FIRST RECORD OF A HUMPBAC WHALE (*MEGAPTERA NOVAEANGLIAE*) MOTHER AND CALF INSIDE BAHIA MAGDALENA, BAJA CALIFORNIA SUR, MEXICO

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The humpback whale (*Megaptera novaeangliae*) is a cosmopolitan species with strong migratory habits (Evans, 1987; Clapham, 2002). It is found in Mexico in winter when it breeds and calves. In the Mexican Pacific they congregate in three subregions (Figure 1) to conduct breeding activities: (1) the southern coast of the Baja California peninsula, (2) the mainland coast of Mexico from Mazatlan to Tehuantepec, including Isla Isabel and islas Tres Marias; and (3) the Revillagigedo Archipelago. They can also be found in the upper Gulf of California, although this zone does not constitute an important aggregation area (Urbán and Aguayo, 1987; Alvarez *et al.*, 1990).

The occurrence of humpback whale breeding and calving areas in the Mexican Pacific was initially described in the 19th century (Scammon, 1874). Humpback whales feeding along the coast of California, Oregon and Washington migrate seasonally to the wintering areas in Mexico and Central America (Steiger *et al.*, 1991; Calambokidis *et al.*, 2000; Urbán *et al.*, 2000; Calambokidis and Barlow, 2004).

The Bahía Magdalena lagoon complex is located between 24°20'N - 25°20'N and 111°30'W - 112°10' W. The complex includes the largest and deepest lagoon in Baja California. The area is a primary breeding and calving area for gray whales (*Eschrichtius robustus*) (Rice *et al.*, 1981; Villa-Ramirez *et al.*, 1982) and several systematic studies have been conducted on this species at this location (Fleischer and Contreras, 1986; Gardner and Chávez-Rosales, 2000; Ollervides, 2001) and continuing to the present (Pérez-Cortés *et al.*, 2004). Therefore, the coverage of these waters by marine mammal studies has been good. Though the area outside the bay is considered the northern limit of the winter range for humpback whales in Mexico (Urbán and Aguayo, 1987; Urbán *et al.*, 1999) they have not been reported within the Bay complex.

While conducting studies on gray whales from small vessels in the

central part of the bay we observed a humpback whale cow-calf pair on several occasions in January 2004. This is the first record of a humpback whale cow-calf pair inside Magdalena Bay, Baja California Sur. On 17 January we observed the cow-calf pair for about 15 minutes, starting at 10:00 h, from distances as close as 50m. This sighting was recorded at 24°34.05'N and 112°02.32'W. During this time the female breached, showing its flippers. A second sighting occurred on 22 January at 24°35.53'N and 112°03.03'W and lasted about 20 minutes beginning at 13:55h; this time we observed the whales from a distance of about 20m.

Identification of the species was based on the presence of a small dorsal fin on the dorsal hump, extremely large flippers that were observed during the first sighting when the whale breached; and the low and bushy shape of the blow. The pair showed an evasive behavior swimming away from the vessel. We photographed the dorsal fin of both the cow and the calf; the event was also recorded on video. This sighting was recorded in an area with a depth of 15m and water temperature of 13°C.

Figure 1. Humpback whales in Magdalena Bay, Baja California Sur. Cow-calf pair sightings reported here (●). Nearest and only known record of (nine) humpback whales in this area (⊙). Sightings of gray whales at the same dates as humpback whale cow-calf sightings (○). Recent strandings of humpback whales (1994 and 2003)(■). Main breeding aggregations of humpback whales in the Mexican Pacific are shown in the inset: 1) Southern coast of Baja California; 2) Mainland coast of Mexico; and 3) the Revillagigedo Archipelago.

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Fishermen and whale watching operators told us about additional sightings in roughly this same period. Because only one pair was sighted each time, we believe that the cow-calf pair was the same during the different sightings.

The humpback cow-calf pair sighting locations are shown in Figure 1. The figure shows sightings of gray whales recorded the same days; as well as a sighting of nine humpback whales recorded during a NOAA cruise in 1992 west of Magdalena Bay (24°53.99'N 112°36.61'W) (Mangels and Gerrodette, 1994). The locations of two humpback whale strandings outside the bay at Magdalena Island are also shown. Of these one was recorded in spring 1994 and the other in fall 2003. In both cases the whales involved were young males.

One of us (Ollervides) has recorded the sounds of singing humpback whales near the entrance of the bay in the winters of 1998 and 1999. No visual confirmation was obtained at that time and the acoustic signals may have been produced at considerable distance.

Baleen whales occupy a wide variety of habitats. Behavioral flexibility in some species suggests they utilize a range of ecological situations (IWC, 1986). Some mysticetes, such as humpback and gray whales, tend to adhere to fairly well-defined migratory patterns. However, some individuals may occur in areas outside common aggregation zones (Martin and Reeves, 2002). Sightings of humpback whales have been documented in areas where they are not regularly found. Steiger *et al.* (1991) observed humpback whales at zones in Costa Rica where they were not present before.

Although we present only two sightings, these might suggest that a number of humpback whales are moving around the Bahía Magdalena region. Studies of the gray whale are conducted systematically in the area and previous to this event other baleen whales have not been recorded inside the bay, at least during the winter months.

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