



Zooplankton abundance and diversity in the brackish water-fresh water mixing zone in the western periphery of the Embillakala lagoon in the Bundala National Park-A Ramsar Wetland in Sri Lanka

P.B.I.A:K.Dayasiri and E.P.S.Chandana

Department of Zoology, Faculty of Science, University of Ruhuna

Bundala National Park (BNP) is the first Ramsar wetland in Sri Lanka. Major lagoons in the BNP are Malala, Embillakala and Bundala Lewaya. These lagoons provide food and habitat for numerous species including migratory birds. However these lagoons are degrading for various reasons such as overwhelming freshwater influence, abrupt saline water intrusion, and invasive species. The agricultural runoff discharged from Lunugamvehera area has been blamed for its adverse effects on Embillakala and Malala lagoons. The present status of the physicochemical parameters and zooplankton community has been assessed in the western periphery of the Embillakala lagoon for a period of six months in relation to the Lunugamvehera water influx into the lagoon. Our data have indicated that study area of the Embillakala lagoon is severely influenced by fresh water input. Increased sedimentation and enhanced littoral zone, abundant freshwater aquatic macrophytes and abundant freshwater zooplankton are noteworthy characters of the study area. Zooplankton abundance and diversity significantly changed monthly in relation to the freshwater nutrient loading via Lunugamvehera water influx. Salinity and humidity were significantly correlated with zooplankton abundance.

Keywords: Bundala National Park, Fresh Water Influence, Physicochemical parameters, Zooplankton