

Environment

The Red-footed Boobies of Farquhar Atoll

The Island Conservation Society (ICS) has partnered with Professor Mathieu Le Corre (Université de La Réunion) to carry out a research project on the Red-footed Booby (*Sula sula*) of Farquhar Atoll.

Contributed by Matthew Morgan, Farquhar Atoll Conservation Officer, Island Conservation Society

The ongoing research is looking into the Red-footed Booby's abundance, habitat selection and movements at sea, using GPS devices, drones and genetic sampling. The project is funded by the Seychelles Conservation and Climate Change Adaptation Trust (SeyCCAT) and is a vital part of understanding the seabird populations and marine ecosystems of Seychelles.

Farquhar is located 770km SW of Mahé and is considerably closer to Madagascar than Seychelles, which is only 180km away. The atoll supports 10 islands in total, but 98% of the landmass is made up by two large islands, Ile du Nord and Ile du Sud. The atoll is rich in life and

supports some of the best fisheries in the region, as well as high densities of turtles and seabirds. Ile du Sud has become increasingly important in recent years due to a huge expansion of breeding pairs, from a few hundred pairs to over 10,000.

Red-footed Boobies, or Fou bet in creole, are a large species of seabird which are vital indicators of marine health and the condition of fisheries. Once common across several islands in Seychelles, breeding populations are now restricted to the most remote locations, mainly Cosmoledo, Aldabra and Farquhar. Their reduced distribution is human induced, caused by habitat loss, human consumption and overfishing of foraging grounds.

On Farquhar, surveying the breeding colony is very difficult as the birds are distributed over impenetrable Bwadammann (*Pemphis*



Matthew Morgan carrying out circular plots



Red-footed Booby

acidula). However, despite the challenging access, circular plots have been used to attain average nest densities. This involves carrying a ladder and a 5.64m pole! Alongside this tried and tested technique, a novel method is also under trial. Using drone technology, the colony has been systematically mapped via photographs and stitched into a photomosaic, from which adult, nests and chicks can be distinguished. To further complement these assessments, remote camera traps have been deployed at night to collect data on roosting birds, previously never studied. The ICS team based on Farquhar have recently carried out the third population census in December, and have one more remaining in April (a total of four). Primary results show that the drone survey could be a suitable alternative to traditional methods in the future, as it causes less disturbance and samples the entire area.

Research into the birds movement will be conducted in April by attaching 40 GPS loggers on to nesting adults. This information is critical for marine spatial planning as it could reveal unknown marine hotspots which deserve regulating.

Last but not least, in order to determine where the influx of 'new' birds have come from, blood samples have been collected in November 2019 and will be collected again in April 2021. The results from genetic analysis will be cross-referenced against other booby colonies in the region to further understand population movements across the South West Indian Ocean.

Thanks to modern technology, we are now able to study seabird populations to a depth previously unknown, collecting information which not only complements conservation, but also socio-economic agendas. Their incomparable movements at sea offer a unique insight into marine ecosystems, furthering our understanding and providing information needed for effective management. Fieldwork for the project will conclude in April 2021, results and findings are scheduled for publishing early 2022.



Colony



Drone sample



Drone funded by SeyCCAT



Annabelle Cupidon in breeding colony



Barachois 3 - Main nesting colony



Property Management Corporation (PMC) would like to inform **ALL** its esteem clients and members of the public that its office will be **CLOSED as from 12 noon on Thursday 24th and Thursday 31th December 2020.**

For any emergency, clients are advised to call the hotline on 2724000

We apologize for any inconvenience caused and thank you for your cooperation and understanding.

We would like to take this opportunity to wish you all a Merry Christmas and a Prosperous New year.