

Record of a dwarf minke whale (*Balaenoptera acutorostrata*) in northern Brazil

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This work reports a stranding of a dwarf minke whale (*Balaenoptera acutorostrata*) on 2004 in Caju Bay at Delta of Parnaíba River in Maranhão State (MA), Brazil. The specimen and the maturity characteristics were identified through skull measurements and morphology. Osteological analyses were carried out and abnormal growth of occipital bones was observed. It is premature at this point to suggest that the dwarf minke whale occurs regularly off the north coast of Brazil; however more information needs to be collected to assess whether the occurrence of the dwarf minke whale is common in this area.

Two species of minke whales, according to Rice (1998), are recognized in the Southern Hemisphere: the Antarctic minke whale (*Balaenoptera bonaerensis*) (Burmeister, 1867) and the dwarf minke whale (*Balaenoptera acutorostrata*). The dwarf minke whale was first described by Best (1985) based on a few individuals captured near Durban, South Africa. Subsequent studies have documented the species along the coasts of all continents in the Southern Hemisphere (e.g. Best, 1985; Arnold et al., 1987; Zerbini et al., 1996) and also in Antarctic waters (Kasamatsu et al., 1993). In tropical latitudes, the dwarf minke whale seems to prefer a coastal habitat and occurs in general in waters over the continental shelf (Best, 1985; Arnold, 1997; Zerbini et al., 1997).

The dwarf minke whale is commonly found along the eastern coast of South America, from northeastern Brazil (~5°S) to channels in Tierra del Fuego in Southern Argentina and Chile (~56°S) (Baldás & Castello, 1986; Zerbini et al., 1996, 1997). Stranding records suggest a seasonal occurrence of the dwarf minke whale off the coast of Brazil, with peaks in the austral winter and spring (July to September). The occurrence of the species in northern Brazil, has not yet been reported. Williamson (1975) reported that minke whales taken off Brazil, which included some dwarf individuals (da Rocha & Braga, 1982), rarely ventured in waters from northern coast of South America.

On 29 July 2004, a stranded baleen whale was found in advanced state of decomposition in the Caju Bay (02°44'S 042°02'W) at Delta of Parnaíba River in Maranhão State (MA), Brazil. This individual (CEMA 006) measured approximately 7.3 m in length. The skull (Figure 1) was collected by the researches of Projeto Cetáceos do Maranhão (PROCEMA). This whale was identified as a dwarf minke whale according to skull measurements (Table 1) and morphology. Body length, skull measurements and degree of fusion of the cranial sutures suggested this individual was physically mature (e.g. Zerbini & Simões-Lopes, 2000). The interparietal had a rhomboidal shape and was exposed in the centre of the vertex. The anterior margin of the interparietal was bordered by the frontal. The supraoccipital was curved posteriorly in the mid-line and its anterior margin was fused with the interparietal. These characters were determined to be diagnostic of dwarf minke whales



Figure 1. The skull of the CEMA 006 individual stranded at Caju Bay in July 2004.

(Zerbini & Simões-Lopes, 2000). Osteological analyses were carried out and abnormal growth of occipital bones was observed. Further analyses will be made to investigate the pathology.

The stranding site of this individual was located 500 km to the north and to the west of the previously known location of records of the species (near Costinha, PB, ~7°S 35°W, da Rocha & Braga, 1982). It is premature at this point to suggest that the dwarf minke whale occurs regularly off the coast of Maranhão. Because of the advanced state of decomposition of the carcass, it is possible that this individual had died somewhere within the species' known range and was carried by currents and winds towards the stranding site. It could also represent a stray animal. More information needs to be collected to assess whether the occurrence of the dwarf minke whale is regular in this area.

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Table 1. Skull measurements of individual CEMA 006 in comparison to the two Southern Hemisphere minke whales (measurements from Class III individuals from Zerbini & Simões-Lopes, 2000).

Measurements (mm)	Antarctic minke whales	Class III dwarf minke whale	Individual CEMA 006
Length of nasals (median)	6.29–8.69	8.29–11.59	10.75
Breadth of nasals (anterior)	4.58–5.99	5.90–6.58	6.32
Breadth of rostrum at base	29.79–33.93	33.87–39.86	34.81
Breadth of frontals across nasals	7.98–11.68	12.52–15.72	12.65
Breadth between maxillaries at nares	10.20–13.62	13.67–16.66	14.55
Breadth of skull (saquamosal)	50.83–56.28	55.18–59.10	58.22
Breadth of skull (frontal)	46.51–51.87	52.00–54.67	53.79
Breadth of skull (maxillaries)	45.09–51.84	48.29–53.79	47.46
Length of orbit (R)	8.62–9.78	10.18–12.37	10.20
Length of orbit (L)	8.61–9.53	10.01–12.35	10.00
Breadth of exoccipital bone	35.93–43.95	38.57–46.71	44.30
Breadth across occipital condyles	8.62–10.22	10.43–11.81	10.75
Height of occipital condyle (R)	5.30–6.19	5.73–7.04	6.32
Height of occipital condyle (L)	5.21–6.17	5.34–6.95	6.96
Breadth of foramen magnum	2.99–3.71	4.30–5.36	5.06
Height of foramen magnum	3.80–5.40	3.38–5.62	5.56

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