

Editor's Note: Several colleagues contacted the Editor at *Aquatic Mammals* regarding the likely error in identification of *Feresa attenuata* in Castro (2004). The following note presents a correction to the original identification of this species by Castro.

Pygmy Killer Whales (*Feresa attenuata*) or False Killer Whales (*Pseudorca crassidens*)? Identification of a Group of Small Cetaceans Seen off Ecuador in 2003

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Pygmy killer whales (*Feresa attenuata*) are a very poorly known species (Donahue & Perryman, 2009; McSweeney et al., 2009), and single sightings or strandings still often warrant publication. Castro (2004) reported an encounter with a school of small cetaceans off Ecuador in 2003, identified by the author as pygmy killer whales, and described details on the behavior of the group. Features noted in the field that were used to determine the species included estimates of their small size (1 to 2.5 m), rounded tips to the flippers, a rounded head when viewed from above, and white around the mouth. The species most frequently confused with pygmy killer whales is the melon-headed whale (*Peponocephala electra*), which are similar in size but have pointed tips to the flippers and a pointed head when viewed from above. Adults of both species typically have white lips, but adult pygmy killer whales also have white extending onto the face around the mouth. However, Figure 2 in Castro (2004), a photograph from the sighting, clearly shows a false killer whale (*Pseudorca crassidens*) rather than a pygmy killer whale. The most obvious difference between these two species, apparent in the photograph, is the relative size of the dorsal fin in proportion to the back; pygmy killer whales have proportionately larger dorsal fins than false killer whales. While relative appendage size may vary with age and sex, and such variation has not been quantified for either species, there is a general rule of thumb that can be used to discriminate the two species with such a photo. Using the length of the dorsal fin base as a metric, the distance between the anterior insertion of the dorsal fin and the blowhole is about twice the length of the dorsal fin base in pygmy killer whales, while in false killer whales the distance is typically about 2.5 times the length of the dorsal fin base. Even if the blowhole is not visible, false killer whales can be distinguished from either

pygmy killer whales or melon-headed whales by the greater extent of back visible relative to dorsal fin size in almost any photo of these species at sea. With reasonable lighting conditions, the clear demarcation between the darker dorsal cape and the lighter lateral pigmentation of a pygmy killer whale should also be visible (Figure 1), and it is not apparent in the photo published in Castro. False killer whales tend to appear more uniform in coloration, although they also have a darker dorsal cape that is visible in good lighting conditions (Figure 2). However, the demarcation between this darker cape and the lighter lateral coloration is diffuse in false killer whales, as is also the case in melon-headed whales.¹

Assuming Figure 2 in Castro (2004) was taken during the aforementioned encounter off Ecuador, this suggests that either the species was misidentified or that more than one species was present. The two species have been recorded in proximity



Figure 1. A pygmy killer whale in good lighting conditions, showing the clear demarcation between the dark dorsal cape and lighter lateral pigmentation; note the relative size of the dorsal fin in relation to the distance from the dorsal fin to the blowhole. (Photo by Robin W. Baird)

¹More images of all three species under varying lighting conditions can be found at www.cascadiaresearch.org/hawaii/species.htm.



Figure 2. A false killer whale in good lighting conditions, showing the diffuse demarcation between the dorsal cape and lighter lateral pigmentation (Photo by Robin W. Baird)

on one occasion in Hawai'i but were not seen to interact or travel together (Baird et al., 2008; McSweeney et al., 2009). Rounded tips to the flippers and a rounded head when viewed from above are characteristics that are shared by both false killer whales and pygmy killer whales, although the size estimates from the sighting (1 to 2.5 m) are difficult to reconcile with the length of false killer whales (in which adults can reach lengths of 5 to 6 m [Jefferson et al., 2008]). Length at birth for false killer whales is estimated to be about 1.75 m (Kasuya, 1986). Body length is notoriously difficult to accurately estimate at sea, however.

Several other details of the sighting and the behavior of the individuals described by Castro (2004) best fit false killer whales rather than pygmy killer whales. The speed of the group was reported at "around 30 km/h." While it is unlikely that either species ever travels at 30 km/h for more than very short periods of time (Williams, 2009), pygmy killer whales typically appear quite lethargic at the surface, while false killer whales frequently engage in high-speed travel. While behavior is certainly more flexible than morphology, in over 70 encounters with pygmy killer whales off the island of Hawai'i (see McSweeney et al., 2009), high-speed travel has never been observed (D. J. McSweeney, pers. comm., 18 August 2010; R. W. Baird, pers. obs.), while high-speed travel as described by Castro (2004) is a common feature of false killer whale encounters. False killer whales also frequently bowride on vessels, while pygmy killer whales do so only occasionally (Jefferson et al., 2008; R. W. Baird, pers. obs.). Both pygmy killer whales and false killer whales are primarily oceanic, but of the two species, false killer whales appear to use shallow waters more regularly.

There is no doubt that pygmy killer whales occur in waters off Ecuador; in fact, Castro (2004) discussed several other records from the general area. However, based on the photo presented in Castro and details of the behavior, the sighting described appears to have been a group of false killer whales rather than pygmy killer whales.

Acknowledgments

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