



## *Miliusa gokhalaiei*, a new species of Annonaceae from India with notes on interrelationships, population structure and conservation status

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### Abstract

*Miliusa gokhalaiei* (Annonaceae), a new species from the Western Ghats, India, is described and illustrated. It is distinguished by unequal rounded leaf bases, sessile or shortly pedicellate flowers, thick fleshy petals, glabrous carpel, and included connective of anther. It is closely related to *M. indica* and *M. eriocarpa*, with which it shares sub-sessile or shortly petiolate, hairy-nerved leaves, axillary solitary flowers, and flask-shaped carpel with 1–2 ovules. Notes on interrelationships, population structure, conservation status and an identification key to the taxa of *Miliusa* in peninsular India are also provided.

**Key words:** Endemic species, Kerala, Peninsular India, Wayanad, Western Ghats

### Introduction

The genus *Miliusa* Leschenault ex Candolle (1832: 213) of the pantropical family Annonaceae is restricted in its distribution to the Austral-Asiatic ranges from India, Sri Lanka and Bhutan to Australia through the Malayan Islands, Philippines and Papua New Guinea (Mols & Kessler 2003). Recently the total number of species has reached 50 with four varieties ([http://zipcodezoo.com/Key/Plantae/Miliusa\\_Genus.asp](http://zipcodezoo.com/Key/Plantae/Miliusa_Genus.asp)) from earlier records of 40 by Mols & Kessler (2003). Mitra (1993) recognised 15 species in the treatment for the flora of India. During the last decade, three new taxa, viz. *Miliusa velutina* var. *deviyarina* Rajendran *et al.* (2003: 220), *Miliusa tirunelvelica* Murugan *et al.* (2004: 102), and *Miliusa wayanadica* Sujanapal *et al.* in Narayanan *et al.* (2010a: 64) were published from the peninsular Indian region, which has more species than other parts of Asia, and now there are a total of ten species and one variety, viz. *Miliusa eriocarpa* Dunn (1916: 58), *Miliusa indica* Leschenault ex Candolle (1832: 213), *Miliusa montana* Gardner ex Hooker & Thomson (1855: 148), *Miliusa nilagirica* Beddome (1868-1874: 18), *Miliusa tomentosa* (Roxburgh: 1795: 31. t. 35.) Sinclair (1955: 378), *Miliusa velutina* Hooker & Thomson (1855: 151), *Miliusa velutina* var. *deviyarina*, *Miliusa wightiana* Hooker & Thomson (1855: 149), *Miliusa longiflora* Sinclair (1955: 378), *Miliusa tirunelvelica* and *M. wayanadica* in the region.

Of the Indian species, five are endemic to peninsular India, and two have an extended distribution in Sri Lanka. Four species, viz. *M. andamanica* Finet & Gagnepain (1906: 151), *M. mukerjeeana* Mitra & Chakraborty (1994: 326), *M. tectona* Hutchinson ex Parkinson (1923: 75) and *M. jainii* Goel & Sharma (1991: 629) are present in the Andaman and Nicobar Islands with three endemic to the Andaman region. *Miliusa tomentosa*, *M. indica* and *M. zeylanica* Gardner ex Hooker & Thomson (1855: 149) are distributed in Sri Lanka also (Huber 1985). Western Ghats with tropical evergreen and moist deciduous forests are the habitats of *Miliusa* in peninsular India.