

Limited information on interaction outcomes for Pacific false killer whales

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Background: False killer whales are the most frequently caught cetacean in the Hawaii-based tuna longline fishery, and the Hawaiian stock is considered strategic under the Marine Mammal Protection Act. Observer data suggest that false killer whales primarily become hooked while depredating tuna and other catch from the gear. Most of the false killer whales that have been observed caught by on-board observers were released alive with hooks in their mouth, esophagus, or ingested, and with varying amounts of gear still attached. In some cases, false killer whales broke free before the on-board observer could ascertain the nature of the hooking/entanglement, because the line parted or was cut by vessel crew. The fate of false killer whales injured by longline fishing gear is unknown, but animals hooked in the mouth/head or having ingested gear are considered seriously injured based on previous serious injury determination guidelines (Angliss and DeMaster 1998). In this presentation, I summarize limited photographic evidence of potential outcomes of interactions between false killer whales and fishing gear. It is difficult to put these observations into a broader context because of their opportunistic and circumstantial nature, but the information nonetheless may be useful to increase our understanding of injury outcomes.

Baird, R. W. and A. M. Gorgone. 2005. False killer whale dorsal fin disfigurements as a possible indicator of long-line fishery interactions in Hawaiian waters. *Pacific Science* 59: 593-601.

In this study, the authors review rates of major dorsal fin disfigurements from photo-identification studies around the main Hawaiian Islands. Three of 80 distinctive individuals (3.75%) were photographically documented to have major dorsal fin disfigurements that appear to be most consistent with fishing line injuries. This rate of severe dorsal fin disfigurement is higher than in any other odontocete population for which published data are available. Two of the three false killer whales with disfigured dorsal fins were seen with calves, suggesting they were adult females and reproductively active despite their injuries.

Photograph from PICEAS cruise.

The 2005 Pacific Islands Cetacean and Ecosystem Assessment Survey (PICEAS), conducted by SWFSC/NOAA, was designed to obtain abundance estimates of false killer whales and other cetaceans in an area between Hawaii, Johnston Atoll, and Palmyra Atoll. This is the region where the majority of takes of false killer whales in the Hawaii-based longline fishery have been documented. The survey included visual search effort and acoustic monitoring using a towed hydrophone array. Fourteen groups of false killer whales were sighted and approached by the vessel (8 were detected visually, 6 were detected acoustically and later confirmed visually). In one of these groups, a severely emaciated individual was photographed. The animal may have had line around the head, but the photograph was too distant to determine unequivocally whether gear was present. It is possible that this observation represented an animal injured by fishing gear and no longer able to feed itself.