

OILED PENGUINS OBSERVED AT BIRD ISLAND, SOUTH GEORGIA

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In Antarctic waters (i.e. south of the Antarctic Polar Front) there have been very few reports of oiled seabirds. Except for the well-publicized Bahia Paraiso incident (Penhale 1989, Eppley & Rubega 1990, Kennicutt *et al.* 1991), all other reports refer to contamination from fuel leaking or discharging from shore installations or facilities (Bourne 1985, Cooper & Condy 1988). Whether the absence of other reports of oiled seabirds in the region is due to lack of pollution, dearth of observers or failure to publish observations, is unknown. This paper presents data on the first observations of oiled seabirds at Bird Island, South Georgia (54°00'S, 38°02'W) since the British Antarctic Survey (BAS) station there was opened in 1971 and, in particular, since its year-round occupancy started in 1982.

Observations of oiled penguins

Between 10 July and 1 August 1993, six sightings of oiled penguins were made, all within 1 km of the BAS station in Jordan Cove (see Fig. 1). The records were as follows:

10 July 1993. One Chinstrap Penguin *Pygoscelis antarctica*, West Platform rocks. Heavily contaminated on one flank and also on head and chin. Captured, cleaned and released after four days rehabilitation.

17 July 1993. One Gentoo Penguin *P. papua*, Freshwater Beach. Large patches of oil on breast and head (Fig. 2).

19 July 1993. One Gentoo Penguin, Landing Beach (Fig. 3). Patches of oil on breast and flanks (different to 17 July individual).

22 July 1993. One Gentoo Penguin, Landing Beach. Heavily contaminated, most of head, flanks and flippers covered. Humanely destroyed, samples of liver tissue and oiled feathers collected.

28 July 1993. One Gentoo Penguin, Landing Beach. Heavily contaminated. Humanely destroyed, and samples of oiled feathers collected.

1 August 1993. One Gentoo Penguin, Freshwater Beach (found dead). Oil on breast.

Subsequent searches in Jordan Cove and elsewhere on the island, where a total of some 7000-10 000 birds are present ashore most evenings in winter, revealed no additional oiled birds. The oil contaminating each of the birds affected was of a fresh appearance and of a thick, tarry consistency.

Origins of oil pollution

Pollution from land into the water can be eliminated. The only potential source is the diesel oil tank supplying fuel to the Bird Island station. This tank is 100 m from the sea and no leak or spillage occurred prior to or during the period when oiled penguins were observed. Leaks from fuel-oil tanks at disused South Georgia whaling stations were reported during the

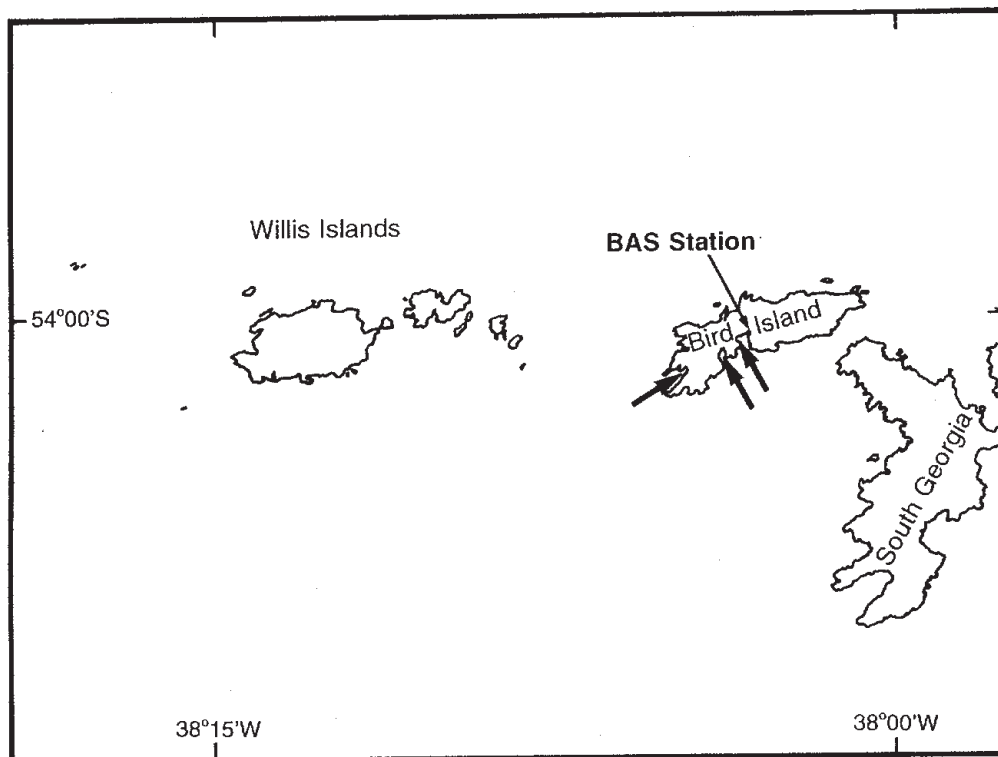


Figure 1

Northwest South Georgia, showing the location of the Willis Islands, Bird Island (including the BAS station in Jordan Cove and other beaches (arrowed) where Gentoo Penguins come ashore in numbers during the winter).

1980s (Bourne 1985). However, by 1992 all tanks had been checked and drained (W.N. Bonner pers. comm.) and pollution from this source - which was, in any case, confined to the harbours of the whaling stations, the nearest of which is 60 km from Bird Island - can be discounted in the present case.

The Gentoo Penguin is a resident, relatively sedentary species whose foraging range at sea, even in winter, is restricted to a radius of about 10 km from its breeding site (Williams 1991, Williams *et al.* 1992). The affected birds must therefore have been contaminated very close to Bird Island. The relatively fresh appearance of the oil suggests that the source of pollution was also relatively close by. Chinstrap Penguins are

more wide-ranging and since only one pair currently breeds at Bird Island, the bird involved probably came from farther afield and sought out the nearest land after becoming oiled.

With the exception of fishing boats, very few vessels indeed frequent the waters north-west of South Georgia in winter. Krill-fishing vessels were active in the area 20-50 km west of the Willis Islands (5 km west of Bird Island, Fig. 1) from early July to late August 1993. The Willis Islands are one of the most important breeding site for penguins on South Georgia (Croxall *et al.* 1984) and when scientists on board the US research vessel *Nathaniel Palmer* visited the area in June 1993, they reported large concentrations of

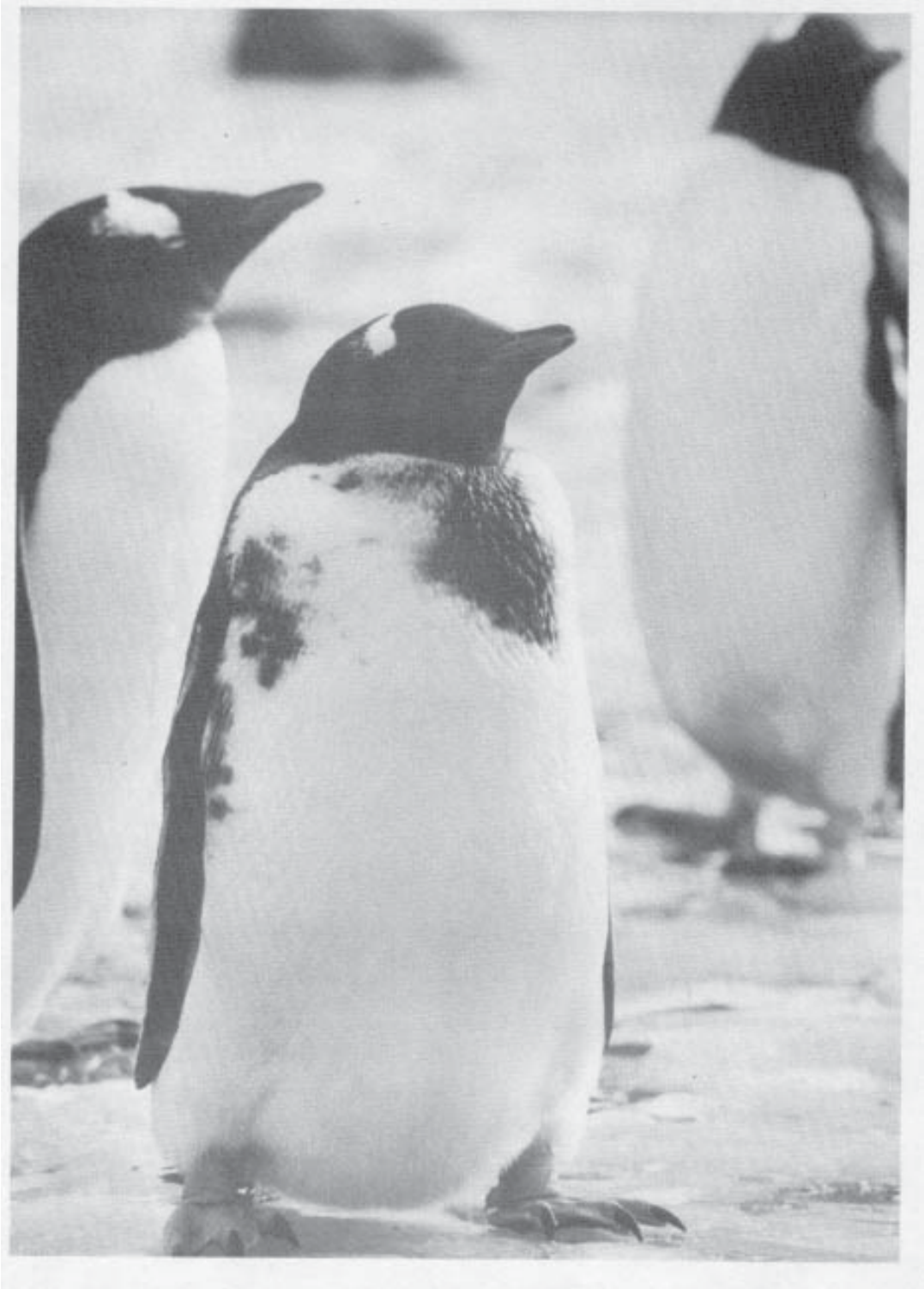


Figure 2

Oiled Gentoo Penguin at Bird Island, South Georgia, 17 July 1993.

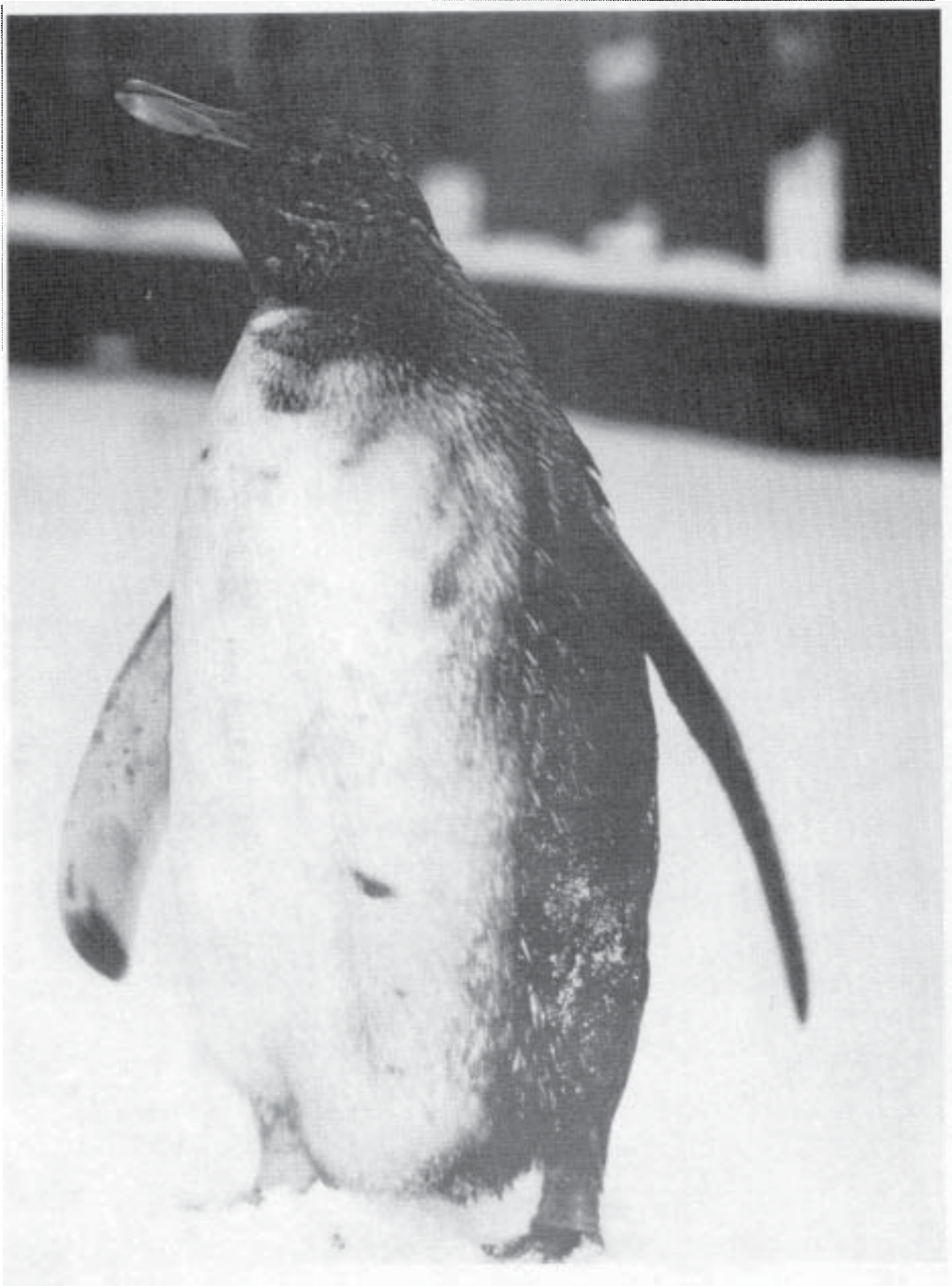


Figure 3

Oiled Gentoo Penguin at Bird Island, South Georgia, 19 July 1993.

penguins at sea inshore to the north-west of the Willis Islands (R.R. Veit pers. comm.).

The evidence, though circumstantial, therefore suggests that the oil pollution originated from fishing vessels in the vicinity of the Willis Islands. That fishing vessels operate very close to these islands is further indicated by observations and photographs of fishing transshipments between vessels a few hundred metres off Trinity Island (Willis Islands group) on 27 February 1993 (P.A. Prince pers. comm.). Great concern was expressed at the time at the very serious potential consequences of fuel leaks from vessels in such circumstances.

Implications of oil pollution

Although few birds were apparently involved in the present incident, it is possible that additional oiled penguins came ashore on the Willis Islands and that not all birds oiled actually came ashore. In any case, any oiling incident, especially close to major seabird concentrations, should be a cause of real concern. Indeed, it is probably already overdue to consider the potential risks to the marine wildlife at South Georgia from oil pollution arising from fishing and transshipment operations in South Georgia coastal waters. Appropriate precautionary management measures might include closing, to fishing and related operations, areas in the vicinity of the main breeding and wintering aggregations of seabirds and seals.

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