

SHORT COMMUNICATIONS

MOBBING RESPONSE IN ADELIE PENGUINS

On 2 January 1977, during an Australian National Antarctic Research Expedition relief voyage to Mawson and Davis Stations, a group of Adelie Penguins *Pygoscelis adeliae* was observed mobbing a Ross Seal *Ommatophoca rossi* on sea ice at latitude 66°14'S and longitude 56°40'E. The Penguins were scattered over the ice and first approached the Seal in small groups. When their number had increased to about 100 they encircled the Seal and began running round it, alternating between clockwise and anticlockwise directions. Each change in direction involved a brief resting period. This pattern continued for about ten minutes during which time the Seal showed very little reaction. When it finally reacted by lunging at the Penguins, they rapidly withdrew and about half showed no further interest in it.

The other Penguins continued to harass the Seal. They approached it slowly as a group with a few individuals towards the front exhibiting slow-wing-flap (*sensu* Ainley 1975) and charge (*sensu* Spurr 1975) displays. The Seal reacted by frequently lunging at the front line of Penguins and occasionally pursuing the group for a short distance. This caused the Penguins to retreat before resuming their harassing within a few seconds. With the Penguins in pursuit, the Seal gradually moved towards a hole in the ice and after about twenty minutes entered the water. The Penguins remained on the ice where the high level of activity rapidly subsided.

Mobbing is common in other species of birds and several studies of the behaviour have been carried out (e.g. Rand 1941; Hartley 1950; Hinde 1954). It is usually elicited by a member of a more powerful species, which may or may not be a predator. The Ross Seal is not known to be a predator of Adelie Penguins. It is the rarest of the Antarctic seals, having a total population estimated at only 220,000 (Gilbert and Erickson 1977). It is usually found in thick

pack-ice of six to eight oktas and perhaps the observed group of Penguins had not encountered one previously.

Though there are no known records of interactions between Ross Seals and Adelie Penguins, responses by these Penguins to the predatory Leopard Seals *Hydrurga leptonyx* are quite commonly observed. The Penguins are generally reluctant to enter the water at any time and they perform a slow-wing-flap if a Leopard Seal appears in the water while they are at the water's edge (Ainley 1975). If the Penguins are swimming when the Leopard Seal appears they leave the water in an extremely agitated state, with behaviour similar to that described by Stonehouse (1968) for Gentoo *Pygoscelis papua* and King *Aptenodytes patagonicus* Penguins.

We thank Dr G.W. Johnstone for help during preparation of this paper.

REFERENCES

- AINLEY, D.G. 1975. Displays of Adelie Penguins: a reinterpretation. In *The Biology of Penguins*: 503-534. B. Stonehouse (Ed.). London: MacMillan.
- GILBERT, J.R., and A.W. ERICKSON. 1977. Distribution and abundance of seals in the pack ice of the Pacific sector of the Southern Ocean. In *Proc. 3rd SCAR Symp. Antarct. Biol.*: 703-740. G.A. Llano (Ed.). Washington, DC: Smithsonian.
- HARTLEY, P.H.T. 1950. An experimental analysis of interspecific recognition. *Symp. Soc. exp. Biol.* 4: 313-336.
- HINDE, R.A. 1954. Factors governing the changes in strength of a partially inborn response, as shown by the mobbing behaviour of the Chaffinch (*Fringilla coelebs*). I. The nature of the response, and an examination of its course. *Proc. R. Soc., Ser. B*, 142: 306-331.
- RAND, A.L. 1941. Development and enemy recognition of the Curve-billed Thrasher *Toxostoma curvirostre*. *Bull. Am. Mus. nat. Hist.* 74: 213-241.
- SPURR, E.B. 1975. Communication in the Adelie Penguin. In *The Biology of Penguins*: 449-501. B. Stonehouse (Ed.). London: MacMillan.
- STONEHOUSE, B. 1968. *Penguins*. London: Arthur Barker.

The late R.J. BARKER, and R.M. HAND, *Antarctic Division, Department of Science and Technology, Kingston, Tas. 7150.*

21 April 1980.