

National Marine Fisheries Service Memorandum for the Record:
*Management Considerations in Designating Demographically Independent Populations as
Stocks under the Marine Mammal Protection Act*

Memo to Record

To: The Record

From:

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Subject: Evaluation of stock designation for Sato's beaked whale.

The National Marine Fisheries Service (NMFS) process for designating stocks under the Marine Mammal Protection Act (MMPA) is described in *Reviewing and Designating Stocks and Issuing Stock Assessment Reports under the Marine Mammal Protection Act* (NMFS 2019). In most cases, if sufficient evidence exists to delineate demographically independent populations (DIPs), they should be designated as stocks and assessed as such in Stock Assessment Reports (SARs). As noted in NMFS (2019), in practice there may be some situations (anticipated to be relatively few) where it would be impractical, or there are insufficient data or analytical tools, to assess and manage a stock at the DIP level (see NMFS (2019) for examples). In addition, when distinct population segments (DPSs) have been established under the Endangered Species Act (ESA), it may be pragmatic to designate a stock comprising more than one DIP of a single DPS.

The purpose of this memorandum is to document the collective consideration by NMFS' Alaska Fisheries Science Center (AFSC), Alaska Regional Office (AKRO), Office of Protected Resources (OPR), and Office of Science and Technology (OST) staff of how to designate Sato's beaked whale.

Current Stock Designation(s): The Sato's beaked whale is a newly described species and so does not as yet have a stock designation. The Sato's beaked whale was identified as a new species in the northern Pacific Ocean based on morphometric and genetics data of a previously undescribed species (Brownell and Kasuya 2021, Fedutin et al. 2020, Yamada et al. 2019). Current information about its distribution indicates that it occurs from Japanese waters across the

northern Pacific to at least the Alaskan Peninsula. Its southern extent is unknown but it is suggested it may occur in warm temperate or tropical waters based on cookie cutter shark scars (Yamada et al. 2019). It was added to the Society of Marine Mammalogy's list of accepted marine mammal species and subspecies in May 2020 (<https://marinemammalscience.org/science-conservation/list-of-marine-mammal-species-and-subspecies-update-includes-new-species-and-subspecies/>). It is unknown whether the species has Demographically Independent Populations (DIPs). Collectively, the AFSC, AKRO, OST, and OPR all agree it should be managed as a single stock.

Demographically Independent Populations/Units Under Consideration: There are no DIPs being considered.

Relevant Regional Office(s), Science Center(s), and Headquarters Office(s): AKRO, AFSC, OPR, OST.

Process by which stock designation was considered: Shortly after publication of findings indicating that Sato's beaked whales are a new species of beaked whale, AFSC researchers discussed the new publication and developed a new draft SAR for publication. While this new SAR was originally intended to be published with the 2022 Alaska SARs, its publication was delayed until the 2023 cycle to allow NMFS to fully complete the process outlined in NMFS (2019).

A draft stock assessment report was initially provided to AKRO in January 2022 and again in January 2023; AKRO did not have any substantive comments. The draft stock assessment report was also provided to the Alaska Scientific Review Group (SRG) in February 2022 and again in March 2023; the Alaska SRG was supportive of documenting the presence of the newly identified species in U.S. waters and had no substantive comments.

Questions to Consider for Stock Designation (from NMFS 2019, Section B):

1. Is it feasible to manage each DIP/unit being considered as a single stock? For example:
 - a. Is there an abundance estimate for each DIP/unit that could be used for calculating the PBR level?
 - b. Is there a way to attribute takes to each DIP/unit other than allocating each take to all possible DIPs in the area?
 - c. Are there any other potential analytical or practical barriers that would limit our ability to manage each DIP/unit?

DIPs are not being considered.

2. Is there a reason to believe that human-caused serious injury/mortality or threats differ significantly between DIPs/units in the area?

DIPs are not being considered.

3. What are the conservation and management benefits and risks of managing each DIP/unit as individual stocks versus together as a single stock?

DIPs are not being considered.

4. Have DPSs for the species to which the DIPs/units belong been recognized under the ESA? (note from NMFS 2019: NMFS should align stock designations with DPSs established under the ESA unless there is compelling reason not to. For species that are listed under the ESA, only DIPs/units from the same ESA-listed DPS should be combined.)

No.

5. Do members of the DIP/unit overlap in space and time with members of at least one other DIP/unit of the same species? For migratory marine mammals, the evaluation should focus on overlap in the breeding ground(s). In cases where DPSs have been established under the ESA, the same species here refers to all animals within a single DPS.

NA

Conclusion: The Sato's beaked whale was identified as a new species based on the historical description in Japan of a smaller form of the Baird's beaked whale, and new morphometric and genetic data to confirm the differences (Brownell and Kasuya 2021, Fedutin et al. 2020, Yamada et al. 2019). As a newly identified species, the Sato's beaked whale has not yet been identified as a stock. Official stock designation decisions are made by the NMFS' Assistant Administrator in final stock assessment reports, following publication of the draft stock assessment reports and consideration of public comment.

References:

Brownell, R. L., Jr., and T. Kasuya. 2021. Sato's beaked whale: A new cetacean species discovered around Japan. *Mar. Mammal Sci.* 37(2): 768–771. <https://doi.org/10.1111/mms.12810>

Fedutin, I. D., I. G. Meschersky, O. A. Filatova, O. V. Titova, V., I. G. Bobyr, A. M. Burdin, and E. Hoyt. 2020. Records of a new cetacean species of the genus *Berardius* from Russian waters. *Russ. J. Mar. Biol.* 46:199–206. <https://doi.org/10.1134/S1063074020030050>

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Yamada T. K., S. Kitamura, S. Abe, Y. Tajima A. Matsuda, J. G. Mead, and T. F. Matsuishi. 2019. Description of a new species of beaked whale (*Berardius*) found in the North Pacific. *Sci. Rep.* 9:1-14. <https://doi.org/10.1038/s41598-019-46703-w>