

HYGROPHILA BENGALENSIS MANDAL, BHATTACHARJEE ET NAYEK SP. NOV.
— A NEW SPECIES OF *HYGROPHILA* BR. FROM 24-PARGANAS (S), WEST
BENGAL.¹

S.K. MANDAL², ALOKE BHATTACHARJEE³, AND AJIT KUMAR NAYEK⁴

(With nine text-figures)

Frutex annuus, ca. 1 m longa; caulis erectus, parum quadratus, longitudinaleter striatus, ad nodus tumidus, internodia longa, ca. 3.5-4.0 cm, minus ramosa glabra. Folia simplicia, opposita, decussata; obovata ad elliptico-lanceolata, 3.5-4.0 x 0.7-1.0 cm, ad marginem undulata cum pilis marginalibus, sessilia vel minute stipitata; nervi 5-6 paribus, infra plus prominenti. Inflorescentia axillaris cymosa, paniculata; bracteae bracteolaeque lineari-oblongae, obtusae, minute pilosae in area marginali. Flores regulares, bisexuales, 2.0-2.4 cm, subsessiles, flavi. Calyx 5-lobatus, tubularis, usque ad 1/3 longitudinis divisus, lobi lineares, subequales, acuminati, ad apicem cum caespite pilorum, intus hispida, 5-nerves, 0.7-0.8 cm, viridis, calyx fructifer divisus usque ad basin, lobi aequales, lanceolati, raphides manifestae praesentes, intus pilosa. Corolla bilabiata, limbus profunde bilabiatus, lobi 5, aequales, subovati, 2.2-2.4 cm, pubescentes, flavi. Stamina 4, didynama, 2 stamina posteriora 12 mm longa, 2 anteriora 6 mm longa, anthera 2 mm, oblonga, 2-locularis, inaequalis, dorsifixae, filamentum deorsum pilosum. Ovarium oblongum, 5 mm, sursum minute pilosum, stylus longus, ca. 1.5 cm, gracilis, minute pilosum; stigma lineare, articulatum, 2-4 mm longum. Capsula 1.5-2.0 cm longa ad dimidium inclusa in calyce persistenti, minute pilosa, suturae 2, longitudinaliter dehiscens, 2-locularis. Semina

24-30, alternatim disposita, affixa cum retinaculis unciformis, ovoidea, minute arillata ad apicem, ventraliter incisurata, 0.8-1.2 mm, testa minute pilosa.

Hygrophila bengalensis Mandal, Bhattacharjee et Nayek differt a *H. salicifolia* Nees foliis obovatis ad elliptico-lanceolatis, marginibus undulatis, floribus flavis, calyce persistenti cum pilis marginalibus, stylo longo, gracili, stigmate longo, articulato, seminibus 24-30, alternatim dispositis per retinacula curvata unciformes affixis, ad apicem minute arillatis, et ventraliter incisuratis, testa cumpilis lanatis mucilagineis.

DESCRIPTION

Annual shrubs, upto 1 m long; stem erect, slightly squarish, longitudinally striated, swollen at the nodes, internode long, about 3.5-4.0 cm, less branched, glabrous. Leaves simple, opposite decussate, obovate to elliptic-lanceolate, 3.5-4.0 x 0.7-1.0 cm, margin undulate with marginal hairs, sessile or minutely stalked; vein 5-6 pairs, more prominent on the lower surface. Inflorescence axillary cymose panicle; bracts and bracteoles linear-oblong, obtuse, minutely hairy on the marginal area. Flower regular, bisexual, 2.0-2.4 cm, subsessile, yellow. Calyx 5-lobed, tubular, divided upto 1/3 of its length; lobes linear, subequal, acuminate, tuft of hair at apex, inner side hispid, 5-nerved, 0.7-0.8 cm, green, in fruit calyx divided upto the base, lobes equal, lanceolate, prominent raphide present, inner side hairy. Corolla-limb 2-lipped, lobes equal, sub-ovate, 2.2-2.4 cm, pubescent, yellow. Stamen 4,

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²Central National Herbarium, Indian Botanic Garden, Howrah-711103.

³Botanist, HQ., P-8 Brabourne Road, BSI, Calcutta-700 001.

⁴Research Scholar, BSI P-8 Brabourne Road, Calcutta-700 001.



Fig. 1-9. *Hygrophila bengalensis* Mandal, Bhattacharjee et Nayek, sp. nov.

1. Flowering twig; 2. Fruiting twig; 3. Dorsal surface of calyx; 4. Calyx showing hairs on ventral surface; 5. Flower — corolla split open; 6. Ovary with persistent calyx; 7. Gynaecium with articulate stigma; 8. Fruit; 9. Seed.

didynamous, posterior 2 stamens 12 mm and anterior pair 6 mm; anther 2 mm, oblong, 2-celled, not equal, dorsifixed, lower portion of the filament hairy. Ovary oblong, 5 mm upper portion minutely hairy; style long, about 1.5 cm, slender, thin, minutely hairy; stigma linear, articulate, 2-4 mm long. Capsule 1.5-2.0 cm long, half-way included within persistent calyx, minutely hairy, sutures 2, dehiscent longitudinally, 2-chambered. Seeds 24-30, alternately arranged, attached with hook-shaped retinacula; seeds ovoid, minutely arillated at the top, ventrally notched, 0.8-1.2 mm, testa minutely hairy (visible by absorbing in moisture).

The species is allied to *Hygrophila salicifolia* Nees but differs from it by the leaf-shape being obovate to elliptic lanceolate with undulated margins, flower yellow, persistent calyx with marginal hairs, long slender style with

long articulate stigma, seeds 24-30 alternately arranged, attached by curved hook-shaped retinacula. Seeds mainly arillated at the top and ventrally notched. Testa with mucilaginous woolly hairs.

LOCALITY

Gorkhara, Sonarpur, 24-Parganas (South), West Bengal, Coll. S.K. Mandal 30.i.1996. Holotype field No. 1216/A deposited in the CAL (Central National Herbarium). Isotype field No. 1216/B - D also deposited in the same Herbarium.

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