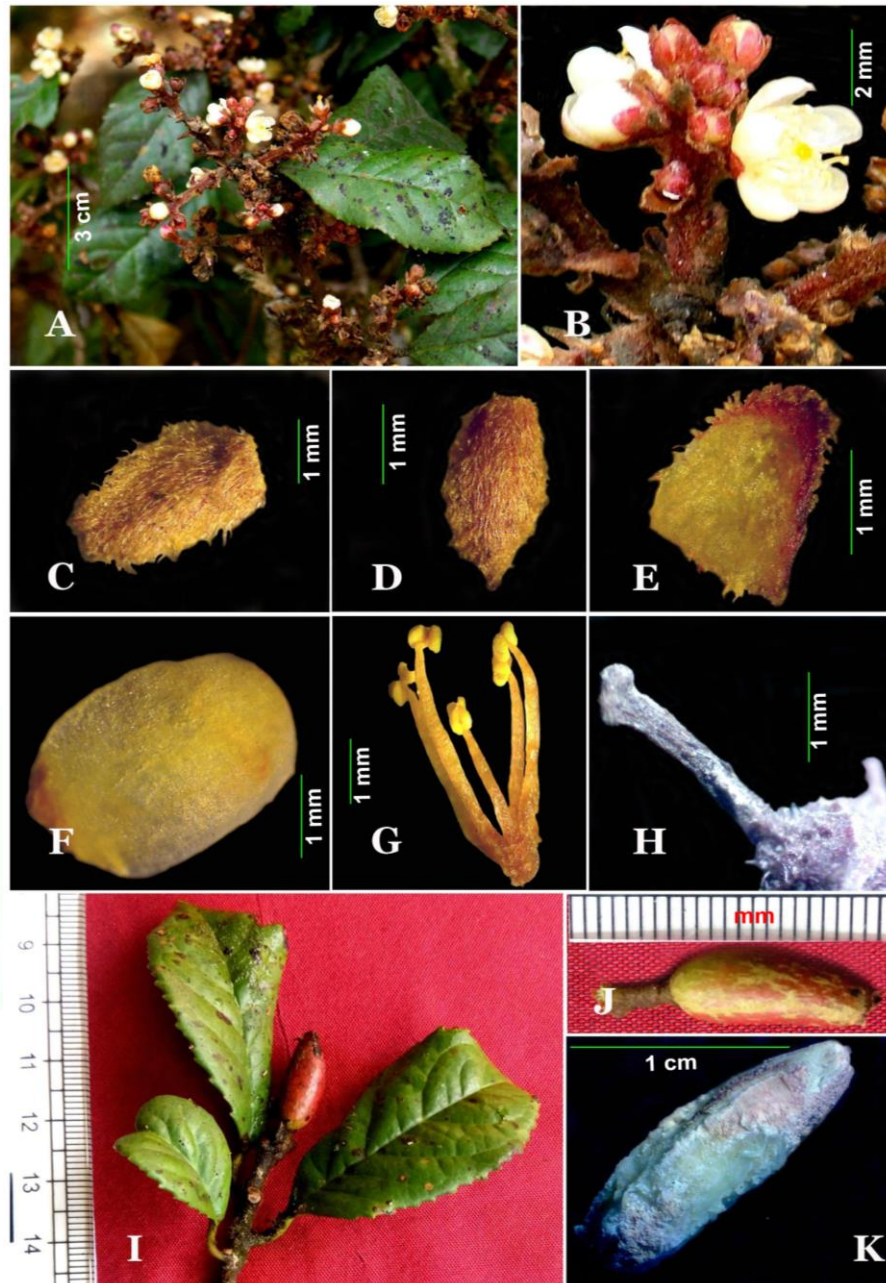


Figure 1: *Symplocos nicolsonii* R. Jagadeesan, A. Gangaprasad, S. P. Mathew E.S.S. Kumar, et J. Stephan. A. a flowering twig, B. an inflorescence, C. a bract, D. a bracteole, E. a calyx lobe, F. a corolla lobe, G. a bundle of stamen, H. a pistil, I. a fruiting twig, J. a fruit, K. a seed.

Table 1: Comparison between *Symplocos nicolsonii* sp. nov. and its allied species *S. lancifolia*

Characters	<i>S. nicolsonii</i> sp. nov.	<i>S. lancifolia</i>
Petiole	5-7mm long, brownish pubescent	1-3mm long, scarcely pubescent
Leaves	2-5.5 × 1-3.5cm, elliptic-obovate, margin serrate-revolute, brittle.	7-9 × 2-3cm, lanceolate, margin crenulate-serrulate, subcoriaceous to membranous.
Bract	2-3.1mm long, ovate, densely appressed pubescent	0.5-2mm long, ovate-triangular, glabrescent or glabrous
Bracteole	2-2.4mm, lanceolate-elliptic	0.5-1.5mm, ovate
Calyx tube	1.5-1.7mm, pubescent	0.5-1.5mm, glabrous-puberulous
Calyx lobe	2 × 1mm, ovate, margin lacerate	1.5 × 1.5mm, elliptic-triangular, margin ciliate
Stamens	25, as long as or shorter than the corolla	25-40, longer than the corolla
Disc	Pubescent	Glabrous
Style	Hairy at the base	Glabrous
Mesocarp	Thick, fleshy 6-8groves	Thin Without groves
Endocarp	Inconspicuous	(smooth), woody

Etymology: Specific epithet of the new taxon is named after late Dr Dan H. Nicolson (1933-2016) who passed away on 2nd June 2016, for his great contributions to the field of botanical nomenclature.

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