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RESEARCH ARTICLE

Sonerila sreenarayaniana (Melastomataceae), a new species from Kerala, India.

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Abstract

Sonerila sreenarayaniana C.N. Sunil, Naveen Kumar and Rajeev, a new species from Melastomataceae collected from the evergreen forest of Pooyamkuttu area of Ernakulam District, Kerala, India is described. The species is allied to *S. devicolamensis* Nayar but differs from it in having 4-angled stem with densely clothed brown peltate scales, penninerved, glandular bristly, larger leaf lamina and longer petiole, smaller calyx lobes, petals, filaments, anthers and style.

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Introduction

The genus *Sonerila* Roxburgh (Melastomataceae) with ca. 175 species (Lundin & Nordenstan, 2009) is distributed from Sri Lanka and India to the Indo – Pacific (Cellinese, 1997), and include caulescent and acaulescent herbs and shrublets. The genus classified under the tribe Sonerileae (Triana, 1866) and is clearly distinguished from other genera of the family Melastomataceae in having consistently trimerous flowers and mostly uniparous (scorpioid) cymes. In India it is represented by 43 species (Clarke, 1879). Subsequently many species were added to the genus from India from time to time by different workers (Fischehr 1932, 1935, 1938; Nayar 1969, 1976; Giri & Nayar, 1985 a, b, 1986 a, b, c, 1987 a, b; Prakash & Mehrotra 1988; Gopalan & Henry 1989; Giri et al .1992; Ravi Kumar 1999; Murugan & Manickam 2002; Josephine et al 2003; Lundin & Nordenstan 2009; Murugesan & Balasubramaniam 2011; Ratheesh Narayanan et al 2013.

During the study of flowering plants of the Ernakulam District in Kerala, India, the authors came across an interesting *Sonerila* from moist rocky area of evergreen forest. It is similar to *S. devicolamensis*, but the comparison with the type material and protologue revealed that it differs from the latter by a number of characters as given in table 1, being a new species.

Taxonomy

Sonerila sreenarayaniana Sunil, Naveen Kumar & Rajeev, sp.nov. Figs. 1& 2

Sonerila sreenarayaniana resembles *S. devicolamensis* Nayar but differs in having 4- angled stem with densely clothed brown peltate scales, penninerved, glandular bristly, larger leaf lamina and longer petiole, smaller calyx lobes, petals, filaments, anthers and style.

Type: - INDIA, Kerala, Ernakulam District, Pooyamkuttu forest, way to Variam colony, 10⁰ 10.909¹ N & 076⁰ 11.095¹ E, Elevation ca. 319 m, 16 October 2013, Sunil & Naveen Kumar 6274 (Holotype CAL; Isotypes MH)

Erect or procumbent annual herbs, 12-52 cm high. Stem unbranched or rarely with 1 or 2 branches, 6 - 12 mm across, 4- angled, densely clothed with peltate brown scales, often rooting in the lower nodes. Leaves 3.5 – 17 x 2.5 – 8 cm, ovate- lanceolate, base cordate or rounded, sometimes unequally cordate or slightly decurrent on petiole, margins serrate to sub entire, apex acute to acuminate, penninerved, nerves 4 - 6 pairs, prominently raised below,

subcoriaceous, generally light to dark greenish above, deep pinkish or purplish below, rarely pinkish or greenish on both surface, sparsely glandular bristly on the upper side and on the nerves of lower side; petiole 3.5 - 9 cm long, glabrous, adaxially grooved, dark pinkish to hyaline or light green. Inflorescence unbranched or branched terminal and upper axillary scorpioid cymes, each with 14 – 38 flowers; peduncle 4.5 – 8 cm long, angled, sparsely glandular bristly or glabrous, dark pinkish to hyaline. Flowers 1.2 – 1.4 cm across, 3- merous; pedicel 2 -3 mm long, 4 – 4.5 mm long in fruit, glabrous or with few scattered bristles. Calyx –tube 1.2 – 1.4 mm long, funnel shaped or campanulate; lobes 1.6 – 2 x 1.2 – 1.5 mm, broadly triangular, acute to acuminate at apex, sparsely bristly or glabrous. Petals 3, 5 – 6.2 x 2.7 – 3.2 mm, ovate – obovate, apex acute to acuminate, dark pinkish, glabrous or with few bristles. Stamens 3; filaments ca. 3 mm long, glabrous, pinkish; anthers 2.7 – 3 mm long, ovate – lanceolate, deeply cordate or sagitate at the base, apex acute, yellow, opening by apical pore. Ovary 1.2 – 1.4 x ca. 1.4 mm, subglobose, sparsely glandular bristly or glabrous; style 5 – 6 mm long, deep pink; stigma punctiform, dark papillose. Capsules 3 – 3.5 x 3 – 3.5 mm, campanulate, glabrous, enclosed in persistent truncate, white, 1.5 – 2 mm long calyx tube. Seeds many, ca. 1 x 0.3 mm, oblong, pale brown, minutely tuberculate, with a bladder – like appendage.

Notes

The new species is locally endemic with very limited distribution. This species can easily be recognised from the field by its brown coloured stem due to the peltate scales

Flowering & Fruiting: September – December

Etymology:- The species is named in honour of the great saint and social reformer, Sree Narayana Guru, in whose name a number of educational institutions have been established all over Kerala.

Habitat and Ecology: - *Sonerila sreenarayaniana* grows in permanently wet shady areas on moist rock and epiphytic on tree trunks at altitude ranging from 300 to 700 m in evergreen forests. *Argostemma courtallense* Arn., *Argostemma rostratum* Wall., *Utricularia striatula* Smith, *Rhynchosglossum notonianum* (Wall.) Burt, *Murdannia fadeniana* Nampy & Joby, *Remusatia vivipara* (Roxb.) Schott, *Elatostema lineolatum* Wight, *Dorstenia indica* Wall. ex Wight are the associated species.

Additional specimen examined: - India. Kerala: Ernakulam District, Pooyamkutty forest area, Way to Uriyampetty Colony. Elevation ca.520 m, 1 November, 2013, C.N. Sunil & V.V. Naveen Kumar, SNMH 5903(SNM College Herbarium, Ernakulam District).

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Table. The major differences between *Sonerila sreenarayaniana* and *S. devicolamensis* Nayar.

Characters	<i>Sonerila sreenarayaniana</i>	<i>Sonerila devicolamensis</i>
Stem	Uniformly 4- angled from base to apex, densely clothed with peltate brown scales.	Lower portion of the stem subangular and upper portion of stem terete, without peltate scales, reddish.
Leaf lamina	Large, 3.5 – 17 x 2.5 – 8 cm, penninerved, sparsely glandular bristly	Small, 3 – 6 x 1.5 – 3 cm, nerves arising from the apex of the petiole (palminerved), glabrous
Petiole	Large, 3.5 – 9 cm long	Small, 1 – 2.5 cm long
Calyx lobes	Small, 1.6 – 2 mm long	Large, 2.5 – 3 mm long
Petals	Small, 5 – 6.2 x 2.7 – 3.2 mm	Large, 13 – 15 x 10 – 12 mm
Filaments	2.7 – 3 mm long	6 – 7 mm long
Anthers	2.7 – 3 mm long	5.5 – 6 mm long
Style	5 – 6 mm long	12 – 13 mm long

Figure 1. *Sonerila sreenarayaniana* a. Habit; b. A portion of stem; c. Leaf segment; d. Inflorescence; e. A single flower; f. Calyx. G. Petal; h. Stamen; i. Pistil; j. Fruiting calyx; k. Seed

