

New whale species discovered along the coast of Hokkaido

September 3 2019



Unidentified beaked whales sighted in the Nemuro Strait. Credit: Tadasu K. Yamada et al., *Scientific Reports*. August 30, 2019

In a collaboration between the National Museum of Nature and Science, Hokkaido University, Iwate University, and the United States National

Museum of Natural History, a beaked whale species which has long been called Kurotsuchikujira (black Baird's beaked whale) by local Hokkaido whalers has been confirmed as the new cetacean species *Berardius minimus* (*B. minimus*).

Beaked whales prefer deep ocean waters and have a long diving capacity, making them hard to see and inadequately understood. The Stranding Network Hokkaido, a research group founded and managed by Professor Takashi F. Matsuishi of Hokkaido University, collected six stranded unidentified [beaked whales](#) along the coasts of the Okhotsk Sea.

The whales shared characteristics of *B. bairdii* (Baird's beaked whale) and were classified as belonging to the same genus *Berardius*. However, a number of distinguishable external characteristics, such as [body proportions](#) and color, led the researchers to investigate whether these beaked whales belong to a currently unclassified species.

"Just by looking at them, we could tell that they have a remarkably smaller [body](#) size, more spindle-shaped body, a shorter beak, and darker color compared to known *Berardius* species," explained Curator Emeritus Tadasu K. Yamada of the National Museum of Nature and Science from the research team.

In the current study, the specimens of this unknown species were studied in terms of their morphology, osteology, and molecular phylogeny. The results, published in the journal *Scientific Reports*, showed that the body length of physically mature individuals is distinctively smaller than *B. bairdii* (6.2–6.9m versus 10.0m). Detailed cranial measurements and DNA analyses further emphasized the significant difference from the other two known species in the genus *Berardius*. Due to it having the smallest body size in the genus, the researchers named the new species *B. minimus*.



Illustrations comparing the new species *B. minimus* (A) and the Baird's beaked whale (*B. bairdii*) (B) in the same genus. Credit: Tadasu K. Yamada et al., *Scientific Reports*. August 30, 2019

"There are still many things we don't know about *B. minimus*," said Takashi F. Matsuishi. "We still don't know what [adult females](#) look like, and there are still many questions related to species distribution, for example. We hope to continue expanding what we know about *B. minimus*."

Local Hokkaido whalers also refer to some [whales](#) in the region as Karasu (crow). It is still unclear whether *B. minimus* (or *Kurotsuchikujira*) and *Karasu* are the same species or not, and the research team speculate that it is possible Karasu could be yet another different [species](#).



Dorsal, ventral, and lateral views of the *B. minimus* skull (From the left). The rostrum is smaller than that of other *Berardius* species. Credit: Tadasu K. Yamada et al., *Scientific Reports*. August 30, 2019

More information: Tadasu K. Yamada et al. Description of a new species of beaked whale (*Berardius*) found in the North Pacific, *Scientific Reports* (2019). [DOI: 10.1038/s41598-019-46703-w](https://doi.org/10.1038/s41598-019-46703-w)

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