



Blyxa Japonica (Miquel) Maximovicz Ex Ascherson Et Gurke Var. *Japonica* (Hydrocharitaceae) and *Najas Malesiana* De Wilde (Najadaceae) - New Records for West Bengal

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ABSTRACT

As part of a thoroughly field survey in Wetlands of Puruliya District , West Bengal *Blyxa japonica* (Miquel) Maximovicz ex Ascherson et Gurke var. *japonica* (Hydrocharitaceae Juss.) were investigated from Adra Sahebbundh, Babirbundh, Kalidaha (Jore) and Rampur Barabundh. *Najas malesiana* de Wilde (Najadaceae Juss.) is also collected from Kalidaha (Jore). These two species were not recorded from West Bengal. So, these two species are a contribution to the flora of West Bengal. A complete morphological description of two species and data on Propagation, Growth-form, Status and distribution are presented.

KEYWORDS

Field Survey, Hydrocharitaceae, Najadaceae, New Records, Puruliya

INTRODUCTION:

During the survey of Wetlands in the District of Puruliya , West Bengal for research work *Blyxa japonica* var. *japonica* belonging to the family Hydrocharitaceae were collected from four wetlands viz. Adra Sahebbundh, Babirbundh, Kalidaha (Jore) , Rampur Barabundh in the Block of Kashipur and *Najas malesiana* belonging to the family Najadaceae is also collected from Kalidaha (Jore) in Kashipur Block. These specimens were identified from authentic literatures and have been processed for preservation in the Herbarium , Sidho-Kanho- Birsha University, Purulia.

A thorough study of the Floras of different parts of India including West Bengal (Bennet,1979; Bhattacharyya and Sarkar, 1998; Biswas, 1966; Duthie, 1960; Gantait *et al.*, 2010; Guha Bakshi, 1984; Prain ,1963; Sanjappa *et al.*,1990; Malick, 1966; Mandal and Mukherjee, 2007, 2012a, 2014, 2016c; Mandal *et al.*, 2003; Mukherjee,1986; Mukherjee and Namhata, 1988; Mukhopadhyay *et al.* , 2007; Murti and Panigrahi, 1989; Prain ,1963; Sanjappa *et al.*, 2012; Sanyal, 1994; Wu and Raven, 2010) fails to reveal the occurrence of these species in West Bengal. So, the present findings are an addition to the flora of West Bengal. For proper identification of these species a brief description is appended below:

HYDROCHARITACEAE JUSS.

Blyxa Thouars.

Blyxa japonica (Miquel) Maximovicz ex Ascherson et Gurke var. *japonica* ; Cook , in *Ber. Schweiz. Bot. Ges.* 83 (1): 59. 1973; Cook, Aqu. Wet. Pl. India 217. 1996; Mandal & Mukherjee in Indian j. Sci. Res. 1 (2): 119. 2010 ; Mandal & Mukherjee , Stu. of Wet. in Pur. Dist. W. B. Ind. with Spec. Emphas. On their macrophytes . 186-187. 2012 b; Mandal & Mukherjee, A Diamo. Collect. Resear. Articl. 162. 2016a; Mandal & Mukherjee, in Inter. Jour. Innov. Res. Advan. Stud. 183. 2016b.

Annual, scapigerous herbs, 40-43 cm in height. Stem herbaceous, branched, fistular , slender, emergent cylindrical, flaccid, glabrous; internode 2.5–4 cm; branching lateral, slender. Leaves opposite decussate, cauline, lanceolate, 2.5 X 0.5 cm, entire-undulate, acute, pubescent, sessile, gradually attenuate at a blunt point at the tip; venation parallel, midrib dis-

tinct. Inflorescence with 5 flowers ; flowers complete, bisexual, diplochlamydous, actinomorphic, hypogynous, trimerous, pedicilate; pedicel 4 mm; calyx 3, gamosepalous; corolla 3, linear, white, 4 mm; stamens 2, anisomerous; filaments filiform; anthers narrow, 2- celled; carpels 3, syncarpous; ovary swollen; style short; stigma 3.

Fl. & Fr.: October - November.

Propagation by: Seeds .

Field notes: Common in Jore, bundh, wet places and at the margin of water bodies.

Growth-form: Natopotamids.

Status: Common.

Distribution: South and East Asia. Introduced in rice fields of Italy, Bangladesh, Burma, India, Nepal, Meghalaya.

Specimens examined: Kalidaha (Jore) [23° 37' N 86° 75' E] , MM-257; Adra (Sahebbundh) [23° 28' 57" N 86° 42' 35" E] , MM-330, MM-332; Rampur (Barabundh) [23° 38' N 86° 76' E], MM- 456, Babiddi (Babirbundh) [23° 37' N 86° 75' E] , MM-592.

NAJADACEAE JUSS.

Najas L.

Najas malesiana de Wilde in Acta Bot. Neerl. x. 168. 1961; Cook, Aqu. Wet. Pl. India 270.1996; Mandal & Mukherjee in Indian j. Sci. Res. 1 (2): 121. 2010 ; Mandal & Mukherjee , Stu. of Wet. in Pur. Dist. W. B. Ind. with Spec. Emphas. On their macrophytes . 202. 2012 b; Mandal & Mukherjee, in Inter. Jour. Innov. Res. Advan. Stud. 183. 2016b.

Vernacular name: Chingri-dal.

Plant annual herb, aquatic, submerged, 11 cm. Stem herbaceous, branched, filiform, solid, cylindrical, creeping, without spine, pubescent; branching lateral, slender. Leaves whorled, simple, linear, 21–23 X 1 mm, serrulate, acute, pubescent, 3-10 spines on each side, spine upward, broad, prominent, pointed, leaf sheath hyaline, spiny, 2 mm.

Fl. & Fr.: October-December.

Propagation by: Seeds.

Field notes: Rare in Jore, bundh etc.

Growth-form: Parvopotamids.

Status: Rare.

Distribution: Tropical Asia and Australia. India, Bangladesh, Indochina, Malaysia, Indonesia, Philippines, naturalized in eastern Brazil.

Specimen examined: Kalidaha (Jore) [23° 37' N 86° 75' E] , MM-256, MM-688.

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HABITAT ECOLOGY:

Adra Sahebbundh: It is located at 86° 42' 35" E longitude and 23° 28' 57" N latitude. It covers about 11 acres of land. This perennial, freshwater, man-made, Government owned wetland was constructed for the supply of water in Railway station, water shed, steam engines. It is also used for domestic purposes. Mohanpura, Metyalsahar, Sarberiya, Kalikend, Doulatpur etc are the adjoining villages of this wetland.

Babirbundh:

Babirbundh is located at 86°75'E longitude and 23° 37'N latitude in Kashipur Block. It is a perennial, freshwater, man-made, Government owned wetland which occupies about 18 acres of land. It is a popular sacred wetland of the locality due to belief of tribal communities.

This wetland is used as a sacred wetland in the locality due to worship and prayer in every Sunday. Women from the localities of Chhatna, Jhantipahari, Sirjam, Kapista, Majramura, Sutaboy, Roytora, Sihika, babiddi, Talajuri, Gourangadi etc come to this wetland for worship. This wetland is also used for pisciculture, irrigation and domestic purposes.

Kalidaha jore:

It is located at 86°75'E longitude and 23°37'N latitude in Kalidaha in Kashipur Block. It is a perennial, freshwater, natural, Government owned wetland which covers about 9 acres of land. It is a conserved wetland where hunting of migratory birds is completely prohibited. Water of this perennial wetland is used for domestic purposes, irrigation, fishing, washing of vehicles. Babiddi, Pathuriyagora, Jagannathdhi, Mohulkoka, Indrabil are adjoining villages to the wetland.

Rampur Barabundh:

It is a perennial, freshwater, man-made, privately owned wetland which is located at 86°76'E longitude and 23°38'N latitude. It covers about 27 acres of land. The main utility of the wetland are as domestic uses and irrigation. Recently the vegetation of this wetland is exploited due to improve of wetland by the Government.

REVIEW OF LITERATURES:

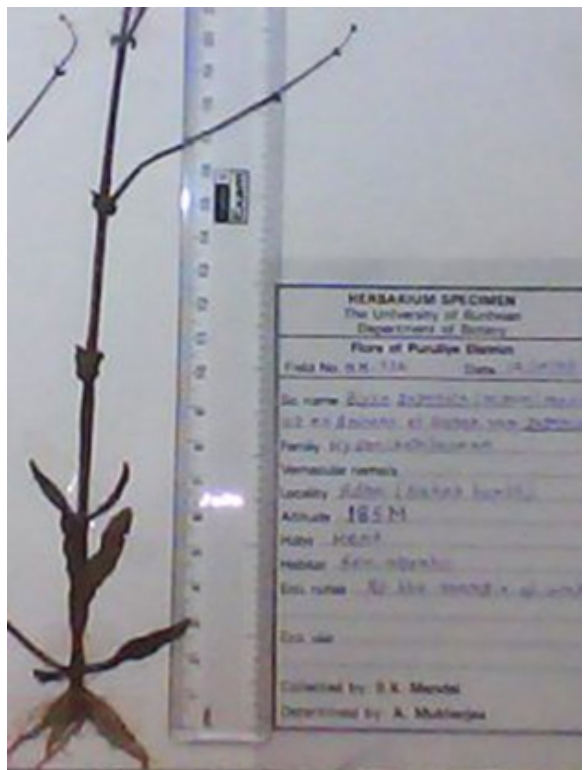
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a. A view of Adra Sahebbundh



b. A view of Rampur Barabundh



c. *Blyxa japonica* (Miquel) Maximo ex Ascherson Wilde. et Gurke var. *japonica*



d. *Najas malesiana* Wilde

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