

AN OBSERVATION OF LIVE PREY CAPTURE BY A BLACK-BROWED ALBATROSS *DIOMEDEA MELANOPHRYS*

N. D. COBLEY

British Antarctic Survey, Natural Environment Research Council, Madingley Road,
Cambridge CB3 0ET, UK
(n.cobley@bas.ac.uk)

Received 1 August 1995, accepted 7 November 1995

There are few observations of albatrosses capturing live prey at sea, prompting speculation as to the methods and timing of feeding (Prince 1980, Prince & Morgan 1987, Harrison *et al.* 1991, Weimerskirch & Wilson 1992, Croxall & Prince 1994). Furthermore, in the Black-browed Albatross *Diomedea melanophrys* most observations of feeding relate to fish or squid captured in the vicinity of fishing vessels (Prince 1980, Griffiths 1982, Thompson 1992, Croxall & Prince 1994, Thompson & Riddy 1995), although breeding birds only obtain 5% of their estimated annual energy requirements in this way (Thompson & Riddy 1995).

At approximately 1300 GMT on 17 April 1995, whilst conducting bird observations on the RRS *Bransfield* at about 48°04'S, 57°21'W, en route from the Falkland Islands to Montevideo, an adult-plumaged Black-browed Albatross was seen to plunge dive from 3 m and seize a silvery-white eel-like fish about 30 cm in length, from just below the surface. Upon capture the fish wrapped itself around the bird's head and neck, wriggling constantly, and shortly afterwards the albatross took off with the fish. It was pursued by several other Black-browed Albatrosses until out of sight. The prey was captured during daylight, and the total time spent on the water was about two minutes; the entire sequence from the initial dive to flying out of sight lasted no more than five minutes. The bird had previously been following the ship in the company of 10–20 Black-browed Albatrosses, all except three of which were subadults of 2–3 years (Prince & Rodwell 1994). Although this bird was following the ship, encountering this particular prey was incidental and occurred some 20 m away from the side of the vessel.

The technique used was categorized by Harper *et al.* (1985) as 'surface plunging' and has been previously recorded for this species when scavenging dead fish (Prince 1980) and feeding at krill swarms (Harrison *et al.* 1981), although there are no published observations of the capture of live fish. The behaviour of the other members of the group in rushing in and attempting to seize the prey is consistent with previous observations of the feeding behaviour of Black-browed Albatrosses around trawlers and with the aggressive roles reported from multispecies feeding assemblages (Harrison *et al.* 1981, Weimerskirch *et al.* 1986, Thompson & Riddy 1995).

The elongate shape, behaviour and colour of this fish strongly suggest that it was a lamprey *Geotria australis*, which has been recorded as an infrequent prey species of Black-browed Albatrosses from South Georgia (Prince 1980, Reid *et al.* in press). Possible alternatives are barracudinas (Paralepididae) or eelcod (Muraenolepidae), both of which are much less flexible and would be unable to wrap around the bird's head (A.W. North pers. comm.). Eels are the only other species occurring in the region of similar shape, but they are mainly benthic, darker in colour and have not been recorded as prey of albatrosses.

Lampreys were not specifically recorded in food samples obtained from chicks at three Falkland Island colonies (Thompson 1992). However, since subadult birds were the dominant age-class on this transect, younger, less experienced albatrosses may be competitively excluded from the main Falkland Islands shelf area (where most breeding birds apparently forage), and thus may obtain lampreys outside the adults' feeding zone. Lampreys are anadromous fish which spawn in rivers in South America and the Falkland Islands and spend most of their adult phase at sea as parasites on other fish (Potter *et al.* 1979). The estimated size of this fish is intermediate between that of recently metamorphosed lampreys from Australian streams and adults obtained at South Georgia from albatross food samples (Potter *et al.* 1979).

ACKNOWLEDGEMENTS

I thank John Croxall and Peter Prince for their comments on this observation, Tony North for providing information about lampreys and fish identification and to Mike Imber and Henri Weimerskirch for improving the quality of the paper.

REFERENCES

- CLARKE, A. & PRINCE, P.A. 1980. Chemical composition and calorific value of food fed to mollymauk chicks at Bird Island, South Georgia. *Ibis* 122: 488–494.
- CROXALL, J.P. & PRINCE, P.A. 1994. Dead or alive, night or day: how do albatrosses catch squid? *Antarct. Sci.* 6: 155–162.
- GRIFFITHS, A.M. 1982. Observations of pelagic seabirds feeding in the African sector of the Southern Ocean. *Cor-morant* 10: 9–14.
- HARPER, P.C., CROXALL, J.P. & COOPER, J. 1985. A guide to foraging methods used by marine birds in Antarctic and Subantarctic seas. *BIOMASS Handbook* 24: 1–22.
- HARRISON, N.M., WHITEHOUSE, M.J., HEINMANN, D., PRINCE, P.A., HUNT, G.L. & VEIT, R.R. 1981. Observations of multispecies seabird flocks around South Georgia. *Auk* 108: 801–810.
- POTTER, I.C., PRINCE, P.A. & CROXALL, J.P. 1979. Data on the adult marine and migratory phases in the life cycle of the southern hemisphere lamprey, *Geotria australis* Gray. *Env. Biol. Fish.* 4: 65–69.
- PRINCE, P.A. 1980. The food and feeding ecology of Grey-headed Albatross *Diomedea chrysostoma* and Black-browed Albatross *D. melanophrys*. *Ibis* 122: 476–488.
- PRINCE, P. & MORGAN, R.A. 1987. Diet and feeding ecology of Procellariiformes. In: Croxall, J.P. (Ed.). *Seabirds: feeding ecology and role in marine ecosystems*. Cambridge: Cambridge University Press. pp. 135–171.

- PRINCE, P.A. & RODWELL, S.P. 1994. Ageing immature Black-browed and Grey-headed Albatrosses using moult, bill and plumage characteristics. *Emu* 94: 246–254.
- REID, K., CROXALL, J.P. & PRINCE, P.A. in press. The fish diet of Black-browed and Grey-headed Albatrosses *Diomedea melanophris* and *D. chrysostoma* at South Georgia. *Polar Biol.*
- THOMPSON, K.R. 1992. Quantitative analysis of the use of discards from squid trawlers by Black-browed Albatross *Diomedea melanophris* in the vicinity of the Falkland Islands. *Ibis* 134: 11–21.
- THOMPSON, K.R. & RIDDY, M.D. 1995. Utilization of offal and discards from 'finfish' trawlers around the Falkland Islands by the Black-browed Albatross *Diomedea melanophris*. *Ibis* 137: 198–206.
- WEIMERSKIRCH, H., JOUVENTIN, P. & STAHL, J.-C. 1986. Comparative ecology of the six albatross species breeding on the Crozet Islands. *Ibis* 128: 195–213.
- WEIMERSKIRCH, H. & WILSON, R.P. 1992. When do Wandering Albatrosses *Diomedea exulans* forage? *Mar. Ecol. Prog. Ser.* 86: 297–300.