

Review of Perrin's beaked whale *Mesoplodon perrini* and suggestions for future research.

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ABSTRACT

Very little is known about this recently described whale. It may be rare within its eastern North Pacific range, and it may be threatened by anthropogenic noise. There is no information on abundance or trends.

KEYWORDS: GENETICS, TAXONOMY, NOISE, PACIFIC OCEAN, NORTH AMERICA, STRANDINGS

INTRODUCTION

Mesopolodon perrini was described in 2002 by M. L. Dalebout, J. G. Mead, C. S. Baker, A. N. Baker and A. L. van Helden based on five stranded specimens from south and central California (Dalebout *et al.* 2002). The holotype stranded on 9 September 1978 at Carlsbad, California (33°07'N, 117°20'W); it and three other specimens were first identified as *M. hectori* (Mead 1981). Virtually nothing is known of its life history, ecology or population biology.

TAXONOMY AND NOMENCLATURE

Status as a separate species was determined through phylogenetic analysis of mitochondrial DNA control-region and cytochrome *b* sequences. Four of the original specimens were initially identified as Hector's beaked whales *M. hectori* and the fifth as *Ziphius cavirostris*. Sister taxon in a weakly supported clade in ML phylogenetic analyses is the lesser or pygmy beaked whale *M. peruvianus* (Dalebout *et al.* 2002, 2004).

DISTRIBUTION, POPULATION STRUCTURE AND MOVEMENTS

The species is known only from strandings along the coast of California (Pitman 2009). Nothing is known of population structure or movements. This species appears to have the most restricted range of any species of *Mesopolodon*.

LIFE HISTORY PARAMETERS

Based on the five known specimens, females can reach at least 4.4m and males at least 3.9m (Jefferson *et al.* 2008). Calves may be weaned by 2.5m. Nothing further is known about life history.

ABUNDANCE AND TRENDS

Abundance. There are no estimates of abundance. The species is apparently rare, as there have been no confirmed sightings in several cetacean abundance surveys in California waters. However, only males seen up close would be identifiable (from the large tooth near the tip of the beak), and 34 sightings of unidentified mesoplodont whales were made in shipboard surveys off California, Oregon and Washington, 1991—2008 (Carretta *et al.* 2011). [None has been identified from gill net mortalities although *M. carlhubbsi* and *M. stejnegeri* have been identified]

Trends. No information.

DIRECT REMOVALS

Directed takes. There are no known directed takes.

Incidental takes. There are no known incidental takes. Cause of death of the five stranded specimens was undetermined.

OTHER ACTUAL AND POTENTIAL THREATS

As with all of the beaked whales, this whale may be subject to mortality inflicted by anthropogenic noise produced by military sonar and geological surveys (Cox *et al.* 2006).

STATUS

No information is available.

RECOMMENDATIONS

Further efforts should be made to determine distribution and abundance in the eastern North Pacific, through collection of biopsy samples and correlated acoustic sampling.

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