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DIVING BY GIANT PETRELS *MACRONECTES*

Of the albatrosses and petrels (Order Procellariiformes), diving and swimming underwater is well known among the Family Pelecanoididae and for several members of the Family Procellariidae (Serventy *et al.* 1971, McLachlan & Liversidge 1978). It has recently been described in Shorttailed Shearwaters *Puffinus tenuirostris* in Bass Strait (Skira 1979), and in Blackbrowed and Shy Albatrosses *Diomedea melanophris* and *D. cauta* in South African waters (Nicholls 1979, Oatley 1979). In this note we describe diving by the largest members of the Procellariidae, the giant petrels *Macronectes* spp.

From 26 to 29 September 1977 we were at Wolf Bay (26 49S, 15 07E) near Lüderitz in South West Africa/Namibia, catching Northern Giant Petrels *M. halli* from an inflatable dinghy with an outboard motor by throwing a net on a cane hoop over them (Voisin *et al.* 1977). One of us (PDS) noticed that a few birds escaped from the net by diving and swimming a few metres underwater.

One month later, on 26 October 1977 J-FV made a similar observation at Gough Island (40 21S, 09 53W). One Giant Petrel *M. giganteus* was observed sitting on the sea near the shore at Long Beach and was being slowly driven towards the surf zone, which consisted of breaking waves over a metre high. As the bird came within one or two metres of the waves, it made a half-turn with an energetic kick to face the swell and dived below it. It resurfaced a few metres on the seaward side of the surf, and swam offshore before resuming its resting position.

In order to dive, giant petrels spread their wings as they do when they bathe (Voisin 1978). They dived with a low angle of incidence and, while underwater, kept their wings almost outstretched with the joints slightly bent. Their diving behaviour differed from that described for albatrosses by Nicholls (1979) in that the giant petrels' wings were not bent sharply at the carpal joints, and they used their feet rather than their wings

for swimming.

We have not observed giant petrels diving through waves on other occasions, but our colleagues J. Cooper and A.J. Williams of the FitzPatrick Institute, University of Cape Town, have both witnessed such activity at Marion Island (46 53S, 37 52E).

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