

Water bird diversity and availability of planktonic food sources in Kavutharimunai in the Northern region of Sri Lanka

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Wetlands are important contributors to biodiversity worldwide. In the present study, diversity and abundance of water birds, phytoplankton and zooplankton were investigated to evaluate the importance of Kavutharimunai for water birds in Northern region of Sri Lanka. Three counting blocks in length of 500 m with open width was selected for bird counting. The counting of birds was done once a month from August, 2018 to January, 2019 by ferry. Water bird species were identified and counted using binoculars (10 x 50) and spotting scope (x 60). Concurrent surface water samples were collected and immediately fixed with Lugol's iodine solution for phytoplankton analysis. Zooplankton samples were collected using a zooplankton net with a mesh size of 90 µm by filtering 100 L and fixing in 5% formalin. Phytoplankton and zooplanktons were identified using standard identification guides. A total of 45 taxa were reported in Kavutharimunai, including 26 water bird species, five genera of diatoms, six genera of dinoflagellates and seven groups of zooplankton. The most dominant phytoplankton genera was *Coscinodiscus* sp., which constituted 61.99% of the total population, followed by *Navicula* sp. (16.03%). Diatoms accounted for 96.77% of the total phytoplankton population followed by dinoflagellates (3.23%). Zooplankton taxa was identified under five groups. Zooplankton assemblages consisted mainly of copepod (51.41%), followed by crustacean larvae (24.71%) and molluscs (16.48%). The 26 water bird species belonged to 10 families. The most abundant species was brown-headed gull (13.95%), followed by black-tailed godwit (11.36%), gull-billed tern (10.47%), curlew sandpiper (10.11%), and little cormorant (7.33%). Rare water bird species that breed only within the Northern region and saunders tern (*Sternula saundersi*) were recorded in sandbars. Based on the results it can be concluded that Kavutharimunai offers a suitable habitat for feeding and breeding of water bird species.

Keywords: Water bird, zooplankton, phytoplankton, Northern region, Kavutharimunai

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