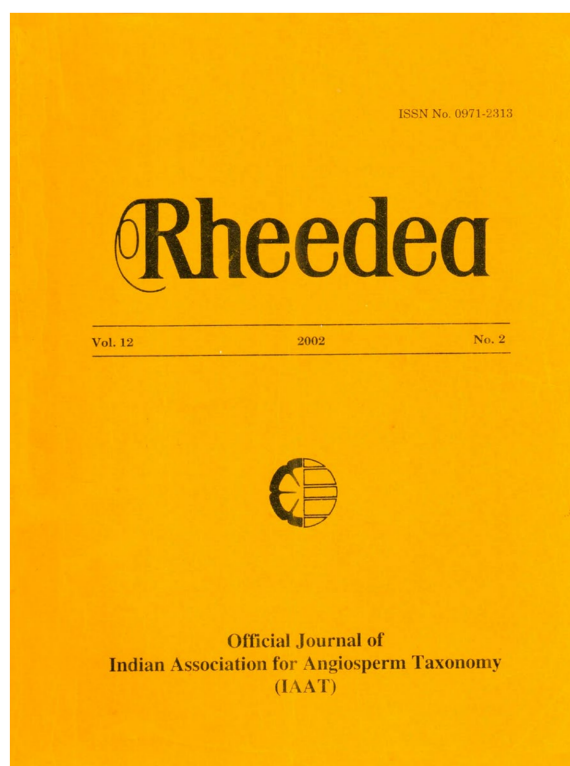




Taxonomic and Nomenclatural notes on *Claoxylon wightii* Hook. f. and its allies (Euphorbiaceae) from Southern Western Ghats, Tamil Nadu, India

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**Taxonomic and Nomenclatural notes on
Claoxylon wightii Hook. f. and its allies
(Euphorbiaceae) from Southern Western Ghats,
Tamil Nadu, India**

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Abstract

Claoxylon wightii Hook. f. and its varieties endemic to Tirunelveli hills were studied. The variety *Claoxylon wightii* Hook. f. var. *hirsutum* (Hook. f.) Susila & N.P. Balakr. is raised to its original specific level. Keys, detailed descriptions and illustrations for all taxa and critical notes on their distribution are provided.

INTRODUCTION

During intensive botanical explorations in Tirunelveli hills since 1996, specimens of *Claoxylon hirsutum* Hook. f., and *C. wightii* Hook. f., and its varieties were collected. After careful investigation the authors conclude that the variety *C. wightii* Hook. f. var. *hirsutum* (Hook. f.) Susila & N.P. Balakr. (1992, 1995) differs in many characters from *C. wightii* Hook. f. Therefore, Hooker's (1887) view has been followed here and *C. wightii* var. *hirsutum* is raised to its original specific level.

Claoxylon hirsutum is allied to *C. wightii* in many respects but can easily be distinguished by its prominently golden yellow hirsute habit, 2 cm long internodes, 6 cm long petioles, eglandular leaf-margins, 4.5 cm long pedicels and up to 2 mm long disk glands.

Key to the species

- 1a. Plants yellow-hirsute ; internodes up to 2 cm long; petioles
up to 6 cm long *C. hirsutum*
- 1b. Plants white-hirsute ; internodes up to 1 cm long ; petioles
up to 2 cm long *C. wightii*

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C. wightii Hook. f. var. *hirsutum* (Hook.f.) Susila & N.P. Balakr., J. Econ. Tax. Bot.16: 735. 1992 & Rheedea 5: 136.1995. *Micrococca wightii* (Hook. f.) Prain var.*hirsutum* (Hook. f.) Prain, Ann. Bot. London 25: 630. 1911; Pax & Hoffm. in Engler, Pflanzenr. IV(147) VII(63): 133. 1914; Gamble, Fl. Pres. Madras 2: 1328. 1925 (Fig. 1).

Shrubs up to 2 m high; branchlets prominently, densely yellowish tomentose or yellowish velvety hirsute. Leaves lanceolate to ovate-lanceolate, 1-6 x 1.5-2.5 cm, acute to cuneate at base, acuminate and mucronate at apex, irregularly glandular-dentate at margin, golden yellow or yellowish green on drying, velvety, shining, penninerved to plinerved; lateral nerves 5-7 pairs, looping towards apex; petioles 1.5-6 cm long, yellowish velvety-hirsute. Inflorescence racemose, axillary, 2.5-7 cm long, yellowish velvety-hirsute, flexuous. Female flowers: pedicels up to 4.5 mm, long, densely tomentose; sepals 3-lobed, lobes ca. 2 x 1 mm, greenish-white, hirsute outside; glands up to 2 mm long. Ovary ca. 2 mm, yellowish hirsute; styles 3, each up to 1 mm long. Capsules ca. 7 x 7 mm; seeds ca. 3 x 1.5 mm, dotted with white pits, thinly crustaceous.

Flowering and fruiting : March – November.

Ecology : Distributed in moist deciduous forests , $\pm$ 600m.

Distribution: Endemic to Tirunelveli and Kanyakumari districts of TamilNadu. (First record for Kanyakumari district).

Specimens examined : INDIA, **Tamil Nadu**: Tirunelveli district, Kupandi via Kannikatty, 21.05.1988, *Gopalan* 88628 (Male) (MH); Kanyakumari district, way to Red Fort Estate, Mahendragiri hills, 31.10.1998, *Sundaresan et al.* 17762 (Female) (XCH, MH); *Ibid.* 25.03.1999. *Jothi et al.* 18557 (Female) (XCH).

Note : Hooker (1887) and Gamble (1925) described the male plant of this species based on the collection of Beddome. While describing this species Hooker (1887) mentioned “I have seen but one specimen a male”. Recently Susila Rani & Balakrishnan (1992, 1995) described the male plant of this species based on the collection of Gopalan. Gopalan and Henry (2000) mentioned “very rare, I could collect only male flower from one small tree”. Hence, all the previous workers have collected only male plants.

A very striking species where only the male specimens were reported earlier. This is the first report of female specimens. It is seen that the distribution is restricted due to anthropogenic pressures. Hence, urgent preservation of germplasm material is necessary.

Taxonomic and nomenclatural notes on *Claoxylon wightii* Hook. f. and its allies



Fig. 1. *Claoxylon hirsutum* Hook. f.: A. Flowering & fruiting twig (Female); B. Flower; C. Sepal; D. Gland; E. Ovary; F. Ovary – L.S.; G. Ovary – C.S.; H. Fruit ; I. Seed.

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Claoxylon wightii Hook. f., Fl. Brit. India 5: 413. 1887; Rama Rao, Fl. Pl. Travancore 368. 1914; Susila & N.P. Balakr., J. Econ. Tax. Bot. 16: 733-736. 1992, Rheede 5: 133. 1995; Ramachandran, Rheede 8: 84. 1998.

Microrococca wightii (Hook.f.) Prain, Ann. Bot. 25: 630. 1911; Gamble, Fl. Pres. Madras 2: 1328. 1925; Chandrabose in Henry et al., Fl. Tamil Nadu 2: 234 : 1987.

Key to the varieties

1a. Internodes up to 5 mm long ; leaves densely hirsute var. *angustatum*

1b. Internodes up to 1 cm long ; leaves laxly hirsute to glaberrulous..... var. *wightii*

C. wightii Hook. f. var. **angustatum** Susila & N.P. Balakr., J. Econ. Tax. Bot. 16: 736. 1992, Rheede 5: 134. 1995. (Fig. 2).

Branches and branchlets densely hirsute. Leaves linear-lanceolate, 1 - 5 x 0.3 - 1.5 cm, acute to cuneate at base, subacuminate and mucronate at apex, glandular-dentate at margin, densely yellowish velvety-hirsute, nerves obscure. Male flowers: pedicels up to 0.25 mm long; sepals 3-lobed, lobes ca. 1 x 0.7 mm, pubescent outside; stamens ca. 10, exserted; filaments up to 0.2 mm long; anthers up to 0.25 mm long. Female flowers: pedicels up to 2 mm long, densely hirsute; sepals 3-lobed, each 1.2 x 0.5 mm, hirsute hairy outside; disk of 3 linear glands up to ca. 1 mm long, pubescent at apex; ovary 2 x 1.6 mm; styles 3-partite, each up to 0.7 mm long, plumose-laciniate. Capsules ca. 5 x 5.8 mm, hispid; seeds ovoid-globose, ca. 4.5 x 2.2 mm, testa crustaceous.

Flowering and fruiting : October – December.

Ecology : Evergreen forests, ±1000 m.

Distribution: Endemic to Tirunelveli hills of Tamil Nadu.

Specimens examined : INDIA, **Tamil Nadu** : Tirunelveli district , Singampatty forests at snake falls, ca 1000 m, R. H. Beddome s.n. (Isotype - MH, Acc.no.48141); *Ibid.* 07-12-1996, Sundaresan et al. 11593, 11597 (XCH).

Note : Susila Rani and Balakrishnan (1992, 1995) described this species based on Beddome's collection. Hence the present collection is a rediscovery after Beddome's collection made during 1868 –1873.

There is an urgent need to safeguard this endemic taxon, as chances of its survival against threats are limited as it may be swept away, if water level rises in the river.

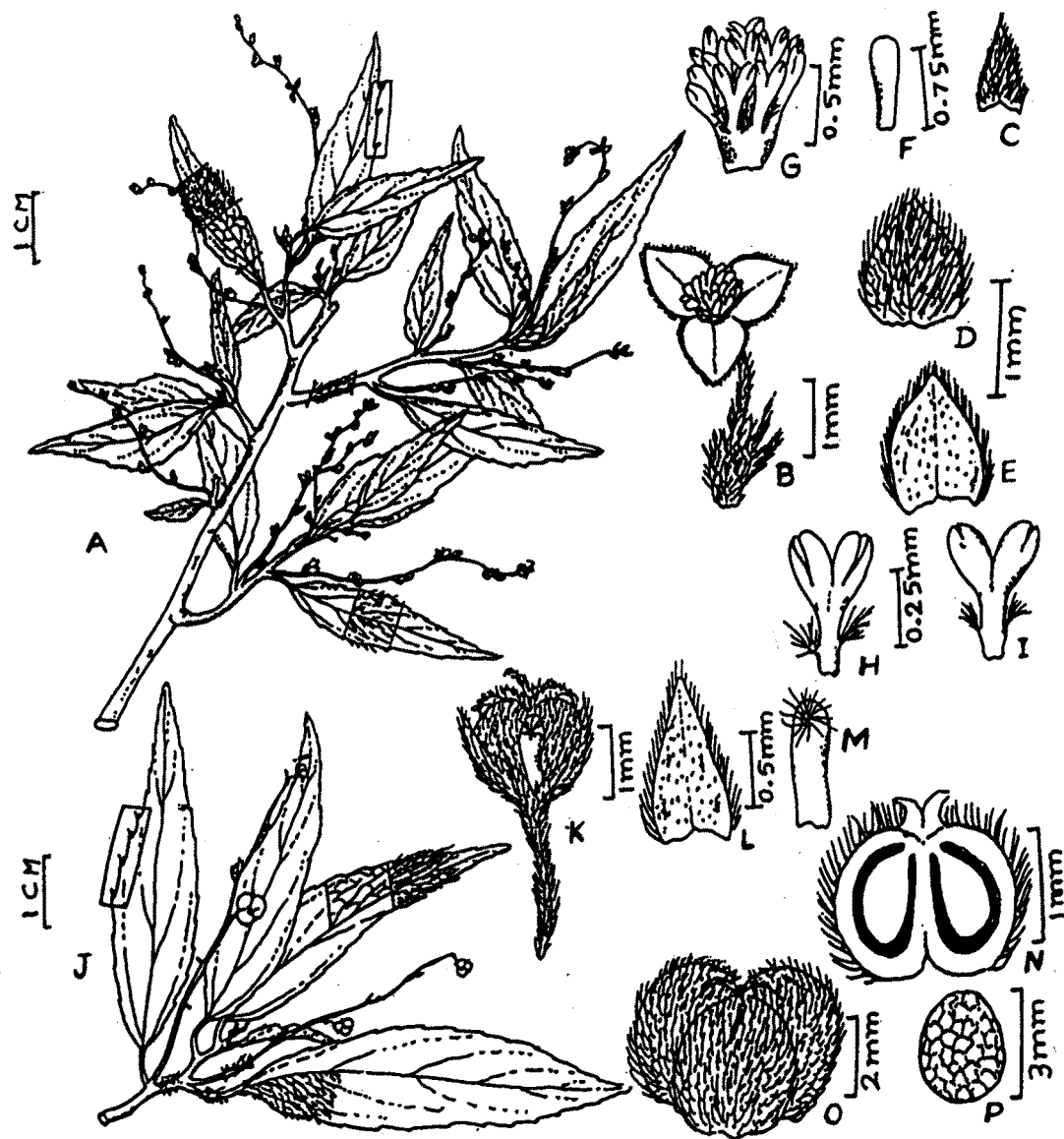
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Fig. 2. *Claoxylon wightii* Hook. f. var. *angustatum* Susila & N.P. Balakr.: A. Flowering twig (Male); B. Flower; C. Bract; D. & E. Sepals; F. Gland; G. Androecium; H. & I. Stamens (XCH11597); J. Flowering & fruiting twig (Female); K. Flower; L. Sepal; M. Gland; N. Ovary – L.S.; O. Fruit; P. Seed.

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Fig. 3. *Claoxylon wightii* Hook. f. var. *wightii*: A. Flowering twig (Male); B. Flower; C&D. Sepals; E & F. Stamens (XCH 16846).

Taxonomic and nomenclatural notes on *Claoxylon wightii* Hook. f. and its allies***C. wightii* Hook. f. var. *wightii* (Fig. 3).**

Shrubs up to 1 m high, laxly white hirsute hairy to glabrescent. Leaves lanceolate or oblong-lanceolate, ca. 6 x 2.5 cm, subcordate or truncate or rounded to acute at base, acute to acuminate at apex, glandular-crenate to serrate at margin, membranous, sparsely hirsute hairy beneath, less so to glabrous above, pale greenish on drying; lateral nerves ca. 6 pairs, at maturity very clear; petioles up to 1.5 cm long, 2-glandular at apex. Inflorescences up to 8 cm long, hispid. Male flowers: pedicels up to 3 mm long; sepals 3-lobed, lobes ovate, ca. 2 x 1.5 mm, hirsute hairy outside; stamens ca 10; filaments free, up to 0.5 mm long; anthers erect, up to 0.5 mm long. Female flowers and fruits not seen.

Flowering : July onwards.

Ecology : Moist deciduous forests, $\pm$ 500 m.

Distribution : Endemic to the southern Western Ghats in Tamil Nadu.

Specimens examined : INDIA, **Tamil Nadu**: Tirunelveli district, on way to Nambikoil, Thirukurungudi, 11.06.1998, *Manickam et al.* 16486, 16495 (XCH)).

Its habitat Nambikoil is an important pilgrimage spot and hence degraded by human activities. Frequent visits of pilgrims seriously affect the population of this endemic taxon. Hence, there is an urgent need for complete protection of this.

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