

Research Article

Diversity of Freshwater Algae of Khotokha Ramsar Wetland, Wangduephodrang District, Bhutan

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ABSTRACT

This study on the algal diversity at Khotokha Ramsar Wetland in the Wangdue Phodrang district sought to count the species of algae, ascertain the impact of aquatic environment's physicochemical factors, and compare the diversity of algae among various habitats. Algal samples were collected from rivers and streams using a systematic sampling method, and ponds were sampled purposefully. Fifteen of the thirty-nine algae were identified to the species level, ten of which are new to Bhutan. Additionally, the study found that the greatest diversity of algae is found in ponds (32 species), followed by streams (25 species) and rivers (21 species). With 16 distinct species (37%) under the Ochrophyta genus, the Khotokha Ramsar wetland has the highest species richness of these, followed by Cyanobacteria (10 species, 23%), Charophyta (8 species, 19%), and Chlorophyta (6 species, 14%). Heterokonta had the lowest species richness. According to the study, ponds with extensive algal diversity had higher water quality than rivers and streams.

Key words: Diversity, Freshwater, Physiochemical, Parameters, Systematic

