Corella, 1996, 20(3): 111–112

SEABIRD ISLANDS No. 231

Riptide Cay, Great Barrier Reef, Queensland

Location: 21°14′S, 152°22′E situated in the northern sector of the Swain Reefs complex, at the southern end of the Great Barrier Reef. The Great Barrier Reef Marine Park Authority reef identification code is 21–172. It is about 247 kilometres north-east of Yeppoon and 285 kilometres east of Mackay, Queensland.

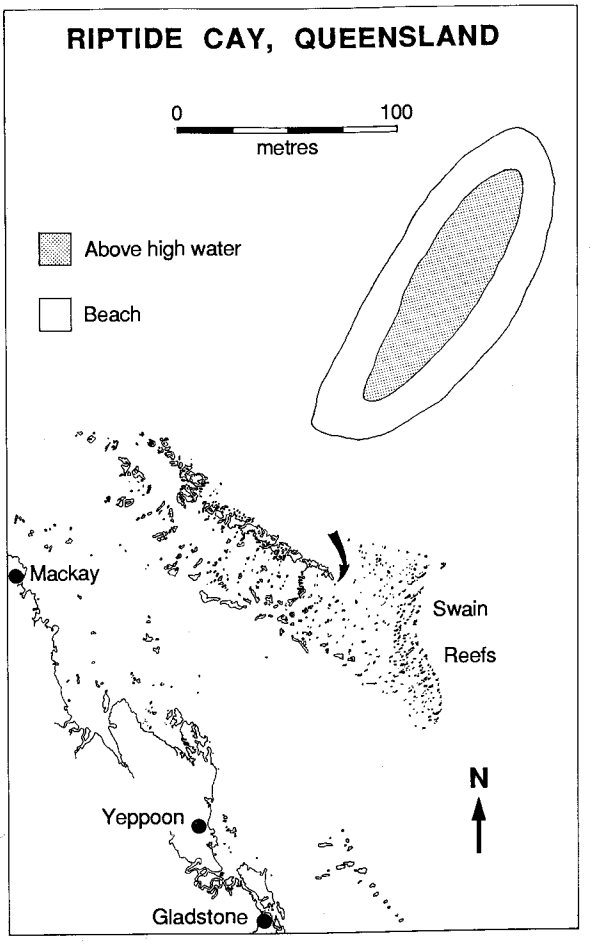
Status: National Park.

Description: Approximately 0.25 ha; measurements in 1976 were 110 m × 43 m at mean spring high tide level[3]. Shape in 1992 was elliptical. Highest point (1995) was 2.5 metres above the reef flat. The cay is located near the north-western tip of a small triangular-shaped reef about 1.3 km long with a maximum width of 1 km.

The cay consists largely of coral sand, with coral fragments of various size. No vegetation has ever been recorded on the cay, and its current status is bare.

Landing: Across the reef flat at the north-western side.

Ornithological History: Limpus and Lyon visited the cay on 9 November 1976[3] and were the first to make ornithological observations. They recorded Masked and Brown Boobies, and Crested Terns breeding. Heatwole visited the cay on 11 January 1985[1] and recorded only Brown Boobies nesting. Officers of the Queensland Department of Environment have subsequently made five trips to the cay, on 13 April 1989, 2 May 1992, 28 November 1992, 6 March 1994, and 19 July 1995. Both Brown and Masked Boobies were recorded breeding on each of these dates, and Crested Terns were also breeding in 1992. Aerial surveys were conducted on 27 December 1991 and 31 December 1992 (Limpus, pers. comm.), and aerial photographs were taken on 7 March 1996.



Breeding Seabirds and Status

Sula dactylatra Masked Booby — Breeding occurs throughout the year, and was recorded on all surveys except January 1985. There is no clear seasonal pattern of breeding abundance, although elsewhere in the Swain Reefs there appears to be a slight winter breeding preference.[2] More than 40 breeding pairs were recorded in November 1992, with a total of 60 adults. A small number of breeding pairs was observed in December 1991, a single nesting pair was observed in December 1992, and approximately 85 nests were counted from aerial photographs taken in March 1996.

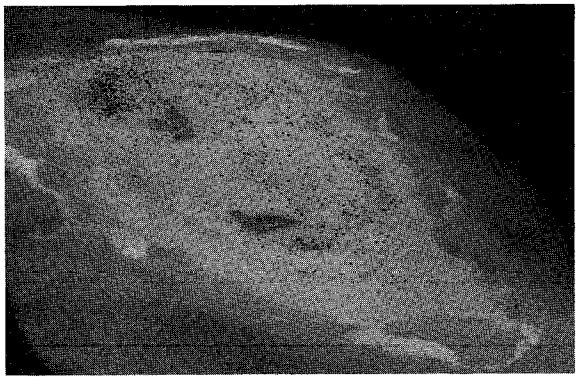
Sula leucogaster Brown Booby — Breeding occurs throughout the year and was recorded on all visits. Possibly a summer breeding preference[2]. About 200 nests recorded in November 1992, with a total of 235 adults, and about 200 nests also counted on aerial photographs taken in March 1996.

Sterna bergii Crested Tern — recorded breeding in November 1976 and November 1992. The maximum numbers were about 600 breeding pairs in 1992, with a total of 1 380 adults, and about 580 nests counted from aerial photographs taken in March 1996.

Factors Affecting Status

The small size of the cay, its exposed location and low elevation (less than one metre above high water) make it susceptive to overwash by the sea during storms. There is currently no stabilizing vegetative cover, and none was recorded during the earlier visits in 1976[3] or 1985[1].

The cay is remote and likely to receive less human visitation than the more southerly Swain Reefs' cays, although visitation to the region is increasing. If disturbed by human visitors, the eggs and chicks of breeding seabirds are more susceptible to predation by resident Silver Gulls. This problem is likely to be exacerbated on small cays without vegetation.



• *Riptide Cay from the air, 7 March 1996. There were 588 Crested Tern nests in three goups, 85 Masked Booby nests and 200 Brown Booby nests at the time.*

Photo: J. Olds

OTHER VERTEBRATES

Loggerhead Turtles *Caretta caretta* and lesser numbers of Green Turtles *Chelonia mydus* nest on the cay in low densities (Limpus, pers. comm.).

Other Seabirds Recorded

Larus novaehollandiae	Silver Gull (max. 15, Mar. 76, Mar. 94).
Sterna dougallii	Roseate Tern (max. 1 500, Mar. 94).
Sterna sumatrana	Black-naped Tern (max. 250, Nov. 76).
Sterna albifrons	Little Tern (180, Apr. 89).
Sterna fuscata	Sooty Tern (1 carcass, Mar. 94).
Anous stolidus	Common Noddy (max. 1 500–2 000, Mar. 94).

Bibliography

1. Flood, P. G. and Heatwole, H. (1986). Coral Cay instability and species-turnover of plants at Swain Reefs, Southern Great Barrier Reef, Australia. *J. Coast Res.* 2(4): 479–496.
2. Heatwole, H., O'Neil, P., Jones, M. and Preker, M. Long-term population trends for seabirds on the Swain Reefs, Great Barrier Reef. In prep.
3. Limpus, C. J. and Lyon, B. J. (1981). Seabirds breeding on the Swain Reefs, Queensland. *Corella* 5: 101–105.

ACKNOWLEDGMENTS

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MORPHOMETRICS OF EGGS OF LITTLE TERN

The purpose of this note is to seek clarification about the dimensions of the eggs of the Little Tern *Sterna albifrons*.

I have been involved in monitoring the Little Tern colony at Botany Bay since the 1988/89 breeding season. During that time I have measured some eggs at random and have found that none agree with the measurements given in some of the popular identification books which have been published recently. I question those which state that the eggs of the Little Tern measure 28 × 22 mm (length × diameter) (Pringle 1987; Beruldsen 1980; Slater 1995). The first edition of the Reader's Digest Complete Book of Australian Birds (1976) states 28 × 22 mm. This was revised in the 1986 and subsequent editions to 32 × 24 mm.

Hitchcock (1959) from a sample of 69 eggs gave a maximum range of 38.0 × 24.9 mm and 32.3 × 25.5 mm and a minimum range of 30.0 × 32.2 mm and 32.7 × 22.6 mm, an average of 32.8 × 24.2 mm. The Handbook of Birds of The Western Palaearctic Vol. 4 (Cramp 1985), states them to be variable and from a sample of 400, a mean of 32 × 24 mm is given, range 30–37 × 21–26 mm. Serventy *et al.* (1971) from a sample of 10 eggs gives a mean of 32.8 × 24.8 mm, range 31.7–35.0 × 23.2–26.2 mm. Hoeher (1974) gives 32.9 × 24.9 mm, sample number not stated.

In the recently published HANZAB Vol. 3 (Higgins *et al.* 1996), I am pleased to see the egg sizes given in the format 32.2(30–36.3 13) × 24.1(22.9–24.9) (North). This format shows the mean length × diameter of the eggs measured, outside the brackets. Within the brackets, the range for each dimension is given, the last number being the sample size.

Table 1. Ranges for length and diameter, mean and standard deviation for 43 Little Tern eggs.

No.:	Range for length:	Range for diameter:	Mean (length × diameter):	SD:
43	30.2–35.6 mm	22.5–26.6 mm	32.5 × 24.1 mm	±1.5 × 0.6 mm

It was suggested to me by Durno Murray that a uniform method should be adopted such as the above for publishing all egg measurements.

Although my sample is small (43 eggs) the measurements agree with the larger ranges and averages given above (Table 1). None were as small as 28 × 22 mm.

ACKNOWLEDGMENTS

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REFERENCES

Beruldsen, G. (1980). 'A Field Guide to Nests and Eggs Of Australian Birds.' (Rigby: Sydney.) 448 pp.

Cramp, S. (1985). 'Hand book of Birds of Western Palearctic, Vol. 4.' (Oxford University Press: Oxford.) 960 pp.

Higgins, P. J. and Davies, S. J. J. F. (1996). 'Handbook of Australian, New Zealand and Antarctic Birds, Vol. 3.' (Oxford University Press: Melbourne.) 1024 pp.

Hitchcock, W. B. (1959). Review of the 'Least' Tern in Australian Waters. *SA Ornith.* **22:** 87–106.

Hoeher, S. (1974). 'Birds Eggs and Nesting Habitats.' (Fletcher and Sons: Norwich.) 194 pp.

Pringle, J. (1987). 'Shorebirds of Australia.' (Angus and Robertson: Sydney.) 692 pp.

Reader's Digest (1976 and 1986). 'Complete Book of Australian Birds.' (Reader's Digest: Sydney.) 615 and 639 pp.

Serventy, D. L., Serventy, V. and Warham, J. (1971). 'Handbook of Australian Seabirds.' (Read: Sydney.) 254 pp.

Slater, P. (1995). 'The Slater Field Guide to Australian Birds.' (Landsdown Publishing: Sydney.) 341 pp.

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CORRIGENDUM

The following amendment should be made to Volume 20, Number 3, September 1996.

Page 111, Seabird Islands

Riptide Cay, Great Barrier Reef, Queensland should read No. 232 not No. 231.