

B O C A G I A N A

Museu Municipal do Funchal

Madeira

10.X.1977

No. 43

NEW CETACEAN RECORDS FROM MADEIRA

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ABSTRACT

Physeter catodon, *Tursiops truncatus*, and *Delphinus delphis* occur commonly round Madeira. The species of pilot whale occurring locally was confirmed from two specimens to be *Globicephala macrorhyncha*. Single records are described of *Eubalaena glacialis*, *Mesoplodon bidens* and *Kogia breviceps*.

INTRODUCTION

The Archipelago of Madeira (Lat. 30° N, Long. 17° W) is of volcanic origin and lies in the eastern North Atlantic. Madeira proper has a surface of 728 km², its greatest length being 58 km and its greatest width 23 km.

There is no great contrast between the summer and winter temperatures of the waters that surround the islands, the annual mean surface temperature in the large bay of Funchal, the capital, being 19.5° C with a median amplitude of annual variation of 5.0° C. The shelf round Madeira is narrow and immediately beyond it there is a steep drop to depths of 3,000 to 4,000 m. The area occupied by the submarine landmass is consequently small. Upwelling favourable to the development of large masses of plankton seems non-existent and the fish fauna of the more coastal waters, not over-abundant by nature, has been further

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depleted by overfishing during the last half century. There is, on the other hand, a rich deep sea fauna living on and above the continental slope, and pelagic fish such as tunny (mainly *Thynnus obesus*) abound.

The senior author has been curator of the Funchal museum since 1931. All Cetacean records during this period have been curated and were described only as shown below, some identifications being in error. The junior author made a short visit in July-August 1976 and was struck by some of the range extensions shown by specimens which had been collected. Photographs and measurements of these critical specimens were taken for expert checking.

PREVIOUS LITERATURE

Sarmiento (1936) mentioned and superficially described 4 cetaceans, 3 of which in Museu Municipal do Funchal, as follows:

- 1) *Mesoplodon densirostris*. Specimen stranded on sandy beach of Porto Santo. Skull preserved and presented to the British Museum (Natural History) (see Harmer, 1924).
- 2) «*Globicephalus melas* (*G. macrorhyncha*). Cast of male specimen and skull (MMF 1018), page, 92, fig. on p. 89. Complete skeleton from dead specimen (MMF 1010)
- 3) *Tursiops tursio*. Cast of female specimen (MMF 1014), page 94, fig. on p. 93.
- 4) *Delphinus delphis*. Model of male specimen (MMF 1015), page 94, fig. on p. 95.

Sarmiento (1948) mentioned the following:

«*Physeter catodon*» (*P. macrocephalus*), «*Mesoplodon densirostris*», «*Orca gladiator*», «*Globicephalus melas*» (*G. macrorhynchus*), «*Grampus griseus*», «*Delphinus delphis*», «*Tursiops tursio*» (*T. truncatus*). Of these the only one mentioned with documentation is *Mesoplodon densirostris*.

Nobre (1938) like Sarmiento described the pilot whale occurring at Madeira as *Globicephala melaena*, but from Nobre's illustrations Fraser (1950) showed the species to be the subtropical *G. macrorhyncha*, characterized by all-dark colouring and a short flipper.

Clarke (1954) described the history of sperm whaling at Madeira from its inception in 1941 up to 1949. This industry continues at the present time from a shore station at Caniçal near the eastern extremity of Madeira.

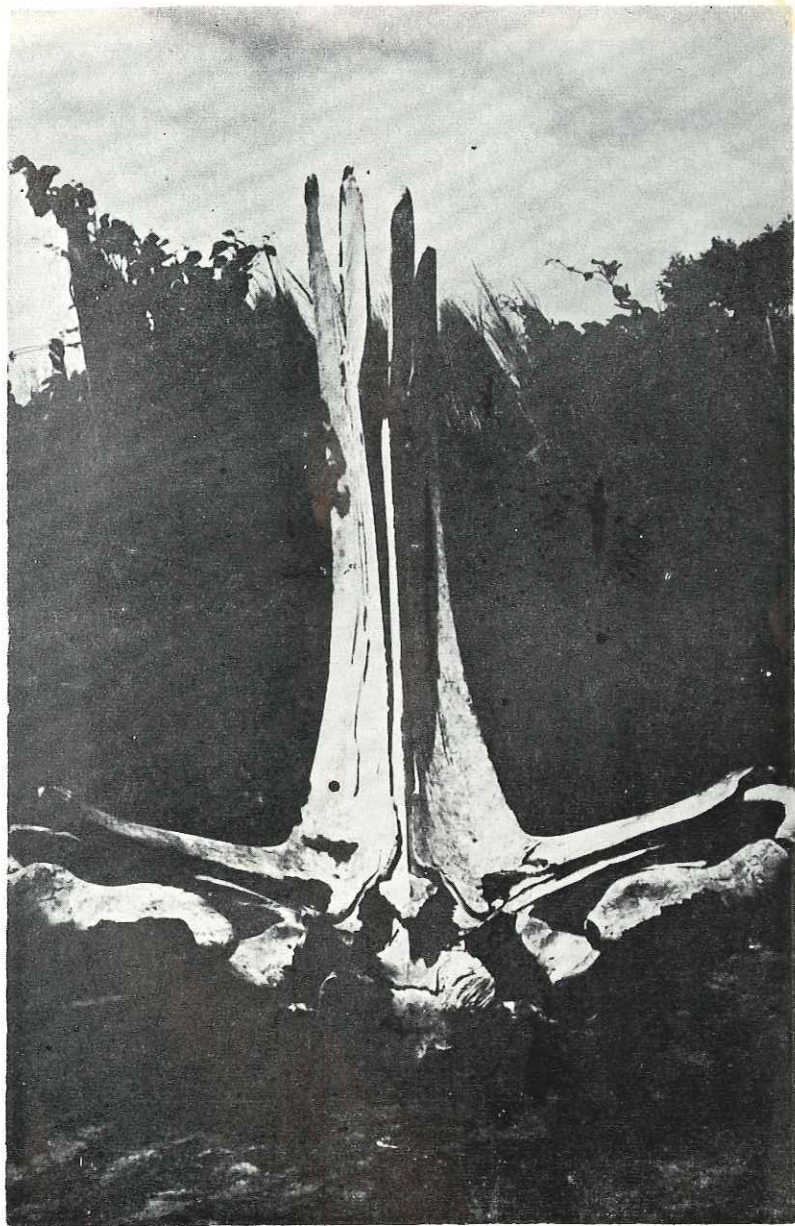


Fig. 1. — Skull of *Balaena glacialis* ventral view. Caniçal, Madeira, July 26, 1976.
Photo D. E. Sergeant.

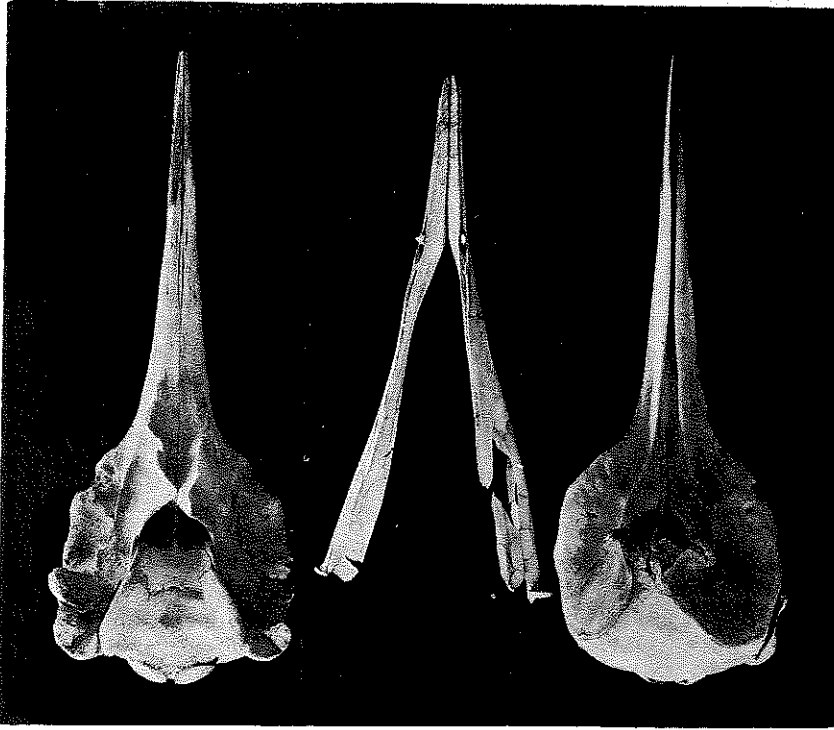


Fig. 2. — Skull of *Mesoplodon bidens* (MMF 2674) ventral (left) and dorsal views.

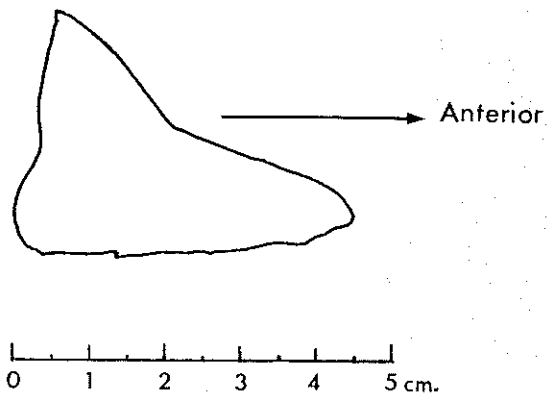


Fig. 3. — Tooth of *M. bidens* (MMF 2674) lateral view.

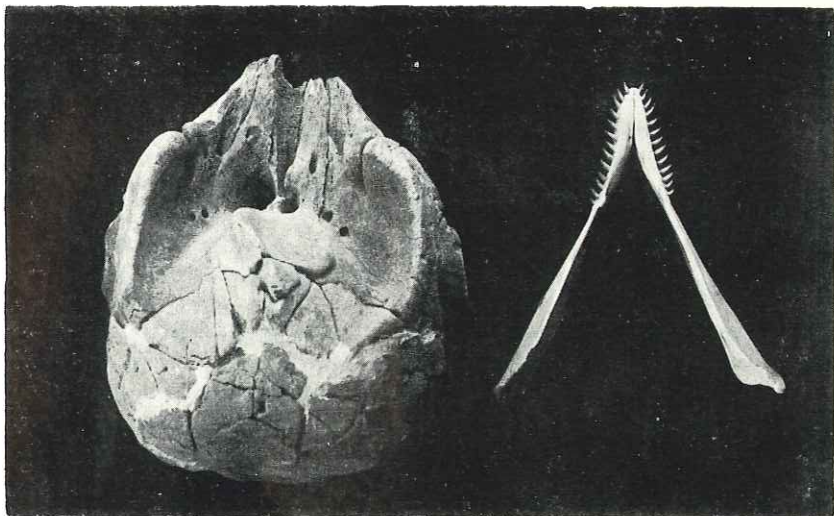


Fig. 4.—Skull and lower jaw of *Kogia breviceps* (MMF 2669)

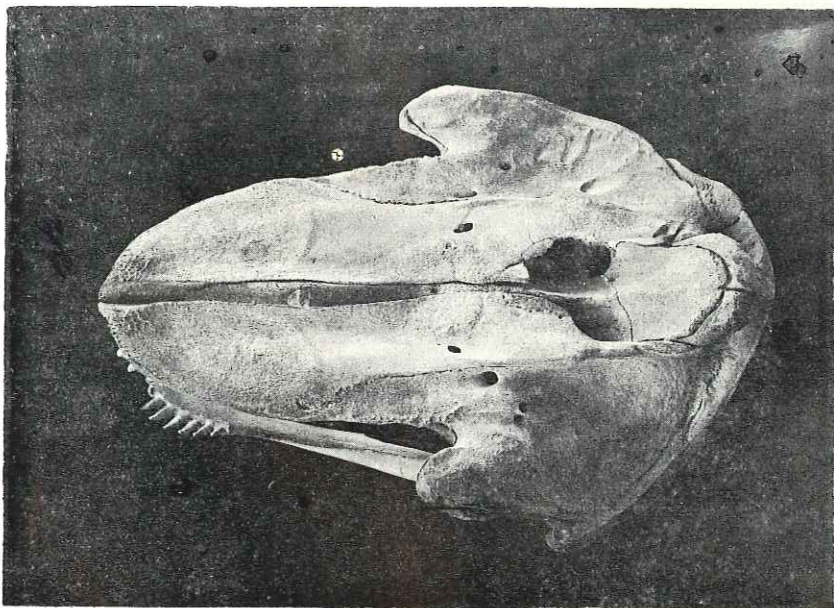


Fig. 5.—Skull of *Globicephala macrorhyncha* (MMF 1018) dorsal view. Note expanded premaxillae and large teeth.

NEW RECORDS

Order Mysticeti

Family Balaenidae

Balaena glacialis — Right Whale

A skull (Fig. 1) was seen by Sergeant (and many previous observers) at the sperm whaling station at Caniçal at the east end of Madeira. It was reported to Maul that the animal had been taken on 27 February, 1967 just off Ponta Delgada on the north coast. A female and calf were reported taken and the accompanying male escaped. The skull is clearly that of the adult. The museum contains skin samples from the tip of the lower jaw and from the side of the body of this animal, stated to measure 14.40 metres nose-tail length. Slijper et al. (1964) give a number of sightings of right whales in the period 1954-1963 from the Cape Verdes northward to the Bay of Biscay but these cannot be verified. The species is very rare in the eastern North Atlantic, having been nearly extirpated from European coasts, but occurs more commonly in the western north Atlantic from Florida to Nova Scotia. Dr. W. R. P. Bourne (in litt. to D. E. Sergeant, Dec 1976) described convincingly a sight record of a right whale which breached at Cape Clear I., St. George's Channel, Ireland on ca. 18th June 1964. It showed short fins and an all-black colour.

Order Odontoceti

Family Ziphiidae

Mesoplodon bidens — North Sea Beaked Whale.

The skull of an animal taken at Machico, 14 August 1941 (MMF 2674), was indentified as belonging to this species (Figure 2). The fused skull sutures, and small size of the tooth (Figure 3), suggest that it was an adult female. The specimen had previously been labelled erroneously as *Hyperoodon rostratus*.

Measurements are shown in Table 1. From the data of Moore (1966) the species has been identified on the coasts of the eastern north Atlantic previously south to Biscay. Its centre of distribution is the North Sea.

The related species *M. densirostris* has been recorded from the island of Porto Santo in the Madeiran archipelago by Harmer (1924).

Family **Physeteridae****Kogia breviceps** — Pigmy Sperm Whale

The skull (MMF 2669) is preserved of a specimen taken off the south eastern coast of Madeira in August 1941 (Figure 4). Measurements are shown in Table 1. There are 2 closely related species. The specimen was identified from the tooth number (0/13) and from measurements, as described by Handley (1966). Duguy (1966) lists 8 specimens from mainland Europe, including 2 from Portugal, and 4 specimens from Senegal. The species inhabits warm seas.

Globicephala macrorhyncha — Pilot Whale.

The museum has two specimens: —

- 1) (MMF 1010) Exhibit of skeleton from specimen found dead by Dr. A. Durão, off south coast of Madeira, at an unknown date.
- 2) Exhibit of cast and skull. MMF 1018, taken off south coast of Madeira. Harpooned by Dr. A. Durão, 28.6.36. This specimen was used by Nobre (1938) for his description of «*Globicephalus melas*». The skull is shown in Figure 5.

Both these are large animals, showing the massive, rather few teeth ($L^6/7$, $R^6/7$; $L^7/8$, $R^7/8$), characteristic of this species, as well as premaxillae covered laterally by the maxillae (Fig. 5). They therefore confirm Fraser's (1950) identification based on external characters in photographs by Nobre (1936). The species occurs at Senegal.

Delphinus delphis — Common or Saddlebacked Dolphin.

A cast is exhibited of specimen MMF 1015, a male harpooned off Madeira by R. Krohn in about 1932. The specimen measured 161 cm.

Tursiops truncatus — Bottlenosed Dolphin.

A cast is exhibited of specimen MMF 1014, a female harpooned off Madeira by Dr. A. Durão in about 1933-34. The specimen measured 248 cm.

ACKNOWLEDGEMENTS

We are grateful to Dr. P. J. H. van Bree for confirming identification from photographs of the skulls of *Balaena glacialis* and *Mesoplodon bidens*.

Table 1. — Measurements of skulls (cm).

	<i>Mesoplodon bidens</i>	<i>Kogia breviceps</i>
MMF No.	2886	2669
Locality	Machico	off SE Madeira
Date	14 Aug '41	Aug 1941
Skull, length	75	19.5-20 *
Maximum width	26	16
Tip of jaw to tip of tooth	23	—
Sutures	well fused	well fused

* estimated 5 mm missing at tip.

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