Seabird News

SEYCHELLES SEABIRD GROUP Newsletter Issue 9 July 2012

The ***Seychelles Seabird Group*** was formed in 2002 to facilitate the sustainable management and conservation of seabird resources in Seychelles. It comprises owners and managers of globally recognized IBAs (Important Bird Areas) and nationally important seabird sites. Our main role is to work collaboratively to: Gain national perspective; Prioritise seabird research and monitoring on a national level; Coordinate all seabird research and monitoring; Utilise standardised methods to ensure the comparability of data; Ensure priority seabird work is undertaken; and Use information collected to direct future research and/or management.

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Inside:

Editorial

Dear SSG members,

The Seychelles Seabird Group is now 10 years old! We are thrilled to see that cooperation on research and monitoring is still high in the agenda of the partner organisations and has led to valuable conservation results and better understanding of the biology and ecology of Seychelles seabirds. This anniversary seems the perfect occasion to launch the trial of a new and exciting tool for the SSG in the form of a blog. Bringing the SSG up to date using current technologies has been discussed in the past. Use of a blog would no doubt bring more dynamic and responsive ways to exchange information. This blog will be initiated soon and instructions provided on how to participate

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SSG partners:

Nature Seychelles: *Cousin Island Special Reserve* **Island Conservation Society:** *Aride, Alphonse and Desroches Islands* **Green Island Foundation:** *Denis Island* **Frégate Island Private** **Seychelles Islands Foundation:** *Aldabra Atoll* **Department of Environment**

News:

Seabirds news from Cousin

By Aurélien Nahaboo

White Tern (Nature Seychelles)

White-tailed Tropicbird chick (Nature Seychelles)

Since the last newsletter in November 2011, Cousin staff conducted the first census for 2012 in February for white-tailed tropicbird, white tern and Tropical shearwaters (formerly called Audubon shearwater). Censuses on Cousin are conducted on a bi-annual basis to take stock of variations linked to the change in wind regimes. Since February 2008, census for white-tailed tropicbirds, white terns and Tropical shearwaters has also been undertaken during the North-West monsoon (February). This will help in better understanding the demographic variations of these year-round breeding species.

White-tailed tropicbird population appears relatively stable overall on Cousin, with 1,287 breeding pairs estimated in February 2012. After an apparent decline in numbers since 2009 to an all-time minimum of 347 breeding pairs estimated in February 2011, the population has recovered and is now closer to the estimates produced in 1999 and 2000, where 1,054 and 1,446 breeding pairs were recorded respectively. Fluctuations shown in the white-tailed tropicbird population appeared common between years and seasons over this thirteen years period despite the methods have slightly varied over the years.

Conversely, the white tern breeding population shows growth over the same period: from 3,606 pairs estimated in February 2000 it declined to 1,273 pairs in February 2009. The new estimate showed 2,430 breeding pairs in February 2012 with consistent methods for over a decade now. However, for both white-tailed tropicbird and white tern, bi-annual censuses underestimate the actual breeding population as these species breed year-round on Cousin and only a part of the actual population can be intercepted.

Tropical shearwater censuses have known quite extensive modifications in the methodologies employed over the years. The data acquired since 2000 was collected using varying sampling sizes (number of plots and plot sizes) and sampling strategies (high level of stratification or not). For this reason, analyses of demographic variations for the species need to be carefully tackled. Nevertheless, variations in breeding population estimates showed that Cousin held a population of 5,177 pairs in February 2000, which rapidly decreased to levels as low as 225 breeding pairs in 2011. Although this census may certainly have underestimate the actual population for various reasons and only a part of the actual population can be intercepted as this species also breeds year-round on Cousin, Tropical shearwater also seems to have decrease on Cousin over the last 10 years. Data from the last census trial in February 2012 indicate a possible increase of the breeding population back to the level of the 2000estimates. This will be verified and data from the other islands will need to be scrutinised in order to validate this observation.

Further bi-annual censuses at the same period of the year, repeating exactly the same methodology used for the different seabird species on Cousin, are needed in order to statistically confirm the trends inferred above.

Articles:

Where do Aldabra red and white-tailed tropic birds go?

Seychelles Island Foundation

Aldabra supports the largest breeding populations of red-tailed tropicbirds (Phaethon rubricauda,) and white-tailed tropicbirds (P. lepturus) in the Seychelles (circa 2000 pairs and c.2000-2500 pairs respectively (Skerrett 2001)). Since 2007, tropicbirds breeding on several small islets in the Aldabra lagoon (La Gigi) have been monitored approximately every 2 weeks. These data have already provided us with an insight into the breeding seasonality, variation in nesting frequency and nesting success of these birds on Aldabra. Where the two species go when not breeding on Aldabra, however, is not known. To improve understanding of their migration ecology and potentially also the threats they are exposed to when away from the protected area of Aldabra SIF are conducting a study to track the birds and improve understanding of the linkages between breeding and foraging sites.

To track the tropicbirds between breeding attempts Jannie Linnebjerg (Universities of Aarhus and Copenhagen, and EC project consultant on Assumption) provided SIF with 27 light level geo-locaters (GLS) in January 2012 which still had approximately one year of battery time left.

Geolocation

Light level geolocation is the calculation of position from ambient light level readings with reference to time. It has proven to be a highly effective technique for tracking long distance migratory species. After data download, data is processed by software to estimate position: latitude from day/night length, and longitude from the absolute time of local midday/midnight. The accuracy of this technique is affected by a large number of factors and an average error ± SD of no better than 185 ± 115 km should be expected for a flying seabird. The data will not reveal exactly where a bird was at a certain time of day, but all the data combined will provide a good idea of the migration route.

Data logger attachment

The data loggers are attached to a colored plastic bird ring by use of a tie-wrap. In the outer and inner shell of the ring, two small holes are drilled and the inner ring is partially removed between the two holes. The partial removal of the inner ring between the two holes allows the tie-wrap to fall within the inner ring thus preventing an extra loop inside the ring that could irritate the bird's leg.

Left: Data logger attached to colored bird ring; Right: Bleeding of a red-tailed tropicbird (Martijn van Dinther)

Set-up

The data loggers (if possible) are to be equally distributed between the two species of tropicbirds nesting on La Gigi islets. To allow for individual recognition during the rest of the breeding season birds are being fitted with two colored plastic rings. One colored ring with the data logger on the right leg and one colored ring on the left leg.

Tropicbirds are prone to abandoning eggs at an early stage of incubation especially if harassed. Next to this the tropicbirds on the islets are nesting under neat bushes and can be difficult to reach and therefore handling could get a bit rough. For this reason we decided to avoid deploying loggers on birds with eggs or small chicks (because these tend to be sitting under the parents wing) and data loggers would only be deployed on birds sitting on older chicks (C3 stage). Birds in obviously poor condition, appearing to be exhausted or with a high ectoparasite load are also not considered suitable. Upon deployment of the data logger standard measurements and a blood sample are being taken for future analyses.

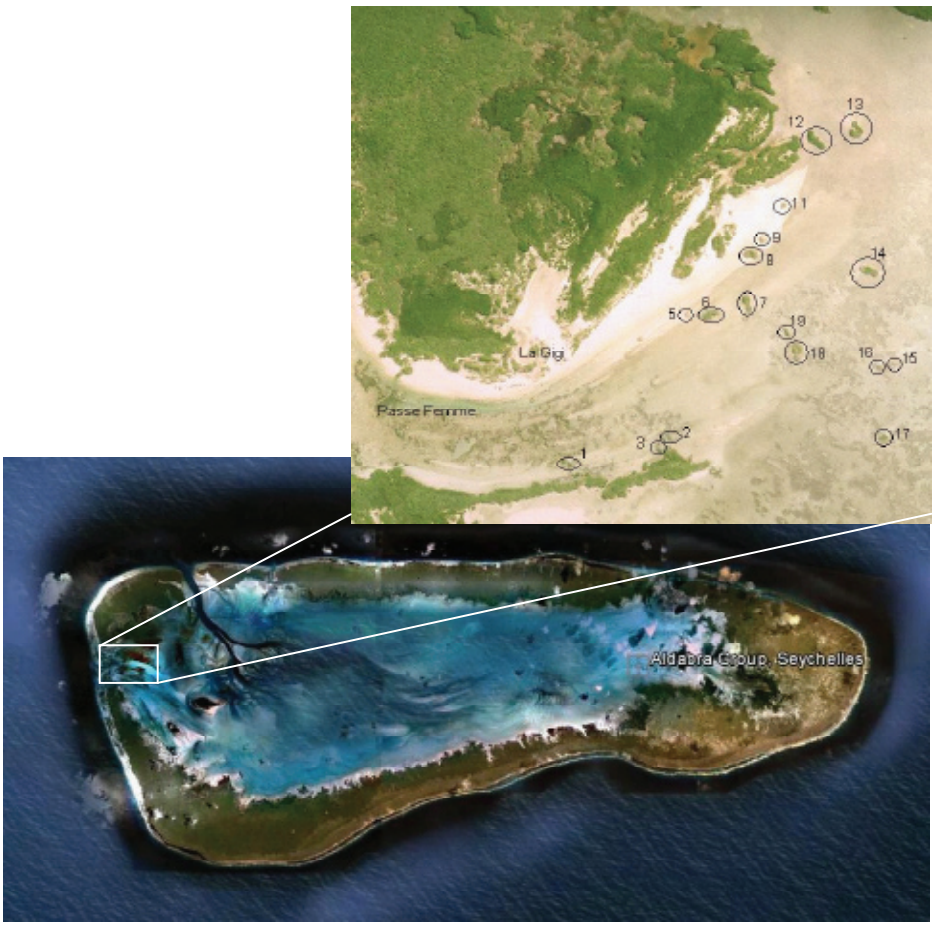
Data logger with ring on Red-tailed tropicbird leg (Martijn van Dinther) Red-tailed tropicbird breeding on Aldabra (Catherina Onezia)

Deployment thus far

Since the beginning of the project at the end of January 2012 seven data loggers have been deployed on red-tailed tropicbirds. Easy access to the islets is only possible during low tides and adult tropicbirds of older chicks are not always present during visits. This has led to fewer deployed loggers than expected so far. We are aiming for all remaining data loggers to be deployed before the end of June.

Data logger retrieval

Eventually the data loggers will be retrieved from the birds. This will be done during the following breeding season(s) at the end of 2012 and beginning of 2013. Because tropicbirds are site faithful it should be possible to retrieve most of the data loggers via the routine tropicbird nest monitoring of the islets. The data logger will be removed and the same measurements and records will be taken from each individual bird. The aim is to be able to present data showing Aldabra tropicbirds migration routes between breeding attempts by the end of 2013.



Location of La Gigi islets where tropicbird nest monitoring is conducted on Aldabra Google earth and SIF-database

The Black-naped terns return to breed on One Palm Island

Aurélie Duhec[1]

After the heavy failure recorded in February 2009 (Adam et al., 2009), the Black-naped terns (BNT) abandoned the sand bank 'One Palm Island', to nest on the beach platform in beach section EF, southern coast of St François Island.

In 2012, the colony made a comeback on the 'One Palm Island' nesting site, with a total of 15 breeding pairs nesting in an area equaling 105 m2. The monitoring covered the whole nesting season which started at the end of January and ended mid-April. ICS recorded a peak in productivity during mid-February. The productivity index is 0.54 if we consider that all the chicks (one downy chick, five partially feathered chicks and one fledged chick) recorded on the 29th of March, successfully fledged.

Even if most of the breeding pairs returned to nest on 'One Palm Island', the beach platform (beach section EF) was still a successful nesting site for a few other pairs. Incidentally, the peak incubation period was also recorded in mid-February with four adults sitting on eggs at this site. But on the 23rd of March, a maximum of six pairs were recorded with their chicks or incubating eggs. One downy chick, one partially feathered chick and three fledged chicks were observed on this date. The productivity index was estimated at 0.5, but the value may be higher since five other chicks were recorded during the next visit, which included two feathered chicks close to fledging.

Figure 1: Black-naped tern on One Palm Island (Aurelie Duhec)

It was the first year that the colony was observed simultaneously on these two breeding sites and it is difficult to make a statement on the reason of the return of the terns onto the sand bank. Indeed, many selective factors including predation, physical changes in site structure and flooding by sea, impact on the colony site selection and abandonment (Erwin et al., 1981).

The monitoring of the BNT greatly improved compared with 2010 and 2011 with a total of nine visits being made during the NW monsoon. The observation reveals that it was a relatively good season for the breeding colony compared with the previous NW monsoons, the highest index was estimated at 0.46 in 2010.

Figure 2: Black-naped tern beach section EF. (Joao Lagoa)

The 'wannabe' Black-naped Tern: The Roseate tern saga continues

This year, the Roseate tern was observed three times inside the One Palm Island colony while Wayne Haselau, a fly-fishermen working for the Alphonse Island resort, reported once the presence of the Roseate inside the beach platform colony. The team spent time to observe the bird and the interaction with the other terns. The behaviour of the Roseate was strange, appearing to be looking for a partner and intrigued by BNT chicks. The Roseate looked confused or lost in an unwelcoming family, with BNT defending their nests and chicks against the Roseate.

A series of pictures taken on the 23rd of March shows the inquisitive nature of the Roseate tern and a chick. The Roseate was allowed to come close to the chick without offending the closest adult BNT which stood at least 60 cm from the chick. After one minute of looking at the chick, the Roseate was chased away by another defensive BNT. A 10 minute squabble then ensued between the two birds.

Since 2008, the Roseate tern has been observed to come close to other BNT nests. The BNT are often observed pecking intruder chicks that do not belong to them. Therefore, the care that the Roseate exhibits towards the chick is very unusual and raises one main question: does the chick belong to the Roseate? If yes, why was it chased away?

Figure 3: the Roseate walked towards the chick.
Figure 4: the Roseate moved its head up-down close to touch the chick with its bill, without causing it any harm. This strange behaviour looked like a parental care behaviour.
Figure 5: the Roseate turned around the chick.
Figure 6: an adult Black-naped Tern chased away the Roseate
Figure 7: the squabble between the two birds lasted about 10min

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Adam, P-A., Bijoux, R., Rose, A., Summerton, P., Michel, J., and Labrosse, M. (2009) Alphonse Island Conservation Centre Annual Report 2009, Island Conservation Society, p78.

Erwin, R.M., Galli, J., and Burger, J. (1981) Colony site dynamics and habitat use in Atlantic coast seabirds. Auk 98:550–561

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Beach erosion: a significant threat for the nesting Shearwater colony on Bijoutier Island?

Aurélie Duhec[1] Pierre-André Adam[2] and Dr. Jeanne Mortimer[3]

Bijoutier is a tiny island of about 1.4 km2; its vegetation is composed mostly of a coconut forest on its western side and Scaevola on its eastern side. Since 2008, a small nesting Wedge-tailed Shearwater (Puffinus pacificus) colony of 19-30 breeding pairs (Adam, et al., 2009) is annually monitored by ICS. The dead coconut tree leaves create an ideal nesting habitat for the species (Figure 1), in the absence of rats and cats.

In 2009, the ICS team expressed concerns about the erosion occurring on the western side of the island which may have a long-term negative impact on the nesting colony. It was estimated that the high water mark was receding by about 1m per year on the western side (Adam, et al., 2009). This in turn would mean, if the rate of erosion remained constant, that the several century year old Bwa Blan (Hernandia nymphaeifolia), which was in the centre of the island in 2007 could be lost in the next 5 years and the current coconut forest could disappear within a time interval of 10-15 years. Breeding success is also being impacted annually as habitat suitability is being compromised. In 2012, ICS recorded three Shearwater nests which were washed out by the sea. Two chicks (downy chick and partially feathered chick) were lost during these unfortunate occasions (Figure 2a & b), while the third one, totally feathered chick, may have survived.

By comparing GPS track data collected during turtle beach surveys conducted in December 2006 and in February 2012, Dr Jeanne Mortimer highlighted that almost 35% of the vegetated surface area of Bijoutier has been lost from the west coast (essentially coconut trees) since 2006 (Figure 3). But, the land area of the island has actually increased by 19% since 2006. Incidentally, the species of plants being established on the eastern side through natural vegetation regeneration is made up of a mixture of mainly Scaevola, Cordia and Guettarda with very few coconut seedlings. This side is currently prime habitat for nesting turtles, especially Green turtles that prefer and are more successful nesting in open areas opposed to dense vegetation.

So far, the Shearwaters have not been observed nesting under the Scaevola bushes but it will be interesting to see if this changes as their current preferred nesting habitat (coconut forest) slowly disappears. It is possible that a Scaevola dominant island may be more beneficial to these nesting birds as it will be more difficult for Grey Herons to predate on their chicks. On a more definite and positive note, it will definitely be more beneficial to nesting Hawksbill and Green turtles as they have difficulty in nesting among coconut debris. Very few turtle emergences occur on the western side of Bijoutier and those that do, normally result in nesting failure due to emergences stopped by obstacles (ESBO) (Figure 4). But sadly, if this happens it will lose part of its aesthetical charm for which it has been known for many decades (Figure 5).

In conclusion, even if the island is not disappearing, but evolving to form a new vegetation structure, the fate of the nesting Shearwater colony is uncertain at this point in time.

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Mortimer, J.A. (2012) Is Bijoutier Disappearing?, information note. p1.

Figure 1: adult Wedge-tailed Shearwater incubating egg in nest amongst coconut leaves on Bijoutier. Photo: Pierre-André Adam

Figure 2(a): the yellow dashed circle indicate a burrow which was occupied by a partially feathered chick before being washed out by the waves. The fallen trees were already on the ground, but the whole structure of the nest covered with coconut tree leaves disappeared. **Figure 2(b):** in this instance, the coconut tree fell down under the powerful force of the waves. The burrow indicated by the yellow dashed circle, was also destroyed on this occasion. Photos: Elizabeth Atchoi

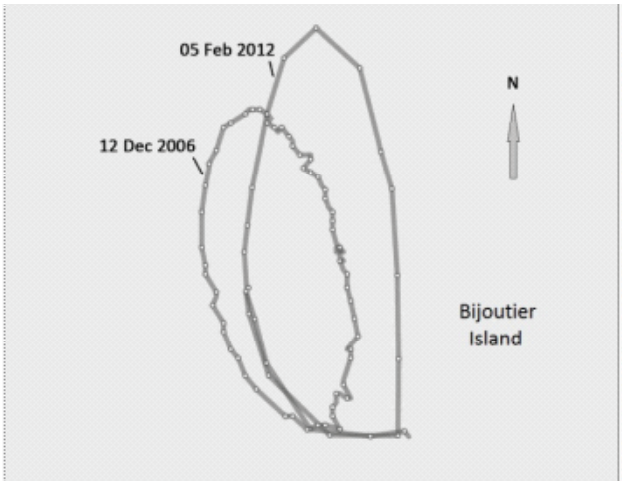

Figure 3: GPS track outline around Bijoutier Island (Mortimer, 2012).

Figure 4: close up view of West Bijoutier beach from the boat. Photo: Aurélie Duhec

Figure 5: view of East Bijoutier from the boat. Photo: Pierre-André Adam