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# *SALVINIA MINIMA* BAKER (SALVINIACEAE): A NEW PTERIDOPHYTIC RECORD FOR BANGLADESH

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In Bangladesh, a total of four species of *Salvinia* namely, *Salvinia auriculata* Aublet, *S. cucullata* Roxb. ex Bory, *S. molesta* Mitch., and *S. natans* (Linn.) All. (syn. *Marsilea natans* L.), have been documented so far (Hooker, 1888; Prain, 1903; Datta and Mitra, 1953; Hadiuzzaman and Khondker, 1993; Siddiqui *et al.*, 2007). Based on standard references (Biswas and Calder, 1954; Fassett, 1957; Blagojevich, 2001; USDA-ERDC, 2002; UFL-IFAS, 2002; Madeira *et al.*, 2003; ISSG, 2006; Mikulyuk and Nault, 2009; Smagula and Connor, 2007; Alam *et al.*, 2012), the present specimen has been identified as *Salvinia minima* Baker. However, previous surveys and research contain no records of *S. minima* from regions that now constitute present Bangladesh. Consequently, this represents the first report of *Salvinia minima* Baker from Bangladesh (Fig. 1).

*Common name:* Water Spangles.

Division: Polypodiophyta, Class: Polypodiopsida, Family: Salviniaceae, Genus: *Salvinia*, Species: *Salvinia minima* Baker, J. Bot. 24: 98 (1886), Synonym: *Salvinia minima* var. *gaillardiana* Maury, J. Bot. (Morot) 3: 129 (1889).

Plant materials were collected on June 20, 2024, from agricultural land in Radhanagar, Bancharampur Upazila under Brahmanbaria District of Bangladesh. The site is geographically located at 23°41'54.1"N latitude and 90°46'31.5"E longitude. Sample was found floating on the surface of the waterbody of a canal and within 1 meter depth. A portion of the samples was preserved as herbarium sheets for long-term documentation. Along with a few aquatic macrophytes, the sample was taken from the water surface and placed in a sizable, air tight polyethylene bag with water mixed. Within six hours of the sample being collected, it was delivered to the Phycology, Limnology, and Hydrobiology Laboratory, Department of Botany at the University of Dhaka. Voucher specimens of the material were created and stored in the laboratory, while some fresh materials were preserved in 4% formaldehyde. The remaining plant sample was transferred to the Botanical Garden of Department of Botany at University of Dhaka, for *ex-situ* culture preparation, in a concrete house that was 1 × 0.5 m in length and 0.40 cm in depth.

The aquatic fern *S. minima* is deep green and free-floating. The leaves range in length from 0.5 to 1.0 cm and are elliptic to nearly spherical or oval, while the stems can reach up to 6 cm. They have a circular to cordate base and an obtuse or notched apex. Leaves are arranged in a whorls of three, two of these three leaves are joined horizontally and float, while the third is submerged, dissected which acts as a root (1.5-2.0 cm). Plant colour is green to olive-green depending on the environmental conditions such as temperature and sunlight. Adaxial surface of the leaf is flat, having white hair on leaf surface. The abaxial surface also contains longer brown hairs. Leaf color ranged from vivid green to brown, and they frequently turn brown with age and exposure to sunshine. Asexual reproduction occurs primarily through fragmentation. Daughter plants can

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develop from any segment of the rhizome. The plant often exhibits exponential growth due to the continuous nature of fragmentation process.

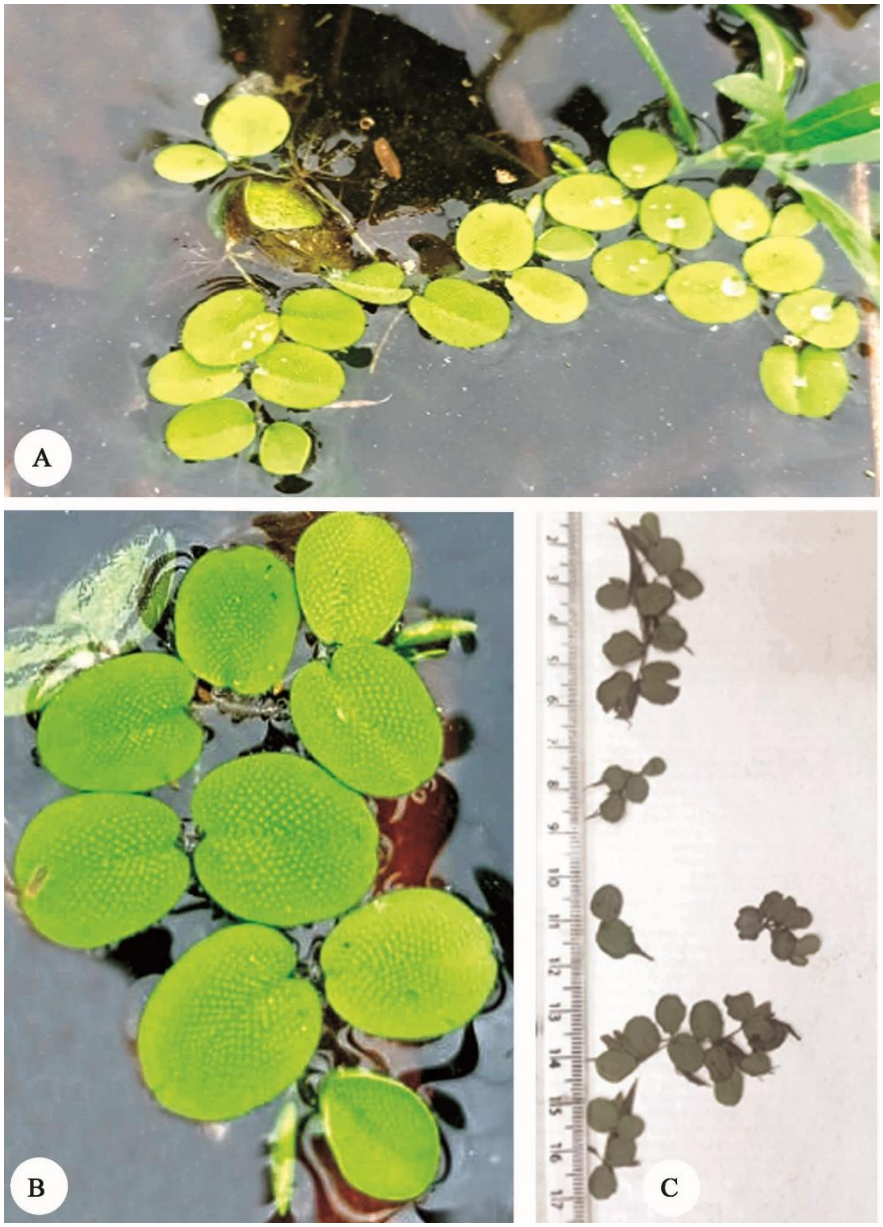


Fig. 1. *Salvinia minima* Baker: A. Natural habitat of *S. minima* growing with other aquatic macrophytes, B. Leaves are arranged in whorls of three, two of these three leaves are joined horizontally and float, while the third is submerged, C. Herbarium specimen with scale.

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