

## **PYGMY SPERM WHALE (*Kogia breviceps*): Hawaiian Stock**

### **STOCK DEFINITION AND GEOGRAPHIC RANGE**

Pygmy sperm whales are found throughout the world in tropical and warm-temperate waters (Caldwell and Caldwell 1989). Between the years 1949 and 1982, at least nine strandings of this species were reported in the Hawaiian Islands (Tomich 1986; Nitta 1991). Shallenberger (1981) reported three sightings off Oahu and Maui. Two sightings of pygmy or dwarf sperm whales were made between Hawaii and Maui during 1993-98 aerial surveys within about 25 nmi of the main Hawaiian Islands (Figure 1; Mobley et al. 1999). A stranded calf was held for several days at Sea Life Park (Pryor 1975:94). Nothing is known about stock structure for this species. For the Marine Mammal Protection Act (MMPA) stock assessment reports, pygmy sperm whales within the Pacific U.S. Exclusive Economic Zone are divided into two discrete, non-contiguous areas: 1) Hawaiian waters (this report), and 2) waters off California, Oregon and Washington.

### **POPULATION SIZE**

No data are available to estimate population size for this species in the central Pacific. As part of the Marine Mammal Research Program of the Acoustic Thermometry of Ocean Climate (ATOC) study, a total of twelve aerial surveys were conducted within about 25 nmi of the main Hawaiian Islands in 1993, 1995 and 1998. Two sightings of five pygmy or dwarf sperm whales were made; however these sightings were excluded during recent abundance analyses (Mobley et al. 2000), because they were made during poor observation conditions. Therefore, no abundance estimate is available for pygmy sperm whales within Hawaiian waters.

### **Minimum Population Estimate**

No data are available to provide a minimum population estimate.

### **Current Population Trend**

No data are available on current population trend.

### **CURRENT AND MAXIMUM NET PRODUCTIVITY RATES**

No data are available on current or maximum net productivity rate.

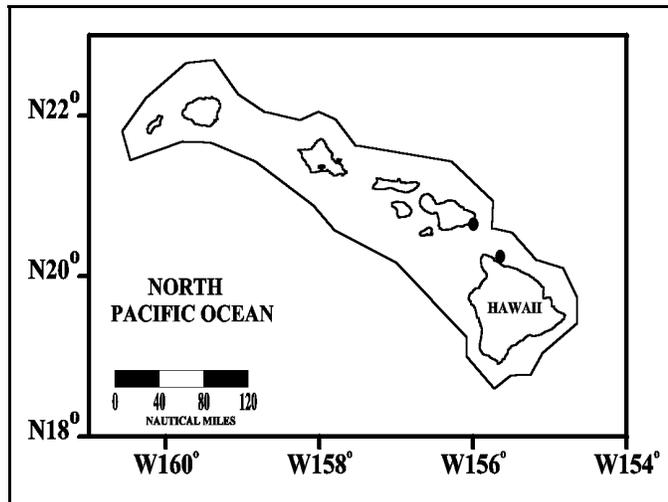
### **POTENTIAL BIOLOGICAL REMOVAL**

No PBR can be calculated for this stock at this time.

### **HUMAN-CAUSED MORTALITY AND SERIOUS INJURY**

#### **Fishery Information**

No estimate of annual human-caused mortality and serious injury is available as there are no reports of direct or incidental takes of pygmy sperm whales in Hawaiian waters (Nitta and Henderson 1993). However, mortality of other cetacean species has been observed in Hawaiian fisheries, and the gear types used in these fisheries are responsible for marine mammal mortality and serious injury in other fisheries throughout U.S. waters. Gillnets are used in Hawaiian waters and appear to capture marine mammals wherever they are used, and float lines from lobster traps and longlines can be expected to occasionally entangle whales (Perrin et al. 1994).



**Figure 1.** Pygmy or dwarf sperm whale sighting locations during 1993-98 aerial surveys within about 25 nmi of the main Hawaiian Islands (see Appendix 2 for details on timing and location of survey effort). Outer line indicates approximate boundary of survey area.

Interactions with cetaceans have been reported for all Hawaiian pelagic fisheries (Nitta and Henderson 1993), but no interactions with pygmy sperm whales have been documented. None were observed hooked in the Hawaiian longline fishery between 1994 and 1998, with approximately 4.4% of all effort (measured as the number of hooks fished) observed (Kleiber 1999).

### STATUS OF STOCK

The status of pygmy sperm whales in Hawaiian waters relative to OSP is unknown, and there are insufficient data to evaluate trends in abundance. They are not listed as “threatened” or “endangered” under the Endangered Species Act (1973), nor as “depleted” under the MMPA. Although information on pygmy sperm whales in Hawaiian waters is limited, this stock would not be considered strategic under the 1994 amendments to the MMPA because there has been no reported fisheries related mortality. The total fishery mortality and serious injury for pygmy sperm whales is zero and therefore can be considered to be insignificant and approaching zero mortality and serious injury rate. The increasing levels of anthropogenic noise in the world’s oceans has been suggested to be a habitat concern for whales, particularly for deep-diving whales like pygmy sperm whales that feed in the oceans’ “sound channel”.

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