



Eyjafjord Humpback Whales

Humpback whales are one of the easiest species to identify individuals, using their unique markings on their bodies but most importantly under their tail. These identifiers can be in the form of black and white pigment variations and patterns under their tails, just like human fingerprints. Scars can also aid us, tooth rakes from killer whales and entanglement scars in particular.

The information gained from regular recordings of the Eyjafjord Humpbacks allows us to learn a great deal about the local population, a single individual might be identified in multiple localities around Iceland and also at their possible breeding grounds near to the Caribbean Sea. If seen throughout the year it could indicate that the individual is resident or maybe not yet reached sexual maturity. Seen on a yearly basis could also get an idea of longevity as well getting an insight into their social structures, population size, site fidelity, life history, behaviour, and general well being.

Location

Eyjafjörður is the longest fjord in Iceland, situated in the north-east with Akureyri based at the start of the fjord. The fjord is 60km long and 20km at its widest point at the mouth. The depth of the fjord varies but one of the deepest areas within the fjord is called Baakkaáll, which reaches 110m just south of Hjalteyri. Clay and sand are the main sediments found on the bottom, which has been layered over many years and is almost 2m thick making the bottom of the fjord flat. The sides of the fjord are steep until reaching the sediment. Ocean temperature ranges from 1°C at the mouth in February to about 8°C at the surface in the spring and summer.

Both sides of the fjord are borders by high, steep mountain ranges and valleys with rich, fertile farming land.





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How do we Identify individual humpbacks?

Humpback whales are one of the easiest species of cetacean to identify individuals. As a big, bulky, buoyant whale, it is very common for the humpback to bring up their tail (fluke) above the water surface before going on a longer deeper dive. The underside of the fluke is the best part of the whale to photograph to determine its identity. This is like a human fingerprint, unique to each and every individual whale. Humpback whales are also generally slow whales and spend long periods at the surface allowing us plenty of time and opportunity to photograph them.

The Fluke

The fluke of the humpback whale comes in the form of many shapes, sizes, patterns and scars. There are three main parts of the fluke we focus on to identify individuals, pigmentation, distinctive marking (scars) and trailing edge shape.

Pigmentation

Black and white form the two permanent colours that make up the patterns of the fluke, other colours, orange or yellow for example, are a temporary coating of diatoms (algae).



Distinctive Markings

This is mainly in the form of obvious scars that are usually circular or linear but can be found in other shapes also. Circular scars are mostly formed by parasitic animals that attach themselves to the skin of whales, for example; barnacles, cookie cutter sharks and lamprey. Linear scars can be in the form of tooth raking from killer whales or entanglement in fishing lines/ropes.



Trailing edge shape

The shape of the fluke can also vary a lot, they can be broad or narrow, their fluke can also have been reduced by injury from entanglement, propellers or killer whale attacks.





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What we discovered in 2016:

Since, May 15th 2016 when Whale Watching Akureyri started their operation in Eyjafjörður to the end of 2016 we have had 100% humpback whale sighting success, observing between 1 to 17 individuals per day.

On the first day of operation we had our first 3 individuals for our catalog;



Dotty McDotFace, AKA 'Dotty'



Holyfield



Tyson

These 3 were recorded a few times until the end of the month and have not seen them since.

The most well known humpback whale to the crew and passengers was one initially called 'Bad Fluker' as he was quite lazy in lifting the fluke high out of the water making it quite frustrating to photograph. However, the named changed to 'Awesome Fluker' when the behaviour changed, maybe having to dive deeper for food. Awesome Fluker was a whale we could rely on during or slow whale days, he could usually be found hanging around the south shores of Hjalteyri. Awesome Fluker has been encountered on 35 days, the 1st encounter being on May 16th and last encountered on October 11th, moving in and out of the fjord for around 6 months. Awesome Fluker has spent the longest time in the fjord than any other humpback whales.



'Bad' Awesome Fluker

The most frequently encountered humpback whale is called 'Dark Knight'. Dark Knight was first encountered on June 24th and encountered on 52 days until October 11th.



Dark Knight



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The Resights

This summer (first summer of operation in Eyjafjord) we were greeted by 6 humpback whales that we have encountered before in Faxaflói, bay off the coast of Reykjavik earlier this year and also previous years.



Vivian



Gills



Pröstur



Aramis



Cheezel



Tequila Blanca

Vivian

Vivian was first encountered in Faxaflói on April 13th and then seen in Eyjafjörður on May 20th, 37 days later. What is interesting about Vivian is that he was seen frequently in Eyjafjörður for the rest of May but then was not seen in the fjord again until the beginning of August and stayed for about a month before leaving once again.

Gills

Gills was first cataloged in Faxaflói on 25th March 2014, seen again this year in Eyjafjörður on the 31st August, 5th and 16th September.

Pröstur

Pröstur was probably the most well known individual to the research team as he was seen frequently in Faxaflói from two months in the summer of 2015 from the 2nd July until 31st August. In Eyjafjörður Pröstur was encountered mid June and surprisingly seen back in Faxaflói late July. In 35 days Pröstur had travelled roughly 600 kilometers if he took the shortest route around the west coast.

Aramis

Aramis has mainly been encountered in Eyjafjörður in 2016, from 2nd September to 5th October but was first encountered in 2014 in Faxaflói in April with just 2 encounters.

Cheezel

Cheezel was first encountered in Faxaflói on the 19th March 2016, 1 of 3 seen on that particular tour. Cheezel was seen opportunistically from then on until July 27th, which was the last day in Faxaflói until Cheezel was seen in Eyjafjörður 21 days later. Only encountered once.

Tequila Blanca

Tequila Blanca was first encountered on 16th March 2016 in Faxaflói, saw one more time in the bay in mid April and not again until 1st July in Eyjafjörður. Stayed there and encountered frequently for the next month and a half. Last day sighted was 13th August.



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Humpback Distribution

We have been very lucky on our tours this year, not needing to travel far out the fjord to see the Humpbacks. On the odd occasion encountering them just beyond the harbour opening. In the research season (May to September 2016) they were quite evenly scattered with no particular preference to resting, socialising or feeding areas that we can easily distinguish.

Encounters recorded were all south of Hrisey, not needing to travel further to explore other areas. So, more humpback whales could and most likely be found around and north of Hrisey.

Humpback whales were mainly encountered in the fjord between the two rivers that flow into Eyjafjörður on the west coast, Svarfaðardalsá river opening up in the town of Dalvík and Hörgá river, just south of Hjalteyri. These rivers bring a lot of nutrients and freshwater into the fjord as well as the Fnjóská river on the east coast.





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Social Interactions

Eyjafjörður is probably one of the best locations in the world to look at humpback whale social structures due to the limited area and long observational periods from the whale watching tours. It is very unlikely you will miss an individual during a day of observations within the whale watching area. The deep fjord with the depths rich in food also increases the probability that they will fluke when going on a deep dive for easy recognition. Sea conditions are also generally good with the high mountains both sides of the fjord making it easier for data collection and reduced human error.

Humpback whales have very complex social structures, socialising can vary depending on the individual, age, sex, time of year and food availability. They communicate with each other using loud low-pitched moans, clicks and howls. They can also use body language; lunging, tail slapping and breaching to indicate location, dominance, youth, playfulness and health.

1 to 6 humpback whales have been observed together for periods lasting a couple of hours to a couple of months. Our most well known humpback pod are;



Athos



Aramis



D'Artagnan



King Louis



Porthos



Dark Knight

All 6 seemed to be socialising between each other from the 15th September 2016 to the 3rd October 2016. After the 3rd they did not seem to be socialising with each other as much. Porthos and King Louis separated after the 3rd October but were seen again together as a pair or both with others on the 24th and 30th of November and the 1st, 9th and 17th of December. They were then socialising on and off for about 3 months.



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Social Interactions



D'Artangnan, Porthos, Athos, Aramis, Dark Knight and King Louis socialising together on the 23rd Septmeber 2016.