A MANX SHEARWATER (Puffinus p. puffinus) IN NEW ZEALAND

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ABSTRACT

The first recorded occurrence of a Manx Shearwater in the New Zealand region, being also the second record from the Australasian region, is reported. A description of the bird is given and a table presented of the main characters separating the Fluttering, Manx, and Hutton's Shearwaters since it seems possible that Manx Shearwaters, when present in New Zealand waters, associate with flocks of Fluttering Shearwaters and may be confused, as beach specimens, with both this species and Hutton's Shearwater. The breeding cycle and post-breeding migrations and movements of the Manx Shearwater are outlined and discussed to account for the southern occurrences of this species.

INTRODUCTION

On June 26 1972, following a prolonged period of cold weather and strong southerly winds, Mr T. L. C. Symmes of Wadestown picked up a freshly dead medium-sized shearwater washed ashore on a beach on the headland separating Karehana Bay from Pukerua Bay, on the Wellington west coast. As the bird was in excellent condition, it was handed to the Dominion Museum, where it was identified as a Manx Shearwater (*Puffinus p. puffinus* Brunnich, 1764). The bird on dissection proved to be a juvenile male with very small (3 x 1mm) black testes, this indicating that it was less than 1 year old, having flown from its home colony about 9 months earlier. Its plumage was in fresh condition and no moult was detected. The bird was thin, but not emaciated and its stomach was completely empty.

The description of the bird is as follows:

Entire upper parts sooty black, including forehead, crown, lores, upper neck, back, upper wing coverts, rump and upper tail coverts. The dividing line between the black upper parts and the white under parts is well below eye level and continues along the sides of neck with only a narrow line of grey suffusion between the two colours. Primaries, secondaries and tail feathers sooty black, outer primaries somewhat lighter brownish black at bases of inner vanes. Under parts pure white. Under wing coverts along leading edge of wing mottled slate grey, forming an obvious dark leading margin, extending in triangular form towards the centre of the under wing in the elbow region. The apex of this triangle nearly reaches the greater under wing coverts, which in that area are grey with dark shafts (Fig. 1). Remainder of under wing coverts pure white. Longest axillaries mainly white, with broad black terminal bands and

slaty dusting on terminal end of white areas. Shorter axillaries same as longest, except for additional white terminal edging. Exposed undertail coverts white, but lateral feathers with outer webs black, forming broad black lateral bands. The two longest, concealed, undertail coverts black, with white bases to inner vanes. Bill dark lead grey, with lower mandible somewhat lighter. Iris very dark brown. Tarsus pink with black edges on outer side, pale flesh on inner side, outer toes black, centre and inner toes pinkish white, webs light grey.

Measurements:

Bill:	35.3mm	Wing:	239mm
Tarsus:	47.1mm	Tail:	72mm
Toe:	50.5mm	Weight:	275g

The colour pattern and the measurements of this specimen conform with published data, except for the presence of the darker triangular area in the under wing which is not mentioned in available literature. The under wing of both adult and immature Manx Shearwaters is described as being pure white, except for darker leading edge and white and black axillaries by Murphy (1936), Witherby *et al.* (1948) and Bauer & Glutz von Blotzheim (1966).

BREEDING DISTRIBUTION OF MANX SHEARWATER

Manx Shearwaters breed on islands and rocky coasts mainly in the eastern North Atlantic, such as: islands off the south coast of Iceland, the Faroes, Hebrides, Orkneys, Shetlands, cliffs off and on the coasts of Ireland, islands off the west coast of Great Britain and off the coast of Brittany, on the Azores, Madeira, Salvages and on Bermuda (Bauer & Glutz von Blotzheim, 1966). Breeding birds start occupying burrows in February and March, eggs are laid in April and May and by late September (exceptionally by October) chicks leave the colonies, after having been abandoned by their parents for up to 2 weeks (Harris 1966).

POST-BREEDING MIGRATION OF MANX SHEARWATER

Immediately following the breeding season adult and immature Manx Shearwaters migrate in a southerly direction, passing the northern coast of Spain into the central Atlantic. The main wintering grounds appear to be in the southwest Atlantic with concentrations along the eastern coast of South America between latitudes 40°S and 38°S (Thomson 1965 and Cook & Mills 1972). Thomson (1965) reported 38 British banded Manx Shearwaters recovered on the coasts of Brazil, Uruguay and Argentina between September and April. Most of these (32) were recovered between October and December. However, immature (non-breeding) birds may remain in the South Atlantic during the northern summer, as Escalante (1970) mentions a specimen collected in Bal. Atlantida (Uruguay) on 17 August 1968.

FIGURE 1 — Underwing of Manx Shearwater, Pukerua Bay, June 1972. Photo: Trevor Ulyatt, National Museum.

RECOVERIES OF MANX SHEARWATERS

Manx Shearwaters are apparently very rare in the southeast Atlantic and there seems to be only a single record from South Africa, " off Port Elizabeth in the non-breeding season " (Mackworth-Praed & Grant 1962). The species had never previously been reported from the South Indian Ocean or the south Pacific area and therefore the recovery of a British banded Manx Shearwater in Australia in 1961 came as a surprise. Spencer (1962) reported that a Manx Shearwater banded on Skokholm, Pembrokeshire, as a chick in September 1960 was recovered in Venus Bay, South Australia, in November 1961, i.e. during the non-breeding season, just about 14 months after it left its colony the year before. Spencer probably correctly surmised that this bird was caught in the prevailing westerly winds in the South Atlantic and was driven right across the South Indian Ocean, before perishing in the Australian Bight. Thomson (1965) also mentioned this recovery, which he considered a unique exception to its normal distribution pattern.

DISCUSSION OF THE NEW ZEALAND RECORD

The bird found freshly dead on the Wellington West coast on 16 June 1972, although being the first ever Manx Shearwater to be recorded in New Zealand, now constitutes the second specimen reported within the Australasian region. As with the Australian specimen, it may be assumed that it reached the Tasman sea via the South Indian Ocean, although the possibility of a South Pacific crossing against the prevailing winds cannot be discarded. However, while both other records outside the Atlantic area, i.e. Port Elizabeth, South Africa (Mackworth-Praed & Grant 1962) and Venus Bay, South Australia (Spencer 1962) were recorded during the non-breeding season, i.e. during the northern winter, the New Zealand specimen was found in June, i.e. during the breeding season of the species in the northern hemisphere. Harris (1966) found from banding recoveries that very few immature Manx Shearwaters return to European waters following their first winter at sea, and it therefore can be assumed that the majority of one year old birds remain well away from land for at least one more year. Thomson (1965), while pointing out the scarcity of South American recoveries during January and February, speculates that the majority of birds may move to some different waters such as further south to the good feeding areas of the upwelling of the Falkland Current, where chances of recovery would be much less. This suggestion was confirmed by Cook & Mills (1972) during a cruise along the eastern coast of South America in late January 1970. During this cruise Manx Shearwaters were encountered in large flocks off Mar del Plata, latitude 38°S and again, although in smaller numbers, around latitude 49°24'S. This is about twelve degrees further south than the southernmost band recovery of

TABLE

Main separation characters of Fluttering, Manx and Hutton's Shearwaters

Characteristics	Fluttering Shearwater *Puffinus g. gavia*	Manx Shearwater *Puffinus p. puffinus*	Hutton's Shearwater *Puffinus huttoni*
Bill length:			
range mm	28.3 - 37.4	32 - 38	32.2 - 39.4
average mm	33.3		36.4
Wing length:			
range mm	192 - 220	216 - 246	212 - 231
average mm	209		221
Tail length:			
range mm	61 - 67.5	69 - 82	67 - 70.5
average mm	63.4		69
Underwing coverts	From carpal joint outwards *pure white;* between axil and carpal joint *variably smudgy brown*	Mainly *white*, with *mottled slate grey leading edge*	From carpal joint outwards with dark *shafts* and *smudgy brown outer vanes* (immature birds paler outside carpal joint); between axil and carpal joint *uniformly smudgy brown*
Long axillaries	Short, do *not reach* trailing edge of wing; *light buff grey, square-ended* and *white-tipped*	Long, *reach* (almost reach) trailing edge of wing; *mainly white with broad black (or grey) terminal band, oval-ended* and *often white-tipped,* sometimes *pure white*	Long, *reach* (almost reach) trailing edge of wing; *dark brown, oval-ended* and only *exceptionally* white-tipped
Undertail coverts:			
Exposed coverts	*Pure white*	White, but with *lateral feathers* having *black outer vanes* forming black lateral bands to the exposed covert area	White, but with *lateral feathers* having *dark brown edges on outer vanes (exceptionally* pure white) forming variably streaked lateral edges to the exposed covert area
Longest pair (concealed)	Either *pure white* or *white with grey dusting and smudging (exceptionally* light buff-grey all over)	*Black,* often with some *white at base of inner vane*	*Completely* or *mainly dark brown (exceptionally* white with brown smudging)

this species mentioned by Thomson (1965). In these latitudes it is quite possible for some of the birds to be caught by the prevailing westerly winds and to be blown into the South Indian Ocean.

The question inevitably arises of how frequently and in what numbers Manx Shearwaters penetrate into the Indian Ocean. Although numbers may be small, individuals could occur quite regularly in this

area. Of the birds perishing in the Australian region only a small proportion would be stranded on beaches. Accordingly, there is only a chance probability of both retrieval and recognition.

It seems possible that Manx Shearwaters, when present in New Zealand waters, associate with flocks of Fluttering Shearwaters *(Puffinus gavia gavia)*, as a small wreck of the latter species was found to have occurred along the Wellington West Coast at the same time as the Manx Shearwater was picked up.

Manx Shearwaters, although superficially similar to Fluttering Shearwaters can be distinguished from the latter species by being black above, not brown, and being slightly larger, with longer wings and tail. If found in fresh condition identification is not difficult, but if partly deteriorated, or wet and full of sand they can easily be confused with Fluttering or possibly with Hutton's Shearwater *(Puffinus huttoni)*. To help with identification a table was set up, in which the main characteristics and separation points of all these three species are listed. The data on *Puffinus g. gavia* and *Puffinus huttoni* have been obtained from a special study on plumage characteristics of these two species (F. C. Kinsky, in prep.) now nearing completion, and those on *Puffinius p. puffinus* were extracted from Witherby *et al.*, (1948), Bauer & Glutz von Blotzheim (1966), and from specimens in the Dominion Museum collections. A similar table has been presented by Serventy, Serventy & Warham (1971) but faulty type setting has rendered it inaccurate.

LITERATURE CITED

BAUER, K. M.; GLUTZ VON BLOTZHEIM, U. N. 1966. Handbuch der Vogel Mitteleuropas, Band 1. Gaviiformes - Phoenicopteriformes. Pp. 1-483, text - figs 1-70. Frankfurt am Main. Akademische Verlagssellschaft.

COOK, F.; MILLS, E. L. 1972. Summer distribution of Pelagic Birds off the coast of Argentina. Ibis 114: 245-251, 1 fig.

ESCALANTE, R. 1970. Aves marinas del Rio de la Plata y aguas vecinas del Oceano Atlantico. Pp. 1-200, 1 text-fig., 1 graph, pls I-VIII, tables I-XI. Montevideo: Barreiro y Ramos S.A.

HARRIS, M. P. 1966. Breeding biology of the Manx Shearwater *(Puffinus puffinus)*. Ibis 108 (1): 17-33, figs 1-6, tables 1-12.

MACKWORTH-PRAED, C. W.; GRANT, C. H. B. 1962. Birds of the southern third of Africa. African handbook of birds, series II, volume I. Pp. xxiv + 1-688, text illus., pls 1-38 (coloured), I-XI (black and white). London: Longmans, Green and Co. Ltd.

MURPHY, R. C. 1936. Oceanic birds of South America. A study of species of the related coasts and seas, including the American quadrant of Antarctica based on the Brewster-Sanford collection in the American Museum of Natural History. Vol. II. Pp. viii + 641-1245, text-figs 62-80, pls 39-72, 10 unnumbered col. pls. The American Museum of Natural History. New York: The Macmillan Company.

SERVENTY, D. L.; SERVENTY, V.; WARHAM, J. 1971. The handbook of Australian sea-birds. Pp. 1-254, figs 1-127 (black and white), 128-142 (col. pls), tables I-III. Sydney: A. H. & A. W. Reed.

SPENCER, R. 1962. British-ringed Manx Shearwater recovered in Australia. British Birds 55 (2): 86-87.

THOMSON, A. L. 1965. The Transequatorial migration of the Manx Shearwater *(Puffin des Anglais)*. L'Oiseau et la Revue Francaise d'Ornithologie 35: 130-140.

WITHERBY, H. F.; JOURDAIN, F. C. R.; TICEHURST, N. E.; TUCKER, B. W. 1948. The handbook of British Birds, Vol IV (cormorants to crane). 5th impress. Pp. xiv + 1-461, text illus., pls 93-125. London: H. F. & G. Witherby Ltd.

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