

## Movements of sperm whales in the Gulf of Alaska

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In 2006, the U.S. National Marine Fisheries Service longline sablefish (*Anoplopoma fimbria*) survey vessel, *F/V Alaskan Leader*, was used to collect data on sperm whales (*Physeter macrocephalus*) in the Gulf of Alaska (GOA). This survey encompassed three sablefish management areas designated by the North Pacific Fisheries Management Council; East Yakutat/Southeast (EY/SE), West Yakutat (WY) and the Central Gulf of Alaska (CGOA). The goals were to photo-identify whales in a larger spatial distribution than previously documented, to collect biopsy samples, and to record the behavior of sperm whales during associations with demersal longline fishing. Only data regarding movements of individually identified sperm whales will be reported here. We found that sperm whales associated with fishing operations during the haul on 19 of our 38 survey days. These 19 days were at stations along the slope; whales rarely associated with fishing operations in shallower depths on the continental shelf. Sperm whales were found in all areas; with the WY area experiencing the highest percentage of days with whales present (70%) followed by the EY/SE (47%) and CGOA (36%) areas. The number of whales observed per day ranged from one to ten with more whales seen, on average, per day in CGOA (6) and fewest in WY (2) and EY/SEAK (2). We photo-identified 34 different whales; 19 whales were seen once during the survey, 12 whales were seen on two days, two whales were seen on three days and one whale was seen on four days. Eighteen of the 34 photographed whales were concentrated across a distance of 165nm during 10 survey days in the CGOA to WY areas. Two whales were seen on two consecutive days. We believe this is because the survey vessel mostly alternated between fishing along the slope and the continental shelf. Of the 34 whales identified, eight matched to a catalog of 50 sperm whales identified during another study near the Sitka fishing grounds in the EY/SE area. Five whales were sighted 60-180nm south of Sitka towards Dixon Entrance; one whale was sighted 200nm to the north, off Yakutat Bay; and two whales were sighted 436nm to the west, near Kodiak Island. From our preliminary observations it appears that some sperm whales in the GOA do not have fidelity to specific locations. However, there may be a seasonal component to an individual whale's movements that needs to be further investigated. Additionally, it is unclear if sperm whales select a specific vessel to follow for consecutive days.