

# Spade-toothed whale

## *Mesoplodon traversii*

### What we know about the world's rarest and least known whale

The spade-toothed whale is a type of beaked whale (hakurā), a little-known group of whales that are named for their dolphin-like “beak” and range from 4-13m long.

#### What are beaked whales?

Beaked whales, known in Māori as hakurā, are deep-diving species, with the goose-beaked whale holding the record for longest (222 minutes) and deepest (nearly 3km) known diving mammal.

Beaked whales are a diverse group, and Aotearoa is a hot spot for them, with 13 of 23 known species occurring here. Seven species of which have been described from animals found here<sup>1</sup>.

Despite being ‘toothed’ whales, most beaked whales have no functional teeth. Males will often have a single tusk tooth in each side of its lower jaw.

Most of what is known about these animals, comes from the examination of dead stranded animals.

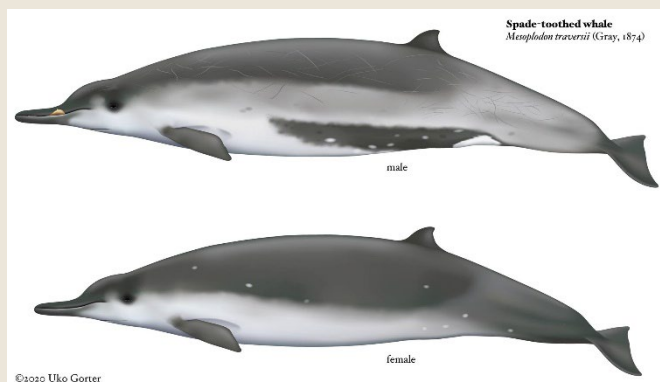
#### What's so special about the spade-toothed whale?

Only seven records of this species exist anywhere in the world, and all but one were found in New Zealand.

Until 2010 no one had seen this whale in the flesh, and it has still not been seen alive at sea. Prior to 2010, the species was only known from a jawbone and two partial skulls.

Scientists from New Zealand confirmed that these three animals were from the same species, and a species that wasn't known from any other specimens.

The species was first seen intact in 2010 when a mother and calf stranded in the Bay of Plenty. Only two more animals have stranded since then, including the one from Otago in 2024.



Comparison of spade-toothed whale from Taiari mouth on 5 July 2024 (above) and Waipiro Bay, Gisborne on 23 December 2017 (below). Photos: Jim Fyfe and Graeme Atkins, DOC.

## What is DOC hoping to discover?

The dissection of one of these individuals will be a world-first.

No complete specimens of this whale have been examined to date, nor has the non-skeletal internal anatomy.

We would like to describe as fully as possible the external and internal anatomy of the animal, as a baseline to underpin future studies of the species worldwide.

This will help build a picture of how spade-toothed whales live and may help us to better conserve the species.

## Stories about the spade-toothed whale

- [Collecting the Spade-toothed whales | Te Papa's Blog](#)
- [For 150 years, no one had seen a full spade-toothed whale. Then two washed up on a beach \(nationalgeographic.com\)](#)
- [World's rarest whale revealed to the world. | Te Papa's Blog](#)
- [The World's Rarest Whale Species Spotted in New Zealand | Smithsonian \(smithsonianmag.com\)](#)



Locations of specimens found in Aotearoa New Zealand.



Jawbone and identifying tusk teeth of the Pitt Island specimen – Te Papa. Inset: Whale flensing spade that inspired the name of the whale.