

Blue whales back to their best off US coasts

Research questions impact of ship strikes on population recovery.

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05 September 2014



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The commercial hunting of blue whales ended in 1971, collisions with ships probably still kill at least a dozen every year.

Blue whales along the US west coast seem to have recovered from decades of hunting, surprising researchers and regulators who had listed them as threatened.

The population of *Balaenoptera musculus*, the largest animal known to have ever existed, was devastated by whaling. In addition to the global whaling ban, the hunting of blue whales is now legally protected in the US amid widespread fears over the impact of collisions with ships on its long term survival.

The blue whale population in the eastern North Pacific is considered 'depleted' under the US Marine Mammal Protection Act, and the species is listed as endangered on the definitive 'red list' curated by the International Union for Conservation of Nature, as well as being included in the US Endangered Species Act.

But in a surprising finding published today in *Marine Mammal Science*, a team at the University of Washington in Seattle suggests that the current eastern North Pacific population of around 2,200 blue whales is probably at 97% of the size the ecosystem can actually support¹.

Although commercial whaling ended in 1971 and the current population number for these blue whales was "pretty well established", says lead author and fisheries researcher Cole Monnahan, "the indication was it had not recovered, and something was preventing it from recovering".

Some researchers had suggested that fatal collisions with fast-moving ships are one reason for US blue whale numbers being held down. A high-profile campaign in California is seeking to move shipping lanes away from known blue-whale feeding grounds.

Road to recovery

To track whale numbers over time, the team created models of the eastern North Pacific population and the impact of ship strikes using known estimates of population size and data that include vessel numbers and the number of whales caught by hunters. They found that the population in the eastern North Pacific has basically recovered to its pre-whaling levels.

The probable current number of whale deaths due to ship strikes is around 11 per year, says study co-author Trevor Branch, also a fisheries researcher at the University of Washington. This is still above of 3.1 — determined as the number of animals that can legally be killed — but even then, this is unlikely to be endangering the survival of the population, he says.

In July, another team of researchers satellite-tagged more than 150 blue whales off California and found that they spent a significant amount of time feeding in areas that overlapped with shipping lanes². That paper “showed that the greatest concentrations of blue whales off the west coast of North America in late summer and fall coincide with the shipping lanes used by cargo vessels arriving and departing from the ports of Los Angeles and San Francisco,” says Daniel Palacios, a marine-mammal researcher at Oregon State University in Newport, and one of the authors of that study.

He adds: “The analyses in the [Monnahan] paper are a useful exercise in terms of providing bounds for the impact that ship strikes could have on the population under different scenarios.” However, he notes, “getting a good handle on how many ship strikes are actually occurring is not easy because their numbers are quite variable from year to year and because probably only a few strikes are observed and documented. For this reason, sensible precautionary management is warranted.”

Shipping shift

All this research raises questions over whether measures to move shipping lanes and to control vessel speeds are justified. Branch says that ultimately it is up to policy makers to decide whether to abandon efforts to reduce collisions between ships and whales. “My personal view is we don’t want any ship strikes on blue whales. It’s a tragedy no matter how many there are,” says Branch.

Michael Fishbach, a blue-whale expert and co-executive director of the non-profit organization Great Whale Conservancy, says that the latest paper is a “very impressive piece of work”. But he questions whether it is possible to say that the blue whale population has truly recovered, given there are many unknowns about the animal’s life history.

He says that he believes the number of ship strikes per year is probably much higher than 11. The animals tend to sink when they die, which makes it difficult to measure the mortality due to shipping. Moreover, even animals that are not killed might still suffer as a result of their injuries. Fishbach insists that Californian shipping lanes should be shifted out of blue-whale feeding grounds.

“This paper could make it harder to move the shipping lanes in the short term. That would really be a shame,” Fishbach says.

But Branch thinks that his team’s paper can stand as a shining example of ‘ocean optimism’ — showing people that it is possible to protect marine environments. Although some other species of whale are recovering now, “very few have recovered as much as this one has”, says Branch.

He adds, “I’m thrilled by the news that in my lifetime I can see a blue whale population [recovering]. As a signal of what’s happening off California, it’s great.”

Nature | doi:10.1038/nature.2014.15846

References

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Nature ISSN 0028-0836 EISSN 1476-4687

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