

TREMATODE ANKLETS IN WHITEFACED STORMPETRELS *PELAGODROMA MARINA*
AT GOUGH ISLAND

R.W. FURNESS

Received 5 June 1984, accepted 25 June 1984

INTRODUCTION

Imber (1984) has described the occurrence and likely origins of anklets consisting of desiccated trematodes on the tarsi of Whitefaced Stormpetrels *Pelagodroma marina* at the Chatham Islands. Clancey (1981) had previously noticed anklets on the same species at Gough Island, but was unaware of their nature and origins.

METHODS

I visited Gough Island from 7 September to 18 October 1983 and recorded the presence or absence of anklets on seabirds examined in the hand. Mass, body measurements, moult score and brood patch score were also recorded, and some individuals were collected under license for pollutant analyses. A few others were found killed by Subantarctic Skuas *Catharacta antarctica* providing additional data on birds of known sex. Anklets were removed from five Whitefaced Stormpetrels and sent to Dr D. I. Gibson, British Museum (Natural History), for identification.

RESULTS

Anklets were found on 24 out of 35 (69 %) Whitefaced Stormpetrels examined, and 14 of those with anklets had them on both legs although none of these were joined together as described by Imber (1984). Anklets examined by Dr Gibson proved to be desiccated metacercariae of the same species of digenean (*Syncoelium filiferum*) recorded by Imber (1984). This species is now named *Copiatestes filiferus* (Gibson & Bray 1977) and is commonly found attached to surface-living fish in the seas around Tristan da Cunha (Gibson 1976). Although I examined 15 Whitebellied Stormpetrels *Fregetta grallaria*, 13 Greybacked Stormpetrels *Garrodia nereis*, 47 Common Divingpetrels *Pelecanoides urinatrix*, 149 Broadbilled Prions *Pachyptila vittata*, 84 Atlantic Petrels *Pterodroma incerta*, 86 Softplumaged Petrels *P. mollis*, 34 Kerguelen Petrels *P. brevirostris*, 39 Great Shearwaters *Puffinus gravis*, 19 Little Shearwaters *P. assimilis* and large numbers of albatrosses, no anklets were

found on any of these species.

There was no tendency for the presence or number of anklets on Whitefaced Stormpetrels to be related to sex (10 males averaged 1,0 anklets per bird, 8 females 1,1) or to breeding status as inferred from brood patch score (15 with brood patch bare or mainly bare averaged 1,10 anklets per bird; 19 with brood patch down covered averaged 1,05 per bird). Neither difference is statistically significant at the 5 % level, implying that the likelihood of entanglement is unaffected by any difference that there may be in the feeding behaviour or distribution of each sex or of breeders and nonbreeders. The masses of Whitefaced Stormpetrels appeared to be unaffected by the number of anklets present, and the presence of anklets was unrelated to body size measurements (Table 1; comparing means by t-tests $p > 0.05$ in every case).

TABLE 1

MASSES AND MEASUREMENTS OF WHITEFACED STORMPETRELS *PELAGODROMA MARINA* CAUGHT AT GOUGH ISLAND IN SEPTEMBER-OCTOBER 1983 IN RELATION TO THE NUMBER OF TREMATODE ANKLETS CARRIED; VALUES GIVEN ARE MEANS WITH STANDARD DEVIATIONS IN PARENTHESES

	Number of legs carrying anklets		
	0	1	2
Number of birds examined	11	9	14
Mass (g)	48,9 (2,4)	49,6 (7,1)	48,6 (2,3)
Wing length (mm)	158,9 (2,8)	160,1 (6,0)	159,4 (4,2)
Tarsus length (mm)	40,6 (1,3)	40,7 (1,7)	41,2 (1,8)
Head plus bill length (mm)	41,4 (1,0)	41,8 (1,1)	42,0 (1,2)

Note: an individual with one anklet was not measured so is omitted from this table.

DISCUSSION

There is therefore no evidence to suggest that the trematode anklets were causing any inconvenience to their carriers on Gough Island in 1983, and no petrels were found tangled in the vegetation although large numbers were seen flying between and through *Phyllica* bushes in the area around the Meteorological Station in Transvaal Bay. All anklets seen were loose on the tarsus and able to move freely up and down, and no leg or foot injuries were seen on any of the Whitefaced Stormpetrels examined. However, more extensive tangling of trematodes may occur at Gough Island in some years, as it occasionally does in the Chatham Islands (Imber 1984).

ACKNOWLEDGEMENTS

I thank B.W. Stead and B.P. Watkins for assistance and company in the field, and Dr D.I. Gibson for identifying the samples of trematode anklets. Research by the FitzPatrick Institute at Gough Island forms part of the Ornithological Programme of the South African Scientific Committee for Antarctic Research. Logistic support was provided by the South African Department of Transport.

REFERENCES

- CLANCEY, P.A. 1981. On birds from Gough Island, central south Atlantic. *Durban Mus. Novit.* 12:187-200.
- GIBSON, D.I. 1976. Monogenea and Digenea from fishes. *Discovery Rep.* 36:179-266.
- GIBSON, D.I. & BRAY, R.A. 1977. The Azygiidae, Hirudinellidae, Ptychogonimidae, Sclerodistomidae and Syncoeliidae (Digenea) in fishes from the north east Atlantic. *Bull. Br. Mus. Nat. Hist. (Zool.)* 32:167-245.
- IMBER, M.J. 1984. Trematode anklets on Whitefaced Stormpetrels *Pelagodroma marina* and Fairy Prions *Pachyptila turtur*. *Cormorant* 12:71-74.

R.W. Furness, Percy FitzPatrick Institute of African Ornithology, University of Cape Town, Rondebosch 7700, South Africa and Zoology Department, University of Glasgow, Glasgow G12 8QQ, Scotland, U.K.