

BAIRD'S BEAKED WHALE (*Berardius bairdii*): Alaska Stock

STOCK DEFINITION AND GEOGRAPHIC RANGE

Baird's beaked, or giant bottlenose, whale inhabits the North Pacific Ocean and adjacent seas (Bering Sea, Okhotsk Sea, Sea of Japan, and the Sea of Cortez in the southern Gulf of California, Mexico), with the best-known populations occurring in the coastal waters around Japan (Balcomb 1989). Within the North Pacific Ocean, Baird's beaked whales have been sighted in virtually all areas north of 35°N, particularly in regions with submarine escarpments and seamounts (Ohsumi 1983, Kasuya and Ohsumi 1984). The range of the species extends north to at least the Pribilof Islands where individuals have been found stranded (Rice 1986, Fig. 27). An apparent break in distribution occurs in the eastern Gulf of Alaska, but from the mid-Gulf to the Aleutian Islands and in the southern Bering Sea there are numerous sighting records (Kasuya and Ohsumi 1984). Tomilin (1957) reported that in the Sea of Okhotsk and the Bering Sea, Baird's beaked whales arrive in April-May and are particularly numerous during the summer. They are the most commonly seen beaked whales within their range, perhaps because they are relatively large and gregarious, traveling in schools of a few to several dozen, which makes them more noticeable to observers than other beaked whale species. Baird's beaked whales are migratory, arriving in continental slope waters during summer and fall months when surface water temperatures are the highest (Dohl et al. 1983, Kasuya 1986).

There are insufficient data to apply the phylogeographic approach to stock structure (Dizon et al. 1992) for Baird's beaked whale. Therefore, Baird's beaked whale stocks are defined as the two non-contiguous areas within Pacific U. S. waters where they are found: 1) Alaska and 2) California/Oregon/Washington. These two stocks were defined in this manner because of: 1) the large distance between the two areas in conjunction with the lack of any information about whether animals move between the two areas, 2) the somewhat different oceanographic habitats found in the two areas, and 3) the different fisheries that operate within portions of those two areas, with bycatch of Baird's beaked whales only reported from the California/Oregon thresher shark and swordfish drift gillnet fishery. The California/Oregon/Washington Baird's beaked whale stock is reported separately in the Stock Assessment Reports for the Pacific Region.

POPULATION SIZE

Reliable estimates of abundance for this stock are currently unavailable.

Minimum Population Estimate

At this time, it is not possible to produce a reliable minimum population estimate (N_{MIN}) for this stock, as current estimates of abundance are unavailable.

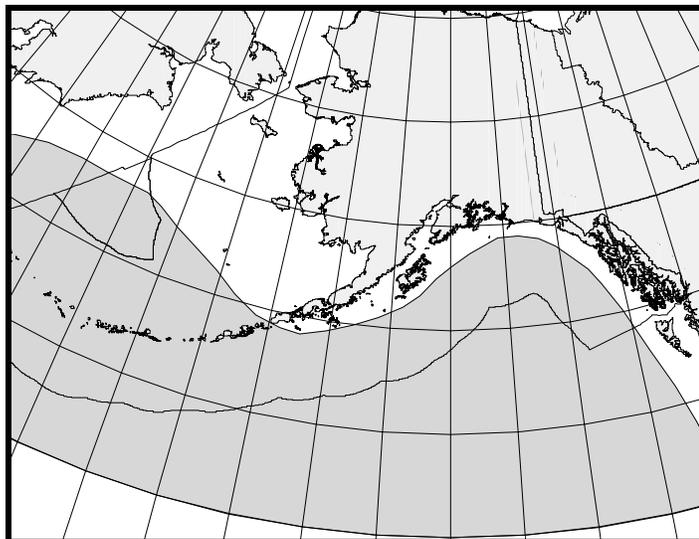


Figure 28. Approximate distribution of Baird's beaked whales in the eastern North Pacific (shaded area).

Current Population Trend

At present, reliable data on trends in population abundance are unavailable.

CURRENT AND MAXIMUM NET PRODUCTIVITY RATES

A reliable estimate of the maximum net productivity rate is currently unavailable for the Alaska stock of Baird's beaked whale. Hence, until additional data become available, it is recommended that the cetacean maximum theoretical net productivity rate (R_{MAX}) of 4% be employed (Wade and Angliss 1997).

POTENTIAL BIOLOGICAL REMOVAL

Under the 1994 re-authorized Marine Mammal Protection Act (MMPA), the potential biological removal (PBR) is defined as the product of the minimum population estimate, one-half the maximum theoretical net productivity rate, and a recovery factor: $PBR = N_{MIN} \times 0.5R_{MAX} \times F_R$. The recovery factor (F_R) for these stocks is 0.5, the value for cetacean stocks with unknown population status (Wade and Angliss 1997). However, in the absence of a reliable estimate of minimum abundance, the PBR for this stock is unknown.

ANNUAL HUMAN-CAUSED MORTALITY AND SERIOUS INJURY

Fisheries Information

Six different commercial fisheries operating within the range of the Alaska stock of Baird's beaked whale were monitored for incidental take by fishery observers during 1990-97: Bering Sea (and Aleutian Islands) groundfish trawl, longline, and pot fisheries and Gulf of Alaska groundfish trawl, longline, and pot fisheries. No Baird's beaked whale mortalities were observed by observers in any observed fishery.

An additional source of information on the number of Baird's beaked whales killed or injured incidental to commercial fishery operations is the self-reported fisheries information required of vessel operators by the MMPA. During the period between 1990 and 1997, there were no fisher self-reports of Baird's beaked whale mortalities from any fisheries operating within the range of this stock. However, because logbook records (fisher self-reports required during 1990-94) are most likely negatively biased (Credle et al. 1994), these are considered to be minimum estimates. Self-reported fisheries data are incomplete for 1994, not available for 1995, and considered unreliable after 1995 (see Appendix 4)

The estimated annual mortality rate incidental to commercial fisheries is zero. Therefore, the annual human-caused mortality level is considered to be insignificant and approaching a zero mortality and serious injury rate.

Subsistence/Native Harvest Information

There is no known subsistence harvest of Baird's beaked whales by Alaska Natives.

Other Mortality

The Japanese have reported taking 54 Baird's beaked whales annually off their coasts during the 6-year period between 1992 and 1997 (IWC 1996, 1997a, 1997b, 1998). Due to the unknown stock structure and migratory patterns in the North Pacific, it is unclear whether these animals belong to the Alaska stock of Baird's beaked whales.

STATUS OF STOCK

Baird's beaked whales are not listed as "depleted" under the MMPA or listed as "threatened" or "endangered" under the Endangered Species Act. Reliable estimates of the minimum population, population trends, PBR, and status of the stock relative to its Optimum Sustainable Population size are currently not available. However, the estimated annual rate of human-caused mortality and serious injury seems minimal for this stock. Thus, the Alaska stock of Baird's beaked whale is not classified as strategic.

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