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Moon the Humpback Whale – tenacity and tragedy

She travelled from British Columbia to Hawaii with severe spinal injury from vessel strike, but will not make it back

On September 7th, a lone Humpback Whale travelled past the Fin Island whale research station along the remote north coast of British Columbia in Gitga'at First Nations Territory. Our drone hovered overhead, and immediately we could tell that something was very wrong. The entire back of the whale - from dorsal fin to fluke - was curved into an unnatural 'S' shape, rendering the tail stock almost completely immobile. We surmised that such an abnormal contortion could be the result of severe blunt-force trauma from being hit by a large boat.

We took several photographs of the dorsal fin, but the whale appeared not to be able to lift her tail to reveal the unique pattern on the underside of her fluke. We use markers such as these to identify every individual we see, allowing us to build on our knowledge of the whale's life history. Because she could not lift her tail, we could not identify who she was.

Her tragic story fully came to light months later, as a result of the collaborative efforts to study Humpback Whales across the North Pacific. The efforts of the *Canadian Pacific Humpback Whale Collaboration (CPHC) in British Columbia came* together with those of the *Pacific Whale Foundation (PWF) in Hawaii* in the *Happy Whale* database.

The whale with the paralyzed tail who we saw on September 7th, was Moon (BCX1232). She had made it to the breeding grounds of Hawaii.

On December 1st, off the coast of Maui, the *Pacific Whale Foundation* documented a whale whose spine was severely deformed. They identified her as Moon through submissions made to the *Happy Whale* database and noted that she was a whale well-known to the feeding grounds of northern British Columbia.

When the images from Maui were shared with us, we knew immediately that this was likely the whale we had photographed – now over *3,000 miles away*. This was confirmed soon afterward by comparing the drone footage from *NCCS* and *PWF*.

The harrowing images of Moon's twisted body in Maui stirred us all. Not only was she likely in considerable pain, but she had somehow migrated thousands of miles across the North Pacific to her Hawaiian breeding grounds without being able to propel herself with her tail.

Her journey from the nutrient-rich waters of British Columbia to the breeding grounds has left her completely emaciated with excessive loads of whale lice as further testament to her severely depreciated condition. But she had made it.

This is the stark reality of a vessel strike, and it speaks to the extended suffering that whales can endure following an incident. It also speaks to their instinct and culture: the lengths whales will go to follow patterns of behaviour.

We have known Moon for many years, often seen in the late fall around the feeding grounds of northern BC. We were thrilled to see her with a calf in 2020, passing on this tradition of migration between feeding and breeding grounds. In her current condition, she will not survive to make the return journey.

There are a number of resources available to educate mariners on how to avoid such collisions, and we must all make every effort to ensure the safety of whales. Vessels of all sizes can be a threat: stay alert, slow down and wait. Going forward, it is clear that we need to take serious action regarding slow-down zones in known whale hotspots.

We will never truly understand the strength it took for Moon to take on what is regrettably her last journey, but it is on us to respect such tenacity within another species and recognize that vessel strikes lead to a devastating end.

To reduce vessel strikes we encourage all boaters to be aware of their local laws, and best practices. For Canadian mariners, we urge you to familiarize yourself with the information available at www.seeablowgoslow.org and to report any witnessed incidences of concern surrounding ship strikes or entanglement to the DFO Incident Reporting Line at 1-800-465-4336, DFO.ORR-ONS.MPO@dfo-mpo.gc.ca, or on VHF Channel 16.