



218 ½ W. 4th Avenue
Olympia, WA 98501 USA
Phone: 360. 943.7325
Fax: 360.943.7026
www.cascadiaresearch.org

February 4, 2014

Nicole R. Le Boeuf, Chief
Marine Mammal and Sea Turtle Conservation Division
Office of Protected Resources
1315 East-West Highway
Silver Spring, MD
20910-3226

Attn: Stock Assessments Reports (SARs)

Dear Nicole,

I am writing to provide comments on the draft 2013 Pacific SARs. In the draft SARs, NMFS appropriately recognizes the existence of multiple stocks of both melon-headed whales and pantropical spotted dolphins in Hawaiian waters. However, for the newly recognized insular stocks of pantropical spotted dolphins off O‘ahu, the 4-islands, and Hawai‘i Island, no abundance estimates are given, and thus no PRB levels are calculated and presented. In the previous SAR for pantropical spotted dolphins: Hawaiian stock, NMFS had used density estimates for this species in various Pacific regions to “provide a range of likely abundance estimates” for Palmyra, and had presented PBR estimates based on the range of likely abundance estimates. NMFS took a similar approach in the 2010 SAR for false killer whales in American Samoa. For the three newly recognized insular stocks of pantropical spotted dolphins in Hawaiian waters, NMFS should provide a range of likely abundance estimates and associated PBR values, using density values for this species. There are a variety of density values that could be used, including those from Barlow (2006), Bradford et al. (2013), and Mobley et al. (2000), applied to the stock ranges as outlined in the draft SAR. Such provision of a range likely abundance estimates and associated PBR values is particularly important given the known fishery interactions that occur with this species off the island of Hawai‘i.

I have also provided a number of additional comments on the attached sheets. Thanks for the opportunity to provide comments on the draft SARs.

Best regards,

A handwritten signature in black ink, appearing to read 'RW Baird', with a stylized flourish at the end.

Robin W. Baird, Ph.D.
Research Biologist
rwbaird@cascadiaresearch.org

Baird comments on draft Pacific 2013 SARs

Melon-headed whale

- **Fishery Information.** There is a statement that “no interactions between nearshore fisheries and melon-headed whales have been reported in Hawaiian waters”, however it should be noted that there is no observer coverage in any nearshore fisheries, thus there is a low likelihood of such interactions being reported. Given this, NMFS should consider alternative sources of information on fisheries interactions, in particular the long-term photo-identification studies that have been undertaken. Aschettino (2010, M.Sc. Thesis) notes a variety of bullet holes and linear scars on melon-headed whales in Hawaiian waters that are indicative of fishery interactions, with such evidence for both the main Hawaiian Islands stock and the Kohala resident stock. Although indirect, such evidence of fisheries interactions should be noted.
- **Other mortality.** The Independent Scientific Review Panel report by Southall et al. (2013) on the Madagascar stranding of melon-headed whales in relation to the use of a multi-beam sonar should be noted in this section. Also, Southall et al. (2006) noted that sonar transmissions were a “plausible, if not likely” contributing factor. Combined with the information presented by Brownell et al. (2009), this information indicates that melon-headed whales are particularly sensitive to impacts from anthropogenic sounds, and this should be explicitly noted in the SAR.
- **Kohala Resident Stock Population Size.** The abundance estimate by Aschettino (2010) includes both individuals that have died since 2002, and those that were born after 2002 but before 2009. Thus the estimate is likely an overestimate of abundance to some unknown degree.
- **Potential Biological Removal.** It is noted there is “no known fishery mortality”, although this is inconsistent with the line injury and bullet wound information presented by Aschettino (2010).

Pantropical spotted dolphin.

- The Table 1 caption notes mortality and serious injuries in “commercial fisheries”, whereas in fact the table only includes information from the longline fishery, as that is the only observed fishery in Hawaiian waters. As such the caption should be changed to specify long-line fishery. This also applies to most other Hawaiian SARs where information is presented on interactions with the long-line fishery. The mean estimated annual take in Table 1 (0.2) appears to be incorrect, this value should be ~0.6 based on an estimated take of 3 individuals (cf. the original version of Table 1).
- **O‘ahu Stock and 4-island Stock population size.** It is noted that “an extensive photo-identification catalog is available for developing mark-recapture estimates. If this statement is based on surveys undertaken by Cascadia Research Collective (CRC) off O‘ahu and in the 4-islands, it should be noted that the number of photos from these areas is relatively limited, and most photos are relatively old (2000-2003 for the 4-island Stock, 2002, 2003 for the O‘ahu Stock), and thus would not be suitable for current abundance estimation given the time period covered.
- **Hawai‘i Island Stock population size.** While large numbers of photos have been obtained from pantropical spotted dolphins off Hawai‘i Island by CRC in recent years, these photos have not been incorporated into a photo-identification catalog. Thus this section

Baird comments on draft Pacific 2013 SARs

should be worded to reflect the availability of photos that could be used to generate a catalog for abundance estimation.

- Status of Stock. It notes that “no habitat issues are known to be of concern for this species”. In Hawaiian waters vessel noise associated with directed fishing effort is a known habitat issue for pantropical spotted dolphins (see Burgess et al. 2011, poster presentation at the 19th Biennial Conference on the Biology of Marine Mammals).

Rough-toothed dolphin

- Fishery information. The ika-shibi fishery is a tuna fishery that catches squid for bait, rather than a squid fishery. This also applies to a number of other Hawaii odontocete SARs (e.g., bottlenose dolphins). In terms of gillnets, my understanding is that any gillnet fishing in Hawaii is undertaken in extremely shallow near-shore areas. Given that rough-toothed dolphins are primarily found in deeper waters in Hawai‘i (Baird et al. 2013), it is extremely unlikely they would interact with gillnets. Note this also applies to the Hawai‘i striped dolphin SAR and the Hawai‘i Fraser’s dolphin SAR.
- Status of stock. It is noted that there is no recent recorded fishery-related mortality or serious injuries, and thus the total fishery mortality and serious injury can be considered to be insignificant and approaching zero. Given that rough-toothed dolphins are well-known to take bait and catch from fishermen off the island of Hawaii, from fisheries that are not observed, and thus there is no recording of potential mortality or serious injury, this statement is unwarranted.

Blainville’s beaked whale: Hawai‘i pelagic stock

- Stock definition and geographic range. As noted, there are multiple lines of evidence of an island-associated and a pelagic stock of Blainville’s beaked whales in Hawaiian waters. Given this, recognition of both a pelagic and island-associated stock of this species in Hawaiian waters is warranted. The previous SAR for Blainville’s beaked whales in Hawaiian waters had recognized a single “Hawaiian stock”, and until an island-associated stock is also recognized, this draft SAR should be renamed Hawai‘i Stock.

Cuvier’s beaked whale: Hawai‘i pelagic stock

- Stock definition and geographic range. As noted, there are multiple lines of evidence of an island-associated and a pelagic stock of Cuvier’s beaked whales in Hawaiian waters. Given this, recognition of both a pelagic and island-associated stock of this species in Hawaiian waters is warranted. The previous SAR for Cuvier’s beaked whales in Hawaiian waters had recognized a “Hawaiian stock”, and until an island-associated stock is recognized, this draft SAR should be renamed Hawai‘i Stock.

Risso’s dolphins.

- Stock definition and geographic range. A 1981 review is cited for the statement that they “have been considered rare in Hawaiian waters”. The paper by Baird et al. (2013 – Aquatic Mammals) reviews 13 years of sightings and effort data from among the main Hawaiian Islands including waters out to ~5000 m offshore, and demonstrates that they are relatively rare among the main Hawaiian Islands. Given the recent time frame and extensive survey coverage considered in the Baird et al. (2013) paper, this would be a more appropriate citation than Shallenberger (1981). Note that Shallenberger (1981) is cited in numerous other Hawaiian SARs, when the Baird et al. (2013) paper would be more appropriate to cite, given the extent of survey coverage and more recent time frame considered.

Baird comments on draft Pacific 2013 SARs

- Status of Stock. It is noted in this SAR and in many other Hawaiian odontocete SARs that “no habitat issues are known to be of concern for this species”. While this may be true in Hawaiian waters, the Hawaiian SARs make no attempt to review habitat issues world-wide, and thus this statement should be modified accordingly.

Common bottlenose dolphin: Hawaii stock complex

- While the CV of the mark-recapture abundance estimate for the O‘ahu Stock (CV = 0.54) is imprecise relative to the other insular stocks, it is similar to the CV for the pelagic stock (CV = 0.59), so the wording of this should be changed appropriately.

Striped dolphins.

- Stock Definition and Geographic Range. It is noted that “sightings have historically been infrequent in nearshore waters”. A more recent reference that notes that sightings are currently infrequent in nearshore waters is available (Baird et al. 2013, Aquatic Mammals).

Fraser’s dolphins

- Given the distribution of sightings in the western half of the Hawaiian EEZ, and the note of one stranding record, the two sightings noted by Baird et al. (2013) off Kona should be reported. There is a statement that “no interactions between nearshore fisheries and Fraser’s dolphins have been reported in Hawaiian waters”. This is not surprising given the relative rarity of this species around the main Hawaiian Islands as noted by Baird et al. (2013).

Pygmy killer whales

- Stock Definition and Geographic Range. It is noted that “encounter rates for pygmy killer whales are rare during near shore surveys” based on McSweeney et al. (2009). Since that publication there has been considerable additional effort that supports this statement, presented in Baird et al. (2013), which also includes the McSweeney et al. (2009) effort.

Fin whales, Hawaiian stock

- In the SAR for fin whales: California/Oregon/Washington stock it notes that “Behavioral changes associated with exposure to simulated mid-frequency sonar, including cessation of feeding, increased swimming speeds, and movement away from simulated sound sources has been documented in tagged blue whales (Goldbogen et al. 2013), which have similar communication frequencies to fin whales. It is likely that fin whale behavior may be similarly affected by such anthropogenic sounds.” This should also be noted for the Hawaiian stock.