



St. François Research Expedition: Discovering secrets of Red-footed Booby and Greater Frigatebird

Island Conservation Society Seychelles

by Gail Fordham

The Island Conservation Society's (ICS) mission was to catch seabirds and attach satellite tracking devices to them; the resultant data giving insight into their flight movements and the secrets of their preferred feeding grounds at sea. In the darkness, we walked through the maze of mangroves inside St. François lagoon; circles of light from our headtorches illuminating the murky water through which we waded. Every direction we shone the torches, mullet leapt from the water in

surprise, and we considered what other creatures were surely lurking around us. Two consultants, Dr. Gerard Rocamora and Pep Nogués, had arrived at the Alphonse ICS offices the day before and spent the afternoon intently checking and testing the devices.

As marine protected areas (MPAs) are being planned and designated across the Seychelles via the Seychelles Marine Spatial Plan, research looking at the movements of species and their important foraging locations is vital. It is important that from an ecological perspective, the coverage of protection is meaningful and not arbitrary. Investigating habitat use for various species can help us improve MPA design. With all of this in the back of our minds, we pushed on through the lagoon, carrying an assortment of ladders, poles and rope which would assist us in catching birds. In the early evening, we had counted approximately 20,000 Red-footed boobys (*Sula sula*) – known as Fou Bet in Creole – flying in from the West, where they had spent the day skimming the sea surface for prey. Watching the swirling mass of birds begin to settle over St. François, we hoped they would roost low down to make our fieldwork a little easier. In 2017, ICS staff estimated an astonishing 250,000 Fou Bet. It has since been hypothesised that perhaps this exceptional number was due to the temporary displacement of birds after the devastating cyclone Fantala, that wiped out their habitat on Farquhar in 2016.

Even at our campsite, the Fou Bet filled the trees like decorations, competing for the most comfortable roost spots and arguing in hoarse rasping croaks. Over the first two nights,





working until early in the morning, we successfully caught several birds and carefully attached the small devices. The method for attachment depends upon the target species. For the Greater Frigatebirds (*Fregata Minor*) – known as Gran Fregat in Creole – we used a simple harness which strapped around the bird's chest and under its armpits. The Fou Bet require a more complicated procedure; as these birds are divers, the device needs to be robust against impact with water. The four middle tail feathers are selected, and the satellite tracker is taped to these, with care given to the solar panel which needs to be left completely exposed for this technology to have the best chance of transmitting properly (we are expecting to get around six weeks' worth of movement data for these birds). We are expecting a longer duration of transmission - up to six months - to come from the Gran Fregat, as they are unable to dive for their food due to a lack of oil in their feathers, relying instead upon piratical

attacks on other species and stealing catch. ICS monitors seabird populations closely, as they are important indicators of overall ecosystem health. On the third night, we observed a Tropical Shearwater (*Puffinus bailloni*) appear out of the vegetation and swoop over our heads. This species is occasionally seen at sea; however, this is the first record for St. François Island. This sighting could be an indication of nesting, and will be investigated on our next overnight visit.

On the fourth night, we had an encounter with another lagoon resident. While wading waist-deep, a Sicklefin Lemon Shark (*Negaprion acutidens*) about 2.5 metres in length came in to inspect the team, before moving back off into the dark. These lagoons and mangrove forests provide ideal nursery conditions and it is possible to observe Lemon Shark pups circling in the shallows.

St. François, part of the Alphonse Group and at the southern tip of the Amirantes chain, is one of the few wild places left on earth, where creatures can take refuge from the brutality of human impact elsewhere. All 8 tracking devices were successfully deployed on Fou Bet and Gran Fregat, and now we wait to see where the birds travel over the coming weeks. This information will illuminate an area of seabird ecology that is still poorly understood at this location, and will prove useful in the determination of effective MPAs.

About ICS

The Island Conservation Society (ICS) is a non-governmental, not-for-profit organisation based in the Seychelles. ICS promotes the conservation and restoration of island ecosystems, sustainable development of islands, and awareness of their vulnerability and vital importance to the planet's biodiversity. Its conservation teams are currently based on the following islands: Aride, Alphonse, Desroches, Farquhar and Silhouette.

