

Why do whales beach themselves

[Sport & Tourism](#)



**ASSIGN
BUSTER**

The Scientific American article " Why do whales beach themselves? " published on June 1, 2009, bring the polemic and controversial reasons about the phenomenon observed in the last years when more than Fifty-five false killer whales were stranded on a South African beach over the weekend. The scientists still do not fully understand why mass stranding happen, and if we should be worried about this event. Whales are the largest marine mammals in the world — the smallest species weigh in at several tons.

When whales beach themselves, they can die simply from the crushing weight of their own bodies or from overheating due to their blubber, which is needed for insulation in cold ocean waters. Stranding are of several types, said Susan Parks, a research associate in the Environmental Acoustics program in the Applied Research Laboratory at Penn State. Individual stranding often are caused by isolated incidents such as sickness, injury, or old age Said Parks, " Entanglement in fishing gear is one of the leading causes of mortality for marine mammals, many of which wash up on shore dead or injured.

The tide carries these whales into shallow water, depositing them on the beach. Then there are multiple-species stranding, explained Parks. " This occurs when different species of marine mammals beach themselves at the same time and place, suggesting that they all died from the same cause," she said. Scientists have been researching possible causes of this phenomenon. One explanation involves the whale " pod" social structure. For instance, whales that travel in pods use a " strength in numbers" survival strategy, but this can backfire when the dominant whale runs aground.

<https://assignbuster.com/why-do-whales-beach-themselves/>

According to Parks, " The rest of the pod may follow a disoriented or sick whale onto shore. " Another theory is that pods may venture too close to the beach when hunting prey or evading predators and become trapped by low tides. Weather also may play a part in beaching. Explained Parks, " In 1998, there was a major stranding on the West Coast of the United States where many different species, particularly sea lions, starved to death. " This mass stranding, she added, was thought to be caused by El Nino's effects on sea-water surface temperatures.

Many marine mammals depend on plankton and kelp that thrive in cool, nutrient-rich waters. In the case of sea lions, when food is scarce, the adults wean pups earlier and leave them behind while they hunt for fish in colder waters further offshore. These young seals are often the ones that become stranded. Some theories about beaching suggest that defects in a whale's navigation system may be the cause. According to Parks, " The problem with these theories is that we don't know exactly how whales navigate. " Some species travel vast distances every year and find their way back to where they started.

Right whales, for example, travel more than a thousand miles from the Gulf of Maine to the coastal waters of Florida and Georgia to give birth, and then swim back to northern waters. Said Parks, it is known that some whales use echolocation to identify objects in their environment but " it is unclear whether these species need to rely on it for navigation. " Some researchers have proposed that whales navigate by using passive listening to hear waves crashing against the coast or steer themselves via undersea topography or the angle of the sun.

<https://assignbuster.com/why-do-whales-beach-themselves/>

However, as interjected Parks, " the distance that animals can see is often very limited in the ocean, and isn't thought to be a useful for long-distance navigation. " Another navigation theory proposed recently is that whales have a bio-magnetic sense, which allows them to sense magnetic fields in the earth's crust. " This would be similar to how homing pigeons orient themselves," explained Parks. Whales following magnetic field lines could beach themselves in areas where the field lines intersect with the coast.

A study in the UK by Margaret Klinowska found a correlation between local magnetic field lines and sites where whales were stranded alive," added Parks. However, more research is needed to solidify the connection. Several multiple-species stranding have occurred following military use of mid-frequency sonar, sparking public outcry. " One reason for the level of concern about these incidents is that they involved the rarely seen beaked whales," explained Parks. " These whales were found beached five, sometimes 10 at a time.

The problem with the sonar theory," she added, " is that we still don't fully understand the cause and effect mechanism of how sonar might affect whales or why it might affect beaked whales in particular. " For many years, professor Chris Parsons has been tracking the patterns of mass whale stranding around the world. In his most recent paper, " Navy Sonar and Cetaceans: Just how much does the gun need to smoke before we act? " Parsons and his co-authors bring together all of the major whale and dolphin stranding in the past eight years and discuss the different kinds of species that have been affected worldwide.

They also strongly argue for stricter environmental policies related to this issue. " Generally, if there is a large whale stranding, there is a military exercise in the area," says Parsons. " Sonar is killing more whales than we know about. " Parsons is a national delegate for the International Whaling Commission's scientific and conservation committees and on the board of directors of the marine section of the Society for Conservation Biology. He has been involved in whale and dolphin research for more than a decade and has conducted projects in South Africa, India, China and the Caribbean as well as the United Kingdom.

Research into the cause of stranding is ongoing, noted Parks. Meanwhile, many coastal areas have rescue groups to find and rehabilitate these stranded mammals and to release them back into the wild. When the rehab patient weighs in at more than 40 tons, which can be a whale of a job. As the article stand, statistically, we are only able to determine the cause of a stranding in about 50 percent of all cases worldwide. In some cases, it is obvious, like a ship strike leaving an animal in poor condition.

In the northeastern United States, pneumonia is a common cause of stranding. We see other diseases and trauma, such as shark attack on whales or dolphins or attacks by members of the same species. Poisonous " red tides" will also affect marine mammals. Some stranding have been speculated to be related to anomalies in the magnetic field, or from parasitic worms in the brain affecting co-ordination and balance, to whales being trapped as they follow prey inshore. There are other possible causes: Predators such as orcas or sharks may force the marine mammals inshore.

In a 1993 pilot whale stranding at Golden Bay, orcas were seen patrolling outside the spit. The whales might have sought sanctuary in shallow waters because of the threat. Deep-water toothed whales with strong social bonds become stranded in a group more frequently than other species. If an individual is sick, or old and dying, the rest of the herd will come to its aid, even if they endanger themselves by venturing too close inshore. These are species that are unusual, that are beautiful, and important for the ecology of our seas.

If there is an activity humans are doing precipitating these stranding we need to know about it—we need to make decisions about pollutants, shipping noise and sonar. Are we in some way contributing to declining health of critical populations, like the northern right whale? is asking the author of the article himself. More articles in the newspapers like the “ Nearly 200 whales stranded on Australian beach” published on 03/01/09 in USA TODAY, or the statistics found in New Zealand where almost 9, 000 whales and dolphins were stranded between 1978 and 2004 give us the idea of how serious this phenomena became .

The concern is that only about a quarter of them were saved for all the whales in New Zealand. Species included Grey’s beaked whale, the Pygmy sperm whale, the sperm whale, the long-finned pilot whale, and the false killer whale (which is actually a dolphin). All the article and scientists are giving vague explanation about those events, but nobody found with certitude way the whales are stranding, which give us the uncertainty if we know well our ecosystem and its functions, and how we can avoid those tragedies.

<https://assignbuster.com/why-do-whales-beach-themselves/>