

## Nature in the Neighborhood – August 2024 – Whales

### Having A Whale of a Time This Year

Whales have been a big thing in the culture, tradition, and imagination of humans for a long time. Some civilizations believe whales to be divine spirits bringing peace, luck, and harmony, while others consider them demons that can destroy ships (think Melville's *Moby Dick*) or swallow humans whole (recall Jonah's Leviathan).

In an odd coincidence, as I started writing this article, a fishing vessel in Rye NH was capsized and two fishermen thrown overboard after a whale surfaced under their boat – all three, the two fishermen and the whale, were reported uninjured.

Here in New England, whales have been prized mostly for their commercial value. The money making, however, has gone from whale hunting in the 19<sup>th</sup> century to whale watching in the 20<sup>th</sup>. This is mostly because perceptions changed and people began to view whales, not as the menacing demons depicted in the corners of ancient maritime maps, but as intelligent gentle giants who have complex social lives not so unlike our own. We've learned that they communicate and cooperate with each other, form friendships, nurture and school their young, and play and sing. Their songs are so compelling, that recordings of them have been put on albums and videos, and even sent into interstellar space on NASA's Voyager spacecraft.

It seems that this year whales have been in the Massachusetts news a good deal. A rare blue whale was spotted by a whale-watching vessel off Cape Ann and a humpback whale spectacularly breached next to a fisherman in his kayak in Nahant Bay. Sadly, there was also the story of the dead Humpback, nicknamed "Espresso," who washed up, not once but twice, on Marblehead and Swampscott shores.

Blue whales (*Balaenoptera musculus*) are not common in our coastal neighborhood. The last sighting was reportedly 20 years ago, making the recent sighting an exciting event. Whales are big, and blue whales are the biggest! They can measure up to 100 feet long and weigh up to 200 tons. To put that into perspective, they can be as long as three school buses put end to end and weigh as much as 30 Honda Accords. This makes them the largest animals on earth, which they've historically been -- even if you count the time of the dinosaurs.

Blue whales are also one of the loudest animals on earth. Their low frequency songs reach nearly 200 decibels (louder than a jet engine) and can be heard by other whales up to 1,000 miles away.

## Nature in the Neighborhood – August 2024 – Whales

What's even more amazing is that blue whales reach their gigantic dimensions on a diet of krill, tiny shrimplike marine creatures, consuming about four tons a day. They accomplish this by filter feeding: with their mouths open, the whales swim into a school of krill, taking in huge amounts of both water and krill. They then push the water through the baleen in their mouth - the fibrous material they have instead of teeth. The baleen, like a filter, traps the krill, which the whales then swallow. You can view a fascinating American Museum of Natural History video of blue whales feeding at: [amnh.org/explore/videos/oceans/blue-whale-feeding-in-ocean](https://www.amnh.org/explore/videos/oceans/blue-whale-feeding-in-ocean)

The number of blue whales today is a small fraction of what it was in the pre-whaling days, another reason why spotting one off Cape Ann this summer incited such interest. They are on the endangered species list, but with the help of the International Whaling Commission's 1982 moratorium on commercial whaling, their populations are growing. That said, they still face threats from vessel strikes, entanglements in fishing gear, pollution, and climate change.

Humpbacks (*Megaptera novaeangliae*), a more frequent visitor to our New England neighborhood, are the species you're most likely to see if you go on a whale watching tour. They tend to be closer to shore and are known for the "show" they put on that includes leaping out of the water (breaching) and flipper and tail slapping. However, unless they stay a safe distance away, whale watching vessels and recreational boats may end up stressing or even harming the performers.

While not as big as blue whales, humpbacks can grow to 60 feet in length and weigh 80,000 pounds -- a not an inconsequential size. A humpback's tail, or fluke, can be up to 18 feet wide and has distinctive markings, not unlike fingerprints, that enables identification of individual whales. Naturalists and scientists find it easier to study whales if they have names instead of numbers. So, each year, newly observed whales are given names based on their tail markings. Go to the NOAA website to play the "name game" and see if you can identify several whale tails based on the whale's given name: [stellwagen.noaa.gov/visit/whalewatching/recognizing-humpbacks.html](https://www.stellwagen.noaa.gov/visit/whalewatching/recognizing-humpbacks.html)

One of the more famous humpback whales, known worldwide, was christened "Salt" because of the recognizable white scarring, like a sprinkling of salt, not on her tail, but on her dorsal fin. A female humpback, she was first sighted in 1976 and spends the warmer months in the waters of Stellwagen Bank near Cape Cod before returning to the tropics for breeding. Humpbacks travel thousands of miles each year when migrating between feeding and breeding grounds, a trip "Salt" has made many times.

Humpbacks are also baleen whales that filter feed, but they engage in a unique method: "bubble net feeding." One or several whales blow a ring of bubbles from their

## Nature in the Neighborhood – August 2024 – Whales

blowholes encircling a school of krill or fish, and then the whales swim up through the “net” created by the bubbles with their open mouths to capture the prey. For a video on this cooperative feeding method visit: [marinesanctuary.org/blog/bubble-net-feeding-what-is-it/](https://marinesanctuary.org/blog/bubble-net-feeding-what-is-it/)

Like blue whales, humpbacks are also endangered, and it was, of course, dismaying to hear that a dead humpback had washed up on Marblehead and Swampscott shores earlier in the year. Many had come down to see “Espresso” who was eventually buried on the beach. A Swampscott town official hoped that the two towns could hold a future memorial service of some kind. Interestingly, in Vietnam, if a whale is found dead, it is buried on land typically with mourners in attendance in a ceremony much like one given a family member.

In addition to blue and humpback whales, other species are known to visit our coastal neighborhoods, including minke, finback, and right whales. There is also evidence that sperm whales, of Moby Dick fame, may be in New England waters.

Apparently, Melville’s novel was based on a real-life albino sperm whale, “Mocha Dick” (so named because he was observed off Mocha Island in Chile in the early 1800s). An explorer, J.N. Reynolds, gathered first-hand observations of Mocha Dick which were then published in the *Knickerbocker* magazine. In Reynolds’ account, Mocha Dick was less lucky than Moby Dick. While he had escaped the whaler hunters for years, he was finally killed in 1838, after he appeared to come to the aid of a distraught cow whose calf had just been slain by the whalers.

In a TIME online article last year, Roger Payne, who first recorded whales singing, wrote that he hoped humans would put the saving of other species where it belongs: at the top of the list. “Fifty years ago,” he wrote, “people fell in love with the songs of humpback whales, and joined together to ignite a global conservation movement. It’s time for us to once again listen to the whales—and, this time, to do it with every bit of empathy and ingenuity we can muster so that we might possibly understand them.”