

DIVERSITY AND ABUNDANCE OF WATERBIRDS IN DELFT ISLAND, JAFFNA, SRI LANKA

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Delft, an isolated island in the Northern Avifaunal region of Sri Lanka (9°29'50" N; 79°42'00" E), is not yet a popular destination for tourists. However, its location in the Indian Ocean, close to India, within a major flyway of migratory birds, makes it a unique place for waterbirds. The objective of this study was to assess the waterbird diversity and abundance in Delft Island. Twenty locations were selected within the island and investigated for waterbird diversity from June to December 2020. Shannon-Weiner Diversity Index (H'), Shannon Evenness (E), and Simpsons' Diversity Index (D) were calculated. A total of 6,837 individuals belonging to 50 genera, 75 species, and 17 families were encountered. The Shannon-Wiener index was 3.44, Evenness was 0.797, and Simpsons' Index was 0.947. The highest Shannon Index (H' = 3) was shown at the 20th point. Seven species including little tern (*Sternula albifrons*; 13.7%), great crested tern (*Thalasseus bergii*; 9.9%), lesser crested tern (*Thalasseus bengalensis*; 6.4%), Caspian tern (*Hydroprogne caspia*; 5.9%), gull-billed tern (*Gelochelidon nilotica*; 5.1%), sooty tern (*Onychoprion fuscatus*; 4.9%), and bridled tern (*Onychoprion anaethetus*; 4.2%) were recorded with a high relative abundance. Further, two Vulnerable (VU) bird species were recorded during the study, viz. little ringed plover (*Charadrius dubius*), and Kentish plover (*Charadrius alexandrinus*). Among the threats identified within the island, the illegal hunting of birds and egg collection were common. These threats may affect rare and threatened species. The results showed that the island has high waterbird diversity, and therefore, it is suitable for promoting ecotourism activities as some species are restricted to the northern avifaunal zone. Community-based ecotourism may reduce the threats to the birds as well.

Keywords: Abundance, Delft Island, Diversity, Northern avifaunal region, Waterbirds