

white in colour". Three specimens collected by Hubert Wilkins eleven miles south of Townsville, less than 50 miles from Inkerman, are practically identical with the *hypoleucos* type.

In my opinion therefore variation in the Black-faced Wood-swallow is indicated by the following races:

*melanops*: foreneck to belly vinous-grey; vent and under tail-coverts black, the latter sometimes tipped with white.

*tregellasi*: (doubtful): similar but foreneck to belly rather more vinous or buffy.

*normani*: foreneck to belly rather lighter vinous-grey than in *melanops*; vent black or dusky; under tail-coverts white.

*hypoleucos*: foreneck and upper breast pale vinous-grey; lower breast and belly white; vent white or slightly dusky; under tail-coverts white.

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**An unusual threat display of an adult muttonbird, *Puffinus tenuirostris* (Temminck).**—During a banding programme carried out in conjunction with members of V.O.R.G. at Cape Woolamai, Phillip Island, Victoria\* some 405 muttonbirds were banded in the period December 1965 to February 1966, including 101 young and 304 adult birds. Whilst handling these birds, the bander is usually confronted with a small stream of orange-coloured "oil" ejected from the nostrils and mouth. Occasionally the partly digested stomach contents may also be brought up. This is recognized as a defense mechanism within the Procellariiformes and is possibly best developed by the Atlantic Fulmar, *Fulmarus glacialis* (L.) as is shown by J. Fisher (1952) in *The Fulmar*, Collin's, London.

When removed from the nesting burrow the bird, apart from spitting, usually scratches out with the feet and attacks with the beak. However, on one occasion, in January 1966, an adult bird was pulled from its burrow and managed to escape. Unlike others which were placed in front of their burrows, or escaped into burrows, this individual moved back a few feet and raised itself up off the ground. The wings were flapped several times whilst the head was moved backwards and forwards, with the beak open and the

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bird spitting. This threat display lasted about two minutes and the bird was then recaptured. This was the only instance of the display seen and it has not been observed during the banding of some 1000 birds, both at Cape Woolamai and in Tasmania. The display would appear to resemble the "bowing" display described for the Laysan and Black-footed Albatrosses, *Diomedea immutabilis* Rothschild and *D. nigripes* Audubon by Rice and Kenyon (1962) in *Auk* 79: 517-567. However, in their description they mention that the Black-footed "often keeps its wings slightly fanned whilst performing the various displays", whereas in this case the wings were completely extended.

The rarity of this threat display, since it does not appear to have been recorded before, would point to it being more or less vestigial, though it could possibly be of recent acquisition. The former seems more likely and one may assume that it was once used in the manner of the albatross, i.e. an above ground display, since it would be impossible for the display to be used below ground.—F. I. NORMAN, Department of Zoology and Comparative Physiology, Monash University, Clayton, Victoria.

**White-winged Black Tern, "regular" visitor to Moreton Bay, Queensland.**—In the conclusion of an article "The White-winged Black Tern in Moreton Bay, Queensland" published in *Emu* 57: 147, it was stated that "the question as to whether the White-winged Black Tern is a regular visitor to Moreton Bay has not been answered and can only be answered by subsequent observations during ensuing seasons".

Since that time, up to April 25, 1965, I have made at least one visit per year to the Luggage Point outfall in order to check on the presence of the species. The visits were generally made during March or April and on all visits the White-winged Black Terns were in the area, generally feeding as a flock at the outfall. The number of birds in a flock, wheeling and diving over the water is hard to judge, but the flock seemed to be about the same size each year and would have consisted generally of anything from 100 to 300 birds.

It is therefore now known that the White-winged Black Tern has been in the Moreton Bay area each summer season for ten years since the time of the first sighting of the species by L. Amict at Raby Bay in 1955. It is, therefore, felt that the White-winged Black Tern should now qualify as a "regular" visitor to the area.

It might be mentioned that sand pumping in connection with the establishment of one of the Oil Refineries at the mouth of the Brisbane River has made the land access to Luggage Point all but impassable in April, 1965. It is to be hoped that any future Port developments in the area will not interfere with the sewer outfall itself and its very obvious food source for the White-winged Black Terns.—F. M. HAMILTON, 8 Ironside Street, St. Lucia, Brisbane.