

## Sea-birds and Cyclones : Some Interesting New South Wales Records

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Late in June, 1950, two cyclones occurred off northern coastal New South Wales. The first, moving in from seaward, crossed the coast about noon on June 19 a little to the north of Lismore. The second, which lasted from June 22 to June 26, was much more severe and extended south to Kempsey, with strong gales and very rough seas farther south to about Newcastle.

Both cyclones caused torrential rains and gales in the Dorrigo Tableland district, which lies more than 2,000 feet above sea-level and about 25 miles, in a direct line, from the coast. Considerable damage was done to the vegetation of the area, especially on those slopes of the Dorrigo Range facing in an easterly or a south-easterly direction.

During the night of June 23 the gale lessened in force, and about midnight there came from the darkened sky above the town of Dorrigo the cries of Crested Terns (*Sterna bergii*), and other calls unfamiliar to the listener (Goddard). The light from a torch revealed the white forms of several terns as they flew bewildered by the storm.

The next morning, June 24, the low-lying areas bordering the Bielsdown River at the foot of the township were submerged. Numbers of Crested Terns were hawking above the floodwaters and a few Silver Gulls (*Larus novæ-hollandiæ*) waded in the shallows. The weather improved on June 25; Goddard then found the sodden remains of a Sooty Tern (*Sterna fuscata*), and shortly afterwards another specimen alive, but emaciated and exhausted. Later in the day Goddard was taken to see two 'strange' birds that had aroused the curiosity of some of the townfolk. Strange they were, indeed, for such a locality; one was a White-headed Petrel (*Pterodroma lessonii*), the other a Great-winged (or Grey-faced) Petrel (*Pt. macroptera*). Both were alive and in good condition bodily, though rather exhausted. A small bluish-grey sea-bird, with white under-parts, was also reported; it was alive when found, but could not be located again. It may have been a White-faced Storm-Petrel (*Pelagodroma marina*), a species that breeds on islands off the New South Wales coast, or perhaps a prion, which birds are in coastal and offshore waters of New South Wales at that time of the year and are sometimes washed ashore in numbers after storms (1).

Details of the three specimens collected by M. T. Goddard at Dorrigo on June 25, 1950, and later deposited in the Australian Museum, Sydney, are—

Sooty Tern (*Sterna fuscata*), ♀, O. 38729. Bill, legs and feet, black. Irides, dark brown. Stomach contents, greenish paste. Culmen 42 mm., tarsus 23 mm., wing 272 mm.

White-headed Petrel (*Pterodroma lessonae*), ♀, O. 38727. Bill, black. Legs, pale flesh with bluish tinge; outer portion of webs and toes, black, rest fleshy. Irides, dark brown. Palate, whitish with mauve tinge. Stomach contents, beaks of cephalopods only. Culmen 35 mm., tarsus 42 mm., wing 306 mm.

Great-winged Petrel (*pterodromo macroptere*), ♂, O. 38728. Bill, legs and feet, black. Irides, dark brown. Palate, whitish. Stomach contents, beaks of cephalopods only. Culmen 35 mm., tarsus 40 mm., wing 328 mm.

The Sooty Tern nests in large colonies on islands in the western Pacific and elsewhere. It is a rare straggler to the coast of New South Wales. A. J. North mentions (2) several examples in the Australian Museum obtained in Sydney Harbour. G. M. Mathews figures (3) a specimen from Long Reef, near Sydney, collected in May, 1892 (No. 746,731, American Museum of Natural History). A bird in immature plumage was taken at Queenscliff, near Manly, on February 3, 1934 (no. O. 33589, ♀). The day before this bird was collected, Tom Iredale, who was travelling to Sydney by ferry, heard the unmistakeable 'wide-awake' call of the species near Middle Head, but he did not see the bird. The same observer noted an example in flight near Sydney Heads on December 11, 1942. The nearest breeding station to New South Wales is Lord Howe Island. The recent specimen from Dorrigo was taken in June, when the birds are absent from Lord Howe. Sooty Terns leave their breeding grounds for several months of the year; where they go remains one of the mysteries of the sea (4a).

The White-headed Petrel breeds on islands in the Subantarctic Zone and ranges north in the autumn and winter months, apparently keeping well offshore for the most part. A dead bird was found on Bondi Beach, near Sydney, on October 21, 1914 (no. 527985, ♀, American Museum of Natural History). This specimen is the type of *australis* Mathews (5). Another was collected on the same beach on January 1, 1922 (no. O. 27143 ♀). A specimen in the Macleay Museum, University of Sydney, has the following interesting data on the label—'Richmond River. Blown inland during the storm of 23-4 June, 1879.' In effect, it was collected in the same month and on the same day but one, as the specimen recently found at Dorrigo, but 71 years earlier, and also following a storm, probably cyclonic. Dorrigo is about 100 miles south of the Richmond River.

The Great-winged Petrel has rarely been obtained in coastal New South Wales. The four records known to us (excluding the recent example from Dorrigo) were all found as derelicts on beaches near Sydney. Details are: O. 32408, ♂, Manly Beach, 10/2/29; O. 32632, ♂, Manly Beach, 15/10/29; O. 32637, ♂, Cronulla Beach, 16/10/29, and a

decomposed bird collected on Cronulla Beach on 23/11/46, by A. R. McGill and J. A. Keast. Unless otherwise stated all numbers refer to specimens in the Australian Museum collection.

That three species of pelagic birds, all rarely recorded in coastal New South Wales, should be collected at the one time, 25 miles from the coast and at an elevation of more than 2,000 feet, is exceptional. It is probable that many more sea-birds were driven inland and scattered over the sparsely-settled countryside by the same cyclones, as indicated by the presence of Crested Terns and Silver Gulls, both largely coastal birds, in the same area. We can only guess at the entire mortality in the absence of interested observers capable of appreciating the significance of such happenings.

An instance of the influence of hurricanes on the dispersal of sea-birds concerns a specimen of the Red-tailed Tropic-bird (*Phaëthon rubricaudus*) found at Moor Creek, near Tamworth, northern New South Wales, on June 17, 1945, after cyclonic winds (6). Moor Creek is on the western, or inland, slopes of the Great Dividing Range, more than 1,000 feet above sea-level, and about 120 miles from the coast. The nearest breeding-place of the Red-tailed Tropic-bird is Lord Howe Island, some 420 miles east of where the bird was found. There is no evidence, of course, that it was blown across from Lord Howe Island. Birds have been involuntarily transported much greater distances by hurricanes. Occurrences of frigate-birds (*Fregata* spp.) in New Zealand (7), and in Port Phillip Bay, Victoria (8), may be attributed to cyclonic disturbances. Both places are more than 1,000 miles south of the normal range of the species.

The scattering of sea-birds over extensive land areas by hurricanes has been discussed in detail by Robert Cushman Murphy in his notable work *Oceanic Birds of South America* (4b), wherein he cites many interesting examples, one of which concerns a South Trinidad Petrel (*Pterodroma arm-injoniana*) found alive near Ithaca, in the State of New York, some 200 miles from the coast and several thousand miles from its known or normal range.

#### REFERENCES

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