PULICARIA VULGARIS GAERTN. (ASTERACEAE) - A NEW SPECIES RECORD FOR BANGLADESH

MD. OLIUR RAHMAN¹, MAHBUBA SULTANA², MOMTAZ BEGUM AND MD. ABUL HASSAN

Department of Botany, University of Dhaka, Dhaka 1000, Bangladesh

Keywords: Pulicaria vulgaris; New record; Bangladesh; Asteraceae.

The genus *Pulicaria* Gaertn. belonging to the tribe Inuleae of the family Asteraceae consists of about 100 species with a distribution from Europe to north Africa and Asia, particularly around the Mediterranean (Liu *et al.*, 2010). *Pulicaria* are annual or perennial woolly or villous herbs distinguished from other species by the presence of outer pappus scales in the form of a short coronate cup. They are characterized by having unwinged stem without resin canals, usually sessile leaves, hemispheric to campanulate involucres, persistent phyllaries and ecalcarate anthers, with branched tails. Pappus are in two rows, inner row of barbellate bristles while outer row of short membranous scales. Clarke (1881) studied the British Indian *Pulicaria* documenting 10 species under 4 sections. Prain (1903) reported only two species of the genus namely, *P. foliolosa* and *P. angustifolia* from the then Bengal. In Bangladesh some works on the Asteraceae were carried out however, *Pulicaria* was not included in those taxonomic treatments (Hossain, 1967; Khan, 1992; Rahman *et al.*, 2008). Very recently Ahmed *et al.* (2008) reported the occurrence of *Pulicaria foliolosa* DC. from Bangladesh without citing any locality.

Recently two specimens belonging to the genus *Pulicaria* were collected from Galachipa upazila of Patuakhali district which were not in line with the recorded species. After critical examination the specimens were identified as *Pulicaria vulgaris* Gaertn. Since *Pulicaria vulgaris* Gaertn. was not reported from any areas now falling under present Bangladesh territory in the relevant literatures (Clarke, 1882; Prain, 1903; Heinig, 1925; Raizada, 1941; Datta and Mitra, 1953; Sinclair, 1956; Mia and Khan, 1995; Uddin *et al.*, 2003; Rahman, 2004; Islam *et al.*, 2009; Uddin *et al.*, 1998; Rahman *et al.*, 2010; Tutul *et al.*, 2010; Uddin and Hassan, 2010), it is being reported here as a new species record for Bangladesh.

A key to *Pulicaria vulgaris* with the recorded species is given below:

- 1. Ligules present; ray florets ligulate, 4-5 toothed; achenes ellipsoid, *P. vulgaris* 4-5 angled.
- Ligules absent; ray florets tubular, 3-toothed; achenes oblong. *P. foliolosa*

A detailed taxonomic account along with illustration of the plant has been made based on the fresh materials. The voucher specimens have been deposited in Dhaka University Salar Khan Herbarium (DUSH).

¹Corresponding author. E-mail: dr_oliur@yahoo.com

²Department of Botany, Jagannath University, Dhaka, Bangladesh.

206 RAHMAN et al.

Pulicaria vulgaris Gaertn., Fruct. Sem. Pl. 2: 461 (1791); DC., Prodr. 5: 478 (1849); Hook. f., Fl. Brit. Ind. 3: 298 (1881). *Pulicaria prostrata* (Gilib.) Ascher., Fl. Brandenburg 1: 304 (1864). *Inula prostrata* Gilib., Fl. Lithuan. 3: 205 (1787). *Aster pulicarius* (L.) Scop., Fl. Carn. ed. 2: 172 (1772). *Inula pulicaria* L., Sp. Pl. 2: 882 (1753). (**Fig. 1**).

Common name: Small Fleabane.

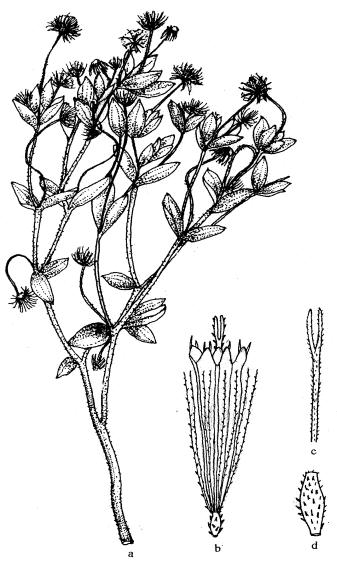


Fig. 1. *Pulicaria vulgaris* Gaertn: a, habit sketch (\times 0.6); b, hermaphrodite floret (\times 8); c, style (with stylar arms) of a hermaphrodite floret (\times 6); d, cypsela (\times 17).

An annual, erect pubescent herb, 15-45 cm tall. Stems softly pubescent, copiously dichotomously subcorymbosely branched above. Leaves 1-3 x 0.5-1.8 cm, lower leaves obovate, half-amplexicaul, shortly petiolate, upper ones oblong-lanceolate, sessile, acute or obtuse at apex, somewhat undulate at margin, entire or slightly finely distantly toothed. Heads 0.8-1.3 cm in diameter, on short stout peduncles, divaricate. Involucral bracts 4-5 seriate, subulate, erect or with subrecurved tips; outer bracts linear, oblanceolate, 2.5-3.0 mm long, acute; inner linear, longer than the outer, c. 3.5 mm long, acuminate. Ray florets uniseriate, ligulate, 4-5-toothed; ligules not exceeding the size of involucral bracts, c 1.0 x 0.4 mm. Disc florets numerous; corolla 2.0-3.5 mm long; lobes glandular. Achenes 4-5-angled, ellipsoid, c 1 mm long, silky, slightly compressed and longitudinally costate. Pappus dirty white, 1-3 mm long, hairy; inner pappus of 6-12 bristles, 1.0-1.5 mm long; outer scales lanceolate, serrate, free.

Flowering and fruiting period: March to August.

Habitat: Grasslands, riverbeds, shady areas and roadsides.

Specimens examined: Patuakhali district, Galachipa, 1.3.2005, M. Sultana, MS 617 (DUSH); Mirzagonj, 16.5.2005, M. Sultana, MS 791 (DUSH).

References

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). 2008. *Encyclopedia of Flora and Fauna of Bangladesh*, Vol. 6. Angiosperm: Dicotyledons (Acanthaceae - Asteraceae). Asiatic Society of Bangladesh, Dhaka. pp. 263-359

Clarke, C.B. 1881. Compositae. In: Hooker J.D., Flora of British India. Vol. 3. pp. 297-300.

Datta, R.B. and Mitra, J.N. 1953. Common plants in and around Dacca city. Bull. Bot. Soc. Beng. 7(1&2): 1-110

Heinig R.L. 1925. List of the Plants of Chittagong Collectorate and Hill Tracts. Darjeeling.

Hossain, E. 1967. Compositae of Dacca city and its suburbs. M.Sc. thesis, Department of Botany, Dacca University.

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.

Khan, S.A. 1992. A taxonomic study on the Compositae of the eastern region of Bangladesh. M.Sc. Thesis, Department of Botany, Jahangirnagar University, Dhaka, Bangladesh.

Liu, L.-L., Yang, J.-L. and Shi, Y.P. 2010. Phytochemicals and biological activities of *Pulicaria* species. Chemistry and Biodiversity **7**(2): 327-349.

Mia, M.K. and Khan, B. 1995. First list of angiospermic taxa of Bangladesh not included in Hooker's Flora of British India and Prain's Bengal Plants. Bangladesh J. Plant Taxon. **2**(1&2): 25-45.

Prain, D. 1903. Bengal Plants. Vol. 1. Botanical Survey of India, Calcutta. pp. 443-444.

Raizada, M.B. 1941. On the Flora of Chittagong. Indian Forester 67(5): 245-254.

Rahman, A.H.M.M., Alam, M.S., Hossain, M.B., Nesa, M.N., Islam, A.K.M.R. and Rahman, M.M. 2008. Study of Species Diversity on the Family Asteraceae (Compositae) of the Rajshahi Division. Research J. Agric. Biol. Sci. 4(6): 794-797. 208 RAHMAN *et al.*

Rahman, M.O. 2004. Second list of Angiospermic taxa not included in Hooker's "Flora of British India" and Prain's "Bengal Plants" - Series II. Bangladesh J. Plant Taxon. **11**(2): 49-56.

- Rahman, M.O., Uddin, M.Z., Tutul, E., Begum, M. and Hassan, M.A. 2010. Additions to the angiospermic flora of Runctia sal forest, Bangladesh. Bangladesh J. Plant Taxon. 17(2): 167-181.
- Sinclair, J. 1956. Flora of Cox's Bazar, East Pakistan. Bull. Bot. Soc. Beng. 9(2): 92-94.
- Tutul, E., Uddin, M.Z., Rahman, M.O. and Hassan, M.A. 2010. Angiospermic flora of Runctia sal forest, Bangladesh. II. Magnoliopsida (Dicots). Bangladesh J. Plant Taxon. **17**(1): 33-53.
- Uddin, S.N., Khan, M.S., Hassan, M.A. and Alam, M.K. 1998. An annotated checklist of angiospermic flora of sita pahar at Kaptai in Bangladesh. Bangladesh J. Plant Taxon. **5**(1): 13-46.
- Uddin, M.Z. and Hassan, M.A. 2010. Angiosperm diversity of Lawachara National Park (Bangladesh): A preliminary assessment. Bangladesh J. Plant Taxon. 17(1): 9-22.
- Uddin M.Z., Hassan, M.A. and Khan, M.S. 2003. An annotated checklist of angiospermic flora of Rema-Kalenga Wildlife Sanctuary (Habiganj) in Bangladesh II.a: Magnoliopsida (Dicots). Bangladesh J. Plant Taxon. 10(1): 79-94.

(Manuscript received on 14 July 2011; revised on 3 November 2011)