

AERIAL PREDATION BY A SOUTH POLAR SKUA *CATHARACTA MACKORMICKI* ON A SNOW PETREL *PAGODROMA NIVEA* IN ANTARCTICA

M.J. BENTLEY

*Department of Geography, University of Durham, South Road, Durham DH1 3LE, UK
(m.j.bentley@durham.ac.uk)*

Received 25 March 2003, accepted 22 May 2004

This short note reports a case of direct aerial predation by a South Polar Skua *Catharacta maccormicki* on a Snow Petrel *Pagodroma nivea*, on Alexander Island, Antarctic Peninsula. South Polar Skuas and Snow Petrels are regularly seen along the east coast of Alexander Island during the austral summer, although in low numbers. Visits by skuas are particularly common around the British research outpost at Fossil Bluff (71°20'S, 68°17'W). I observed skuas in several inland valleys near our geological field camp in Moutonnée Valley (70°52'S, 068°19'W; ca. 55 km north of Fossil Bluff) in November–December 2001. Snow Petrels are thought to breed at a few sites along the east coast of Alexander Island (Croxall *et al.* 1995) and have been seen in the mountains to the west of Fossil Bluff [e.g. on the summit ca. 2 km west of Fossil Bluff in February 1998 (MJB, pers. obs.)] and in Ablation Valley (70°48'S, 068°25'W; ca. 5 km north of Moutonnée Valley) in November–December 2000.

A pair of South Polar Skuas was observed nesting in one part of Striation Valley (70°54'S, 068°19'W) on 25 November 2001. Within 10 m of the nest were numerous (>10) white pellets, up to 30 mm in diameter and 80 mm long. Most were composed near-exclusively of white feathers, with occasional small bone fragments. Four of the pellets contained Snow Petrel skulls. Bird bones were also common around the nest. Similar pellets were found elsewhere in Striation and Ablation Valleys, including at least three more skull-bearing ones and a pellet consisting solely of eggshells. The pellets tended to occur in local concentrations on, or close to, upstanding rock promontories where skuas were observed to perch on multiple occasions. Three Snow Petrel carcasses were also found at the sites, consisting of wings, partial rib cages and backbone, and, in one case, a skull. In Moutonnée Valley, probably the same pair of skuas was observed on at least three occasions around our field camp, flying over the tents or standing on nearby snow patches.

OBSERVATIONS

On 5 December 2001, a South Polar Skua was observed mobbing a Snow Petrel in flight above Ablation Valley. The incident took place directly overhead, about 20–40 m above the ground. Over a period of three to four minutes, the skua harassed the petrel and made repeated slashing motions at the petrel with its beak. On at least one occasion, it collided with the petrel in midair. Most of the attacks were made from above. The Snow Petrel repeatedly uttered sharp cries as the skua drove it progressively lower, until it was eventually

forced to the ground. The actual ground impact was screened by a small rock spur, and so it is not known if the petrel was injured by the impact; but, less than 20 minutes later, the skua was observed dragging the partly-eaten carcass of the petrel around on a nearby snow patch. In less than one hour, the carcass was entirely stripped of flesh, leaving only the skull, rib cage and wings.

DISCUSSION

Skuas are well known for eating carrion and for killing and eating chicks in penguin colonies (Young 1994). They are also known as important predators of the eggs and young of Snow Petrels (e.g. Watson 1975, Barbraud 1999) and of Antarctic Petrels *Thalassoica antarctica* (van Franeker *et al.* 2001, Norman and Ward 1999). This is, however, the first published instance of which I am aware of a South Polar Skua attacking an adult Snow Petrel in flight and subsequently killing it. The technique is similar to that reported for predation of flying birds by Great Skuas *C. skua* (Higgins & Davies 1996), but different from that reported for predation by Subantarctic Skuas *C. antarctica* from Marion Island (Sinclair 1980). Skuas there were seen to force prions to fly progressively higher, with a second skua attacking the prion from above with its feet.

The number of pellets with avian remains observed close to the nest of this particular pair of skuas indicates that the pair regularly preyed upon Snow Petrels. Given the distance to open water (ca. 100 km to the north and more than 200 km to the south), the skuas here may rely on Snow Petrels as a significant source of food, as has been observed elsewhere in inland Antarctica (Higgins & Davies 1996). The presence of pale off-white eggshell fragments in one pellet implies that the skuas also eat eggs from petrel nests. No other birds were observed in the area.

It seems likely that all the observations of skuas in 2001 concerned the one pair whose nest was observed in Striation Valley, because no more than two birds were ever seen at once, and the observed markings and colouration were consistent with the birds being the same pair.

ACKNOWLEDGEMENTS

Thanks are due to C. Hjort, who commented on a draft of this note, and R. Phillips, who provided relevant literature. D. Hodgson, J. Smith, E. Verleyen and A. Hunt were part of the same field team.

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