

Birds of Providence Atoll, Seychelles, and first population estimates of breeding Greater Crested Tern *Thalasseus bergii* and Black-naped Tern *Sterna sumatrana* at Bancs Providence

by Adrian Skerrett

(Photographs by the author)

Providence Atoll, which since 1976 has been part of the Seychelles, lies 710 km southwest of Mahé, the main island of Seychelles in terms of size and population. It is not a true atoll, but a bank 45 km in length oriented north - south varying from 1 km to 10 km wide and occupying an area of 345 sq km. The land area comprises Providence Island (157 ha) in the north and Bancs Providence or Cerf (71 ha) in the south, separated by 32 km of shallow water. Providence Island was inhabited by workers engaged in fishing and copra production, probably continuously from at least 1846 until late 2006. In 2016, Bancs Providence comprises four large and about six very small islands, but its size and shape appear to be dynamic. It has never been permanently inhabited, though temporary fishermen's huts have been recorded (Coppinger 1884). There are no alien mammals and the only land bird is the Madagascar Fody *Foudia madagascariensis*.

On 21 December 2006 Providence Atoll was hit by Cyclone Bondo, the worst cyclone to hit the Seychelles for half a century. Today, the atoll lies abandoned.

Cyclone Bondo had a severe impact on birds as well as humans. On my only previous visit to Providence in 1996, I noted a huge heronry at Providence with small numbers of Brown Noddy *Anous stolidus* and Fairy Tern *Gygis alba* nesting in the crests of coconut palms. The heronry was destroyed by the cyclone while near the settlement there were around 200 corpses of Brown Noddy and a number of dead Grey Heron *Ardea cinerea*. Loss of trees for the island as a whole was about 65% (D Dogley, pers. comm). A few Grey Heron were present feeding at the reef and less than ten Brown Noddy nearby; no Fairy Tern was seen. I was unable to visit Bancs Providence in 2006 but flying over the island it appeared most trees were down and the sea had washed over much of the land.

On 18 March 2016, I joined MY *Pangaea* for the fourth in a series of cruises to enable the local NGO Island Conservation Society to conduct research in the outer islands of Seychelles. The ship made a brief stop the following day at Boudeuse, 530 km from Port Victoria, and here I confirmed the presence of seven breeding pairs of Brown Booby *Sula leucogaster* (six on eggs, one with a downy chick), similar to the eight breeding pairs discovered during the first MY *Pangaea* cruise in November 2013 (Rocamora 2013). There were also about 1,000 pairs of nesting Masked Booby S.

dactylatra, many with eggs or chicks at various stages of development. In Seychelles, both these booby species breed only here and at Cosmoledo but have a much wider historical distribution (Feare 1978).

On 20 March 2016 we anchored off the west coast of Providence and the area was explored using small shallow draught skiffs in the case of Providence Atoll and a RIB in the case of St Pierre. I visited the northern half of Providence accompanied by Igor Tatarinov on 20 March, St Pierre accompanied by Richard Schumann the following day and the southern half of Providence accompanied by Dr Jeanne A. Mortimer on 22 March. The main ornithological observation of significance was the presence of a large high tide roost of waders at Point Gustave, the southern tip of Providence, including 220 Crab Plover *Dromas ardeola* and 150 Whimbrel *Numenius phaeopus*. Also noteworthy was the presence of about 800 Grey Heron in southern Providence; many breeding Grey Heron were observed on all coasts but especially at Point Gustave.

On 23 March 2016 I visited Bancs Providence, landing just after high tide near the northern tip at 8.30am. We proceeded southward crossing three channels between the four main islands and visiting other islands by walking over drying flats. We reached the southernmost island around 1pm and here we made the most remarkable ornithological discoveries of the cruise: undocumented and significantly large colonies of Greater Crested Tern *Thalasseus bergii* and Black-naped Tern *Sterna sumatrana*.



Plate 7. Greater Crested Tern crèche.



Plate 8. Greater Crested Tern.

Greater Crested Tern

Greater Crested Tern is resident on coasts and islands of the Red Sea and Persian Gulf to South Africa and Namibia, and across the Indian Ocean and central Pacific to the Society Islands with race *thalassinus* in the western Indian Ocean (del Hoyo *et al.* 1996). In Seychelles it is known to breed at seven islets of Aldabra (Diamond and Prÿs-Jones 1986), Etoile (Dawson 1965) and African Banks (Feare 1979). It was last documented at Etoile in 1965 (Dawson 1966) but probably still breeds, and nests were photographed by a visitor in 1998 (Islands Development Company archive, photographer unknown). Significant numbers of adults with a few begging juveniles observed at Boudeuse, Etoile and African Banks in November 2013 suggest that a minimum of 50 pairs continue to breed in the northern Amirantes (Rocamora 2013 and pers comm). It formerly bred and may still breed at Astove (adults seen with young, June 1969: Bayne *et al.* 1970). It may also breed at Cosmoledo, where it is commonly encountered. Non-breeding birds disperse widely and are fairly common throughout Seychelles all year round suggesting some breeding sites remain to be discovered.

Greater Crested Tern chicks leave nests about two days after hatching, one parent looking after each chick or chicks forming a crèche (Domm and Recher 1973, Domm 1977). Young are able to fly at 40 days (Milon 1950). A few of the young we observed still retained considerable down, but most were well feathered and probably within 2–3 weeks of being able to fly. Incubation lasts 25–30 days, fledging 38–40 days. Working backwards this suggests laying dates in January–February. Elsewhere in Seychelles, there are two known laying periods at Aldabra, December–January and June–August, while at African Banks eggs have been recorded in November (Vesey-Fitzgerald 1941) and July (Feare 1979).

The number of fledglings within the crèche was difficult to count manually and I found the best method was to photograph the entire crèche and count the individuals later. In this way, I counted 152 fledglings. Around 200 adults were also present at the colony site, with more observed at other locations throughout the day.

There is little information on breeding success in the region but elsewhere productivity is 0–0.6 per nest (del Hoyo *et al.* 1996). Birds observed at Bancs Providence were close to fledging, so the colony might be at least 250 pairs, making it the largest known colony in Seychelles at the present date. However, this is speculative and more information is needed to assess more accurately the numbers breeding at Providence. Meanwhile, a range of 200–300 pairs is estimated.

Previous first hand references to Greater Crested Tern at Providence Atoll are largely imprecise with regard to breeding. The earliest report is of two specimens collected by Abbott on 17 August 1892 with no mention of breeding (Ridgway 1895). Diamond and Prÿs-Jones (1986) summarise distribution of terns breeding in Seychelles, citing seven references for the Providence bank area. However, some of these refer only to terns of other species at Farquhar, not Providence. Where Greater Crested Tern is mentioned, Providence is not mentioned. Gadow and Gardiner (1907) state “it was never definitely found breeding” and Dawson (1966) names only Etoile as a breeding site. The only one of the list of sources to mention this species at Providence is Stoddart (1967) who states “Sea birds breeding on the bank include *Sterna bergii thalasseus*” but without reference to exact location or numbers.

The Seychelles population as a whole has been previously estimated at 260–700 pairs (Rocamora and Skerrett 2001). However, this includes an estimate of 100–500 pairs at Cosmoledo, potentially the largest Seychelles colony, where breeding is yet to be proven. The total Seychelles population of Greater Crested Tern is estimated as follows:

Table 1. Total Seychelles population of Greater Crested Tern 2016.

Location	Population	References
Aldabra	60–100 pairs	Diamond & Prÿs-Jones 1986; Rocamora & Skerrett 2001
Cosmoledo	Unknown, possibly 0–100 pairs	
Astove	Unknown, possibly 0–50 pairs	
Bancs Providence	200–300 pairs	This paper
Northern Amirantes (African Banks, Etoile and possibly Boudeuse)	c. 50–100 pairs	Dawson 1966; Feare 1979; 1998 photograph; Rocamora 2013 & pers. comm.
TOTAL	310–650 pairs (or 930–1,950 birds as per Wetlands International 2006)	

This is the first report of this breeding species at Providence Atoll since Stoddart (1967). It is the first estimate of numbers other than a figure of 10–100 in 1986 (Diamond and Prÿs-Jones 1986). It is the first indication of breeding season at this locality of the atoll (the southernmost island of Bancs Providence).

Black-naped Tern

Black-naped Tern is resident from Micronesia to the western Indian Ocean (del Hoyo *et al.* 1996). There may be two races with *mathewsi* restricted to the Malagasy region, Maldives and Chagos, but alternatively it may be monotypic (Safford and Hawkins 2013). Seychelles lies at the western extremity of the species’ range and holds all or almost all of the African regional population. Black-naped Tern is known to breed on Aldabra, Cosmoledo, Farquhar, St Joseph Atoll, St Francois and African Banks with breeding at Farquhar only discovered in 2006 (Skerrett 2006) and at St Francois in 2008 (Adam *et al.* 2009). It is believed to be mainly resident at breeding sites but has been recorded as a vagrant to Bird, Aride, Cousin and La Digue (Skerrett *et al.* 2007).

Immediately south of the Greater Crested Tern crèche on the western coast lies an open sandy beach. We noted the presence of Black-naped Tern and counted 61 adults resting there. The following day I counted 77 adults on the same beach and a total of 120 birds on the island as a whole. Beyond the beach above the tideline was an open area with scattered low bushes. Here there were at least 12 nests with eggs and eight nests with chicks. No Black-naped Terns were seen elsewhere at Providence Atoll. In view of the number of adults counted, the Bancs Providence population is probably at least 40 pairs. Interestingly, the following day at Farquhar I learned that the breeding season was over and that there were no active nests at Farquhar.

Unpublished data from Island Conservation Society staff suggest breeding dates of January–May at Farquhar while at Alphonse it is February–April and June–September (A Duhec, pers. comm). Obviously there is too little information to say what the season might be at Bancs Providence though one might expect it to be similar to Farquhar, which lies only 65 km south southeast of Bancs Providence. Indeed, it might be one population with birds moving between sites.

In 1905, Black-naped Tern was recorded as a “shore breeder” at Providence (Gadow and Gardiner 1907). Dawson (1966) states that it was said to breed “exclusively in the Amirantes and at Providence in October and November in scrapes in the shingle or sand banks above high water mark” but the original source of this information is unclear. In 1967, Stoddart omits any mention of Black-naped Tern naming only Greater Crested Tern and Fairy Tern as breeding seabird species (Stoddart 1967). In 1976, presence was noted at Bancs Providence but no nests (C. J. Feare, pers comm). In 1996, it was noted and territorial activity observed but no nests were found (Skerrett 1996). In November 2001, a large number of adults (min. 130) was observed in mixed flocks with smaller terns, and the importance of Bancs Providence for the species, at least during the non-breeding season, was noted (Rocamora 2001).

The Seychelles population has previously been estimated at 125–205 pairs (Adam *et al.* 2009). Recent assessments by Island Conservation Society at Farquhar and St Francois, put the total as follows:

Table 2. Total Seychelles population of Black-naped Tern 2016.

Locality	Population	References
Aldabra	50–70 pairs	Betts 2000
Cosmoledo	30–50 pairs	Skerrett <i>et al.</i> 2001, Rocamora <i>et al.</i> 2003
Farquhar	87–137 pairs	Duhec and Jeanne 2016
Bancs Providence	c. 40 pairs	This paper
St François Atoll	18 pairs	Nogués, Narty & Fernández 2016
St Joseph Atoll	10–20 pairs	Skerrett & Skerrett 2005
African Banks	c. 10 pairs	Rocamora & Skerrett 2001
TOTAL	245–345 pairs (735–1,035 birds per Wetlands International 2006)	

This is the first confirmed breeding record from Providence Atoll for more than a century, the first to identify Bancs Providence as the breeding site (as opposed to a vague reference to the atoll) and the first ever population estimate. Given the proximity of the atolls to the Farquhar-Providence populations (65 km apart) they may represent one population being around 50% of the total population for the African region.



Plate 9. Crab Plover.



Plate 10. Black-naped Tern.



Plate 11. Fairy Tern.



Plate 12. Black-naped Tern nest.

Other birds

A full list of bird sightings and counts can be accessed at the following link: <http://ebird.org/ebird/country/SC?yr=all>

Of particular note are the remarkably high numbers of Grey Heron at Providence (800 birds) and Bancs Providence (450 birds). It is possible Grey Herons take a heavy toll on nesting Black-naped Terns, as has been observed elsewhere including at neighbouring Farquhar Atoll. They may also predate Greater Crested Tern eggs and chicks but possibly less so due to larger size and the habit of this tern species in nesting in very dense colonies. Also noteworthy is the number of Crab Plover with counts of 220 at Point Gustave, Providence and 60 at Bancs Providence. Previous counts include 140 at Bancs Providence in 2001 (Rocamora 2001).

Fairy Tern breeds in small numbers at Bancs Providence, their nest sites hidden deep within vegetation unlike at other Seychelles breeding sites such as Aride, Cousin and Cousine. This nest site location is possibly to avoid detection by Grey Herons, absent at these other named islands.

One species of note in an earlier unwritten report is Roseate Tern *Sterna dougallii*. During a visit to Bancs Providence in 1976 a colony was observed where large numbers of chicks were being taken by Grey Herons (Guy Savy pers comm). No Roseate Terns were observed on this occasion, which is unsurprising as this species is present at breeding sites elsewhere in Seychelles only from late April to August.

Providence Atoll as an Important Bird Area (IBA) and protected area

The BirdLife International threshold for Black-naped Tern to qualify for consideration as an Important Bird Area (IBA) was originally set at just two birds (Fishpool & Evans 2001). This is too low, taking into consideration the new populations discovered by Island Conservation Society since the first inventory of IBAs in Africa was published (Rocamora and Skerrett 2001). It was proposed that it might be raised to 4–7 (Adam *et al.* 2009) and the threshold was raised to six in 2014 (Lascelles 2014). The breeding population at Bancs Providence clearly considerably exceeds the IBA threshold. The threshold for Greater Crested Tern is 500 birds and again, this survey suggests the Bancs Providence population comfortably exceeds this. The latest atoll-wide non-breeding population of Crab Plover of 280 birds is very close to the IBA criterion of 300 birds. It is also possible that Roseate Terns still breed at Bancs Providence.

The first draft of the IBA inventory for Seychelles included a shadow list of potential IBAs where more data was needed, and this included Bancs Providence (Rocamora & Skerrett 1999). The shadow list was approved by a national workshop but not included in the final inventory for Africa as the concept of potential IBAs was inconsistent with accounts for other countries (Rocamora & Skerrett 2001). The information collected during the ICS/*Pangaea* expedition clearly shows that Providence meets the criteria to be designated as an IBA, though equally clearly more information is needed. It is recommended that the area of an IBA should include the entire bank surrounding both Bancs Providence and Providence Island, thereby including not only the breeding tern colonies of Bancs Providence but also the important feeding areas for both terns and migratory waders, notably Crab Plover.

Bancs Providence is also worthy of protection and should be considered as a Special Nature Reserve protected by Seychelles law. The author has made this recommendation to high level officials in Seychelles and the preliminary responses have been encouraging.



Plate 13. Grey Herons.

Acknowledgements

I am grateful to the owners, management, officers and crew of *MY Pangaea*, in particular Todd Robinson, Todd Calitri, Richard Schumann, Ferdi Heymann, Igor Tatarinov and Marilize Nadauld. I am also grateful to Dr Jeanne A Mortimer, Island Conservation Society Expedition Leader, for efficient organisation of requirements for shore landings and liaison with *MY Pangaea* personnel.

I am grateful to Islands Development Company Limited for permission to land on Providence and Bancs Providence. I thank Dr. Gérard Rocamora for helpful suggestions and comments on the first draft of this paper. I am also grateful to Mike Evans and James Millett for assistance with queries concerning IBA thresholds.

References

- Adam P-A, Skerrett A & Rocamora G (2009).** The first confirmed breeding record of Black-naped Tern from St Francois Atoll and a new population estimate for Seychelles and the Afrotropical Region. *Bulletin of the African Bird Club* 16 (1): 78–82.
- Bayne CJ, Cogan BH, Diamond AW, Frazier J, Grubb P & Hutson A (1970).** Geography and ecology of Cosmoledo Atoll. *Atoll Research Bulletin* 136: 37–56.
- Betts M (2000).** *Research Officer's Annual Report for Aldabra June 1999–July 2000*. Internal report. Victoria: Seychelles Islands Foundation.
- Coppinger RW (1884).** *Cruise of the Alert*. London: Swan Sonnenschein & Co.
- Dawson P (1966).** A survey of the sea birds of the Seychelles Islands. *Oologists' Record* 40: 1–11.
- del Hoyo J, Elliott A & Sargatal JE (eds.) (1996).** *Handbook of the Birds of the World*. Vol. 3. Hoatzin to Auks. Lynx Edicions, Barcelona.
- Diamond AW & Prÿs-Jones RP (1986).** The biology of terns nesting at Aldabra Atoll, Indian Ocean, with particular reference to breeding seasonality. *Journal of Zoology, London*. 210: 527–549.
- Domm S (1977).** Seabirds and waders of the Lizard island area. *Sunbird* 8: 1–8.
- Domm S & Recher HF (1973).** The birds of One Tree Island with notes on their yearly cycle and feeding ecology. *Sunbird* 4: 63–86.
- Duhac A & Jeanne R (2016).** Island Conservation Society Farquhar Atoll Annual Report 2015. Internal Report.
- Feare CJ (1978).** The decline of booby (*Sulidae*) populations in the western Indian Ocean. *Biological Conservation* 14: 295–305.
- Feare CJ (1979).** Ecological observations on African Banks, Amirantes. *Atoll Research Bulletin* 227: 1–7.

- Fishpool LDC & Evans MI (eds.) (2001).** *Important Bird Areas in Africa and Associated Islands: Priority Sites for Conservation.*
- Gadow H & Gardiner JS (1907).** Aves, with some notes on the distribution of the land-birds of the Seychelles. *Trans. Linn. Soc. Lond.* (2) 12 (Percy Sladen Exp. Rpts. 1): 103–110.
- Lascelles B (2014).** Marine Important Bird Areas In the Seychelles. Unpublished Report.
- Milon PhE (1950).** Quelques observations sur la nidification des Sternes dans les eaux de Madagascar. *Ibis* 92: 545–553.
- Nogués P, Narty C & Fernández A (2016).** Alphonse Group Monthly Report June 2016. Island Conservation Society Internal Report.
- Ridgway R (1895).** On the birds collected by Dr W. L. Abbott in the Seychelles, Amirantes, Gloriosa, Assumption, Aldabra and adjacent islands, with notes on habits etc., by the collector. *Proceedings of the United States National Museum* 18: 509–546.
- Rocamora G (2001).** Report on an expedition to Cosmoledo, Astove, Assomption and Aldabra. 5th to 20th of November 2001. Internal report. Island Conservation Society, Seychelles. 7 p.
- Rocamora G (2013).** *Bird observations and conservation potential of the Islands of Boudeuse, Etoile, Rémire, and African Banks in the Amirantes Group, Seychelles.* Report on Findings of the First Island Conservation Society (ICS) / MV *Pangaea* Research Expedition 22–28 November 2013. Island Conservation Society Internal Report.
- Rocamora G & Skerrett A (1999).** *First inventory of Important Bird Areas of the Republic of Seychelles. Final Version 25/08/99 with comments from IBA Workshop of 07/08/98 integrated.* Unpublished Report.
- Rocamora G & Skerrett A (2001).** Seychelles p 751–768 in **Fishpool LDC & Evans MI (eds.) (2001).** *Important Bird Areas in Africa and Associated Islands: Priority Sites for Conservation.* Newbury: Pisces Publications & Cambridge, UK: BirdLife International.
- Rocamora G, Feare CJ, Skerrett A, Athanase M & Greig E (2003).** The breeding avifauna of Cosmoledo atoll (Seychelles) with special reference to seabirds: conservation status and international importance. *Bird Conservation International* 13: 151–174.
- Safford RJ & Hawkins AFA (eds.) (2013).** *The Birds of Africa Volume VIII: The Malagasy Region.* Christopher Helm, London.
- Skerrett A (1996).** Ornithological observations south of the Amirantes. *Birdwatch* 18: 3–8.
- Skerrett A (2001).** The Important Birds of St Francois Atoll. *Birdwatch* 38: 9–10.
- Skerrett A & Skerrett J (2005).** *Seabirds and shorebirds of D'Arros and St Joseph Atoll during the south-east monsoon.* Island Conservation Society internal report. Victoria: Island Conservation Society.
- Skerrett A (2006).** News from Farquhar. *Birdwatch* 58: 10–13.
- Skerrett A, Betts M, Bullock I, Fisher D, Gerlach R, Lucking R, Phillips J & Scott B (2007).** *A Checklist of the Birds of Seychelles.* Lulu.com.
- Stoddart DR (1967).** Summary of the ecology of coral islands north of Madagascar (excluding Aldabra). *Atoll Research Bulletin* 118: 53–61.
- Vesey-Fitzgerald D (1941).** Further contributions to the ornithology of the Seychelles Islands. *Ibis* (14) 5: 518–531.
- Wetlands International (2006).** *Waterbird Population Estimates.* Fourth edition. Wageningen: Wetlands International.

Adrian Skerrett

Email: askerrett@hotmail.com