

# Movements of seabirds off Crown Point, Tobago

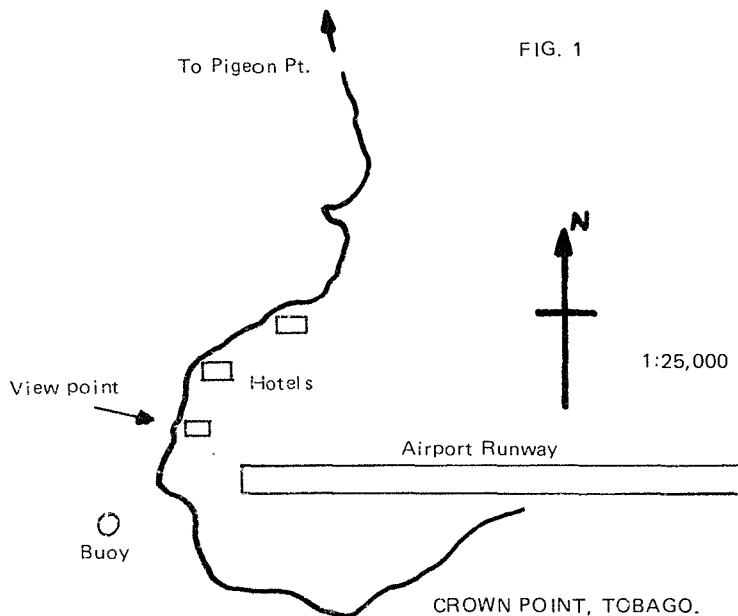
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VERY little has been done to date in Trinidad and Tobago in the way of in-depth studies of seabirds, in spite of the fact that Tobago in particular possesses what are probably the most important seabird breeding colonies in the south Caribbean. Unfortunately such studies require plenty of time, since by their nature seabirds move about a lot in somewhat inaccessible areas, and in almost every case the researcher requires a boat. Since I have lacked both these essentials, I have had to content myself over the last 27 years with random observations, some banding at the colonies, and a study of moult that bogged me down in awesome statistics. But I have immensely enjoyed myself working with seabirds, especially on Tobago.

Here I present some observations, based on some systematic coast watches at Crown Point, Tobago during 1979, 1980 and 1981. Sometimes one cannot immediately recognise the significance of certain statistics, so I include them in detail, at least partly in the hope that others may be stimulated to extend or develop future watches in a more meaningful way.

## METHODS

I stationed myself with binoculars at Sandy Point beach on the extreme western tip of Tobago (see Figure 1), so as to gain an unobstructed view of the seacoast over nearly 180°. Visibility was almost always very good, so with 10 x binoculars I could scan the horizon and recognise any birds within 1½ kilometres of the shore.



Dividing the day into four sections (A - D), denoting early morning, late morning, early afternoon and late afternoon, — in each case within half an hour of 07000, 1030, 1400 and 1730 — I recorded over a 30-minute period all seabirds within my view, noting whether they were moving to the north or south of my position.

I covered each section of the day three times within a fortnight over approximately the same period of the year (early April) for three consecutive years, so the results (Tables 1 - 3) should give adequate coverage of seabird movements just off western Tobago during early April.

Although some birds are likely to have been counted more than once in a 30-minute period, as they first flew in one direction, then returned the other way, I am convinced that this was extremely uncommon. Such behaviour would indicate actual foraging. But when seabirds are actually feeding, or going directly to a shoal, they fly faster and more purposefully than usual, in a manner that is instantly recognisable to fishermen or those experienced with seabirds. The great majority of the birds that I counted seemed to me to be cruising steadily and unhurriedly, as if journeying to a distant point.

In order to set up some comparison with the April figures, I also watched twice for 30-minute periods in December and January. The figures from these "winter" watches (not included here) showed a complete absence of four of the eight species, namely the gulls, Sandwich, Roseate and Noddy Terns, and far fewer numbers of most of the other species. Only the Royal Tern and the Brown Pelican were well represented in December.

## RESULTS

1. The observations (Tables 1-3) show that eight species of seabird were involved in the movements past Crown Point. Although some birds were seen passing at distances up to 1½ km from shore, the majority passed fairly close to shore. Brown Pelicans (*Pelecanus occidentalis*), Laughing Gulls (*Larus articularis*), Royal and Sandwich Terns (*Sterna maxima* and *S. sandvicensis*) mostly passed within 200 metres, with Roseate Terns (*Sterna dougallii*) a little farther out. Brown Noddies (*Anous stolidus*) and Brown Boobies (*Sula leucogaster*) were mainly seen about 600 metres out, while Magnificent Frigatebirds (*Fregata magnificens*) were the most variable, often passing over at a considerable height. Very few of the seabirds, other than some frigatebirds, crossed the point over land, so those seen from the view-point probably constitute the vast majority of seabirds moving north or south in that area.

TABLE 1

Movements of seabirds at Crown Point during April 1 – 14, 1979

Species	Direction			Periods of Day									Total	
		A		B		C		D						
Laughing Gull	N	146	218	418	16	6	9	19	39	72	340	432	322	2051
	S	16	22	9	11	3	1	42	40	145	21	44	13	367
Royal Tern	N	36	21	10	15	1	4	8	25	7	54	28	13	222
	S	1	4	1		3	2	5	4	5	4	3	4	36
Sandwich Tern	N	1	2			1						8	6	18
	S		7	1		1								9
Roseate Tern	N	26												26
	S	3	17	4		2	1			2				29
Brown Noddy	N	6		3				4					1	14
	S	1		1										2
Brown Pelican	N	20	21	12	1			8	3	1		15	11	92
	S	3	5	7	6		3	1	2	1	21	6	5	60
Magnificent Frigatebird	N	4	3	3	8	15	33		2	10	2	3	6	89
	S		3	2	5	4	6	4		7				31
Brown Booby	N	7	1	9	10	1	1	1	9	2		69	3	113
	S	14	3		10			22	14	1				64

TABLE 2

Movements of seabirds at Crown Point during April 6 – 19, 1980

Species	Direction			Periods of Day									Total	
		A		B		C		D						
Laughing Gull	N	27	45	52	6	11	20	19	5	14	175	77	109	560
	S	1	5	27	7	2	5	23	34	35	2	16	3	160
Royal Tern	N	10	26	43	3	4	13	9	7	6	24	21	15	181
	S		5	7	2	3	5	1	5	3	4	4	11	50
Sandwich Tern	N	1					1							2
	S	1		4			1							6
Roseate Tern	N		2	21		4	1				5	6		39
	S	4		7			3							14
Brown Noddy	N	1		1						1	4			7
	S			1										1

Brown Pelican	N	11	6	8	4	2	2	5	4	2	4	6	1	55
	S	7	7	4	10		6	4	4	1	33	23	26	125
Magnificent Frigatebird	N	3		1	8	2	196	9	63	2	6	7	170	467
	S	1	6	12	3	1	3	5	6		3			40
Brown Booby	N	3					3	1	3		42	11	11	74
	S	8	1			1	3	3	3	15				34

TABLE 3

Movements of seabirds at Crown Point during March 30 – April 10, 1981

Species	Direction	Periods of Day												Total
		A			B			C			D			
Laughing Gull	N	12	27	47	15	14	8	17	19	8	265	152	40	624
	S	17	26	103	3		5	27	18	18	13	7	15	252
Royal Tern	N	12	1	2	2	6	9	7	14	22	1	16	9	101
	S	13		8	3	10	3	4	11	9		6	2	69
Sandwich Tern	N			3						5		3		11
	S			6										6
Roseate Tern	N	4	14	5		32				2	4	13		72
	S	49	33	10		4								96
Brown Noddy	N		1										3	4
	S	1		1				1						3
Brown Pelican	N	1	2	8	5	1	2	6		5	13	14	6	63
	S			2	4	1		9	6		7	2	1	32
Magnificent Frigatebird	N				3	15	7	1	34	259	7	5	4	335
	S		1	209		3	23			2				238
Brown Booby	N					1		1			89	12	4	107
	S	5	3	9	1	1	11	5	4	26				65

2. The height of travel above water-level varied from just above the waves (especially Brown Noddies and boobies) to about 30 metres above the water. The main exception to this was the Frigatebirds, that tended to soar in circles, drifting gradually in one direction and often congregating in thermal currents, at heights of up to several hundred metres.

3. Movement was more pronounced in the early morning and late afternoon, just as is the usual case for landbirds in the

tropics. To a certain extent this can be associated with a daily commuting from roost to feeding area in the open sea and back again. This tendency was especially marked in the boobies, which clearly moved southwards during much of the day, returning north in the evening to their roosts on the rocky coasts of north and northeastern Tobago and the offshore islands.

But the same cannot be said for the gulls and terns, which moved northwards in greater numbers than in the other direction.

I am inclined to think that the Laughing Gulls and Royal Terns, which were the two most numerous species, were actually in the course of a northward migration at this time. It would indeed be expected that many seabirds wintering off the northeastern coast of South America would be returning to their breeding grounds in the West Indies and North America in April. Both these species are also known to breed on our islands, although actual nesting colonies of Royal Terns have not yet been found on Tobago.

The small numbers seen of Sandwich Terns and Brown Noddies do not warrant any conclusions here, and I found only fairly small numbers of Roseate Terns, although occasionally a large flock would pass by. The recent discovery of a small nesting colony of Roseates near Buccoo would of course lead us to expect some movement of this species in the area.

4. Frigatebirds also roost off northeastern Tobago, and the daily southwestern movement of the species to feeding grounds and back is a well-known phenomenon. But owing to their habit of congregating in thermal currents, it is more a matter of chance whether birds passing Crown Point in a specific direction will appear there in large numbers. Thus a general tendency one way might easily be counter-balanced by only one large concentration of birds drifting the other way in a thermal. The statistics

would have to be much more comprehensive to tell us anything meaningful.

Similarly, we learn little here about the pelicans, other than the fact that they are more sedentary than the other species. Many of them spent much of their day resting on the buoy just off the point (see Fig. 1), fishing nearby or commuting up or down. More than the other seven species, the pelicans' movements appeared to be especially influenced by the fishing conditions in the immediate neighbourhood.

5. The state of the tide at the period of observation appeared to make little difference, as one would expect with the very small tides in this part of the world. Moreover, no significant changes were apparent as a result of the occasional rainy spell; however, the weather was in fact predominantly fair.

6. I suggest that future studies of seabird movements in the area might encompass different times of year, especially September/October, when migration would be expected. Also valuable data might be obtained from regular watches at points like Toco, Galeota and Iacos. Notwithstanding the above, the seabird area that is crying out for an in-depth study is the area of St Giles Islands and Little Tobago. However, the logistics of such a study are daunting; I only wish I had another life-time in which to attempt it!