J. CUBBAGE/CASCADIA RES.

Making a comeback? This blue whale was photographed near the California coast.

ENDANGERED SPECIES

Blue Whale Population May Be Increasing Off California

To Melville's Ishmael, sailing the Pacific in search of the sperm whale Moby Dick, hunting great blue whales simply wasn't a consideration. Too fast to be caught by the sailing vessels of the time, these 100-foot-long, 175-ton leviathans belonged, Ishmael said, to the "rabble of uncertain, fugitive, half-fabulous whales," known only by reputation. But that was in 1851, and within 20 years, steam-powered ships armed with explosive harpoons had enabled whalers to stalk—and kill—the largest creatures ever to have lived on Earth. By the time the whaling of blues was banned in 1968, an estimated 338,000 had been killed and their population levels had plummeted so low that marine mammal specialists feared they were in imminent danger of extinction. Indeed, the blue, along with seven other large whales, was put on the endangered list as soon as the U.S. Endangered Species Act took effect in 1973.

But now, at least in the North Pacific, the blue whale may be showing signs of a comeback. At the upcoming meeting of the International Whaling Commission, which will be held from 18 April through 2 May in Kyoto, Japan, scientists from the National Marine Fisheries Service (NMFS) of the National Oceanic and Atmospheric Administration (NOAA) will report new data indicating that there may be more blue whales in California coastal waters than were previously thought to exist in the entire North Pacific. At best, says population biologist Jay Barlow of NMFS's Southwest Fisheries Science Center in La Jolla, who prepared the estimate, the blue whale may have quadrupled its numbers off California during the 1980s.

Experts on marine mammals, who have previewed the figures, are greeting the news with cautious optimism. Together with increased sightings of fin and humpback whales and the recovery of California gray whale populations to prewhaling levels, these findings indicate that bans on the killing of large whales are having the intended effect. "These data indicate that recovery of whales from their depleted levels is possible," says Mike Tillman of the NMFS Office of Protected Resources in Washington, who heads the U.S. scientific delegation to the whaling commission.

But as encouraging as the new numbers are, there's reason for caution as well. As even Barlow concedes, previous data on blue whale populations and migrations are sparse and unreliable, making it difficult to judge whether the creature is truly on the rebound, as everyone hopes. In fact, very little research has been done on these solitary behemoths. "Resources are limited, and blue whales just haven't gotten into any controversial interactions with humans," notes Tillman. Even the NMFS team did not set out solely to survey blue whale populations. Instead, the expedition was funded to assess the status of small dolphins, whose "controversial interaction with humans" is getting caught in fishermen's gill nets.

For 3 months between late July and early November 1991, teams of observers scanned the sea from the flying bridge of the NOAA research vessel McArthur as it criss-crossed 5600 nautical miles of ocean, ranging from the Mexican border to Oregon and 300 miles out to sea. The observers noted all sightings of whales as well as dolphins, and, recalls cruise leader Barlow: "We certainly had the perception there were a lot more blues than we'd seen before. Still, you feel insecure until you run the numbers."

When he received the final datalogs and began running the numbers last spring, Barlow came up with an estimate of 2049 blue whales feeding in the summer and fall of 1991 off California alone. This contrasts with an estimate that only 1600 blue whales remained in the entire North Pacific in 1974. But while that contrast seemed to indicate the blue whale population was on the rise, the earlier figure had been extracted from whaling records and was considered unreliable for assessing population trends.

To see if he could find a more trustworthy estimate of blue whale populations in years past, Barlow began digging in the NMFS data archives, and came up with a ship survey done in fall 1979 and summer 1980 that had overlapped the region off Southern California where most of the blue whale sightings had been made in 1991 and had also logged blue whale sightings. When Barlow then produced estimates from this one area for both cruises, he came up with a total of only 470 blue whales in 1979-80—compared to 1872 in 1991, a statistically significant increase.

Still, no one is yet prepared to say that the trend is definitely up. Research biologist John Calambokidis of Cascadia Research Collective in Olympia, Washington, points out that in summer and fall blue whales migrate in and out of the area surveyed in search of food. The difference between the two counts might therefore be due to differences in the distribution of the animals and the timing of the surveys rather than in the animals' abundance.

And Calambokidis has his own estimate based on a different survey technique—photographing whales near the coast from a small boat—performed for the Southwest Fisheries Science Center. From his sightings of blues over the past two seasons, he estimates a population closer to 1000—only half of Barlow's estimate but still "higher than expected," he says. No matter which turns out to be correct, the number of sightings alone—Calambokidis has photographed 600 identifiable individuals in California waters since 1986—has "shocked a lot of scientists" who thought the creature was much more sparse.

The good news doesn't breed complacency, though. Researchers would like to know the reason for the discrepancy between the two population estimates. One possibility, Calambokidis says, is that his survey, performed within 30 miles of the California coast, may have sampled a different blue whale population than the more wide-ranging NMFS survey. Both Barlow and Calambokidis hope that a new 3-month survey that NOAA will begin in July will provide improved data and help to reconcile their estimates. Meanwhile, no one is suggesting that it is time to remove the blue from the endangered list. Even if the higher estimate should prove to be correct, it's still a long way from joining the ranks of the gray whale, which has grown so abundant in the eastern Pacific (21,000) that the NMFS has recommended its removal, although it would still be protected under the Marine Mammal Protection Act. And many questions remain about how the blue whale is faring worldwide. Once, for example, it was most abundant in the southern oceans where prewhaling estimates put its numbers at 190,000. Now there are only about 5500, and that's considered a fuzzy estimate.

That makes the news from the North Pacific even more important to scientists like Barlow and Calambokidis. Whether or not the blue is having a population explosion, the creature at least seems to have found one place to hold its own.

–Yvonne Baskin

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