

Photo-identification reveals long-term site fidelity in minke whales in Glacier Bay and Icy Strait, Alaska

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Background

- Habitat use of minke whales in the Alaska stock is **poorly understood**.
- In other stocks, inter-annual site fidelity has been documented through photo-ID over spans **generally <10 years**.^{1,2,3,4,5,6}
- Sightings of minke whales in the inside waters of Southeast Alaska are infrequent, however the entrance to **Glacier Bay and Icy Strait are a relative hotspot for minke whales**.⁷

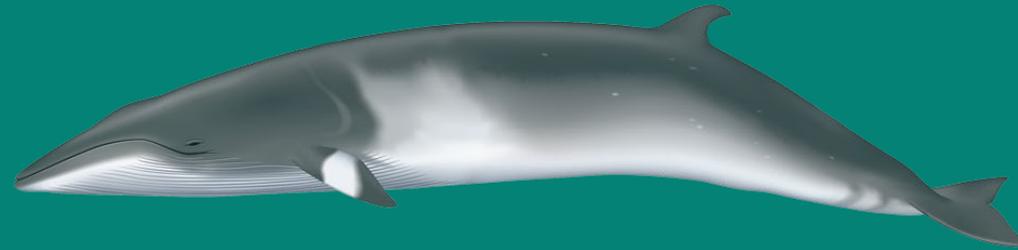
Methods



- From 1989-2024, we **opportunistically collected dorsal fin photographs** of minke whales in Glacier Bay and Icy Strait, Alaska from April-Oct.

Results

- Minke sightings were most common in **June, July & August**.
- Most individuals (n = 75 photo encounters) had similar-looking dorsal fins (no visible notches) and therefore could not be distinguished from each other, but **three individuals (M1, M2, M3) had distinct dorsal fin notches that allowed us to recognize them over time**.
- M1, M2, and M3 demonstrated **intra- and inter-annual site fidelity to lower Glacier Bay and central Icy Strait**.
- Within a year, the longest span that we documented was for M2 in 2013, first sighted on June 3 and last sighted on August 30 (**88 days later**, approximately 2.5 nautical miles apart).



We documented minke whale site fidelity in Southeast Alaska up to 28 years

These are among the longest sighting spans reported for minkes

Significance

- The repeated detection of these three individuals within and between years indicates that at least some of the minke whales in Glacier Bay and Icy Strait are **resident to the area**, either seasonally or year-round (more likely the former as minke whales in Alaska are thought to migrate seasonally.)
- Their apparent dependence on the local habitat and prey resources **may make them vulnerable to local disturbance and local ecological changes**.
- The long-term site fidelity of these animals is **among the longest yet reported in the world for this species**.

M1
1993 – 2016

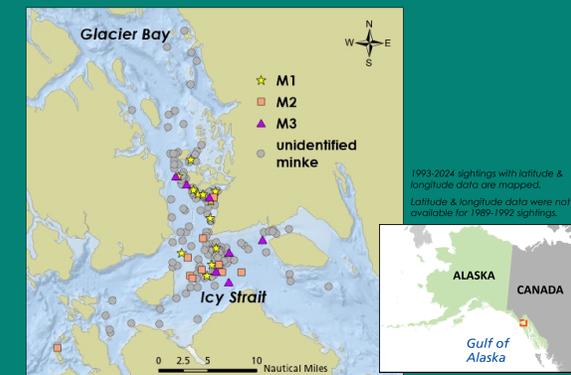
Sightings span at least 24 years

M2
1992 – 2019

Sightings span at least 28 years

M3
2013 – 2024

Sightings span at least 12 years



Minke whale sightings with confirmed and probable sightings of M1, M2, and M3 highlighted.

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