

Summary of the Breeding Seabirds on New South Wales Coastal Islands

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This summary follows on from the Seabird Island Series covering the seabird breeding islands of the New South Wales coast. Estimates of the number of breeding pairs are given for the State, the recorded nesting islands are listed* and, where appropriate, brief comments are included.

It is over 30 years since K. A. Hindwood (Hindwood 1948) published "Notes on the Seabirds Breeding on the Coastal Islands of New South Wales". In that paper he summarised the known breeding islands for each species and at the same time indicated that the Solitary Islands were "The only New South Wales Islands of any size that have not been reported on ornithologically . . .". Since then, considerable changes have occurred in the breeding populations and a number of reports have been published, including ones on the Solitary Islands.

It was very largely through Keith Hindwood's influence and encouragement that I became interested in breeding seabirds. This interest eventually led to summaries of the breeding seabirds on these islands being published in *The Australian Bird Bander* between 1973 and 1976. (The references to each island item are listed in Appendix I.) Last year an additional report on a formerly unrecorded breeding island, Statis Rock near Seal Rocks, was published (Holmes 1977).

There are a few islets, mostly connected to the mainland by sand bars, on which shearwaters or penguins have bred or attempted to breed, in very small numbers but no regular breeding of any consequence occurs on them. The Drum and Drumsticks just north of Jervis Bay remains the only probable seabird breeding island not visited; its surface is inaccessible except by helicopter.

Nine species of seabirds have been recorded breeding on the coastal islands of N.S.W. One other species, the Black-winged Petrel *Pterodroma nigripennis* may breed or may be attempting to breed. Two species not strictly seabirds are included; one, the Sooty Oystercatcher *Haematopus fuliginosus*, breeds only on the islands, while the other, the Eastern Reef Egret *Egretta sacra*, breeds mainly on them.

The figures given are basically compiled from the Seabird Island Series. However, because of the manner in which estimates have varied, e.g. "Estimated 1 000 to 10 000 breeding pairs.", mean or assessed figures have been taken. Additional data on Broughton Island (van Gessel 1978; Lane 1978), Statis Rock (Holmes 1977) and Belowla Island (Lane 1977) have also been included.

A summary, in order of species, follows (in each case the islands are listed in geographical order, north to south):

Little Penguin *Eudyptula minor*

Estimated about 16 800 breeding pairs; recorded breeding on South Solitary (20), Delicate Nobby (20), Statis Rock (5), Broughton (20), Cabbage Tree (300), Boondelbah (1 000), Moon (15), Bird (5), Lion (300), Flinders (30), Bass (5), Big (500), Martin (30), Bowen (1 000), Brush (2 500), Belowla (800), Grasshopper (50), Wasp (200), Tollgates (5 000) and Montagu (5 000).

Over 74% of the breeding population is concentrated on the three larger islands in the southern region — Brush, Tollgates and Montagu.

* A complete list of the NSW seabird breeding islands in both alphabetical order and geographical order (north to south) is at Appendix I.

Gould's Petrel *Pterodroma leucoptera*

Estimated 250-300 breeding pairs; breeds only on Cabbage Tree Island, with one record for Boondelbah.

Black-winger Petrel *Pterodroma nigripennis*

Recorded burrowing and in burrows on Mutton Bird Island but breeding has not yet been confirmed.

Wedge-tailed Shearwater *Puffinus pacificus*

Estimated nearly 45 000 breeding pairs; recorded breeding on Cook (2 000), North Solitary (2 500), North Rock Solitary Is. (100), North-west Solitary (100), South-west Solitary (1 500), South Solitary (100), Little Muttonbird (20), Mutton Bird (5 500), Sawtell (10), Green (80), Delicate Nobby (500), North Rock Broughton Is. (1 000), Inner Rock Broughton Is. (100), Broughton (12 000), Little Broughton (4 500), Cabbage Tree (2 500), Boondelbah (3 500), Shark (10), Moon (?), Bird (1 000), Lion (300), Flinders (5), Big (500), Martin (30), Stack (10), Bowen (100), Brush (400), Belowla (?), Grasshopper (200), Wasp (50), Tollgates (1 200) and Montagu (5 000).

About 52% of the breeding population is found on the islands of the central coast — Boondelbah, Cabbage Tree and the Broughton Group — an area which extends about 20 km from north to south.

Sooty Shearwater *Puffinus griseus*

Estimated 250 breeding pairs; recorded breeding on Broughton (10), Little Broughton (5), Cabbage Tree (50), Boondelbah (10), Bird (5), Lion (7), Bowen (10), Tollgates (5) and Montagu (150). (The inclusion in some publications of the Five Islands as a breeding station is incorrect.)

In 1948, Hindwood (*loc. cit.*) recorded this species only from Lion Island and Broughton Island, the only known N.S.W. breeding stations at that time. However, these birds may have nested in small numbers on some or all of the islands listed for many years but could have been overlooked in the absence of systematic searching. It is the common "mutton bird" of New Zealand and the breeding on Australian islands is fringe only.

Short-tailed Shearwater *Puffinus tenuirostris*

Estimated 25 700 breeding pairs; recorded breeding on Broughton (1 000), Little Broughton (1 000), Cabbage Tree (20), Boondelbah (500), Bird (25), Big (100), Martin (40), Bowen (200), Brush (750), Grasshopper (400), Wasp (200), Tollgates (6 500) and Montagu (15 000).

About 84% of the breeding population is concentrated in the south on the Tollgates and Montagu Island.

The first positive breeding record of this species in N.S.W. occurred in 1958 on the Tollgates (Davies 1959); other records were reported during the following few years. Probably the increase in breeding numbers has been gradual and may have been spread over many years. A Short-tailed Shearwater's egg was found on the surface of Brush Island in 1915 (Hull 1916). The manner of searching at that time may easily have resulted in overlooking a second breeding species which was not known or expected to breed in this state at that time. Those early visits were mostly of short duration and sometimes this species has been hard to locate among much larger numbers of Wedge-tailed Shearwaters, even when their presence has been expected. Whether the Short-tailed Shearwater will extend its breeding range further northward remains to be seen. It was reported "underground" at night on Mutton Bird Island in 1969 (Lane 1970) but breeding has not been confirmed since. Broughton Island remains at present as the most northerly breeding station.

White-faced Storm-Petrel *Pelagodroma marina*

Estimated 10 700 breeding pairs; breeds on North Rock Broughton Is. (1 000), Inner Rock Broughton Is. (500), Boondelbah (100), Bird (500), Flinders (20), Martin (10), Belowla (1 500), Grasshopper (10), Wasp (50) and Tollgates (7 000). Formerly it bred on Broughton Island and Big Island (Five Islands) but interference apparently caused desertion of these stations. About 65% of the breeding population is concentrated in the south on the Tollgates.

Silver Gull *Larus novaehollandiae*

Estimated 30 000 breeding pairs; recorded breeding on North Solitary (15), South Solitary (300), Korffs (100), Sawtell (100), Statis Rock

(100), North Rock Broughton Is. (20), Broughton (80), Little (50), Moon (1 000), Bass (2 000), Big (17 800), Martin (1 000) and Montagu (7 500).

In addition to the island breeding stations, this species breeds in many other places, particularly inland lakes. The figures refer only to the coastal islands.

The main island breeding concentration is on the Five Islands Group (Big, Bass and Martin); this amounts to almost 70% of the total coastal breeding population.

Kelp Gull *Larus dominicanus*

Estimated 12-15 breeding pairs; breeds on Moon (2), Flinders (1), Bass (6) and Martin (4). First recorded breeding in N.S.W. on Moon Island in 1958 (Gwynne and Gray 1959) and seen on Five Islands the same year. However, the first recorded breeding on that group was in 1968 (Battam 1970) on Bass Islet, though breeding almost certainly occurred there earlier than that year. Landing on Bass Islet is extremely difficult, even in relatively calm conditions, and swimming ashore is the usual method. Certainly breeding had been suspected earlier than 1968 but could not be confirmed due to unsuitable landing conditions, even by swimming, when a number of visits were attempted. The extension of the breeding status has been slow but steady, and nesting now regularly occurs on two other islets of the group, Flinders and Martin. The number of breeding pairs for the Five Islands in 1969/70 was four; in 1975/76 it was 11.

Crested Tern *Sterna bergii*

Estimated 13 000 breeding pairs; recorded breeding from Cook (?), Juan and Julia Rocks (300), North Solitary (8 000), South Solitary (300), Korffs (100), Statis Rock (10), Broughton (50), Little (40), Moon (700), Big (2 000), Martin (500) and Montagu (1 000). The total estimated figure may be a little overstated as this species often changes its breeding station: sometimes it is absent from a breeding station for one or more years. In other cases the breeding population may vary substantially from one year to another, hence a more accurate estimate of the total population for the state would be possible only if carried out during a particular season, or on each station each year for a number of seasons.

Eastern Reef Egret *Egretta sacra*

Estimated 5 breeding pairs; recorded breeding on Shark, Bird, Flinders and the Tollgates; recorded from North-west Solitary, South-west Solitary, Cabbage Tree, Moon, Big, Stack, Brush, Grasshopper, Wasp and Montagu and may breed regularly on at least some of these islands. These birds also breed on mainland cliffs and an accurate estimate of the breeding status along the coast is not known. Usually only the grey phase is seen in N.S.W. but the white phase has been recorded on rare occasions (e.g. see McKean, *et al.* 1976).

Sooty Oystercatcher *Haematopus fuliginosus*

Estimated 20 breeding pairs; recorded breeding on North Solitary, North-west Solitary, Sawtell, Moon, Flinders, Brush, Belowla, Tollgates and Montagu. Recorded from North Rock Solitary Is., South-west Solitary, Split Solitary, Little Muttonbird, Mutton Bird, Korffs, North Rock Broughton Island, Broughton, Little, Big, Grasshopper and Wasp; breeding probably occurs on some of these islands. The Sooty Oystercatcher is spread fairly evenly along the coast in pairs or small parties of up to six or eight birds. However, 11 were seen on Belowla Island on one occasion and 12 on another visit.

References

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APPENDIX I

List of N.S.W. coastal islands in alphabetical order with reference to volume number, part number and year of publication in *The Australian Bird Bander*, and in geographical order, north to south.

ALPHABETICAL ORDER

Bass I.	(14/4, 1976)
Belowla I.	(11/3, 1973)
Big I.	(14/4, 1976)
Bird I.	(11/1, 1973)
Boondelbah I.	(14/1, 1976)
Bowen I.	(14/1, 1976)
Broughton I.	(14/1, 1976)
Brush I.	(12/3, 1974)
Cabbage Tree I.	(14/4, 1976)
Cook I.	(11/4, 1973)
Delicate Nobby	(14/1, 1976)
Flinders I.	(14/4, 1976)
Grasshopper I.	(14/1, 1976)
Green I.	(14/1, 1976)
Inner Rock, Broughton Is.	(14/1, 1976)
Juan and Julia Rocks	(14/1, 1976)
Korffs I.	(14/4, 1976)
Lion I.	(13/2, 1975)
Little I.	(14/4, 1976)
Little Broughton I.	(14/1, 1976)
Little Muttonbird I.	(14/4, 1976)
Martin I.	(14/4, 1976)
Montagu I.	(11/2, 1973)
Moon I.	(12/2, 1974)
Mutton Bird I.	(14/4, 1976)
North Rock (Broughton Is.)	(14/1, 1976)
North Rock (Solitary Is.)	(13/4, 1975)
North Solitary I.	(12/1, 1974)
North-west Solitary I.	(13/3, 1975)
Sawtell I.	(14/4, 1976)
Shark I.	(14/4, 1976)
South Solitary I.	(13/4, 1975)
South-west Solitary I.	(13/1, 1975)
Split Solitary I.	(12/4, 1974)
Stack I.	(14/1, 1976)
Statis Rock	
Tollgates Is.	(14/4, 1976)
Wasp I.	(14/1, 1976)

GEOGRAPHICAL ORDER

Cook I.
Juan and Julia Rocks
North Solitary I.
North Rock (Solitary Is.)
North-west Solitary I.
South-west Solitary I.
South Solitary I.
Split Solitary I.
Little Muttonbird I.
Mutton Bird I.
Korffs I.
Sawtell I.
Green I.
Delicate Nobby.
Statis Rock
North Rock (Broughton Is.)
Inner Rock (Broughton Is.)
Broughton I.
Little Broughton I.
Cabbage Tree I.
Little I.
Boondelbah I.
Shark I.
Moon I.
Bird I.
Lion I.
Flinders I.
Bass I.
Big I.
Martin I.
Stack I.
Bowen I.
Brush I.
Belowla I.
Grasshopper I.
Wasp I.
Tollgates Is.
Montagu I.

NOTE: The islands of the Five Islands Group are listed separately; they are Big I. (No. 1 & No. 2), Martin I. (No. 3), Flinders I. (No. 4) and Bass I. (No. 5).