

Chapter 39

Report on top-predator survey of southern Angola including Ilha dos Tigres, 20–29 November 2005

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The R.V. Tòmbwe (45.5 m) sailed from Luanda at 22h00 on 23 November for Baia dos Tigres, with four Angolan, two Namibian and one South African scientist. The vessel departed late because there was a delay in the arrival of the baggage containing most of the research equipment.

At sea observations of seabirds were conducted during both the outward and return stages between Luanda and Baia dos Tigres. Birds were counted every hour, on the hour, for ten minutes (between the hour and 10 minutes past the hour). It was attempted to avoid counting birds that were following the ship by counting only the birds sighted in the 180° arc of the bow. The most abundant species were Common Tern, Sabine's Gull, Pomarine Jaeger and Cory's Shearwater (Table 1). On the vessel's return voyage, during a trawl about 20 km south of Luanda, Royal Terns (c. 20) were the most abundant bird attending the trawl. Their call closely resembles that of Crested (Swift) Terns, but is higher pitched. Also observed were a small dark petrel, suspected to be a Bulwer's Petrel, and a dark-rumped Storm Petrel, but neither could be identified beyond doubt.

When marine turtles or cetaceans were observed, they were identified, counted, and their GPS position was re-

corded. Just two turtle species were identified, with few individuals observed (Table 2). Large schools of Bottlenosed and *Stenella* Dolphins and Shortfin Pilot Whales were recorded, as well as Dusky Dolphins and Humpback and Bryde's Whales (Table 3). Other marine organisms that were observed included Manta Rays, Hammerhead Sharks, several varieties of Flying Fish, a Dorado and a Sunfish. Opportunistic stern counts were conducted, usually in the evening, but the data were not used in the summary at the end of the report.

Ilha dos Tigres is a low lying sandy island about 25 km in length and about 5 km at its widest part. It appears as though a portion of the island's interior becomes flooded during high tides in the south. The island is separated from the mainland by a deep channel. Vegetation is sparse and includes a grass found in the north of the island, and a casuarina-type tree in the only settlement. There are several sites on the island's eastern shores where disused and dilapidated buildings occur, and there is an airstrip that is still in use. Six people, who kept a large pet dog, were guarding the island. This survey covered the northern and southern parts of the island, due to our late departure from Luanda, there was insufficient time to cover the central region.

After some 50 hours steaming, the vessel arrived at Baia dos Tigres late at night on Thursday, 24 November and lay at anchor outside of the bay until dawn. A small party went ashore at the settlement on 25 November to confer with the local authority regarding the vessel's intentions. Thereafter, the vessel proceeded to the northern portion of the island, where all scientific personnel were disembarked. The party split into two groups of four – one group to conduct a census of fur seals, weigh pups and collect scats; the other to conduct a census of seabirds, band any chicks, measure any

Table 1: Seabirds observed between Luanda and Baia dos Tigres. Values shown as 10/11 represent total numbers observed to/from Baia dos Tigres, excluding stern counts

Cape Gannet	10/11
Swift Tern	9/0
Royal Tern	1/16
Common Tern	40/64
Arctic Tern	0/7
Black Tern	0/11
Unidentified tern	1/0
Kelp Gull	30/20
Grey-headed Gull	1/0
Sabine's Gull	105/33
Pomarine Jaeger	91/120
Parasitic Jaeger	4/28
Long-tailed Jaeger	3/0
Grey Phalarope	0/2
Sooty Shearwater	9/6
Cory's Shearwater	53/65
White-chinned Petrel	0/10
Wilson's Storm Petrel	2/23
Leach's Storm Petrel	0/12
Petrel/ Storm Petrel (dark rump)*	1/1

*Unidentified

Table 2: Turtles observed between Luanda and Baia dos Tigres. Values shown as 1/0 represent total numbers observed to/from Baia dos Tigres

Loggerhead Turtle	24 Nov	1/0	12h40	14°58.990S; 11°48.145E
Unidentified Turtle	27 Nov	0/2	11h30 11h50	not recorded 13°24.130S; 12°02.558E
Olive Ridley Turtle	27 Nov	0/2	12h50 13h20	13°10.983S; 12°03.754E 13°24.130S; 12°02.558E

eggs, attach satellite transmitters (PTT) to adult Cape Cormorants, and collect opportunistic diet samples. The southern portion of the island was surveyed the following day. Two further days would have been required in order to survey the western shoreline, central region and the opposite mainland.

Cape Fur Seal

Counts were made of the number of live adults and of live and dead pups of the Cape Fur Seal. In the north, 618 adults and 50 pups were counted in two distinct groups. No mortality was noted here. In the south, 3 388 adults and 1 111 pups were counted in four groups. Additionally, 52 dead pups were counted.

Cape Cormorant

There were many more Cape Cormorant nests in the north of the island than in the south. The colonies in the two areas were in a similar stage of breeding; most nests were still under construction, but a few nests already had completed clutches. There were also several groups of recently fledged chicks. The contents of 255 nests were recorded: 123 were empty, 132 had eggs and 0 had downy chicks. Mean observed clutch size was 1.3 eggs. Birds were excessively nervous of human presence and took flight when observers approached them within 200 m (or more). Large numbers of attending Kelp Gulls then fed on eggs. Therefore, the numbers breeding were estimated from counts of portions of colonies extrapolated to cover the entire colonies. In the north, it was estimated there were at least 1 830 active nests and in the south, 800 nests, giving an estimated total of 2 630 pairs breeding (Table 4).

Table 3: Observations of cetaceans between Luanda and Baia dos Tigres. Positions of sightings are shown

23 November		
c.500 Bottle-nosed Dolphin	06h30	09°06.987S; 12°41.884 E
c.10 unidentified dolphin	11h20	10°35.444S; 12°37.239E
24 November		
2 Humpback Whale	09h30	14°26.934S; 11°53.324E
6 Dusky Dolphin	19h30	15°40.380S; 11°41.045E
26 November		
2 Bottle-nosed Dolphin	16h00	In Baia dos Tigres
1 Bryde's Whale	17h00	16°19.173S; 11°42.515E
27 November		
4 Humpback Whale	07h10	14° 04.966S; 11°59.801E
1 unidentified whale	08h10	13° 54.779S; 11°59.086E
c.10 unidentified <i>Stenella</i> sp.	08h10	13° 54.779S; 11°59.086E
6–10 Striped Dolphin	08h40	13°49.964S; 11°59.054E
1 unidentified dolphin	09h00	13°47.026S; 11°59.193E
c.300 Spotted (70%) & Striped (30%) Dolphin	09h50	13°41.860S; 11°56.531E
8 Bottle-nosed Dolphin	11h00	13°31.924S; 11°59.563E
c. 200 mixed <i>Stenella</i> spp. (90% Spotted; 10% Striped)	12h50	13°14.933S; 12°04.013E
3–6 Risso's Dolphin	13h35	13°04.163S; 12°05.431E
1–4 <i>Stenella</i> spp.	13h35	13°04.163S; 12°05.431E
8 Bottle-nosed Dolphin	14h00	13°02.510S; 12°05.674E
6 Bottle-nosed Dolphin	17h30	13°04.163S; 12°05.431E
28 November		
c.200 Short-finned Pilot Whale	11h27	09°22.225S; 12°32.518E
c.50 Bottle-nosed Dolphins	13h35	13°04.163S; 12°05.431E
11 Shortfin Pilot Whale	13h35	13°04.163S; 12°05.431E
c.30 Shortfin Pilot Whale	12h30	09°15.053S; 12°34.241E
2 Bottlenosed Dolphin	12h30	09°15.053S; 12°34.241E

Twenty-three pellets and seven regurgitations were collected. The species composition of prey identified from pellets is shown in Table 5. Of 75 prey items identified, 41 (55%) were horse mackerel, 24 (32%) soles and eight (11%) sardine. Sardine occurred in all the regurgitations collected, but no other prey was recorded. About 100 quite emaciated fledglings and a few adult Cape Cormorants were found trapped in a well – 80 of the fledglings were banded and a PTT (#57351) was fitted to one adult bird, which was also banded with the number 8-38481. The bird subsequently foraged to the north of the island, to a maximum distance of 17 km from the island (Fig. 1). Several birds were too weak to be banded. They were removed and released immediately.

White-breasted Cormorant

Eight nests of Whitebreasted Cormorant, some containing large chicks, were observed on the remains of a dilapidated jetty at the settlement. There were also three colonies of White breasted Cormorant, totaling 52 nests, within the Cape Cormorant colonies in the north.

Kelp Gull

Kelp Gulls were breeding in large numbers over large areas of the northern and southern parts of the island. They seemed to be less dense in the central region. In the north, 556 nests of Kelp Gull were counted and in the south 398. The contents of 101 nests were recorded and the eggs of 13 clutches were measured. Of nests examined, 0 were empty, 90 had eggs and 11 had downy chicks. Mean observed clutch size was 2 eggs. Mean measurement of eggs was 71.6 mm x 49.2 mm (Range: 67.4–78.9mm x 46.8–50.5mm)

Table 4: Numbers of individual (or pairs where indicated) of birds observed on or from Ilha dos Tigres: (b) denotes confirmed breeding, (?) possible but unconfirmed breeding at this locality

Cape Cormorant	(b)	2 630 pairs
White-breasted Cormorant	(b)	60 pairs
Kelp Gull	(b)	954 pairs
Grey-headed Gull	(?)	1
Caspian Tern	(b)	88 pairs
Swift Tern	(?)	9, including 1 juvenile
Royal Tern		1
Sandwich Tern		11
Common Tern		3
Arctic Tern		7
Parasitic Jaeger		1
Northern Giant Petrel		1
White-chinned Petrel		1
Cape Gannet		10, including 1 juvenile
Greater Flamingo		268
Ruddy Turnstone		10
Greenshank		2
Curlew Sandpiper		4
Little Stint		9
Red-necked Stint		1
Sanderling		471
White-fronted Plover	(?)	6
Chestnut-banded Plover		4
Ringed plover		8
Pied Crow	(?)	3
Osprey		1
Manx Shearwater (specimen record)		1

Table 5: Analysis of Cape Cormorant pellets collected in the north of Ilha dos Tigres

Sample no.	Common name	Scientific name	No. of individuals in sample	Otolith measurement (mm)						
1	Unidentified fish	no otoliths	1							
2	Horse Mackerel	<i>Trachurus sp.</i>	4	4.2	3.9	3.4	4.2			
3	Sardine	<i>Sardinops sagax</i>	1	2.5						
4	Horse Mackerel	<i>Trachurus sp.</i>	5	3	3.6					
	Sardine	<i>S. sagax</i>	1							
	Unidentified Sole	Solidae	1	1.65						
5	Sardine	<i>S. sagax</i>	1							
	West Coast Sole	<i>Austroglossus microlepis</i>	17	1.9	1.7	1.8	1.7	1	1.3	
6	Horse Mackerel	<i>Trachurus sp.</i>	10	3.8	3.6	3.9	4.4	5.5		
7	West Coast Sole	<i>A. microlepis</i>	1	1						
	Sardine	<i>S. sagax</i>	2							
	Horse Mackerel	<i>Trachurus sp.</i>	1							
8	Red-spotted Tonguefish	<i>Cynoglossus zanzibarensis</i>	1	2.5						
	West Coast Sole	<i>A. microlepis</i>	1	1.8						
	Horse Mackerel	<i>Trachurus sp.</i>	2	3.4						
9	Horse Mackerel	<i>Trachurus sp.</i>	2	3.6	3.9					
10	Sardine	<i>S. sagax</i>	1	2.1						
	Horse Mackerel	<i>Trachurus sp.</i>	1							
11	Unidentified fish	no otoliths	1							
12	West Coast Sole	<i>A. microlepis</i>	4	1.6	2.8					
	Panga	<i>Pterogymnus lanarius</i>	1	4.1						
13	Horse Mackerel	<i>Trachurus sp.</i>	4	3.5	3	3.6	3.1			
	Sardine	<i>S. sagax</i>	1							
14	Unidentified fish	no otoliths	1							
15	Sardine	<i>S. sagax</i>	1							
16	Unidentified fish	no otoliths	1							
17	Horse Mackerel	<i>Trachurus sp.</i>	2	3.6	3.1					
18	Unidentified fish	no otoliths	1							
19	Horse Mackerel	<i>Trachurus sp.</i>	10	4.4	3.9	4	4.2	3.8	4.8	
20	Unidentified fish	no otoliths	1							
21	Unidentified fish	no otoliths	1							
22	Unidentified fish	no otoliths	1							
23	Unidentified fish	no otoliths	1							

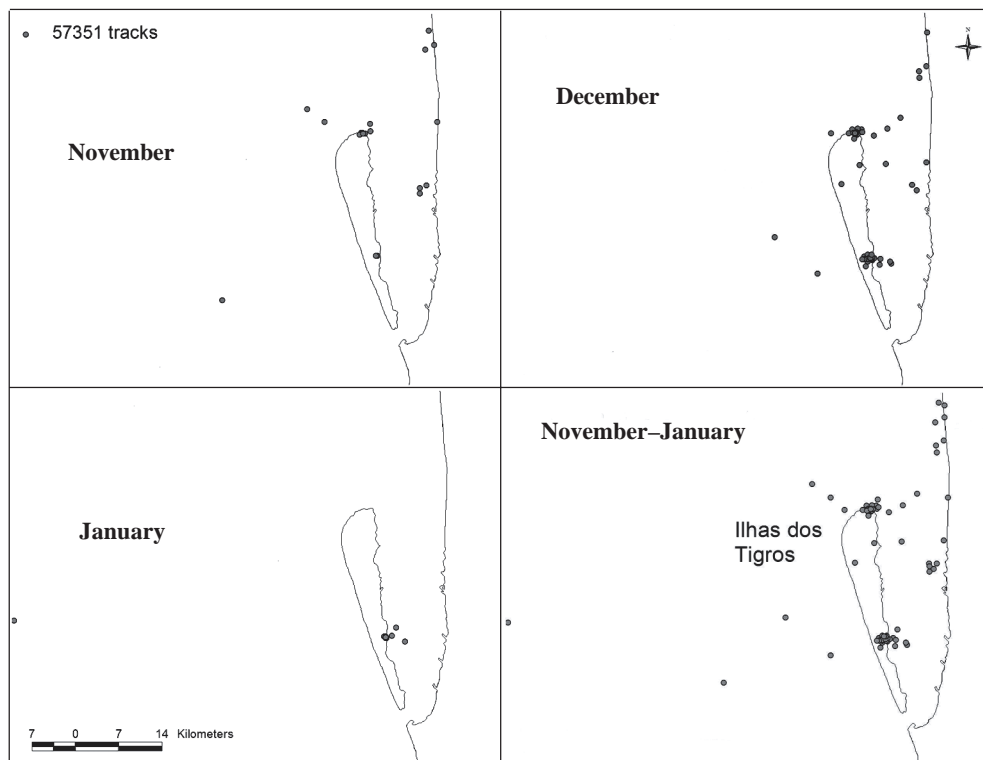


Figure 1: Satellite tracking positions of an adult Cape cormorant fitted with a PTT at Ilha dos Tigres in November 2005

Caspian Tern

Three colonies of Caspian Tern were found in the south, numbering 88 nests. Most of the nests found were empty, a few contained eggs, and several chicks of different ages were present at each colony. Five of seven eggs found were measured, and the mean dimensions were 62.7mm x 45.6 mm (Range: 61–66.8 mm x 44.4–46.6 mm). Disturbed Caspian Tern chicks were noted wandering far from the colonies, but had adult birds attending them.

Other observations

Shorebirds were counted along the entire stretch of shoreline that was surveyed. Other birds observed were also counted and recorded. No Damara Tern or African Black Oystercatcher were observed on the island or over the surrounding waters. Neither species could be discerned on the mainland from the vessel, which steamed slowly along this region on the completion of the island survey. There were no White Pelican present on the island and no Lesser Flamingo were observed ashore, though several Greater Flamingo were present. It was clear that the latter fed at the southern portion of the island, which probably floods during spring

tides. A small deep pond was located at the southern end of the island. Numerous shorebirds were present along its shores and a large fish was observed inside the water-body. Only a single Royal Tern was seen in the bay. A few (c.10) Bottle-nosed Dolphins were seen between the island and the mainland. Several large shoals of fish were seen in the water.

General

There was insufficient time to cover the central region of the island (or) and to investigate the use of the island by marine turtles. However, there were observations of shells of Green Turtles near to the houses at the settlement. The locals did not confirm that the turtles breed at the island, but the possibility of this should be investigated further.

No indication of the occurrence of other reptiles was observed. No passerines were observed ashore. Flies, a small black beetle and some ants were seen in the settlement.

The dog was observed to catch a Cape Cormorant in a roost at the village with relative ease. Nests of cormorants on the remains of a jetty were disturbed by one of the authorities stationed there, presumably for food. Cormorants in the north were also severely disturbed by another group of officials arriving in a patrol boat shortly after our group landed.