

A NEW DISTRIBUTION RECORD FOR THE CRITICALLY ENDANGERED MADURA SWAMPWEED *HYGROPHILA MADURENSIS* (N.P. BALAKR. & SUBR.) KARTHIK. & MOORTHY (ACANTHACEAE)

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The Flora of British India reported 49 genera, 504 species and 127 varieties of Acanthaceae from India (Clarke 1885). The recent report in “Flowering Plants of India” by Karthikeyan et al. (2009) listed 47 genera, 475 species and 118 varieties of Acanthaceae in India. The genus *Hygrophila* R.Br. belongs to the family Acanthaceae and comprises about 100 species (Hai & Huyen 2012), of which many are aquatic plants (Deng et al. 2011). Clarke (1885) reported eight species under the genus *Hygrophila* from India. Later Gamble (1924) listed four species in the Flora of the Presidency of Madras. Matthew (1983) reported four species in the Flora of the Tamil Nadu Carnatic. Henry et al. (1987) listed six species of *Hygrophila* in the Flora of Tamil

Nadu, while retaining *Santapaua* as an independent genus.

During botanical explorations in Pudukkottai District of Tamil Nadu in December 2013. *Hygrophila madurensis* (N.P. Balakr. & Subr.) Karthik. & Moorthy (Acanthaceae) was collected from marshy localities. This species is listed as Critically Endangered and endemic to Tamil Nadu found along the foothills of the Eastern Ghats section (Walter & Gillett 1998; Arisdason 2011). The type specimen was collected from Nallakulam in Alagar Hills, Madurai District of Tamil Nadu on 12 February 1958. After the type collection, this was collected only once by Ravikumar in 1984 (IUCN 2013). Balakrishnan & Subramanyam (1963) described the genus *Santapaua* with only one species, namely *Santapaua madurensis*. Taking into consideration the broader concept of the genus *Hygrophila* as suggested by various authors, encompassing several related genera like *Adenosma*, *Asteracantha*, *Cardanthera*, *Hemiadelphis*, *Nomaphila* and *Synnema*, Karthikeyan & Moorthy merged the genus *Santapaua* with *Hygrophila*. Therefore, if *Hygrophila* is treated as sensu lato, this species should now be known by the name *Hygrophila madurensis* (N.P. Balakr. & Subr.) Karthik. & Moorthy (Arisdason 2013). The present sighting at Pudukkottai plains is a new distribution record from Tamil Nadu.

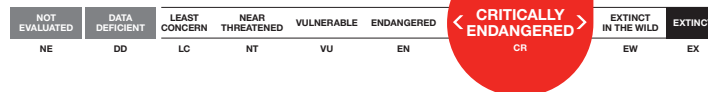


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Hygrophila madurensis
 Madura Swampweed



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This paper provides a brief description, distribution, illustration and photographic images for a better understanding of the species.

Hygrophila madurensis
(N.P. Balakr. & Subr.) Karthik. & Moorthy
(Images 1–2)

In *Flowering Plants of India Dicotyledons (Acanthaceae - Avicenniaceae)* 1: 22. 2009. *Santapaua madurensis* N.P. Balakr. & Subr. in *J. Indian Bot. Soc.* 42: 411. 1963; Henry et al., *Fl. Tamil Nadu, India series I: Analysis*, 2: 160, 1987.

Specimen examined: SJCBOT3329, Kudumiyanmalai, Pudukkottai District, Tamil Nadu 17.xii.2013, coll. P. Raja and identified by S. Soosairaj, Dept. of Botany, St. Joseph's College, Tiruchirappalli and confirmed by matching with isotype (Subramanyam 5286 B-C) at the Madras Herbarium (MH), Botanical Survey of India, Southern Regional Centre, Coimbatore (Image 3).

Description: Herbs, 10–20 cm high; branchlets decumbent, arising from base, stems quadrangular

with raphides arranged longitudinally, swollen at nodes. Leaves thin, membranous, glabrous, oblong, lanceolate, oblanceolate, base cuneate, margin minutely crenulate, acute or subacute at apex, nerves 5–7 pairs, prominent below; raphides scattered on upper surface, petioles up to 2.5mm long. Flowers in axillary open dichasial cymes becoming sympodial and unilateral; primary peduncle ca. 5mm long; internodes ca. 3mm long; bracts linear, acute, 2–5 mm long; pedicels ca 1mm long. Calyx-lobes 5, free, sub equal, linear, acute, 4–5×1 mm. Corolla purple, ca. 0.9×0.5 cm across; tube funnel-shaped, broad, pubescent inside; upper lip bifid emarginate, lobes rounded; lower lip trifid, lobes obtuse, rounded. Stamens 4, fertile, didynamous, filaments linear, filiform, glabrous, 2–4 mm long; anthers oblong, ellipsoid, 1–1.3 mm long. Ovary pubescent, ca. 2mm long, oblong–elliptic, 2-celled; ovules many; style linear, 4mm long; stigma simple. Capsules linear-oblong, flat, sessile, ca. 7×1 mm; seeds bearing throughout the length of the capsule; retinacula minute, conical, straight, slender. Seeds 10–40, small, ellipsoid, compressed, glandular puberulous.



Image 1. *Hygrophila madurensis* (N.P.Balakr. & Subr.) Karthik. & Moorthy
a - habit; b - flowering twing; c - flower



Image 2. Map showing the distribution of *Hygrophila madurensis* at present collection

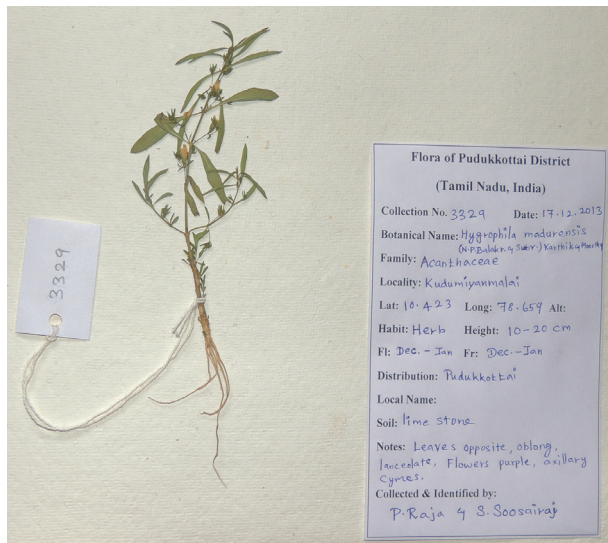


Image 3. Herbarium image of *Hygrophila madurensis*

Habitat: Marshy localities along edges of seasonal ponds.

Flowering & fruiting: December–January.

Distribution: Endemic to Tamil Nadu (Madurai, Pudukkottai).

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