
Common Name: Humpback whale *SGCN*
Scientific Name: *Megaptera novaeangliae*
Taxon: Whales, Dolphins, and Porpoises

Federal Status: Endangered **Natural Heritage Program Rank:**
New York Status: Endangered Global: G4
New York: SNA
Tracked: Yes

Synopsis:

Humpback whales in the North Atlantic are found in six regions, or feeding grounds. Each area represents a subpopulation, and whales show strong, maternally-driven, site fidelity to these areas (NMFS 2013). Regions include the eastern United States (primarily consisting of the Gulf of Maine), Gulf of St. Lawrence, Newfoundland/Labrador, western Greenland, Iceland, and northern Norway stocks (NMFS 2013). In the past these subpopulations were managed as one stock (Waring et al. 1999). More recently, however, the decision was made to manage the Gulf of Maine feeding stock separately (Waring et al. 2000, IWC 2002). Typically, humpback whales migrate from high latitude feeding grounds in the summer to subtropical or tropical calving grounds, such as the Dominican Republic. However, some whales remain on the feeding grounds throughout the year (NMFS website).

While humpback whales often return to the natal feeding grounds, their distribution within those regions is believed to be primarily driven by prey concentrations (NMFS 1991). This pattern has been observed in New York waters, where studies have shown them to be feeding primarily on sand lance (Sadove and Cardinale 1993). Other studies have shown prey shifting between sand lance and herring (and sometimes mackerel) in humpbacks, depending on prey availability (Payne et al. 1986, Fogarty et al. 1991). Humpback diet also includes krill. Surveys by Okeanos Ocean Research Foundation from the 1970s to early 1990s found that humpback whale abundance in the New York Bight region varied widely year to year (Sadove and Cardinale 1993). They often observed humpbacks in shallow waters, including Long Island Sound, Block Island Sound, Gardiner’s Bay, Fire Island and New York Harbor (Sadove and Cardinale 1993). Humpbacks of all age classes were seen on surveys from June through September, and juvenile whales were also observed in December and January (Sadove and Cardinale 1993). Humpbacks were acoustically detected in the New York Bight in 2008 and 2009. While seasonal patterns could not be determined due to survey protocols and analysis time constraints, humpbacks were detected by both the New York Harbor and Long Island arrays (BRP 2010).

NMFS states that humpback populations are increasing in most areas of their distribution (NMFS website). The population trend of the species in New York is unknown. Okeanos Foundation estimated that no more than 50–100 individual humpback whales use the New York Bight area at one time, based on the results of their surveys (Sadove and Cardinale 1993). Since receiving protection from the International Whaling Commission in 1966, their numbers appear to have been increasing. Clapham et al. (2003) estimated an average increase of up to 4.0% per year for the Gulf of Maine stock in 1992–2000.

Distribution (% of NY where species occurs)		Abundance (within NY distribution)		NY Distribution Trend	NY Abundance Trend
0% to 5%		Abundant		Stable	Increasing
6% to 10%		Common			
11% to 25%		Fairly common	X		
26% to 50%		Uncommon			
> 50%	X	Rare			

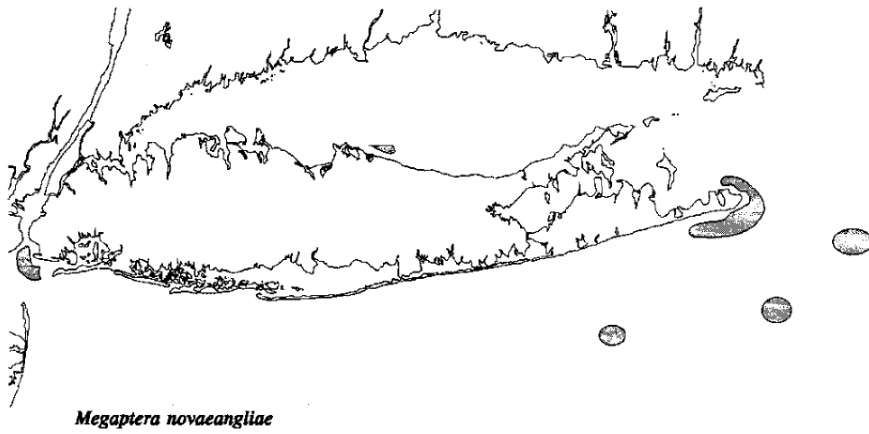
Habitat Discussion:

Surveys by Okeanos Foundation in New York waters found juvenile humpbacks using the New York Bight region during December and January, indicating that this area could be an important wintering area for juvenile whales (Sadove and Cardinale 1993). Studies show that that the area of the mid-Atlantic is an additional winter feeding ground (Barco et al. 2002).

Within the feeding area, humpback whales are often associated with areas of upwelling, which typically occur in areas where there are changes in underwater topography, such as underwater banks, ledges and seamounts (CETAP 1982, Payne et al. 1986, Robbins 2007). Sadove and Cardinale (1993) found humpback whales in New York feeding primarily on sand lance; these surveys observed humpbacks of all age classes, including mother and calf pairs. In this study humpback whales were found to use relatively shallow, near-shore areas (Sadove and Cardinale 1993). They have been observed for a week or more in Long Island Sound, Block Island Sound, Gardiner’s Bay, and inlets along the south shore of Long Island (Sadove and Cardinale 1993). These inlets include Shinnecock, Fire Island, and New York Harbor. Sadove and Cardinale (1993) hypothesized that the year-to-year distribution of humpbacks in New York waters is driven primarily by the distribution of prey. However, since regular monitoring has not taken place in the New York Bight, it is possible that prey shifting to herring, mackerel and krill may occur as it does in the Gulf of Maine when prey availability changes. This in turn, could lead to use of areas further offshore.

Primary Habitat Type
Marine; Deep Sub-tidal

Distribution:



Locations of sightings of humpback whales by surveys conducted by the Okeanos Ocean Research Foundation, 1970s to early 1990s (Sadove and Cardinale 1993)

Threats to NY Populations				
Threat Category	Threat	Scope	Severity	Irreversibility
1. Transportation & Service Corridors	Shipping Lanes (vessel strikes)	W	L	M
2. Biological Resource Use	Fishing & Harvesting Aquatic Resources (entanglement in fishing gear)	W	M	M
3. Climate Change & Severe Weather	Habitat Shifting & Alteration (loss/change of prey from climate change)	P	V	V
4. Energy Production & Mining	Oil & Gas Drilling (exploration and production)	R	M	H
5. Energy Production & Mining	Renewable Energy (offshore wind)	R	M	H
6. Human Intrusions & Disturbance	Recreational Activities (whale watching, recreational fishing)	R	L	L
7. Pollution	Excess Energy (anthropogenic noise including shipping)	W	H	V
8. Pollution	Garbage & Solid Waste	N	L	H
9. Pollution	Industrial & Military Effluents (contaminants)	N	L	H
10. Human Intrusions & Disturbance	War, Civil Unrest & Military Exercises (military sonar)	R	L	H
11. Invasive & Other Problematic Species & Genes	Invasive Non-Native/Alien Species (transmittable, viruses, parasites)	N	L	V
12. Invasive & Other Problematic Species & Genes	Problematic Native Species (algal blooms)	N	L	V

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