

ESC America's Top 10

General Information	Please Use this Column to Provide the Requested Information
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Report Questions	
Do you have photos that can be used in the report?	Yes
Will you want printed reports?	No
If your species is selected, will you use the opportunity to organize around the species and/or publicize its plight?	Yes
The Species & Its Status Questions	
Common name, genus & species	Humpback whale (<i>Megaptera novaeangliae</i>)
Conservation Status	Endangered
Current population size	As of 2010, the total population of North Pacific humpback was estimated at 21,808.
Has the species been delisted? If yes, when? Was the recovery on time? (Skip questions 17+18.)	No
If no, does the species have a recovery plan?	yes
If it does have a recovery plan, what is the projected downlisting and/or delisting date?	
Background Questions (for the report profile)	
Geographic range	AL(o), AK(s), CA(s), CT(s), DE(s), FL(s), GA(s), HI(s), LA(o), ME(s), MD(s), MA(s), MS(o), NH(s), NY(s), NJ(s), NC(s), OR(s), RI(s), SC(s), TX(o), VA(s), WA(s) [key: (b) currently breeds, (s) seasonally present, (m) migration route, (o) occasionally present, (x) extirpated]
Habitat	Gulf of Maine, West Atlantic Ocean, North Pacific Basin
Primary diet (if applicable)	omnivore
Public Engagement Questions (Please explain why the species is interesting, why it matters, why decision-makers + the public should care.)	
Interesting facts about the species	From National Geographic: Humpback whales are known for their magical songs, which travel for great distances through the world's oceans. These sequences of moans, howls, cries, and other noises are quite complex and often continue for hours on end. Scientists are studying these sounds to decipher their meaning. It is most likely that humpbacks sing to communicate with others and to attract potential mates.

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Humpback whales (*Megaptera novaeangliae*) occur in all oceans of the world, generally inhabiting waters over continental shelves, along continental edges and around some oceanic islands [1]. They winter in warm waters in a few specific locations and mate and give birth on wintering grounds where little feeding is thought to take place [1]. For the summer season, they migrate to high-latitude areas where they tend to stay relatively close to shore (although some groups inhabit deeper water) and spend the majority of their time feeding [1].

Additional background information to complete the species profile in the report.

From National Geographic: These whales are found near coastlines, feeding on tiny shrimp-like krill, plankton, and small fish. Humpbacks migrate annually from summer feeding grounds near the poles to warmer winter breeding waters closer to the Equator. Mothers and their young swim close together, often touching one another with their flippers with what appear to be gestures of affection. Females nurse their calves for almost a year, though it takes far longer than that for a humpback whale to reach full adulthood. Calves do not stop growing until they are ten years old.

Humpbacks are powerful swimmers, and they use their massive tail fin, called a fluke, to propel themselves through the water and sometimes completely out of it. These whales, like others, regularly leap from the water, landing with a tremendous splash. Scientists aren't sure if this breaching behavior serves some purpose, such as cleaning pests from the whale's skin, or whether whales simply do it for fun.

What are the most important messages that should be communicated about this success story?

Fishing moratoriums can result in remarkable species recoveries.

Outline and describe the **existing threats** that might impede its recovery, e.g., new threats to its habitat, etc. Include any potential political threats, e.g., a Congressional delisting before its time. Cite any substantiating scientific studies.

Humpback whales face a series of threats including: entanglement in fishing gear (bycatch), ship strikes, whale watch harassment, habitat impacts, harvest (NOAA) and noise. Fishermen have expressed support for removing the whales from the endangered species list.

Criteria-Specific Questions

Detail the ecological and scientific importance of the species. Note if it is a keystone species. Describe its role in the biodiversity of its environment. Cite any substantiating scientific studies.

In the co-evolution of predator and prey, whales can be seen as partly responsible for shaping the behaviour and morphology of their prey. Whales therefore, are very important to ocean ecosystems. Within the ocean ecosystem, whales are responsible for consuming large numbers of krill and fish and as a result, they play an important role in influencing community structures (the marine food chain). Not only do they influence through their predatory behaviour, they also support communities as a food source. For example, when a whale dies, it rapidly sinks to the bottom of the ocean and becomes a huge food source for numerous other marine species.

Provide information on any additional benefits the species provides, such as economic, medicinal, or ecosystem services.

The whales have some economic impact, as ecotourism and whale sighting tours are quite popular in appropriate coastal areas.

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Judge's score for importance of species.

What recovery actions have been taken for the species?	Humpback whale populations were greatly depleted by commercial whaling [1]. Prior to whaling, humpback whale numbers are thought to have exceeded 125,000 [1]. America whalers alone, however, killed between 14,164 and 18,212 humpback whales between 1805 and 1909 [1]. Humpback whales first received protection in the North Atlantic in 1955 when the International Whaling Commission placed a prohibition on non-subsistence whaling by member nations [1]. Protection was extended to the North Pacific and southern hemisphere populations following the 1965 hunting season [1].
Why were those recovery actions successful? If there are or have been multi-agency and/or public/private collaboration to protect the species, please describe.	Very successful (see population increases) FWS working with NOAA, International Whaling Commission...
Please detail the species' recovery. What increases have there been in the size of the population and in the number of populations? If there is political support for the conservation of the species, please explain.	Humpback whale populations were greatly depleted by commercial whaling by the early 1900s. In 1966, the entire North Pacific humpback population was thought to number only around 1,200 animals. As of 2010, the total population of North Pacific humpback was estimated at 21,808. North Atlantic humpback numbers are thought to be slowly increasing. An average increase of 1 percent (SE=0.005) was estimated for the period 1979 to 1993 [3]. The best estimate of the number of North Atlantic humpbacks in 1992 and 1993 was 11,570 (CV=0.069) [3]. Data suggest that the Gulf of Maine humpback whale stock is also steadily increasing in size at a rate consistent with the larger population [3]. The Gulf of Maine minimum population was estimated to be 501 in 1992 and 647 in 1999 [3]. Both of these estimates are likely low due to sampling technique [3]. The best estimate of the actual number of animals is thought to be 902 [3]. While there has been a fishing moratorium on the species, there is pressure on the species from the global whaling industry. An overriding threat to humpback whales and the ocean ecosystem they rely upon – and one that threatens to undermine all other conservation efforts for the whale – is ocean acidification, the increasing acidity of seawater resulting from the ocean's uptake of carbon dioxide. Humpback whales are filter feeders that draw large mouthfuls of plankton, tiny crustaceans, and fish from the water. Ocean acidification impairs the reproduction and growth, and can dissolve the thin shells, of plankton whales eat. Already the world's oceans have become about 30 percent more acidic due to fossil-fuel use, and nearly every marine animal studied has had an adverse response to acidification. Absent reductions in carbon dioxide pollution, marine ecosystems will undergo massive chemical changes that could imperil many species, including the humpback whale.
Are there actions that need to be taken by government officials and/or NGOs to continue the recovery? Are there additional actions that individuals can take to continue the species' recovery?	Citizens can reduce their carbon footprint. They should also guard against harassment of humpback whales in whale watching expeditions.

Judge's score for recovery.

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Final Judge's Score

0

Please submit to Nancy Welch at nwelch@endangered.org by July 3, 2013. Thank you for participating in the 2013 Top Ten Report.

- [1] National Marine Fisheries Service. 1991. Recovery Plan for the Humpback Whale (*Megaptera novaeangliae*). Prepared by the Humpback Whale Recovery Team for the Silver Spring, Maryland. 105pp.
- [2] NatureServe. 2005. NatureServe's Central Databases. Arlington, VA. U.S.A.
- [3] NOAA Fisheries. 2005. Stock Assessment Report. Humpback Whale (*Megaptera novaeangliae*): Gulf of Maine Stock, revised Dec. 2004. National Oceanic and Atmospheric Administration, Washington, D.C.
- [4] NOAA Fisheries. 2005. Stock Assessment Report. Humpback Whale (*Megaptera novaeangliae*): Eastern North Pacific Stock, revised May 15, 2005. National Oceanic and Atmospheric Administration, Washington, D.C.
- [5] Calambokidis J., T. Chandler, L. Schlender, G.H. Steiger, and A. Douglas. 1995-2000. Final reports to Monterey Bay, Channel Islands, and Olympic Coast National Marine Sanctuaries, Southwest Fisheries Science Center, and University of California at Santa Cruz. Cascadia Research, 218 1/2; W Fourth Ave., Olympia, WA 9850. Accessed at <http://www.cascadiaresearch.org/abstracts/abstract.htm>.
- [6] NOAA Fisheries. 2005. Stock Assessment Report. Humpback Whale (*Megaptera novaeangliae*): Central North Pacific Stock, revised Feb 12, 2005. National Oceanic and Atmospheric Administration, Washington, D.C.
- [7] NOAA Fisheries, Office of Protected Resources. Cetaceans: Whales, Dolphins, and Porpoises. Humpback Whale. Website <http://www.nmfs.noaa.gov/pr/species/mammals/cetaceans/humpback_whale.doc> accessed January, 2005.
- [8] Mobley J. Jr., S. Spitz, and R. Grotefendt. 2001. Abundance of Humpback Whales in Hawaiian Waters: Results of 1993-2000 aerial surveys. Hawaiian Islands Humpback Whale National Marine Sanctuary Office of National Marine Sanctuaries. National Oceanic and Atmospheric Administration U.S. Dept of Commerce. Available at <http://hawaiihumpbackwhale.noaa.gov/research/HiHWNMS_Research_Mobley.pdf>.
- [9] NOAA Fisheries. 2005. Stock Assessment Report. Humpback Whale (*Megaptera novaeangliae*): Western North Pacific Stock, revised Feb 5, 2005. National Oceanic and Atmospheric Administration, Washington, D.C.
- [10] NOAA Fisheries. 2010. Draft Stock Assessment Report. Humpback Whale (*Megaptera novaeangliae*): Central North Pacific Stock, revised Jan 28, 2010. National Oceanic and Atmospheric Administration, Washington, D.C.