SHORT NOTES

SEABIRDS NESTING AT NORFOLK ISLAND

The following is a summary of the breeding and status of seabirds on Norfolk, Nepean and Philip Islands as observed in December 1978 and December 1979. The first visit was 3-8 December, when seabird censusing was part of my activities at the RAOU field outing. The second visit, 9-23 December, allowed more time to concentrate on banding, measuring and censusing seabirds.

As Moore (1981) points out, little has been published on Norfolk Island birds, despite the considerable amount of information that has been collected. In that these notes include Nepean and Philip Islands and were made during a month not included in Moore's summary, they add usefully to that summary. All measurements are in millimetres.

BLACK-WINGED PETREL Pterodroma nigripennis

Local information suggests that numbers on Norfolk have decreased. Cat-killed remains of two were found at Ross Point and Collins Head. Live birds were seen at Ross Point during the day and heard there at night. One was seen at Anson Point during the day.

On Philip, some were seen flying over and landing at their burrows on the slopes above and to the east of the north coast landing. Between dusk and 2300 hours, 12 were caught outside or entering their burrows. The population is estimated to be 50-100 pairs. Not one was seen on Nepean.

Measurements of nine live birds were: wing 226.9 (221-231), SD 3.8; culmen 23.7 (21.8-24.5), SD 1.2. Two wing spans were 744 and 748. One had tarsus 29.3, toe 35, length 290, and tail 105.

WEDGE-TAILED SHEARWATER Puffinus pacificus pacificus

The vast majority nest on Norfolk itself where, in some places, the large numbers burrowing under the kikuyu-grass pasture at the cliff edges are causing erosion.

On both visits the birds were incubating, and 16 were taken from their burrows during the day. This was about a third of the burrows sampled and the birds were presumed to be beyond reach in most of the rest. At night the surface was covered by thousands of birds. In five nights 800 were banded, and I estimate that several hundred thousand are using the island. Hundreds of cat-killed carcases litter the breeding colonies. About eight surface eggs were found. One bird handled had a white tail feather. Owen Evans, the local bird bander, finds from one to four with similar white tail feathers each season.

The whole surface of Nepean is honeycombed with their burrows, but they are less common on Philip.

NOTORNIS 28: 209-219 (1981)

Measurements of eight live birds and 27 incomplete carcases on Norfolk were: wing 310 (300-324), n=35, SD 7.0; culmen 40.4 (38.4-43.2), n=17, SD 1.3; tarsus 51.3 (48.1-53.6), n=31, SD 1.6; toe 62.1 (55.6-67), n=29, SD 2.0; length 462 (442-471), n=8, SD 9.5; tail 141 (133-149), n=22, SD 4.7; wing span 1061 (1032-1100), n=10, SD 22.3.

Five surface eggs measured 43 (41.4-44.4) x 67.4 (65.7-68.7) mm.

LITTLE SHEARWATER Puffinus assimilis assimilis

No live birds were seen as they breed in winter. Dead nestlings and adults of 2 or 3 months' decay were found on Nepean and Philip.

Measurements of two adults from Nepean were: wing 172, 176; culmen 23.1, 23.6; tarsus 37.2, 37.0; toe 43.7, 40.2; tail —, 65.

AUSTRALASIAN GANNET Sula bassana serrator

In both years four pairs were seen incubating on the south clifftop of Philip. Breeding was first recorded on Nepean in November 1961 (McKean *et al.*). One bird was seen circling low over the north end of Nepean.

MASKED BOOBY Sula dactylatra

Two hundred pairs breed on Nepean and 100 pairs on Philip. Breeding was more advanced on Philip, where fledglings were common and eggs few. On Nepean more eggs and young chicks than fledglings were present. The last adults at the remnant of the 100-acres colony on Norfolk were killed during the 1977-78 season.

RED-TAILED TROPICBIRD Phaethon rubricauda

At least 200 pairs were breeding on Norfolk. Most were incubating, although no chicks had hatched. Some eggs were laid during our stay and some prenesters were active in selecting sites. Some eggs were found broken.

Some 10-20 pairs were nesting on the north side of Philip with more on the south side (see Tarburton 1979). No nesting was observed on Nepean.

Measurements of 30 birds were: wing 353 (335-375), SD 9; culmen length 67 (61.8-70.5), SD 2.1; culmen width 26.8 (24.8-29.7) SD 1.2.

Twenty eggs measured 67.2 (62.7-73.9) x 47.5 (42.2-49.2).

SOOTY TERN Sterna fuscata

Probably 40 000 - 70 000 pairs nest on Philip and several hundred pairs under the low shrubby patches of white oak (*Lagunaria patersonia*) on Nepean. A few half-grown chicks indicated that the annual egg-collecting (October-November) had not been completely destructive. Most birds were still incubating their replacement clutches or guarding

very young chicks. Some also nest on Bird Rock and adjacent stacks off the north coast of Norfolk

Two birds from Norfolk measured: wing 294, 305; culmen 42.9, 45.3; tarsus 25.2, —; toe 28.9, —; tail 163, 192.

COMMON NODDY Anous stolidus

The few hundred that nest on the ledges of Philip had either eggs or chicks up to about 3 weeks old. Some were nesting on the stacks on the north side of Norfolk. No pairs were observed on Nepean.

BLACK NODDY Anous minutus

About 30 pairs were found nesting on two remaining white oaks on Philip. Two colonies were found on Norfolk in Norfolk pines (Araucaria heterophylla). About 100-150 pairs were in each. One was in a gully between Bloody Bridge and Collins Head, the other just east of Rocky Point. Some birds were incubating and some shell fragments were found on the ground.

Measurements made on Norfolk were: wing 222, 234; culmen 37.2: tarsus 25.

GREY TERNLET Procelsterna cerulea

On Philip, 15-20 nests were found. They were in cavities around the landing and on the ground under trees towards the summit. There were numbers of birds on the stacks off the north coast of Norfolk and two carcases were found in a cat's cache near the Captain Cook Memorial, indicating nesting nearby. One leg was found at Rocky Point. No nests were seen on Nepean.

Measurements of two wings were 203 and 205. One egg measured 41.3×28 mm.

WHITE TERN Gygis alba

Eggs and chicks at all stages of development were found on Norfolk pines and white oaks over a wide area of Norfolk. Cat killed remains were common. None nests on Nepean or Philip.

Measurements made on dead material were: wing 252 (244-262), n = 23; culmen 32; tarsus 14.4; toe 28.9, 27; tail 104, 120.

LITERATURE CITED

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