

**Common Name:** American lobster  
**Scientific Name:** *Homarus americanus*  
**Taxon:** Crustaceans

**SGCN – High Priority**

**Federal Status:** Not Listed  
**New York Status:** Not Listed

**Natural Heritage Program Rank:**  
 Global: Not Ranked  
 New York: Not Ranked  
 Tracked: No

**Synopsis:**

The American lobster, *Homarus americanus*, is a crustacean in the family Nephropidae. They are benthic organisms that burrow or take shelter in a variety of substrates including rocky or firm muddy bottoms. American lobsters can be found all along the continental shelf in the western North Atlantic with abundance decreasing from northern to southern areas. The American lobster is classified into three distinct stocks in U.S. waters: Gulf of Maine (GOM), Georges Bank (GB), and Southern New England (SNE) (ASMFC 2006). New York’s population lies within the SNE stock. While the GOM and GB stocks have been increasing in abundance over the past several years, the SNE stock has been witnessing a decline in abundance. According to the 2009 Atlantic States Marine Fisheries Commission (ASMFC) stock assessment and subsequent Technical Committee review, the SNE stock is witnessing recruitment failure, and that, coupled with continued fishing pressure and changing environmental factors is believed to be what is causing the decline (ASMFC 2009, 2010). Currently, the SNE stock is considered overfished but overfishing is not occurring. The GOM and GB stocks are not overfished and overfishing is not occurring (ASMFC 2009).

Abundance in the Long Island Sound (LIS) reached a peak in 1997 followed by a drop in abundance to levels consistent with previous years. In the early 2000s abundance levels began to drop and remained relatively low, reaching record lows in 2011. Decreased landings in the LIS were consistent with the pattern of decline seen in abundance levels. CT DEEP larval lobster surveys indicate that larval abundance in the LIS is currently at very low levels. Although not at the lowest relative to the whole the time series, both the eastern and western LIS larval recruitment are below their median thresholds.

In 1999, there was a lobster die-off in the Long Island Sound and lobster levels have not rebounded since. It was determined that this die-off was not caused by a single factor but rather several different factors combined including high bottom water temperatures, low dissolved oxygen, a paramoeba infection, and storm mixing of the water column that increased the bottom temperatures by one to two degrees Celsius in a 24 hour period. It is suggested that the temperatures alone could have caused the die-off, or could have made the lobsters more susceptible to hypoxia and infection by causing increased physiological stress. Lobster shell disease is also increasing in prevalence and severity, particularly in the east end and south shore of Long Island (NYSDEC 2005).

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

**Habitat Discussion:**

American lobsters begin their life as planktonic (free-swimming) larvae where they converge near surface waters to feed. After their fourth molt they settle on the ocean floor where they remain benthic for their adult lives. They have been found on a variety of substrates including: eel grass, rocks, firm mud, or marsh peat. In order to shelter themselves from predation, they typically prefer substrates in which they can create burrows (ASMFC 2006).

Lobsters can be found in the intertidal zone, inshore (up to depths of 40 meters) and offshore (up to 700 meters) along the continental shelf. Water with a temperature of 15-18°C and salinity of 20-25ppt is preferred, but American lobsters have been shown to exist in a wider range. However, lobsters exposed to temperatures and salinities outside of their preferred range for an extended period of time can be negatively affected physiologically (ASMFC 2006).

<b>Primary Habitat Type</b>
Estuarine; Brackish Deep
Estuarine; Brackish Shallow
Marine; Deep Sub-tidal

**Distribution:**

American lobster occurs in Long Island Sound.

<b>Threats to NY Populations</b>				
<b>Threat Category</b>	<b>Threat</b>	<b>Scope</b>	<b>Severity</b>	<b>Irreversibility</b>
1. Biological Resource Use	Fishing & Harvesting Aquatic Resources (legal harvest)	R	M	L
2. Climate Change & Severe Weather	Habitat Shifting & Alteration (increasing temperature)	P	H	V
3. Invasive & Other Problematic Species & Genes	Problematic Native Species (predation)	W	L	V
4. Biological Resource Use	Fishing & Harvesting Aquatic Resources (illegal harvest, commercial and recreational)	N	L	M
5. Pollution	Household Sewage & Urban Waste Water (hypoxia)	N	L	H
6. Invasive & Other Problematic Species & Genes	Problematic Native Species (shell disease/Paramoeba)	N	L	V
7. Pollution	Industrial & Military Effluents (cadmium, mercury, PCBs, dioxin)	R	L	M
8. Pollution	Industrial & Military Effluents (oil/chemical spills)	N	L	M
9. Pollution	Air-Borne Pollutants (Pesticide spraying for West Nile)	N	L	M
10. Pollution	Air-Borne Pollutants (ocean acidification)	P	L	V

**References Cited:**

Atlantic States Marine Fisheries Commission (ASMFC). 2006. American lobster: habitat fact sheet. Available online at <http://www.asmfc.org/>.

Atlantic States Marine Fisheries Commission (ASMFC). 2010. Recruitment failure in the southern New England lobster stock. American Lobster Technical Committee, ASMFC. April 17, 2010.

New York State Department of Environmental Conservation (NYSDEC). 2005. State Wildlife Comprehensive Plan - DRAFT Species Group Report For American lobster. [www.dec.ny.gov/docs/wildlife\\_pdf/appendixa2.pdf](http://www.dec.ny.gov/docs/wildlife_pdf/appendixa2.pdf). Feb. 2013.