

# Scientists use DNA from a museum specimen to study rarely observed type of killer whale

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In a scientific paper published in the journal *Polar Biology*, researchers report using DNA from tissues samples collected in 1955 to study what may be a new type of killer whale (*Orcinus orca*).

In 1955, a pod of unusual-looking [killer whales](#) stranded on a New Zealand beach and a skeleton was saved in a museum in Wellington. Photographs were also taken but it was almost 50 years before this unique form of killer whale, characterized by a very small white eye-patch and bulbous forehead, was documented alive in the wild.

Scientists have suspected for some time that there might be more than one type of killer whale, a theory supported by recent genetic studies. The so-called "type D" killer whale from New Zealand, however, was not included in previous genetic studies because no tissue samples were available. For the current study, scientist Andrew Foote (University of Copenhagen) extracted DNA from dried tissue and tooth fragments from the New Zealand skeleton, the only known specimen of type D killer whale.

A complete [mitochondrial DNA](#) sequence of the type D specimen was compared to samples of 139 killer whales from around the world. From that, Foote estimated that type D separated from other killer whales approximately 390,000 years ago, making it the second oldest branch in the killer whale family tree and possibly a separate subspecies or species. Dramatic changes in [global sea level](#) and ice sheet coverage during the Pleistocene may have contributed to the diversification of killer whales.

**More information:** [link.springer.com/article/10.1...  
1354-0/fulltext.html](https://link.springer.com/article/10.1007/s11265-013-01354-0/fulltext.html)

Provided by NOAA National Marine Fisheries Service

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