

BLACK-NAPED TERNS *Sterna sumatrana* ON THE SOUTHERN GREAT BARRIER REEF, 1985-1986

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The Black-naped Tern *Sterna sumatrana* nests on islands off the north-east of Australia between Darwin (12°27'S., 130°51'E.) and Bundaberg (24°52'S., 152°21'E.) (Kikkawa 1976, Blakers *et al.* 1984). Breeding records are relatively few and there has not previously been a comprehensive regional survey. The present report describes the distribution and breeding of Black-naped Terns on the southern half of the Great Barrier Reef during the 1985-1986 nesting season (Figure 1).

STUDY AREA AND METHODS

Approximately 150 continental islands and rocks between Holbourne Island and the Keppel Group were surveyed at least once between October 1985 and March 1986. All coral cay islands (23) except for Riptide Cay were surveyed two to four times between December 1985 and May 1986. Included amongst the surveyed islands were all known tern nesting sites except for Riptide Cay, Reid Island and Creek Rock (Kikkawa 1976). There are no records of Black-naped Tern nesting on these three islands.

RESULTS

Approximately 1000 and 2000 terns were estimated to be present on the cays in the Swain Reefs region in February and April 1986 respectively. There were no nests on the cays but nests were present on the wreck of an Asian fishing vessel on Horseshoe Reef (Table 1 e). Nesting was previously recorded on Bylund Cay in November 1976 (Limpus and Lyon 1981) and on Frigate Cay in July 1983 (Moverley 1985).

In the Capricorn - Bunker region nesting occurred on nine cays in the 1985-1986 season (Table 1 f-n) though it has probably taken place on all of the cays at one time or another in the past (Kikkawa 1976, Walker and Domm 1986). The presence of feral cats on Northwest Island

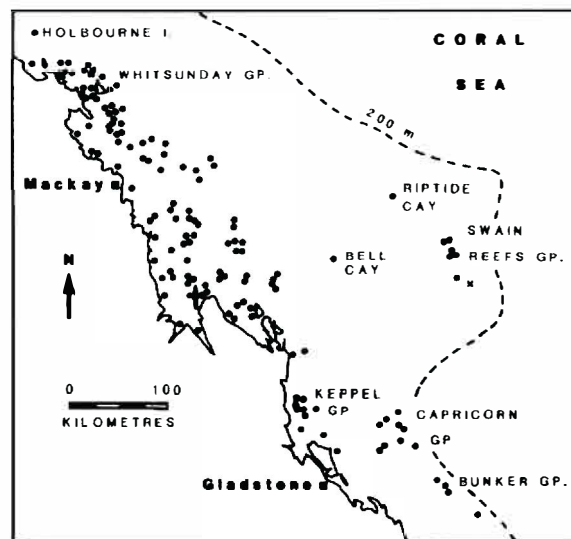


Figure 1. Locality map showing the positions of all islands and groups of islands (●). Rocks and cays overwashed by the sea at high tide are not included. The 200 m depth contour marks the edge of the continental shelf. x — shipwreck on Horseshoe Reef.

TABLE 1

Black-naped Tern nesting sites in summer 1985-86.

	Island	Date	Sites	Terns Present	Nests Visible	Clutch Stage	Associated Nesting Species
a	Holbourne	24 Dec. 85	SE rock	350	75	E,C	BT
b	Olden	16 Nov. 85	SE rock	90	19	E	SG
c	Little Grassy	16 Nov. 85	NE side	70	6	E	-
d	East Rock	27 Dec. 85	N side	5	1	E	CT
e	Horseshoe Reef	22 Feb. 86	shipwreck	140	17	E	BT, BB
f	North Reef	5 Feb. 86	NW side	100	45	E,C	-
g	Wilson	4 Feb. 86	S side	70	2	E	-
h	Wreck	6 Feb. 86	SW side	>200	130	E,C	RT
i	Masthead	18 Jan. 86	N side	100	50	C	RT, CT
j	One Tree	8 Feb. 86	NE side	210	25	E	RT
k	Hoskyn (west)	7 Feb. 86	E end	200	47	E	-
l	Fairfax (west)	8 Jan. 86	sand spit	60	?	E	-
m	Lady Musgrave	28 Mar. 86	S.E. sides	100	21	E,C,U	RT
n	Lady Elliot	30 Dec. 85	N,E sides	50	22	E	CT

Abbreviations: E, eggs; C, chicks; U, unfledged juveniles; BB, Brown Booby; BT, Bridled Tern; SG, Silver Gull; RT, Roseate Tern; CT, Crested Tern.

and of hundreds of human occupants on Heron Island presently precludes nesting on these two islands.

Elsewhere Black-naped Terns were present only in the far north of the region of continental islands. From 1 to 15 were present on Rattray, Double Cope (west), Armit, Grassy and Gumbrell Islands in mid-November 1985. Nesting occurred on bare rock on four islands (Table 1 a-d). There are no other records for the continental islands in the literature with the exception of recent sightings in the Whitsunday area reported in the RAOU Atlas (Kikkawa 1976, Blakers *et al.* 1984). The species was not sighted during extensive surveys of the islands south of the Whitsunday Group between April 1985 and May 1986 (S. Domm, pers. comm.).

DISCUSSION

The 1985-1986 survey substantially extends the number and distribution of sites where Black-naped Terns are known to nest on the southern half of the Great Barrier Reef. Nesting and non-nesting birds were found to occur only in two areas — the southern offshore cays and north of the Whitsunday Islands. The absence of Black-naped Terns elsewhere on southern Great Barrier Reef islands suggests a shortage of food in these areas. The Capricorn-Bunker and Swain Reefs regions are close to the edge of the continental shelf where marine productivity is likely to be

stimulated by upwelling of deep, nutrient-rich water from the Coral Sea. In contrast the other nesting area in the northern Whitsunday region is close to the mainland and distant from the edge of the shelf. There may be other factors enhancing marine productivity in this area since the coral growth fringing the islands is more highly developed there than it is in the southern part of the Whitsunday Group (unpub. obs.).

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