

Jamnagar Wetlands: Important coastal sites for Indian Skimmer *Rynchops albicollis*

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Introduction

Jamnagar is a coastal district in Gujarat, where 58 wader species (i.e., 25% of the world's wader species) either winter or breed. It is located near the Gulf of Kutch, where India's first Marine National Park was declared in 1982, along with a Marine Sanctuary, to protect and conserve the marine flora and fauna of the area (Patel, 2019). Wetlands, comprising Intertidal mudflats, salt marsh, coral reefs, mangroves, and reservoirs, cover 198657 ha of the district, of which Inland wetlands contribute 20 % and coastal wetlands contribute 80% of the total wetland area (Anon 2010).

The Indian Skimmer *Rynchops albicollis* is a pointed-winged, tern-like bird, chiefly blackish-brown above and glistening white below, with a pied plumage. A unique feature is that the lower mandible is quite longer than the upper. Immature birds are lighter brown above, scalloped with fulvous white, have a forehead streaked with brown, and their tail feathers are brown-tipped. Depending on the water level, the species is a local migratory bird with different breeding and wintering grounds (Ali and Ripley 1974).

Indian Skimmer is data-deficient in current as well as long-term trends, Vulnerable as per IUCN Redlist category, and Schedule-IV as per the Wildlife Protection Act, 1972. The distribution range is approximately 34,796 sq. km (SolB 2020). The 1% biogeographic population was 80 birds in 2006, which was reduced to 75 in 2012 and further reduced to 40 birds in 2021. The species is restricted to South Asia. It was recorded at 111 sites in South Asia and Myanmar, with 19 sites meeting the 1% criterion from 1997 to 2007. Jahajmara, located on the coast of Bangladesh, had a population of more than 50% in 2001. It was reported from 26 sites from 1997 to 2007 from Gujarat, India, and none met 1% criterion (Li et al. 2009).

Increased fluctuations in water levels along the rivers where this bird breeds—caused by dams, irrigation, and sand mining—result in both flooding of colonies and low water levels that expose breeding islands to terrestrial predators and humans. These conditions result in high mortality rates for eggs and chicks, and the reproductive rate appears inadequate to sustain the population. This once-common and distinctive bird has experienced declines for many decades. It has been lost as a breeding species throughout Southeast Asia, Myanmar, and likely now also in Pakistan. Consequently, the

current and projected rate of population decline is estimated to be between 34% and 46% over three generations (BirdLife International, 2024).

The rationale of the study: The occurrence of Skimmers in coastal wetlands is yet to be fully studied. Despite their huge importance, the Jamnagar wetlands are not yet highlighted for the Indian Skimmer. We speculate that the wintering population of 400 birds around the Jamnagar wetlands constitutes approximately 10% of the biogeographic population.

Methodology

The wintering population of Indian Skimmer was monitored by direct total counts. All potential wetlands in Jamnagar were visited, and the Dhichada wetland was selected for study based on the continuous presence of species and higher counts. Special efforts were made to separate adults from immature birds in July and August 2020. The wetland was visited every alternate day from September 2020 to November 2020. Observations were made at all stages using 8x or 10x binoculars, as well as telescopes. Photographs were taken with DSLRs equipped with 400 to 600 mm lenses.

Table-1 Counts of Indian Skimmer at Jamnagar in July and August 2020 at Dhichada

Date	Adult	Juvenile	Total Count
26/07/2020	-	-	53
02/08/2020	18	9	27
08/08/2020	18	9	27
11/08/2020	18	9	27
12/08/2020	18	9	27
15/08/2020	21	2	23
16/08/2020	18	9	27
22/08/2020	14	9	23
23/08/2020	14	9	23

Results

Out of 45 surveys (15 in each month) conducted from September to November 2020, the mean population was highest in November, i.e. 190.33 ± 20.35 , followed by October (179.18 ± 28.42) and then September (120.6 ± 33.54). The highest population of November was on the 8th i.e. 245 individuals. Likewise, 234 individuals on October 29th and 179 individuals on September 27th, 2020. Eight sites were



H04, an adult Indian Skimmer ringed in Chambal by the BNHS team in July 2018, was photographed in Jamnagar in July 2020 by Ankur Gohil.
(Photo: Ankur Gohil)

visited during the International Skimmer count in December 2020 and January 2021, out of which skimmers were seen at two sites, i.e. Dhinchada and Rosy Port. A total of 237 individuals were recorded in December skimmer counts and 123 in the January count. At least five individuals with BNHS rings were observed regularly during the study period.

Discussion

Despite their huge importance, the Jamnagar wetlands are not yet highlighted for the Indian Skimmer. Counts in the early months of July and August are less compared to the September-November phase at Jamnagar. Along with the Dhinchada wetland, Rosy Port is another important site for skimmers. The colony of the Rosy port mudflat has been reported for the first time. A total of 134 birds were reported in December 2020, and again 52 in January 2021, from the Rosy Port area. Dhinchada and Rozi Port support a 9% biogeographic population of Indian Skimmers, thus making it a very important wintering ground that must be conserved from solid waste pollution and other threats. Mangrove afforestation activities may also serve as a threat to the Indina Skimmer and other mudflat-dependent species.

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