
Population decline in key oceanic seabird colony of the Eastern Indian Ocean: Could illegal egg harvesting be the prime cause?

Ravichandra Mondreti*^{†1,2}, Priya Davidar*¹, and David Grémillet*^{2,3}

¹Pondicherry University (Pondicherry University) – Kalapet, Puducherry, India

²Centre d'Ecologie Fonctionnelle et Evolutive – UMR CNRS CEFE – UMR 5175 and CNRS - Université de Montpellier - Université Paul-Valéry Montpellier - EPHE, Montpellier, France

³Percy Fitzpatrick Institute of African Ornithology NRF-DST Centre of Excellence at the University of Cape Town – Rondebosch 7701, South Africa

Abstract

We performed population counts of a nesting colony of terns (Sternidae) on Pitti Island, an official seabird sanctuary, on three different field occasions: 17 February 2013, 10 March 2013, and 10 February 2014. We also evaluated both seabird population trends using data from earlier surveys and the present survey. We assessed the number of nests as well as eggs. We also recorded egg loss due to predation, including collection and harvesting by fishermen. We conducted a questionnaire survey and interviewed 800 respondents from Kavaratti Island in the Lakshadweep Archipelago to assess the number of people involved in seabird egg harvesting and trade. We also evaluated their attitudes towards seabird conservation. Even though, we observed three tern species in the Pitti Island: Sooty Tern *Onychoprion fuscatus*, Brown Noddy *Anous stolidus*, and Greater Crested Tern *Thalasseus bergii*, we found only Sooty Terns nesting during our field visits. Natural predation on Sooty Terns is low (< 1%), however, fishermen removed 14%–45% of the eggs. In our study, we found 72% of the 800 respondents were either directly or indirectly involved in the harvest including the egg trade. During our survey, we found interviewees involved in egg collection and harvesting were significantly less inclined to support seabird conservation. Pitti Island is a protected area; nonetheless, tern numbers have been decreasing since 1963. Stringent conservation measures and periodic monitoring of the nesting colonies can only save this key pelagic seabird breeding site from being lost. Another important measure is to deviate the local people from the illegal egg collection and trade.

Keywords: seabird population decline, illegal egg harvesting, Pitti island, Eastern Indian Ocean, seabird colony, Sooty Terns

*Speaker

[†]Corresponding author: ravichandra.mondreti@gmail.com