

The possibility of the occurrence of the Giant Petrel (plate 8b), a huge fulmar the size of an albatross with a fan-shaped tail and a distinctive massive pale bill, has only to be considered to prevent confusion. Apart from an all-white phase in the far south, adults are grey-brown with paler heads, while the immatures which migrate north are dark brown and could be mistaken for Sooty Albatrosses.

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#### REFERENCES

- Alexander, W.B. (1955): *Birds of the Ocean*. New York and London. 2nd edition.  
Bourne, W.R.P. (1967). Long-distance vagrancy in the petrels. *Ibis* 109:141-167.  
Condon, H.T. (1936): 'Notes on the albatrosses occurring in south Australian waters'. *S. Austr. Orn.*, 13:141-161.  
Falla, R.A. (1937): *Birds in Rep. Brit. Austr. N.Z. Antarctic Research Exped.*, ser. B, 2: 1-288.  
Learmonth, N.F. (1960): 'Sea birds of Portland, Australia'. *Emu*, 60: 103-107.  
Murphy, R.C. (1936): *Oceanic Birds of South America* New York.  
Palmer, R.S., ed. (1962): *Handbook of North American Birds*. Yale. vol. I.

## Additional Notes on Albatross Identification

by John Warham and W. R. P. Bourne

Since the discussion of albatross identification by Warham *et al.* (1966) reprinted above was written, a number of field guides of very variable quality have dealt with albatrosses among other species of the tropical Atlantic (Watson 1966), tropical Pacific (King 1967), New Zealand (Falla *et al.*, 1966), Australia (Slater 1970) and South Africa (Prozesky 1970), while Serventy *et al.* (1971) have published a fuller account of Australian seabirds illustrated with photographs. Between them these cover most of the southern seabirds which have wandered north, and Falla *et al.* (1966), Slater (1970) and Serventy *et al.* (1971) also illustrate the distinctive characters of the bills of the southern albatrosses which, it is perhaps worth emphasizing, are the best means of telling them apart in the hand, though less useful at sea; some of these are also figured by Murphy (1936), while Palmer (1962) deals with the North Pacific species as well.

Following the review of vagrancy in the petrels by Bourne (1967) Black-browed Albatrosses (*Diomedea melanophris*) have been reported in Britain and Ireland in most years (such records are listed annually in reports of the occurrence of

rare species in *British Birds* and in the *Irish Bird Report*), with two in the Caribbean at 14°03'N 66°31'W on 6 May 1968 (de Bruijne 1970) and again off the east coast of the United States on various dates in the summer of 1972 (DuMont 1973). One even visited the gannetry on the Bass Rock off the east coast of Scotland for three summers from 1967 to 1969 (Waterston 1968), but it was frequently disturbed and eventually went away. McDaniel (1973) also lists four occurrences of Yellow-nosed Albatrosses (*Diomedea chlororhynchos*) off eastern North America in the period 1970-1972, and speculates on why there should suddenly have been an increase in albatross records. We suggest that it may partly be because more people are now interested in them, and partly because they are now less likely to be shot than in the past, so that birds which penetrate the northern hemisphere as migratory juveniles are now more likely to be able to settle down there and bring pleasure to many people as adults. It is notable that a good many of the recent

<sup>1</sup>. See Supplement.

records have apparently referred to mature birds (though the characters of immaturity may sometimes have been overlooked), and it seems possible that many of them may refer to the same individuals as they wander round the North Atlantic.

Among other recent occurrences of southern petrels north of the equator a Southern Giant Petrel (*Macronectes giganteus*) was seen in the approaches to the English Channel on 2 November 1967 (Meeth 1969), a Wandering Albatross (*Diomedea exulans*) resembling those from the New Zealand area was photographed in California on 11 July 1967 (Paxton 1968), and a Cape Petrel (*Daption capensis*) was seen there on 9 September 1962 (McCaskie 1970), so that the increase in the northern records does not appear to be entirely confined to the mollymawks.

#### *Recent work on the albatrosses*

The most important recent original contribution to the identification of albatrosses has been a note by Tickell (1969) reporting that at South Georgia some immature Grey-headed Albatrosses (*Diomedea chrysostoma*) have pale heads. These are likely to be confused with young Black-browed Albatrosses while the bill and underwing are still dark, and Yellow-nosed when the first yellow starts to appear on the upper mandible and more white on the underwing. However, in addition to the difference in the shape of the bird the bill of a Grey-headed Albatross should always be darker than that of a Black-browed, while a Grey-headed with white on the underwing is always likely to have broader dark edges than a Yellow-nosed. These observations help explain a number of sketches of heads of immature albatrosses made at sea by Edward Wilson (Roberts 1967), some of which may result from observations of more than one species.

Descriptions of albatrosses from the North Atlantic sometimes refer to "white tails". This is because the grey tails are often lost against a grey sea and the white upper tail coverts are then mistaken for a white tail. With good views both the mantle and tail can often be seen to be paler than the upperwing. DuMont (1973) was incorrect in asserting that the Black-browed Albatross's entire upper surface is usually uniformly dark; the tail and mantle may get browner with wear and fading before the moult but in birds taken at sea the variation in the colour of the upperparts is still apparent at all seasons [see plate 58 in the paper by Warham *et al.*, (1966)]. Nor is DuMont correct in stating that the Black-browed is the only mollymawk with a "thin, black eyeline mark"; this is a general character of mollymawks in which they show individual as

well as specific variation. It is remarkable how the descriptions made of some of these birds in life vary even when they were made of the same individual at the same time, possibly because while it is often easy to see an albatross at a considerable distance, it may be more difficult to see it well at close quarters.

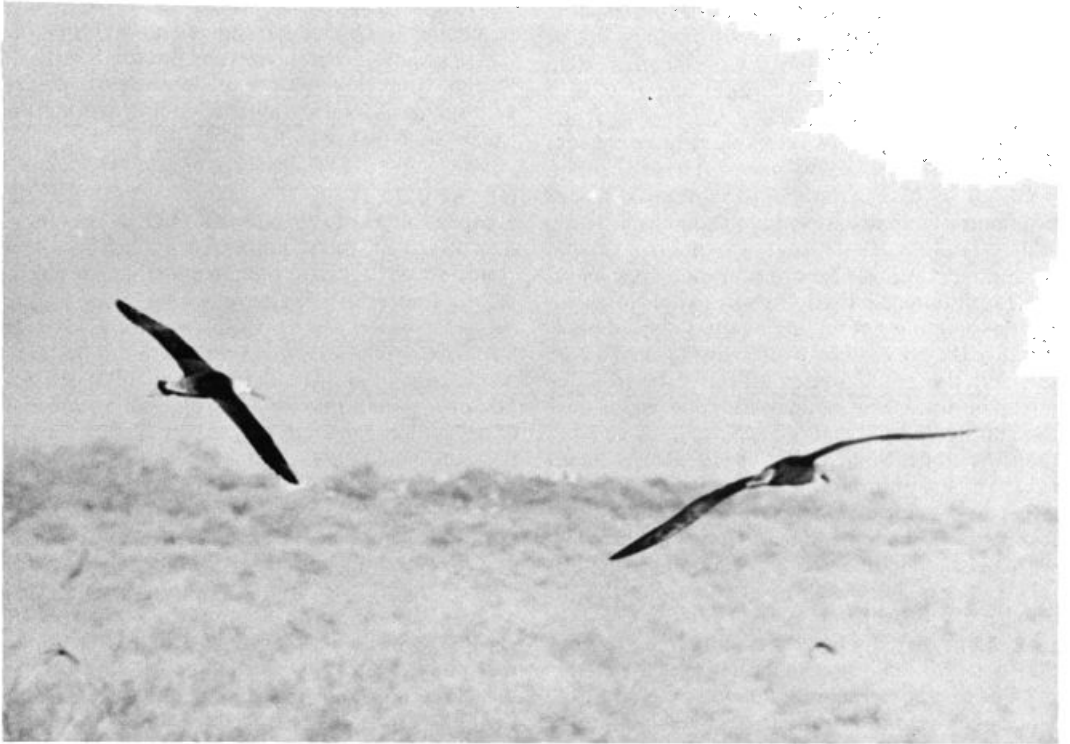
Falla *et al.*, (1966) and Cox (1973) give some criteria for the identification of the races of Australasian mollymawks. Whereas the southern populations of the Black-browed Albatross have a dark iris, the New Zealand race *impavida* develops a pale one when adult, and according to Cox tends to retain a wider dark anterior margin to the underwing which forms a point between the carpal joint and the body; it seems possible this may also occur with immature individuals of more southerly populations, however. Similarly, while the southern populations of the Shy Albatross (*Diomedea cauta cauta*) have largely white heads and pale upperparts with greenish-grey lateral plates to the bill, a dark mark through the eye, and grey cheeks, the New Zealand race (*D.c.salvini*) has the upperwing darker than the centre of the back, the lateral plates of the bill darker, and the head largely grey with a white forehead, while the very local Chatham Island race (*D.c.eremita*) is even darker with the head largely grey and the bill yellow. Vooren (1973) has recently suggested that young *D.c.cauta* may be similar to *D.c.salvini*, however. The Shy Albatross has a circumpolar range in the Southern Ocean, wintering in force off south-west Africa, so it seems as likely to appear in the North Atlantic as the North Pacific.

#### GIANT PETRELS

Since our earlier paper was published numerous observers have confirmed a suggestion by Bourne and Warham (1966) that there are two sibling species of giant petrel with an overlapping distribution. The Southern Giant Petrel (*Macronectes giganteus*) breeds around the Antarctic zone of surface water and is polymorphic, occurring in a pure white morph with occasional dark feathers, and a dark one which is uniformly dark brown when young becoming greyer with a pale head when adult. The Northern Giant Petrel (*Macronectes halli*) breeds around the southern part of the subantarctic zone of surface water, the sites overlapping with those used by the previous species along the boundary between the two zones, and resembles the dark morph of *giganteus* when young but is darker when adult, retaining a dark crown which contrasts with the pale face and chin, but showing a greater tendency to develop a pale iris. According to Johnstone (1971) the dark birds can be told apart at



PLATE 9. Buller's Albatross *Diomedea bulleri* (photo: John Agnew). Below: soaring Galapagos Albatrosses *Diomedea irrorata*.



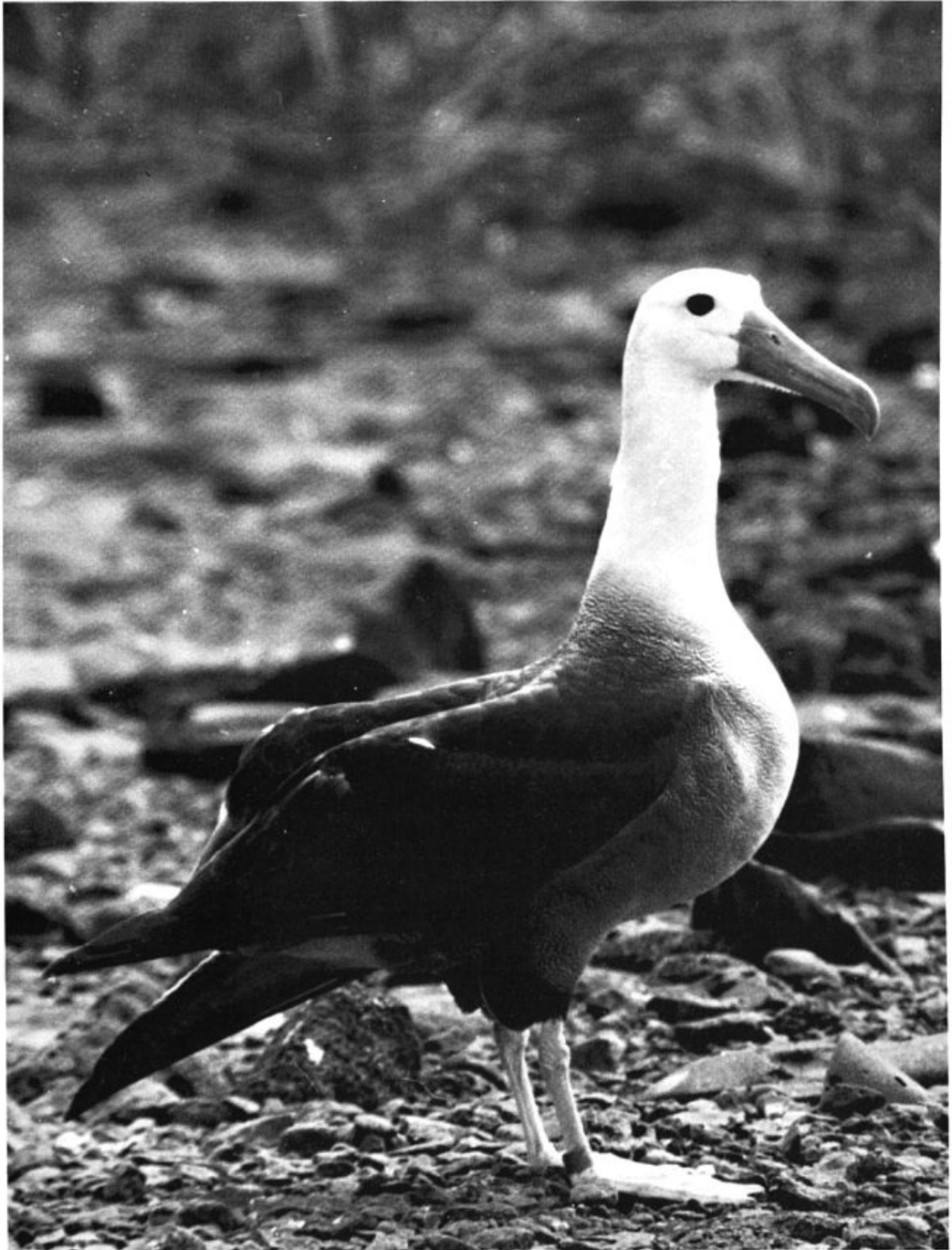


PLATE 10. Galapagos Albatross *Diomedea irrorata*.

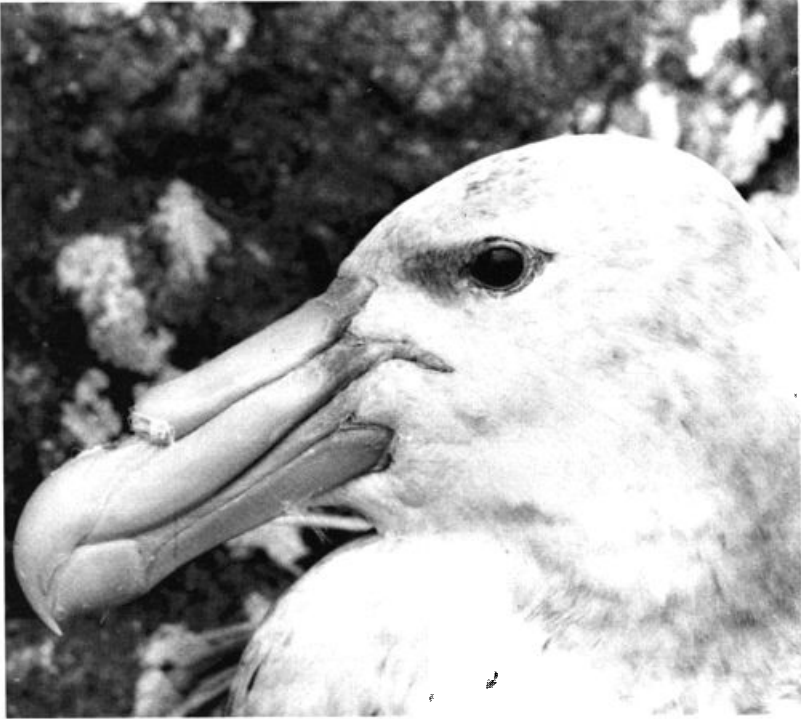


PLATE 11. Giant Petrel *Macronectes giganteus*. Below: darkest phase of Giant Petrel (photos: John Warham).



any age because the pale pinkish-ochre bill always has a green tip in *giganteus* but a dull pink one sometimes tending to brown or ochre in *halli*, and in the adults also by the head-markings and the presence of a pale leading edge to the wing in *giganteus* but a dark one in *halli*, often visible in flight. The drawing of the bird seen in the North Atlantic by Meeth (1969) indicates that it was an adult dark *giganteus* but it is now known from banding results that both the white morph and *halli* also migrate north during the period of immaturity. Both forms are figured by Bourne and Warham (1966) and in colour by Serventy *et. al.*, (1971, plates 137 and 138).

## THE NORTH PACIFIC

Surprisingly few southern albatrosses have been reported in the North Pacific despite the greater development of north-south movements by some other seabirds there. This may be partly because they tend to be overlooked among the three species of North Pacific albatross which between them have plumages resembling those of all the southern species (Palmer 1962), and partly owing to a deficiency of well-informed observers. Most of the identification problems applicable to southern albatrosses in the North Atlantic are equally valid for the North Pacific, with the added complication that two additional species might occur there, Buller's and the Galapagos (or Waved) Albatrosses (*Diomedea bulleri* and *D. irrorata*). Buller's Albatross, which breeds in the New Zealand area, appears to be the Pacific representative of the Yellow-nosed Albatross, and is generally rather similar with a paler back, a large grey head with a white forehead and crown, and a dark grey bill with a yellow stripe above and below, the upper stripe having a wide, swollen base (see colour plate 135 in Serventy *et. al.*, 1971). It may be told from the larger Shy Albatross by the presence of a dark anterior margin to the underwing, as in the Yellow-nosed Albatross. The Galapagos Albatross has a barred grey body with a pale head and neck and band across the rump and a massive yellow bill, and is unlikely to be confused with other albatrosses though it might be mistaken for the adult Southern Giant Petrel, which is however a very different shape with a highly distinct grooved bill. Immatures of both these albatrosses are very similar to the adults.

## REFERENCES CITED

- Bourne, W.R.P. 1967. Long-distance vagrancy in the petrels. *Ibis* 109:141-167.
- Bourne, W.R.P. and J. Warham. 1966. Geographical variation in the giant petrels of the genus *Macronectes*. *Ardea* 54:45-67.
- Cox, J.B. 1973. The identification of the smaller Australian *Diomedea*, and the status of the *Diomedea* in South Australia. *South Australian Ornithologist* 28:67-75.
- de Bruijne, J.W.A. 1970. Black-browed Albatross (*Diomedea melanophris*) in the Caribbean. *Ardea* 58.
- DuMont, P.G. 1973. Black-browed Albatross sightings off the United States east coast. *Amer. Birds* 27:739-740.
- Falla, R.A., R.B. Sibson and E.G. Turbott. 1966. *A field guide to the birds of New Zealand*. Collins, London.
- Johnstone, G.W. 1971. Giant Petrels. *Australian Bird Bander* 9:83-84.
- King, W.B. 1967. *Seabirds of the tropical Pacific Ocean*. Smithsonian Institution, Washington D.C.
- Meeth, P. 1969. Giant Petrel (*Macronectes giganteus*) in west European waters. *Ardea* 57:92.
- McCaskie, G. 1970. A Cape Petrel off Monterey, California. *California Birds* 1:39-40.
- McDaniel, J.W. 1973. Vagrant albatrosses in the western North Atlantic and Gulf of Mexico. *Amer. Birds* 27:563-565.
- Murphy, R.C. 1936. *Oceanic Birds of South America*. American Museum of Natural History, New York.
- Palmer, R.S. 1962. *Handbook of North American Birds. Vol. I, Loons through Flamingoes*. Yale University Press, New Haven.
- Paxton, R.O. 1968. Wandering Albatross in California. *Auk* 85:502-504.
- Prozesky, O.P.M. 1970. *A field guide to the birds of southern Africa*. Collins, London.
- Roberts, B. 1967. *Edward Wilson's 'Birds of the Antarctic'*. Blandford, London.
- Serventy, D.L., V. Serventy and J. Warham. 1971. *The Handbook of Australian Sea-birds*. A.H. and A.W. Reed, Sydney.
- Slater, P. 1970. *A field guide to Australian birds non-passerines*. Oliver and Boyd, London and Edinburgh.
- Tickell, W.L.N. 1969. Plumage changes in young albatrosses. *Ibis* 111:102-105.
- Vooren, C.M. 1973. Notes on sea birds between New Zealand and Bounty Islands. *Notornis* 20:301-310.
- Warham, J., W.R.P. Bourne and H.F.I. Elliott. 1966. Albatross identification in the North Atlantic. *Brit. Birds* 59:376-384.
- Waterson, G. 1968. Black-browed Albatross on the Bass Rock. *Brit. Birds* 61:22-27.
- Watson, G.E. 1966. *Seabirds of the tropical Atlantic Ocean*. Smithsonian Institution, Washington D.C.