

**FLEMINGIA FLUMINALIS C.B.CLARKE (FABACEAE) - REDISCOVERY
OF AN ANGIOSPERM FROM BANGLADESH**

KHANDAKAR KAMRUL ISLAM¹ AND SARDER NASIR UDDIN

Bangladesh National Herbarium, Chiriakhana Road, Mirpur-1, Dhaka-1216, Bangladesh.

Keywords: Flemingia fluminalis, Angiosperm, Rediscovery, Bangladesh

Flemingia Roxb. ex W.T.Aiton is a genus of Fabaceae consists of 30 species distributed in tropical Asia, Africa and Oceania regions but widely sprceaded in China, Vietnam and India Gilbert, 2010. Khatun and Naderuzzaman, 2009 described a total of 9 taxa (*viz. Flemingia chappar, F. fluminalis, F. involucrate, F. lineata, F. macrophylla, F. paniculata, F. praecox, F. stricta* and *F. strobilifera*) under *Flemingia* Roxb. ex W.T.Aiton genus from Bangladesh. Among these taxa, *Flemingia fluminalis* C.B.Clarke ex Prain was collected from Chittagong (present Chattogram) by Prain in 1897. After Prain, any one (*viz. Uddin & Hassan, 2018; Khatun & Nedaruzzaman, 2009; Islam et al., 2016 & 2016a; Uddin et al., 1998; Uddin and Rahman, 1999; Islam et al., 2009; Datta et al., 2014; Choudhury et al., 2004; Sinclair, 1956 and Heinig, 1925*) the species *Flemingia fluminalis* C.B.Clarke ex Prain has never been collected or mentioned in any publication on the flora covering the present territory of Bangladesh. Recently, the author's, while exploring the flora of Poly Forest Range of Bandarban district, collected a specimen and after a critical examination, it has been confirmed as *Flemingia fluminalis* C.B.Clarke ex Prain. Hence, it has been reported here as a rediscovered species from Bangladesh after 123 years. The detailed description of the species based on herbarium material and photographs are given below.

Flemingia fluminalis C.B.Clarke ex Prain, J. Asiat. Soc. Bengal, Pt. 2, Nat. Hist. 66(2):438.1897. *Flemingia strobilifera* (L.) W.T. Aiton var. *fluminalis* (Prain) Thuan, Fl. Cambodge, Laos & Vietnam 17:143. 1979. *Moghania fluminalis* (Prain) H.L.Li, ILDIS: World Database of Legumes. 2019. *Hedysarum bracteatum* Roxb, Hort. Bengal. 57. 1814, *nom. nud.*

(Fig. 1)

Small shrub, erect, nearly 1 m tall. Branchlets slender, twiggy, pubescent and tomentose. Leaves simple, 1-foliolate; stipules lanceolate, 1.10-2 cm long, apex with long mucro, deciduous or persistent; petiole usually 1-4.5 mm long, hairy; leaflets narrowly lanceolate,

¹ Corresponding author. Email: orchidcu.islam@gmail.com

1-2 x 5-12 cm, pubescent on both surface and densely beneath, cuneal at the base, apex rounded-obtuse or acute, lateral nerves 5-8 pairs with very oblique; Inflorescence terminal or axillary thyrses, 4-11 cm long, sometimes branched; inflorescence axis 4-9 cm, slightly curved, densely pubescent, cymules small, each enclosed by concave bract; bracts 0.8-1.10 x 1.5-1.8 cm long, both surfaces pubescent, papery, shortly petioled, cordate, apex obviously emarginated. Calyx 0.5-0.9 cm long, finely pilose, pubescent, with scattered small dark brown sessile gland, lobes ovate, equal to or shorter than tube. Corolla pale, near 5.5



Fig. 1. *Flemingia fluminalis* C.B. Clarke ex Prain

mm long; petals 5, standard auricled at base, wing petals obliquely oblong or obovate, adnate to the keel petals; keel petals elliptic, slightly curved, shorter and wider than wings petals. Stamens diadelphous (9+1), anthers uniform. Ovary 2-ovuled, subsessile; stigmas capitate; styles beardless. Fruit legume; legume oblong-elliptic, densely pubescent, 2-seeded. Seed orbicular and attached to the funicle at the centre. *Flowering and fruiting*: January-December.

Ecology: River bank and along hilly streams; about 200-300 m altitude.

Distribution: China, India, Laos, Myanmar, Vietnam.

Specimen examined: **Bandarban**: Ruma sadar, Thana para, near Sangu river bank, 11 iv 2018; Khandakar Kamrul Islam KKI 2824 (DACB 62731). Ruma sadar, Rijnuk stream near hill slope, 6 xii 2018, Khandakar Kamrul Islam KKI 3330 (DACB 62733).

Acknowledgements

The author's gratefully acknowledge the Ministry of Environment, Forest and Climate change for giving financial support for the field survey. Author's special thanks to the Director of Bangladesh National Herbarium for providing herbarium facilities and constant encouragement during the work.

References

- Choudhury, J.K., Biswas, S.R., Islam, M.S., Rahman, O. and Uddin, S.N. 2004. Biodiversity of Dulahazra Safari Park, Cox's Bazar. IUCN, Bangladesh. pp. 1-30.
- Datta, S., Hossain, M.K., Hossain, M.A. and Chowdhury, P. 2014. Floral diversity of Shitakunda Botanical Garden and Eco-park in Chittagong. Bangladesh. *Indian J. Tropical Biodiversity*. 22(2): 106-118.
- Gilbert, M.G. 2010. *Flora of China*, Vol. 10. Science Press and Missouri Botanical Garden Press, Beijing and St. Louis. pp. 232-237.
- Heinig, R.L. 1925. *List of plants of Chittagong Collectorate and Hill Tracts*. The Bengal Government Branch Press, Darjeeling, pp. 1-78.
- Islam, K.K., Anwar, K.B. and Uddin, S.N. 2016. Vascular flora of the Karnafuli river and its surrounding areas under Rangamati district of Bangladesh. I. Magnoliopsida (Dicotyledons). *Bull. Bangladesh National Herb.*, 5: 1-57.
- Islam, K.K., Uddin, S.N., Khan, B. and Mirza, M.M. 2016. An annotated checklist of the Vascular plants of Pharus reserve forest under Bilaichari upazila, Rangamati district of Bangladesh. *Bull. Bangladesh National Herb.*, 5: 59-95.
- Islam, M.R., Uddin, M.Z. and Hassan, M.A. 2009. An assessment of the angiospermic flora of Ramgarh upazila of Khagrachari district, Bangladesh. *Bangladesh J. Plant Taxon*. 16(2): 115-140.
- Khatun, B.M.R. and Naderuzzaman, T.M. 2009. *Fabaceae*. In: Ahmed, Z.U., Hassan, M.A., Begum, Z.N.T., Khondker, M., Kabir, S.M.H., Ahmad, M., Ahmed, A.T.A., Rahman, A.K.A. and Haque, E.U. (eds). *Encyclopedia of Flora and Fauna of Bangladesh*, Vol. 8. Angiosperms: Dicotyledons (Fabaceae-Lythraceae). Asiatic Society of Bangladesh, Dhaka, pp. 1-478.
- Sinclair, J. 1956. Flora of Cox's Bazar, East Pakistan. *Bull. Bot. Soc. Beng.* 9(2): 1-116.
- Uddin, S.N. and Hassan, M.A. (eds.) 2018. *Vascular flora of Chittagong and the Chittagong Hill tracts*. Vol. 2. Magnoliopsida: Part 1 (Magnoliaceae-Celastraceae). Bangladesh National Herbarium, pp. 1-1060.
- Uddin, S.N., Khan, M.S., Hassan, M.A. and Alam, M.K. 1998. An annotated checklist of angiospermic flora of Sitapahar at Kaptai in Bangladesh. *Bangladesh J. Plant Taxon*. 5(1): 13-46.
- Uddin, S.B. and Rahman, M.A. 1999. Angiospermic flora of Himchari National Park, Cox's Bazar. *Bangladesh J. Plant Taxon*. 6(1): 31-68.