

FIRST ANTARCTIC RECORD OF A KILLER WHALE STRANDING

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On the afternoon (6 P.M.) of 16 January 1973, during a "Zodiac" out motor rubber boat collecting trip from Palmer Station (64° 45' S, 64° 58' W), Antarctica, to Cormorant Island, looking for the blue-eyed shag (*Phalacrocorax atriceps*) we needed for neurophysiological research (Tomo, Panizza and Castello, 1973) arriving to the shore of Cormorant Island through a short channel carved in the rocks, we were surprised to find, during low-tide, a stranded killer whale (*Orcinus orca*), 5.2 meters long and approximately 1.5 metric ton in weight (Fig. 1). We took color photographs immediately and also some notes. The stranded "orca" was of female sex; time since death was estimated on two weeks or more. Black and white colors of the tegument had been partially removed by floating ice debris abrasion, some of the 25 powerful teeth were broken, possibly by crashing floating ice against the open mouth (Fig. 2). It was possible to observe, also, "tooth wear" as it has been previously described (Caldwell and Brown, 1964) and some blood clots on a rock just under the tongue. Even though 0°C water temperatures are common during austral summer, air temperatures, specially during sunny days, may reach 10°C or more, thus the sun had heated the body and visceral putrefaction had greatly progressed when we met the carcass.

Some gas bubbles sporadically escaped from a 3 cm wide circular hole on the tegument of the middle back. No other wound was seen in the carcass. The body was full of gas and increased in width, so it probably floated.

Floating and drifting dead whales like the *Balaenoptera aff. borealis* (Fig. 3) are not common in the Antarctic. Scientific reports on stranded cetacea or bones collected in those latitudes are few, only one skull of the "cruciger dolphin" (*Lagenorhynchus cruciger*) has been found and recently described from Livingston Island (Islas Shetland del Sur) (Fraser and Noble, 1968) and one *Phocoena dioptrica* collected at South Georgia (Fraser, 1968).

When five days later we returned to Cormorant Island for obtaining measurements and to examine its stomach content we could not find the "orca" carcass along the coast of the tiny island. We realized then what had happened: in the same way as it probably reached the shore it went away, floating and drifting like



Fig. 1. Female *Orcinus orca*, stranded at Cormorant Island ($64^{\circ}47'S$, $64^{\circ}59'W$) on a rocky shore (16 January, 1973).



Fig. 2. Some teeth were broken, others showed certain wear related to feeding behaviour.

a buoy, carried away by local water currents, wind action and tidal displacements. *Orcinus orca* is world wide distributed, its range extending from the Greenland Sea in the North to the Ross Sea in the South (Fraser, 1964) chiefly in coastal waters and cooler regions (Rice and Scheffer, 1968). On the base of our observations one can found "killer whales" simultaneously during February at Valdés Peninsula ($42^{\circ} 05' S$, $63^{\circ} 30' W$) feeding on adults and pups of fur seal, "lobo de un pelo", (*Otaria flavescens*) from the nearby shore rockerries and in the Gerlache Strait (Bellingshausen Sea) in Antarctica, chasing "Adelie penguins" (*Pigoscelis adeliae*), that try to escape with fast swimming and "porpoising" swimming movements.

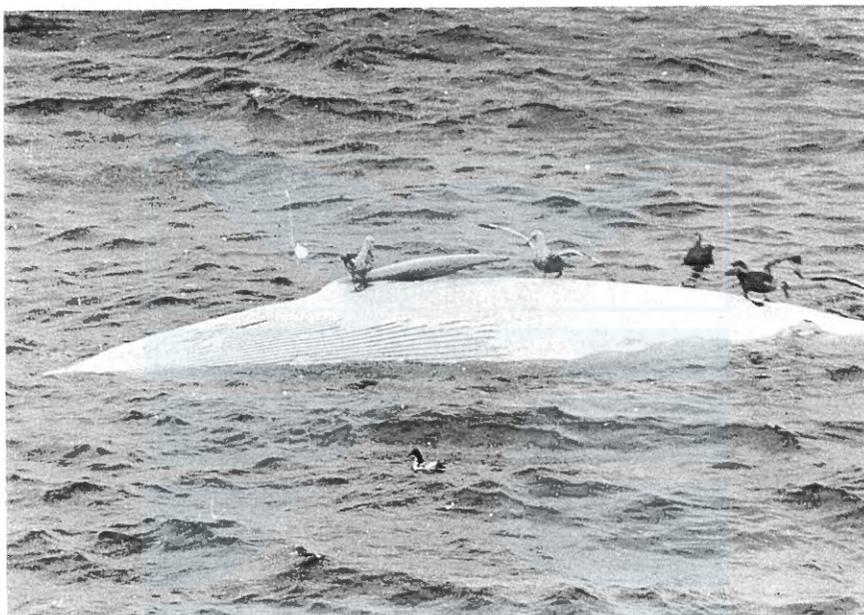


Fig. 3. Floating and drifting naturally dead, *Balaenoptera aff. borealis*, photographed at Mar de la Flota, near Base Esperanza, February 1970, by A. Tomo, from the Icebreaker A.R.A. "Gral. San Martín".

Although killer whale is the best known and the most popular cetacean in the Antarctic Ocean and rather common along the Antarctic Peninsula, there is no published report on its behaviour and biology, except an excellent paper on the habits of 60 killer whales, 120 minke whales (*Balaenoptera acutorostrata*) and 1 *Berardius arnouxii* being restricted to pools in the sea ice of (Hope Bay) Bahia Esperanza ($63^{\circ} S$, $57^{\circ} W$) (Taylor, 1957), and an old report with some description on habits, young and adult color patterns, shape and variation in length of the male dorsal fin, and remarks on their possible diet. During the period from middle September to middle of March, were observed in the area of Mc Murdo Sound (Ross Sea) (Wilson, 1907).

There is still much to be known about the killer whale, detailed information

about its distribution is not available or whether it migrates or if stocks in the north are separate from those in the south.

The second of us spent 1967 at Estación Científica "Almirante Brown" (64° 50' S, 62° 50' W) and carried among other works, a record of cetacean sightings. Three different species were observed in 19 occasions with a total of 34 specimens observed in front of the main building of the Station in the period March-July. Only once, the 6 of April (08.50 A.M.), 5 killer whales were observed at Bahía Paraiso. As something unusual a whale (*Balaenoptera* spp.) was observed the 23 of July swimming between broken ice, while the last two were recorded the 15 of May.

It is almost sure that during the austral winter, before thick ice covers coastal areas of the Antarctic Peninsula, killer whales move to open waters, probably swimming to subantarctic areas. This hypothesis has to be proved and we must remark what has been previously stated: "research in the Antarctic so far has contributed but little to what is known of this creature" (Fraser, 1964).

Herskovitz (1966) gives 80 bibliographic mentions on *Orcinus orca* only 5 are referred to sightings in antarctic waters at different places (Hope Bay; between Powell and South Shetland Islands; 70° 23' S, 85° 57' W; 78° S, 170° E; 77° 46' S, 166° E).

In the period December 1972-February 1973, killer whales were observed in eight occasions in the Gerlache Strait (Castello and Duguay, in press) and in our opinion this strait must be selected as an area for studying the behaviour and biology of this important and largely neglected species.

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