



A new species of *Striga* section *Polypleurae* (Orobanchaceae) from southern Western Ghats of India

M. OMALSREE^{1,4}, K. M. PRABHU KUMAR^{2*}, M. SABU³, P. SUNOJKUMAR³, BINUTHOMAS¹, A. RAJENDRAN¹ & V.K. SREENIVAS⁴

¹ Research and Development Centre, Bharathiar University, Coimbatore, Tamil Nadu, India.

² Plant Systematics and Genetic Resources Division, Centre for Medicinal Plants Research, Arya Vaidya Sala, Kottakkal, Kerala, India; e-mail: prabhumkrishna@gmail.com

³ Department of Botany, Calicut University, Kerala, India.

⁴ Department of Botany, Sri Vyasa N.S.S. College, Wadakkanchery, Kerala, India.

Abstract

A new species of *Striga* from Tamil Nadu parts of Western Ghats of India is described and illustrated as *Striga kamalii* sp. nov. The new species shows similarity with *S. densiflora* in having a densely hispid stem, linear leaves, bracts longer than calyx, and oblong fruit shorter than calyx lobes, but differs in the 10-ribbed calyx, the glandular hairs on calyx and corolla tube, and the obovate-rounded petals. A detailed description, with data on distribution and parasitism together with relevant taxonomic notes and colour photographs are provided.

Key words: New species, Orobanchaceae, *Striga kamalii*, Tamil Nadu, Western Ghats

Introduction

The genus *Striga* Loureiro (1790: 22) belongs to the family Orobanchaceae (broomrape family), and has its centre of diversity in tropical Africa. Earlier the genus was accommodated in the family Scrophulariaceae, but based on morphological and molecular data the genus was transferred to Orobanchaceae (Olmstead *et al.* 2001). The genus comprises about 42 species with the highest diversity in tropical Africa (Jayanthi *et al.* 2014), where 28 taxa have been recorded of which 22 are endemic (Mohamed *et al.* 2001; Fischer *et al.* 2011). Only few taxa extend to the Arabian Peninsula and Asia, e.g. *S. lutea* Loureiro (1790: 22) and *S. gesnerioides* (Willdenow 1800: 338) Vatke (1875: 11) (Musselman & Parker 1981). Seven species were recorded so far from South India including the recent addition of two new species, viz. *Striga indica* Prabhu *et al.* (2013: 284) and *S. scottiana* Jeeva *et al.* (2012: 79).

All species of *Striga* are obligate root hemiparasites, and require some specific host plants for their survival (Botanga & Timko 2005). *Striga gesnerioides*, parasitizes on a variety of hosts belonging to the family Fabaceae, Convolvulaceae, Solanaceae, Vitaceae and Euphorbiaceae (Mohamed *et al.* 2001) and *S. indica* parasitic on *Euphorbia antiquorum* Linnaeus (1753: 450) (Jayanthi *et al.* 2014). The rest of the species are mostly parasitic on various members of Poaceae. Wettstein's (1895) treatment of *Striga* in Engler and Prantl's "Die Natürlichen Pflanzenfamilien", divides the genus into two sections based on the number of ribs on the calyx tube, viz. *S. sect. Pentapleurae* with 5-ribbed calyx and *S. sect. Polypleurae* with 10–15-ribbed calyx.

During recent field studies in Tamil Nadu, we encountered an unknown *Striga* species, parasitic on some Poaceae members at the campus of Bharathiar University, Coimbatore, Tamil Nadu during August 2011. Later we collected the specimen after one year from the same locality. The critical studies on the collected material have revealed that the species is related to *Striga densiflora* (Bentham 1836: 363) a species endemic to India, but differs in many characters. Detailed taxonomic studies with the perusal of relevant literature (Hooker 1884, Gamble 1924, Saldanha 1963, Matthew 1980) and critical comments from experts proved this to be a species hitherto unknown to science, which is described here.