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## A NEW SPECIES OF *Sonerila* (MELASTOMATACEAE) FROM THE WESTERN GHATS - INDIA

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### Abstract

A new species of *Sonerila* Roxburgh (Melastomataceae) is described and illustrated. *Sonerila nayarana* sp. nov. occurs in the Velliangiri hills, the Western Ghats in the Coimbatore District, Tamil Nadu, India. It seems most similar to *Sonerila parameswaranii* Ravikumar & Lakshmanan, 1999.

**Key words:** taxonomy, *Sonerila nayarana*, Coimbatore, Tamil Nadu

### Introduction

*Sonerila* Roxburgh (Melastomataceae) occurs with c. 43 species from India and Sri Lanka to China and through Malesia to New Guinea (Lundin & Nordenstam, 2009; www.tropicos.org). It is well represented in Southern India. In Tamil Nadu there are about 23 species and 2 varieties (Nair & Henry, 1983; Giri & Nayar, 1985; Ravikumar, 1999). It is the only trimerous genus (except for the monotypic *Stussenia* Hansen and *Lithobium* Bong.) and the stamens are in one or rarely two whorls.

During a floristic study of the Velliangiri hills in the Western Ghats of the Coimbatore District, Tamil Nadu, India, a species of *Sonerila* was collected that appeared not to be identifiable with any previously known species (Hooker, 1897; Gamble & Fischer,

1957; Nair & Henry, 1983; Giri & Nayar, 1985; Ravikumar, 1999; Lundin & Nordenstam, 2009). It is apparently most similar to *S. parameswaranii* Ravikumar & Lakshmanan from the Pachakumatchi Hills, Tamil Nadu, and is here described as new.

***Sonerila nayarana*** Murugesan & Balasubramaniam  
**sp. nov.** (Pl. 1, Fig. 1)

**Type:** *Cat. no.* KASCH 343A-C (Holotype), MH 2784 A-C (Isotype); *Loc.* Velliangiri hills (1800 m a.s.l.), Coimbatore District, Tamil Nadu, India; *Coll.* M. Murugesan; *Date.* 18-IX-2004.

**Diagnosis:** *Sonerilae parameswaranii* similissima, habitu herbaceo prostrato vel procumbenti ad 30 cm alto, foliis ovatis ad orbiculariter ovatis 0.5-3 cm

longis 0.4-2.5 cm latis palminervatis, basi cordate rotundata raro truncata pilis paucis, marginibus serratis ciliatis, apice acuto, petiolo ad 2.5 cm longo, pedicellis ad 3 mm longis, filamentis 4—6 mm longis, antheris ovatis 2—4 mm longis, stylo 5—8 mm longo differt. Differentiae *S. parameswaranii* in tabula 1 datae.

*Sonerila nayarana* is most similar to *S. parameswaranii*, but differs in the prostrate to procumbent up to 30 cm long habit, leaves ovate or orbicular-ovate, 0.5-3.0 x 0.4-2.5 cm, palminerved, base cordate-rounded or rarely truncate with a few hairs, margins serrate, ciliate, apex acute, petiole up to 2.5 cm long, pedicels up to 3 mm long, filaments 4-6 mm long, anthers ovate, 2-4 mm long, style 5-8 mm long. The differences with *S. parameswaranii* are given in Table 1.

**Description of the holotype:**

Procumbent, unbranched or rarely with 1 or 2 branches, deeply rooted, succulent, annual herbs, 8-17 cm high; often rooting in the lower nodes. Branches and branchlets densely bulbous based hirsute hairy; hairs 2-4 mm long. Leaves simple, opposite or clustered at middle, ovate, 1-2.7 x 1-2.3 cm, 6-8 nerved, truncate or cordate, rarely cuneate at base, crenate serrate rarely dentate at margins, serratures hairy; the hairs often glandular, apex acute or very shortly acuminate or rarely obtuse or rounded; sparsely hirsute hairy on both surfaces, especially on the nerves; petiole 0.7-2.5 cm long; hirsute hairy at apex especially at the vicinity of leaf base, glabrous towards base, flat. Inflorescence a terminal scorpioid cyme, 2-5-flowered, 2-3 cm long, pedunculate. Flowers ca 1.5 cm across, shortly pedicelled, 3-merous, purplish; pedicel up to

3 mm long. Calyx-tube campanulate, 0.9-1.2 x 0.3-0.5 cm, densely bulbous based hirsute hairy as that of branches and branchlets; teeth 3, ovate, 1.5-2 x 2.5-3 mm, sparsely hirsute, acute or shortly acuminate at apex. Petals 3, obovate or rarely spatulate, 0.5-1 x 0.9-1.2 cm, prominently 1-nerved, sparsely hirsute hairy on nerves, acute or rounded and apiculate at apex. Stamens 3; filaments 4-6 x 0.5-1 mm, broad at base, narrowed towards apex; anthers yellow, lanceolate, rarely oblong or ovate-lanceolate, 3-4 x 1.5-2 mm, obtuse at apex, with an apical pore; connective without appendages. Ovary inferior, globose or subglobose, 2-3 mm long; ovules many; style simple, 5-6 mm long; stigma capitellate. Capsule obovoid, rarely globose or ovoid, 5-7 x 3-4 mm, prominently ribbed, hairy, enclosed in persistent calyx-tube; seeds many, minute.

**Remarks:** The species is present only during the South-west monsoon (August to September). Because the plants are so ephemeral and small, they are easily overlooked. We noticed only two well-separated populations, each of not more than 5 plants, one from under rocks and another one from rock crevices.

**Ecology:** Rarely found along the crevices of moist rocks in open grasslands at about 1700 m a.s.l. on western slopes. It is always associated with species such as *Eriocaulon* spp. *Impatiens clavicornu*, *I. goughii*, *Jansenella griffithiana*, *Parnassia mysorensis*, *Swertia minor*, *Tripogon anantaswamianus*, *T. bromoides*, etc.

**Flowering & Fruiting:** August-September.

**Table 1:** The major differences between the species

<i>Sonerila parameswaranii</i> Ravikumar & Lakshmanan, 1999	<i>Sonerila nayarana</i> Murugesan & Balasubramaniam, 2011
Plants erect.	Plants prostrate-procumbent.
Shrub up to 1.5 m high.	Herb up to 17 cm high.
Leaves ovate-lanceolate or oblong-lanceolate, 1.6-9.2 x 0.7-3.9 cm.	Leaves ovate / orbicular-ovate, 0.5-3.0 x 0.4-2.5 cm.
Leaves oblique at base, acuminate at apex.	Leaves cordate or rounded or rarely truncate at base, acute-very shortly acuminate or rarely obtuse or rounded at apex.
Leaves ciliate at margins.	Leaves with ciliate at serrature only.
Leaves pinninerved.	Leaves palminerved.
Petiole up to 6 cm long, densely villous.	Petiole up to 2.5 cm long, few hairy at the vicinity of leaf base only.
Pedicel up to 1.8 cm long.	Pedicel up to 3 mm long.
Anthers linear-lanceolate, 1-1.3 cm long.	Anthers ovate, 2-4 mm long.
Filaments 8-10 mm long.	Filaments 4-6 mm long.
Style 1.5-1.8 mm long.	Style 5-8 mm long.

**Etymology:** The new taxon is proposed in honour of Dr. M.P. Nayar, for his dedicated research in the field of Systematic Botany of Angiosperms.

**Abbreviations:** **KASCH**, Kongunadu Arts and Science College Herbarium; **MH**, Madras Herbarium (Botanical Survey of India, Southern Circle)

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#### **Literature cited**

Gamble, J. S. and C. E. C. Fischer, 1915-1936. *The Flora of the Presidency of Madras: Melastomataceae* Part 1-11. (Part 1-7 by Gamble and 8-11 by Fischer). Adlard & Sons Ltd., London: 488-505.

Giri, G. S. and M. P. Nayar, 1985. A new species of *Sonerila* Roxb. (Melastomataceae) from southern India. *Bulletin of the Botanical Survey of India*, 27(1-4): 86-89.

Hooker, J. D. (Ed.), 1897. *The Flora of British India: Melastomataceae - II*. Reeve & Co., London: 512-565.

Lundin, R. and B. Nordenstam, 2009. Two New Species of *Sonerila* (Melastomataceae) from South India. *Novon*, 19 (1): 76-79.

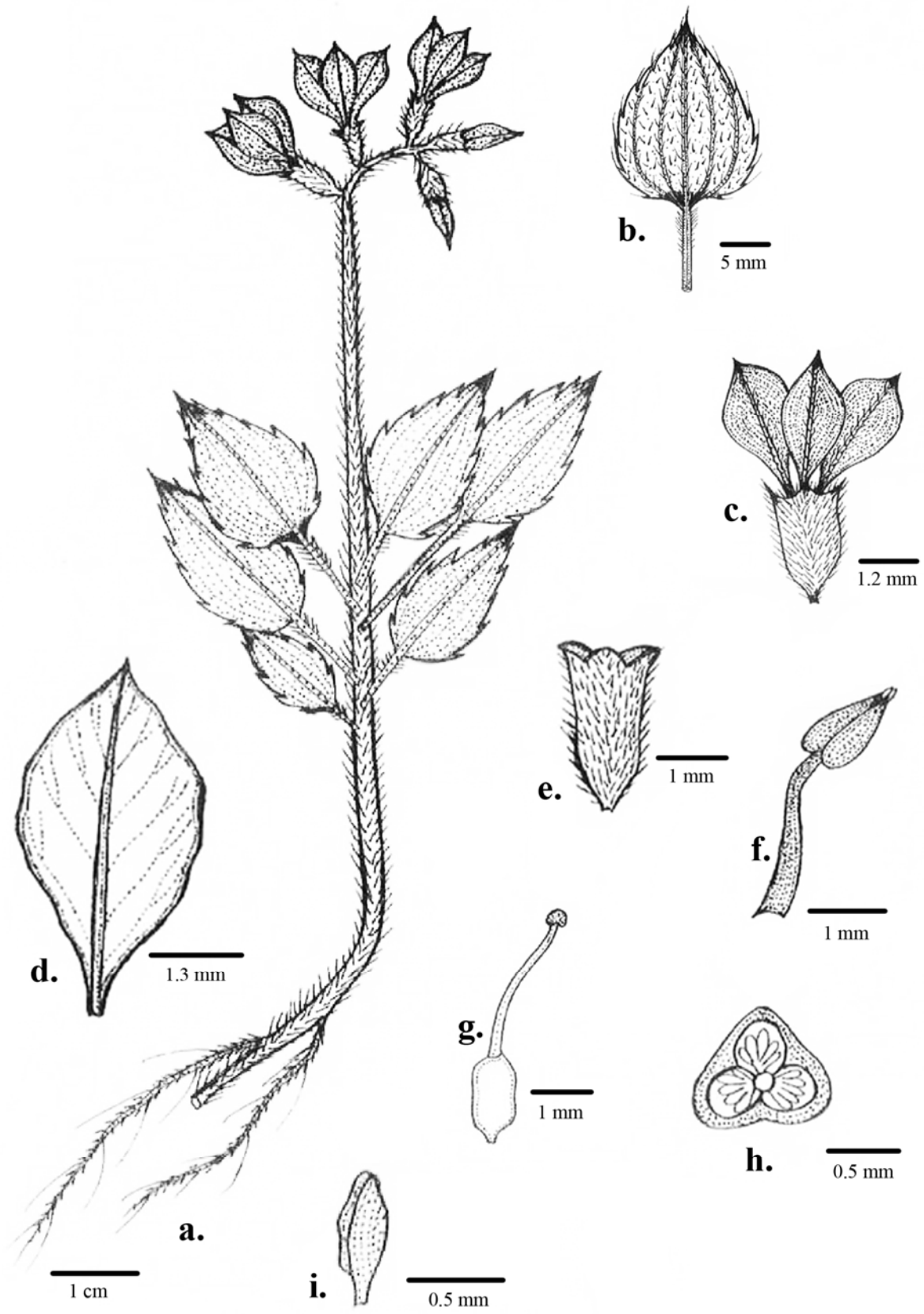
Nair, N. C. and A. N. Henry, 1983. *Flora of Tamil Nadu, India: Melastomataceae - I: Analysis* vol. 1: Botanical Survey of India, Coimbatore: 159-165.

Ravikumar, K. 1999. Novelties from High Wavy Mountains, Southern Western Ghats, Theni District, Tamil Nadu, India. *Rheedea*, 9: 55-75.

www.tropicos.org(<http://www.tropicos.org/NameSearch.aspx?name=Sonerila&commonname=>)

Downloaded on 7<sup>th</sup> August, 2011.

# PLATE 08



**Fig. 1:** *Sonerila nayarana* Murugesan & Balasubramaniam sp. nov.  
**a.** Habit, **b.** Leaf, **c.** Flower, **d.** Petal, **e.** Calyx-tube, **f.** Stamen, **g.** Pistil, **h.** T.S. of Ovary, **i.** Seed.