

## REDISCOVERY OF *POTENTILLA SUPINA* L. (ROSACEAE) IN BANGLADESH

MOHAMMAD TARIKUL HASAN<sup>\*</sup> AND MOHAMMAD ZASHIM UDDIN<sup>1</sup>

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

<sup>\*</sup>Department of Botany, Abdulpur Govt. College, Lalpur, Natore-6422, Bangladesh.

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*Potentilla supina* L. (Rosaceae) has been rediscovered after 118 years after the publication from D. Prain's. This species was collected from Norigashi; Bagatipara Upazila of Natore district under Rajshahi division, Bangladesh. Detailed description and photographs were presented.

Rosaceae family consisting of 95 to 125 genera and 2825 to 3500 species which is found in worldwide, but especially diverse in the Northern Hemisphere and Subtropics, with the majority cultivated as ornamentals and edible fruits (Te-tsun *et al.*, 1974, 1985, 1986). The genus *Potentilla* consists of over 300 species, mostly herbaceous and woody perennials, and grows as a weed (Guillén *et al.* 2005). In Bangladesh, the family Rosaceae is represented by 13 genera and 26 species, and the genus *Potentilla* has two species, *P. indica* and *P. supina* (Pasha and Uddin, 2013). *Potentilla supina* was one of them and reported by David Prain (1903) from Tirhut, North Bengal (North Bengal consisting with present Rajshahi and Rangpur divisions of Bangladesh and Jalpaiguri and Malda division of India). Since the time of David Prain's collection, no other collectors have collected this species from present Bangladesh territory (Ahmed *et al.*, 2009; Islam *et al.*, 2009; Rahman *et al.*, 2010; Tutul *et al.*, 2010; Uddin and Hassan, 2010; Arefin *et al.*, 2011; Rahman *et al.*, 2012; Rahman, 2013; Rahman and Alam, 2013; Rahman *et al.*, 2013; Sarker *et al.*, 2013; Uddin *et al.*, 2013; Kona and Rahman, 2015; Rahman *et al.*, 2015; Uddin *et al.*, 2015; Nahar and Rahman, 2016; Uddin and Abiabdullah, 2016; Mahmudah *et al.*, 2017; Rahaman *et al.*, 2017; Haque *et al.*, 2018; Rahman *et al.*, 2018; Rahman and Uddin, 2018; Uddin and Hassan, 2018; Rahman *et al.*, 2019a, b; Sarker and Rahman, 2019; Khanam *et al.*, 2020; Hossain *et al.*, 2021; Khan *et al.*, 2021; Hossain *et al.*, 2022; Islam *et al.*, 2022; Khatun *et al.*, 2022; Rahman *et al.*, 2022 and Sultana *et al.*, 2022. After a lapse of 118 years, 1<sup>st</sup> author recently collected one specimen from Bagatipara Upazila under Natore district while exploring the flora of the Bagatipara Upazila and after a critical study identified it as *Potentilla supina* L (Te-tsun *et al.* 1974, 1985, 1986). Detailed description and images of the species have been given below.

*Potentilla supina* L., Sp.Pl.1: 497 (1753); Hook, Fl. Brit. Ind. 2:359 (1879); Prain, Beng. Pl. 1: 465(1903); Ahmed *et al.* (ed.), Encycl. Fl. Fauna Bangladesh 10:31, (2009). *Tridophyllum supinum* (L.) Greene, Leafl. Bot. Observ. Crit. 1(14): 189. (1906); *Comarum flavum* Buch.-Ham. ex Roxb. Hort. Bengal.:39 (1814). *Argentia supina* (L.) Lam., Fl. Franç. 3: 119 (1779); *Chamaephyton supinum* (L.) Fourr., Ann. Soc. Linn. Lyon 16: 371 (1868), not validly publ; *Comarum supinum* (L.) Alef., Bot. Zeitung (Berlin) 24: 262 (1866); *Fragaria supina* (L.) Crantz, Stirp. Austr. Fasc. 2:10(1763).

<sup>1</sup> Corresponding author: E-mail: zashim@du.ac.bd

*English name:* Spreading cinquefoil, bushy cinquefoil

*Bangle name:* Shaktitala

*Description:* An annual herb, prostrate or sub-erect. Roots slender with sparse lateral rootlets. Stems spreading, ascending, or erect, dichotomously branched, 10–25 cm tall, together with petioles pilose. Radical leaves 4–7 cm including petiole; stipules brown, membranous, abaxially pilose; Leaf blade 3-foliate or pinnately compound with 3–5 leaflets; leaflets alternate or opposite, sessile, or terminal leaflet shortly petiolulate or subsessile, both surfaces green, oblong or obovate-oblong, both surfaces pilosebase cuneate or broadly so, margin obtusely serrate, incised serrate, or 2- or 3-parted, apex obtuse or acute; caudine leaves resembling radical ones but pairs of leaflets fewer higher up stem; Inflorescence terminal, corymbose-cymose, with axillary flowers on lower part of flowering stem. Flowers 6–8 mm in diam.; pedicel 0.8–1.5 cm, densely



Fig. 1. Photograph of *Potentilla supina* L. A. Natural view B. Flower, C. Dry material.

pubescent. Sepals triangular-ovate, apex acute; epicalyx segments oblong-elliptic or elliptic-lanceolate, nearly equaling or slightly longer than sepals, apex acute. Petals yellow, obovate, shorter than sepals, apex emarginate. Fruits achenes, cylindric, rugose, apex acute. Flowering and fruiting: March to October.

*Ecology:* The plant is generally found in damp open grass lands or harvested paddy field prefer partial shed.

*Distribution:* Afghanistan, Albania, Austria, Baltic States, Belarus, Belgium, Bulgaria, China, Former Czechoslovakia, Denmark, Russia, Egypt, France, Germany, Greece, Hungary, India, Iran, Iraq, Italy, Japan, Kazakhstan, Kirgizstan, Korea, Mexico, Morocco, Namibia, Nepal, New South Wales, North European Russi, Norway. Pakistan, Poland, Romania, Spain, Switzerland, Tadzhikistan, Thailand, Tibet, Tunisia, Turkey, Turkmenistan, Ukraine, Uzbekistan, Vietnam, Former Yugoslavia

*Specimens examined:* **Natore:** Bagatipara, Norigacha, 13 iii 2022, Md. Tarikul Hasan, MTH 2117 (DUSH).

## References

- Ahmed, Z.U., Hassan, M.A., Begum, Z.N.T., Khondker, M., Kabir, S.M.H., Ahmad, M. and Ahmed A.T.A., (eds.). 2009. Encyclopedia of Flora and Fauna of Bangladesh, vol. **10**. *Angiosperms: Dicotyledons (Ranunculaceae-Zygophyllaceae)*. Asiat. Soc. Bangladesh, Dhaka. pp. 31-32.
- Arefin, M.K., Rahman, M.M., Uddin, M.Z. and Hassan, M.A. 2011. Angiosperm flora of Satchari National park, Habiganj, Bangladesh. *Bangladesh J. Plant Taxon.* **18**(2): 117-140.
- Guillén A., Rico, E. and Castroviejo, S. 2005. Reproductive biology of the Iberian species of *Potentilla* L. (Rosaceae). *Anales del Jardín Botánico de Madrid* **62**(1): 9-21.
- Haque, A.K.M.K., Khan,S. A., Uddin, S.N. and Shetu, S.S. 2018. An annotated checklist of the angiospermic Flora of Rajkandi Reserve Forest of Moulvibazar, Bangladesh. *Bangladesh J. Plant Taxon.* **25**(2): 187-207.
- Hossain, G.M., Khan, S.A., Shetu, S.S., Rahman, M.S., Ahmed, F.A. and Ali, M.A. 2022. Floristic survey of vascular plants in coastal district Bagerhat of Bangladesh. *Bangladesh J. Plant Taxon.* **29**(1): 43-78.
- Hossain, G.M., Khan, S.A., Rahim, M.A., Rahman, M.S. and Islam, K.M.N. 2021. Floristic composition of the coastal district Satkhira, Bangladesh *J. Plant Taxon.* **28**(1): 97-124.
- Islam, K.K., Hoque, M.A., Rahman, N., Sarker, M.A.A. and Uddin, S.N. 2022. A checklist of the vascular flora of Madhabkundo Eco-Park, Moulvibazar, Bangladesh. *Bull. Bangladesh National Herb.* **8**: 1-31.
- Islam, M.R., Uddin, M.Z. and Hassan, M.A 2009. An assessment of the angiospermic flora of Ramgarh upazila of Khagrachhari district, Bangladesh. *Bangladesh J. Plant Taxon.* **16**(2): 115-140.
- Khan, S.A., Hossain, G.M., Shetu, S.S., Rahim, M.A., Islam, M.S., Ahmed, F.A. and Fairy, R.H. 2021. A preliminary taxonomic study on the flora of Rangpur district, Bangladesh. *Bangladesh J. Plant Taxon.* **28**(2): 329-365.
- Khanam, R., Khan, S. A., and Rahim, M.A. 2020. Angiosperms in Narsingdi district of Bangladesh: class Magnoliopsida. *Bangladesh J. Plant Taxon.* **27**(1): 153-171.
- Khatun, S., Khatun, L., Ame, M.A., Sumona, A.A. and Rahman, A.H.M.M. 2022. Documentation of angiospermic plants of Puthia upazila of Rajshahi and their important medicinal values. *Biological and Pharmaceutical Sciences,* **19**(02): 258-281.
- Kona, S. and Rahman, A.H.M.M. 2015. An assessment of angiosperm diversity at Mahadebpur upazila of Naogaon district, Bangladesh. *Intl. J. Adv. Res.* **3**(10): 1067-1086.
- Mahmudah, Z., Islam, M.M., Haque,T. and Uddin, M.Z. 2017. Taxonomic enumeration of angiosperm flora of Sreenagar upazila, Munshigang, Dhaka, Bangladesh. *J. Asiat. Soc. Bangladesh, Sci.* **43**(2): 161-172.
- Nahar,J. and Rahman A.H.M.M. 2016. Study of angiosperm plant species at Sadarupazila of Naogaon district, Bangladesh. *Discovery,* **52**(250):1963-1978.

- Pasha, M.K. and Uddin, S.B. 2013. Dictionary of Plant Names of Bangladesh (*Vascular Plants*). Janokalyan Prokashani. Chittagong, Bangladesh.
- Prain, D. 1903 (Indian rep. 1963). Bengal Plants, Vol. 2. Botanical Survey of India, Calcutta. p. 913.
- Rahaman, M.A., Rahman, M.A. and Uddin, M.Z. 2017. Diversity of angiosperm flora of Kuakata National Park, Patuakhali district, Bangladesh. *J. Asiat. Soc. Bangladesh, Sci.* **43**(2): 143-159.
- Rahman, A.H.M.M. 2013. Angiospermic Flora of Rajshahi district, Bangladesh. *Amer. J. Life Sci.* **1**(3): 105-112.
- Rahman, M.O. and Alam, M.T. 2013. A taxonomic study on the angiosperm flora of Trishal upazila, Mymensingh. *Dhaka Univ. J. Biol. Sci.* **22**(1): 63-74.
- Rahman, M.O., Antara, R.T., Begum, M. and Hassan, M.A. 2012. Floristic diversity of Dhamraiupazila of Dhaka with emphasis on medicinal plants. *Bangladesh J. Bot.* **41**(1): 71-85.
- Rahman, M.O., Begum, M. and Ullah, M.W. 2013. Angiosperm flora of Sadarupazila of Munshiganj district, Bangladesh. *Bangladesh J. Plant Taxon.* **20**(2): 213-231.
- Rahman, M.O., Hassan, S and Begum, M. 2019a. Floristic study in Lalpurupazila of Natore district, Bangladesh: identification, distribution and economic potential. *J. Asiat. Soc. Bangladesh, Sci.* **45**(1): 71-91.
- Rahman, M.O., Sayma, N.J and Begum, M. 2019b. Angiospermic flora of Gafargaonupazila of Mymensingh district focusing on medicinally important species. *Bangladesh J. Plant Taxon.* **26**(2): 269-283.
- Rahman, M.O., Uddin, M.Z., Tutul, E., Begum, M. and Hassan, M.A. 2010. Additions to the angiospermic flora of Runctiasal forest, Bangladesh. *Bangladesh J. Plant Taxon.* **17**(2): 167-181.
- Rahman, N. and Uddin, S.N. 2018. Seventy-one new additions to the angiosperm flora of Bangladesh. *Bull. Bangladesh National Herb.* **6**: 49-70
- Rahman, N., Sarker, M.A.A. and Uddin, S.N. 2018. One Hundred and Three New Additions to the angiosperm flora of Lawachara National Park. *Bull. Bangladesh National Herb.* **6**: 71-88.
- Rahman, M.S., Hossain, G.M., Khan, S.A. and Uddin, S.N. 2015. An annotated checklist of the vascular plants of Sundarban mangrove forest of Bangladesh, Bangladesh. *J. Plant Taxon.* **22**(1): 17-41.
- Rahman,N., Sultana, M., Rahman, M.S., Islam, K.K., Hoque, M.A. and Saqee, A. 2022. Floral composition of Birgonj National Park in Dinajpur district, Bangladesh, *Bull. Bangladesh National Herb.* **8**:77-91.
- Sarker, K., Islam, M.R., Uddin, M.Z. and Hassan, M.A. 2013. Angiosperm Flora of Manikgonj Sadar upazila, Bangladesh. *J. Asiat. Soc. Bangladesh, Sci.* **39**(2): 147-166.
- Sarker, P. and Rahman A.H.M.M. 2019. Angiosperms in Gobindaganj upazila of Gaibandha district, Bangladesh. *Bangladesh J. Plant Taxon.* **26**(2): 285-298.
- Sultana, M., Rahman, M.S., Hoque, M.A. and Saqee, A. 2022. Checklist flora of Khadimnagar National Park under Sylhet district in Bangladesh. *Bull. Bangladesh National Herb.* **8**: 33-76.
- Tutul, E., Uddin, M.Z., Rahman, M.O. and Hassan, M.A. 2010. Angiospermic flora of Runctiasal forest, Bangladesh. II. Magnoliopsida (dicots). *Bangladesh J. Plant Taxon.* **17**(1): 33-53.
- 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, 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, M.Z., Alam, M.F., Rhaman, M.A. and Hassan,M.A. 2013. Diversity in angiosperm flora of Teknaf wildlife sanctuary, Bangladesh. *Bangladesh J. Plant Taxon.* **20**(2): 145-162.
- Uddin, M.Z., Kibria, M.G. and Hassan, M.A.2015. Assessment of angiosperm plant diversity of Nijhum Dweep, Bangladesh. *J. Asiat. Soc. Bangladesh, Sci.* **41**(1): 19-32.
- Uddin., M. Z. and Abiabdullah, M. 2016. Taxonomic study on the angiosperms of Char Kukri Mukri wildlife sanctuary, Bhola district. *J. Asiat. Soc. Bangladesh, Sci.* **42**(2): 153-168.
- Te-tsун, Y., Ling-ti, L., Tsue-chih, K., Chao-luan, L., Ke-chien K. and Wan-fu, C. 1974, 1985, 1986. Rosaceae. In: Yü Te-tsун, ed., *Fl. Reipubl. Popularis Sin.* 36: 1-443; 37: 1-516; 38: 1-133.