## SOME PROBLEMS DURING THE EXODUS OF YOUNG SHEARWATERS FROM MUTTONBIRD ISLAND, NEW SOUTH WALES

Muttonbird Island (30°18′S, 153°09′E) off Coffs Harbour, New South Wales, contains the second largest breeding colony of Wedge-tailed Shearwaters *Puffinus pacificus* in the State, despite being joined to the mainland by a breakwater since about 1925. There is some interference to the breeding birds by dogs, cats and occasionally people but this is now rare. The colony seems to have changed little over recent years and has an estimated breeding population of about 6 000 pairs (Swanson 1976).

In 1988, a paved pathway was built from the end of the breakwater to the eastern end of the island, to keep visitors on the 'track'. This work may have caused destruction of some burrows during the non-breeding season, but it has greatly improved control of people on the island. Previously, people walking over the island deviated from the track wherever it became overgrown with vegetation, and in doing so, damaged burrows and compacted further areas which became unsuitable for burrowing.

Changes followed the establishment of a marina adjacent to the breakwater. The breakwater was resurfaced, a fence was erected along its length, and lighting was installed for the convenience of people using the marina.

Initially the lights on the breakwater were baffled to prevent dazzling when viewed directly from the island. The recently installed lighting apparently does not create this problem. Unfortunately, the same cannot be said for the more numerous and more intense lighting of the commercial area of Coffs Harbour Jetty adjacent to the Railway Station.

During the exodus period in 1987, 146 fledglings were found ashore and were taken to the Pet Porpoise Pool near the Jetty for return to their natural environment. The birds had been picked up mainly in the vicinity of the commercial area near the Jetty. This area contains the closest concentration of bright lights to the island. My wife and I collected the birds on ten days between

22 April and 6 May, and banded 144 before releasing them on the island. At least 141 flew off to sea when released into the air.

On the night of 26 April, in addition to birds from the Jetty area, thirty were brought in from an area about seven kilometres north of the island. This area contains resorts and a restaurant, and has a large concentration of bright lights. The local television station ran a news feature on the birds 'coming ashore', and suggested that any found should be taken to the Pet Porpoise Pool or released into the air from a nearby headland. Following the announcement no further birds were brought to the pool from that area, and presumably any found there were released nearby.

About the same time, many birds were killed on roads. Ten to twelve birds were found at each of three locations: near the commercial area at the Jetty; on the Pacific Highway south of Coffs Harbour where a drive-in theatre existed at the time (this area is some five kilometres inland from the island); and on the Pacific Highway adjacent to the resort area mentioned earlier. As far as can be determined no other road kills occurred in numbers in the Coffs Harbour area.

The data from 1988–1990 cannot be compared with 1987 as I was absent from Coffs Harbour during the critical period. However, the problem clearly continues; 47 birds were collected from the pool, banded and released between 27 April and 2 May 1990.

It appears that concentrations of strong, bright lights attract many fledgling shearwaters when they are endeavouring to go to sea. This is undoubtedly aggravated by strong onshore winds against which young birds may have difficulty in flying.

## REFERENCE

Swanson, N. M. (1976). Scabird Islands No. 42, Mutton Bird Island. New South Wales. *Aust. Bird Bander* 14: 88–91.

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