Species Status Assessment

Class: Actinopterygii
Family: Syngnathidae
Scientific Name: *Hippocampus erectus*
Common Name: Lined Seahorse

Species synopsis:

This species is associated with submerged aquatic vegetation and is found from the southern tip of Nova Scotia in Canada, southward along the Atlantic coast to Mexico, the Caribbean, and Venezuela (Teixeira and Musick 2001, Project Seahorse 2003). It is most commonly found in coastal waters with aquatic vegetation, but can be found in deeper channels (Project Seahorse 2003). The lined seahorse has been found around Long Island as recently as 2012 (M. Richards, personal communication). Populations in the central-southern extant of the range are in decline as a result of overharvesting (Project Seahorse 2003). It is difficult to determine population trends at the northern limits of the lined seahorse's distribution.

I. Status

a. Current and Legal Protected Status

i. Federal Not listed **Candidate?** No

ii. New York Not listed

b. Natural Heritage Program Rank

i. Global Not ranked

ii. New York Not ranked **Tracked by NYNHP?** No

Other Rank:

IUCN Red List Category: - Vulnerable

Status Discussion:

This species is fairly common where it occurs however is considered vulnerable to overfishing for trade.

II. Abundance and Distribution Trends

a. North America

i. Abundance

__X__ declining ____increasing _____stable ____unknown

ii. Distribution:

__X__ declining ____increasing _____stable ____unknown

Time frame considered: _____

b. Regional

i. Abundance

__X__ declining ____increasing ____stable _____unknown

ii. Distribution:

__X__ declining ____increasing ____stable _____unknown

Regional Unit Considered: _Northeast U.S._____
Time Frame Considered: ___Past 20 years (Project Seahorse 2003)_____

c. Adjacent States and Provinces

CONNECTICUT **Not Present _____** **No data __X____**

i. Abundance

____ declining ____ increasing ____ stable __X__ unknown

ii. Distribution:

____ declining ____ increasing ____ stable __X__ unknown

Time frame considered: Unknown

Listing Status: Not listed SGCN? Yes

MASSACHUSETTS **Not Present _____** **No data __X____**

i. Abundance

____ declining ____ increasing ____ stable __X__ unknown

ii. Distribution:

____ declining ____ increasing ____ stable __X__ unknown

Time frame considered: _____

Listing Status: Not listed SGCN? No

NEW JERSEY **Not Present _____** **No data __X____**

i. Abundance

____ declining ____ increasing ____ stable __X__ unknown

ii. Distribution:

____ declining ____ increasing ____ stable __X__ unknown

Time frame considered: _____

Listing Status: Not listed SGCN? No

ONTARIO	**Not Present ___X___**	**No data _____**
PENNSYLVANIA	**Not Present ___X___**	**No data _____**
QUEBEC	**Not Present ___X___**	**No data _____**
VERMONT	**Not Present ___X___**	**No data _____**

d. NEW YORK **No data __X____**

i. Abundance

__X__ declining ____ increasing ____ stable _____ unknown

ii. Distribution:

__X__ declining ____ increasing ____ stable _____ unknown

Time frame considered: _____

Monitoring in New York.
There are annual trawl surveys in the Long Island Sound and surrounding water bodies.

Trends Discussion:

There is very little catch data available for this species, making it difficult to determine trends. This species is in decline in the central-southern extent of its range (Project Seahorse 2003).

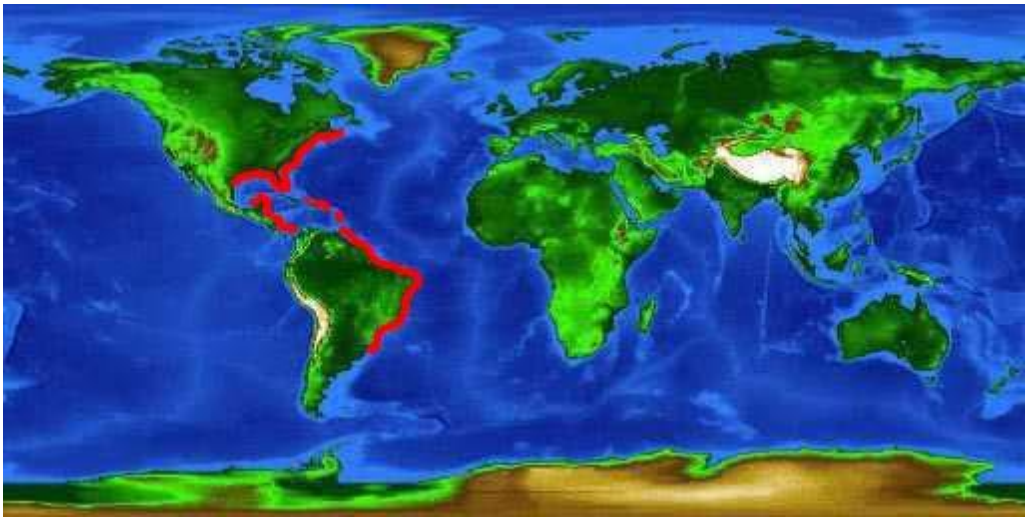

Figure 1: Global distribution of the lined seahorse (Bester no date).

III. New York Rarity, if known:

Historic	# of Animals	# of Locations	% of State
prior to 1970	_____	_____	_____
prior to 1980	_____	_____	_____
prior to 1990	_____	_____	_____

Details of historic occurrence:

There is no historic occurrence information available.

Current	# of Animals	# of Locations	% of State
	_____	_____	_____

Details of current occurrence:

Table 1 (below) includes data from the Western Long Island Seine Survey (1984-2012), Crustaceans WLIS Lobster Trawl Survey (2006-2007), and the Peconic Bay Small Mesh Trawl Survey (2006-2012). The associated years listed above only represent years with lined seahorse occurrences, and not necessarily the total duration of the individual surveys.

Table 1: Occurrences of lined seahorse in New York State waters (M. Richards, personal communication)

Location of Occurrence	Year Present
Jamaica Bay	1984-1997, 1999, 2001-2002, 2005-2008, 2010
Staten Island	1984-1986, 1988-1989
Hempstead Harbor	1984
Little Neck Bay	1984, 1988, 1998, 2002,-2003, 2006, 2007
Manhasset Bay	1986, 1988, 1991, 1998, 2000-2001
Shinnecock Bay	1987
Long Island Sound West	1990, 2006
Great South Bay Islip	2001
Westchester Shoreline	2006
Little Peconic Bay	2006-2009, 2011
Great Peconic Bay	2006, 2008, 2009, 2012
Shelter Island Sound South	2006-2009
Shelter Island Sound North	2007-2008
Flanders Bay	2009
South Oyster Bay	1984-1989

New York's Contribution to Species North American Range:

% of NA Range in New York	Classification of New York Range
____ 100 (endemic)	____ Core
____ 76-99	__X__ Peripheral
____ 51-75	____ Disjunct
____ 26-50	Distance to core population:
__X__ 1-25	__~200 miles_____

IV. Primary Habitat or Community Type:

1. Marine, Shallow Subtidal
2. Estuarine, Brackish Shallow Subtidal, Aquatic Bed
3. Marine Eelgrass Meadow

Habitat or Community Type Trend in New York:

____ Declining __X__ Stable ____ Increasing ____Unknown

Time frame of decline/increase: _____

Habitat Specialist? _____ Yes __X___ No

Indicator Species? _____ Yes __X___ No

Habitat Discussion:

The lined seahorse can be found in waters up to 240 feet in depth (Project Seahorse 2003). It is associated with aquatic vegetation such as seagrass, mangroves, sponges, and floating Sargassum (Dias et al. 2002, Project Seahorse 2003, Sedberry and Webster 2005, Bester no date). It can be found at the surface and bottom of both shallow water and deeper areas in channels, bays, along beaches, and in or near salt marshes (Dias et al. 2002, Project Seahorse 2003).

V. New York Species Demographics and Life History

__X__ Breeder in New York

__X__ Summer Resident

__X__ Winter Resident

____ Anadromous

____ Non-breeder in New York

____ Summer Resident

____ Winter Resident

____ Catadromous

____ Migratory only

____Unknown

Species Demographics and Life History Discussion:

There is little information available on the biology of this species (Teixeira and Musick 2001). Breeding occurs from May to October (Laurie et al. 1999). Individuals normally reach sexual maturity at about 2.2 inches. Males keep eggs in a brood pouch (Teixeira and Musick 2001)for the duration of the 20-21 day gestation period (Laurie et al. 1999). This species has been known to exhibit aggressive courtship behaviors including tail wrestling and snapping with the snout (Teixeira and Musick 2001). Both males and females display color changes during courtship (Sweat 2009). The female transfers the eggs to the male's pouch, brood size can range from 77 to 1,552 eggs (Teixeira and Musick 2001, Sweat 2009).

VI. Threats:

This species is threatened by collection for domestic folk medicine and souvenir trades, and domestic and international aquarium trades in Mexico, Brazil, and for domestic trades in Central America (Dias et al. 2002, Project Seahorse 2003). The lined seahorse is also often found as bycatch in shrimp trawl fisheries in U.S., Mexico and Central America, some of which is retained for export for use in the traditional Chinese medicine trade (Dias et al. 2002, Project Seahorse 2003). This species is also threatened by habitat degradation from pollution, coastal development, and excess sedimentation (Project Seahorse 2003). Loss of salt marsh and submerged aquatic vegetation beds from tidal flow restrictions and habitat degradation is also a threat (NYSDEC 2005).

Are there regulatory mechanisms that protect the species or its habitat in New York?

_____ No ____ Unknown

__X__ Yes

The lined seahorse is listed in Appendix II of CITES which regulates the trade and harvest of this species.

Describe knowledge of management/conservation actions that are needed for recovery/conservation, or to eliminate, minimize, or compensate for the identified threats:

Sanctuary zones should be created where fishing is prohibited (Dias et al. 2002).

The New York State Wildlife Action Plan (NYSDEC 2005) identifies management actions for submerged aquatic vegetation dependent species that include:

- Submerged aquatic vegetation habitat protection and restoration are crucial elements in any conservation and management plan for SAV dependent species. Aspects of submerged aquatic vegetation habitat protection and restoration will be included in the final watershed recommendations.

- Salt marsh habitat protection and restoration may be important elements in any conservation and management plan for SAV dependent species. Aspects of salt marsh habitat protection and restoration will be included in the final watershed.

- Update SAV habitat maps and collect appropriate information on fisheries utilization.

- Continue existing surveys, which capture SAV dependent species and develop new directed surveys as appropriate to assess the needs of this species group.

VII. References

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