

16th Annual Research Symposium Proceedings



Faculty of Agriculture
Rajarata University of Sri Lanka

2024

RANGE EXTENSION AND TAXONOMIC NOTES ON *Mastixia nimalii* IN RATHNAPURA DISTRICT, SRI LANKA

A. Perera¹, H. Jayasinghe², I. Madawala^{1,3}, N. Gunatilleke⁴ and N. Geekiyanage⁵

¹Postgraduate Programmes, Faculty of Agriculture, Rajarata University of Sri Lanka, Anuradhapura, Sri Lanka.

²National Institute of Fundamental Studies, Hantane Road, Kandy, Sri Lanka.

³Agriculture Publication Unit, Department of Agriculture, Gannoruwa, Peradeniya, Sri Lanka.

⁴Department of Botany, Faculty of Science, University of Peradeniya, Peradeniya, Sri Lanka.

⁵Department of Plant Sciences, Faculty of Agriculture, Rajarata University of Sri Lanka, Anuradhapura, Sri Lanka.

The genus *Mastixia* of the family Nyssaceae is represented by five species in Sri Lanka, including three endemics. *M. congylos* and *M. nimalii* are the most recent additions to this genus which are lesser-known species. Extensive floristic surveys were carried out under the *Endana* biodiversity corridor project, with transects (100 m × 5 m) being demarcated in the *Walankanda* forest reserve along the elevation gradient. A checklist of the flora in different habitats was recorded and geotagged. *M. nimalii*; is a rare, endemic, and critically endangered species from *Walankanda* Forest Reserve of Sinharaja Forest Range. For the first time, another population was observed in *Kiribathgala* forest reserve near *Pelmadulla*, *Rathnapura*. The survey differentiated *M. nimalii* from the sympatrically occurring *M. tetrandra* even in sterile conditions in the field, which was not documented before. *M. nimalii* can be differentiated from the latter by having leaves obovate to oblanceolate (vs. oblanceolate to oblong-oblanceolate), 7 – 14 × 4 – 6 cm (vs. 5 – 10 × 2 – 4 cm), apex acute to lanceolate, base cuneate (vs apex acute, base attenuate), petiole 1.5 – 4 cm (vs. 1.5 – 3), vans 4 – 7 pairs (vs. 4 – 6 pairs). Herbarium specimens were prepared from the collected samples and are to be deposited in the National Herbarium, *Peradeniya*. Further two distinct micro-habitat conditions were identified for each species. *M. nimalii* was found in riverine habitats, with branches facing the sunlight, suggesting it is the true *Diya-thaliya* species, as its vernacular name indicates its close association with water. In contrast, *M. tetrandra* was found inhabiting higher ground areas. These new records expand the known range of *M. nimalii*, which was previously reported from a few locations in Sinharaja forest. In the *endane* threatened plant nursery, a few saplings of *M. nimalii* are ready for *in-situ* and *ex-situ* conservation. These records highlight the value of biodiversity in *Walankanda*, and *Kiribathgala* forest reserves for conservation and need for future research on taxonomy within this globally recognized biodiversity hotspot.

Keywords: Biodiversity hotspot, *Endana* biodiversity corridor, *Kiribathgala* forest reserve, Plant taxonomy, Sri Lankan endemic flora.