

October 3, 2012

Lance Smith, Regulatory Branch Chief
Protected Resources Division
National Marine Fisheries Service
Pacific Islands Regional Office
1601 Kapiolani Blvd., Suite 1110
Honolulu, HI 96814

Dear Lance,

I am writing to comment on the Proposed Endangered Status for the Hawaiian Insular False Killer Whale Distinct Population Segment (DPS), in response to the reopening of the comment period based on new information available.

The new information provided identifies a previously unrecognized population of false killer whales in the Northwestern Hawaiian Islands (NWHI), and includes comparisons of genetics, photo-identification, movements and habitat use of the NWHI population and the Main Hawaiian Island (MHI) insular DPS, as well as additional analyses of social organization and high use areas for the MHI insular DPS based on association patterns, genetic analyses, and density analyses using data from satellite tags. As noted in Chivers et al. (2011, document 5), the genetic analyses of samples collected from the NWHI, in combination with additional samples from the MHI insular DPS and the Hawai‘i pelagic stock, “confirm the conclusions of Chivers et al. (2010) with respect to the genetic distinctness of Hawaiian Insular false killer whales, and thus, support recognition of this population ... as a DPS under the Endangered Species Act (Oleson et al. 2010)” (Chivers et al. 2011, p. 10). The MHI are also a unique ecological setting in comparison to the NWHI. The large size and high elevations of the MHI increase local productivity around the islands in several ways: through the island mass effect, through increased precipitation and runoff of nutrients on the windward sides of the islands, and through the creation of large-scale eddies off the leeward sides, particularly off Hawai‘i Island, that result in increased upwelling and concentration of prey. Combined, these factors lead to enhanced productivity around the MHI, while the surrounding oceanic waters are oligotrophic, resulting in a discontinuity between productive insular and unproductive oceanic waters. The relatively small size and low elevations of the NWHI do not favor any of these factors, and the oceanic waters surrounding the NWHI, particularly north of 23°N, are influenced by the seasonal shifting of the productive waters of the Subtropical Convergence Zone, diminishing any difference in productivity between insular and oceanic waters surrounding the NWHI. Although the sample size of satellite tagged individuals from the NWHI population is small, individuals from that population appear to be using deeper waters further from shore than those in the MHI insular DPS (Baird 2012¹, document 1), consistent with such ecological differences.

¹ Note that Table 2 from Baird (2012), a summary of information from Baird et al. (2010), contains a mistake; the median distance from shore for PcTag5 (aka HIPc272 in Table 4 of Baird et al. 2010) was actually 20.5 km.

The recognition of the NWHI population has relevance to understanding the abundance of the MHI insular DPS, reducing uncertainty in the abundance of the DPS and having implications for the Population Viability Analysis (PVA) undertaken in the NMFS status review (Oleson et al. 2010). The NMFS status review presented two abundance estimates for the MHI insular DPS, both based on mark-recapture analyses of photo-identification data undertaken by my colleagues and I. One estimate (170 individuals, $CV = 0.21$) includes individuals photographed off Kaua‘i that had not been observed to associate with false killer whales known to be from the MHI insular DPS. As noted in the status review, the Kaua‘i individuals “may come from another undocumented population in the Northwestern Hawaiian Islands, or may represent a portion of the insular population that has not been previously documented photographically”. The other estimate (151 individuals, $CV = 0.20$) excluded the Kaua‘i individuals that were of unknown population origin. The higher of the two estimates (170 individuals) was used in PVA in the status review. The recent comparison of photo-identifications obtained during the NMFS 2010 survey with the photographic identifications in question from Kaua‘i, and the MHI insular DPS, has revealed that the individuals previously photographed from Kaua‘i are, in fact, members of the newly recognized NWHI population (Baird et al. 2012, document 2). Thus, of the two recent mark-recapture estimates of the MHI insular DPS, the estimate of 170 individuals is not valid, and the estimate of 151 individuals ($CV = 0.20$) should be considered the best available estimate for this population. The use of the higher estimate in the PVA suggests that the PVA underestimated extinction risk for the MHI insular DPS.

When the Endangered listing for the MHI insular DPS was originally proposed in November 2010, no proposal for listing Critical Habitat was made. If the listing had been finalized as expected in November 2011, NMFS was going to propose Critical Habitat for the population in March 2012, with an expected final Critical Habitat decision in November 2012. One of the documents for public review provides a quantitative assessment of location data from satellite tagged false killer whales from the MHI insular DPS, specifically to inform designation of Critical Habitat (Baird et al. 2012, document 3). This document provides a strong scientific basis for designating Critical Habitat, should the population be listed as Endangered.

Thank you for the opportunity to provide comments.

Best regards,



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