

Species Status Assessment

Class: Actinopterygii
Family: Cottidae
Scientific Name: *Cottus recai*
Common Name: Spoonhead sculpin

Species synopsis:

The spoonhead sculpin is a freshwater fish found in moderately deep lakes, larger rivers, and swift streams (Smith 1985, NatureServe 2012). Its historical distribution is broad, ranging from all of the Great Lakes and the St. Lawrence River to the Lower Mackenzie River and to the Peace and Upper Missouri Rivers in Alberta (Cooper 1983, Smith 1985, NatureServe 2012). New York is close the southern limit of the spoonhead sculpin distribution and this species is in decline across most of the southern extent of its range (NatureServe 2012).

I. Status

a. Current and Legal Protected Status

- i. **Federal** Not Listed **Candidate?** No
- ii. **New York** Endangered, SGCN

b. Natural Heritage Program Rank

- i. **Global** G5
- ii. **New York** SH **Tracked by NYNHP?** Yes

Other Rank:

Committee on the Status of Endangered Wildlife in Canada (COSEWIC): Not at Risk (01Apr1989)
Species of Northeast Regional Conservation Concern (Therres 1999)

Status Discussion:

This species is listed as Threatened or a Species of Concern in Michigan, Ohio, Montana, Alberta and Manitoba (Houston 1990, NatureServe 2012). Spoonhead sculpin is listed as extirpated or possibly extirpated in Illinois and Pennsylvania, as well as in New York where it is listed as state endangered

(NatureServe 2012). Populations in Quebec and Ontario are ranked as Secure and Apparently Secure respectively.

II. Abundance and Distribution Trends

a. North America

i. Abundance

declining increasing stable unknown

ii. Distribution:

declining increasing stable unknown

Time frame considered: Past 10 years (NatureServe 2013)

b. Regional

i. Abundance

declining increasing stable unknown

ii. Distribution:

declining increasing stable unknown

Regional Unit Considered: Great Lakes

Time Frame Considered: Past 10 years (NatureServe 2013)

c. Adjacent States and Provinces

CONNECTICUT	Not Present <u> X </u>	No data _____
MASSACHUSETTS	Not Present <u> X </u>	No data _____
NEW JERSEY	Not Present <u> X </u>	No data _____
ONTARIO	Not Present <u> X </u>	No data _____
PENNSYLVANIA	Not Present <u> X </u>	No data _____
VERMONT	Not Present <u> X </u>	No data _____
QUEBEC	Not Present _____	No data _____

i. Abundance

___ declining ___ increasing X stable ___ unknown

ii. Distribution:

___ declining ___ increasing X stable ___ unknown

Time frame considered: Past 20 years (NatureServe 2013)

Listing Status: Secure

d. NEW YORK

No data X

i. Abundance

___ declining ___ increasing ___ stable ___ unknown

ii. Distribution:

___ declining ___ increasing ___ stable ___ unknown

Time frame considered: _____

Monitoring in New York.

While no surveys specifically target spoonhead sculpin in New York, NYSDEC and USGS have conducted four bottom trawling assessments each year in the eastern basin of Lake Ontario since the 1970s; none have been captured (J. Lantry, personal communication).

Trends Discussion:

This species is in decline in all of the Great Lakes except Lake Superior where it is still common (Houston 1990, Potter and Fleischer 1992). In New York it has been found in Lake Erie and Lake Ontario (Smith 1985); however, the Lake Ontario reports are not authentic records (Potter and Fleischer 1992). There are no records of this species in Lake Huron since 1973 (Potter and Fleischer 1992).

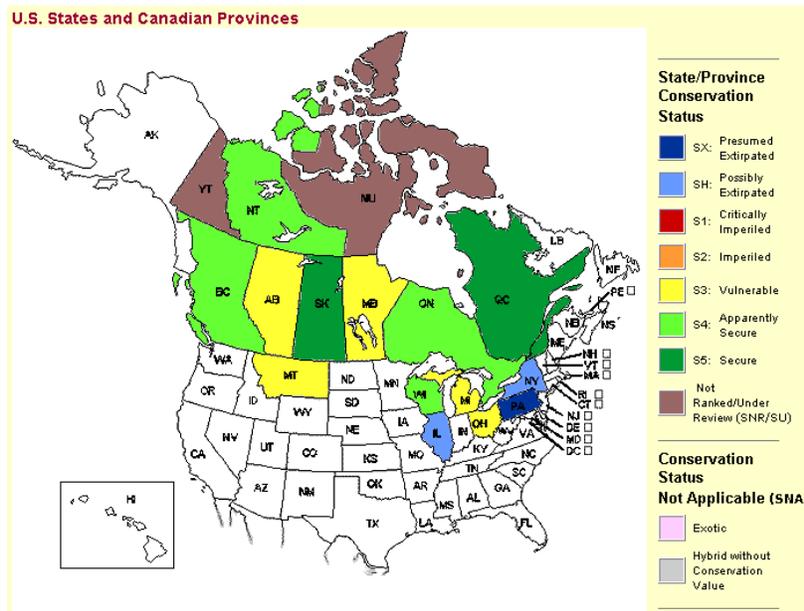


Figure 1: Conservation status of spoonhead sculpin in North America (NatureServe 2013).

III. New York Rarity, if known:

Historic	<u># of Animals</u>	<u># of Locations</u>	<u>% of State</u>
prior to 1970	_____	_____	_____
prior to 1980	_____	_____	_____
prior to 1990	_____	<u>0</u>	_____

Details of historic occurrence:

In New York, the spoonhead sculpin was historically found in Lake Erie and there have been unverified reports in Lake Ontario (Smith 1985, Potter and Fleischer 1992, NYSDEC 2013). No specimens have been collected in Lake Erie since the 1950s (Smith 1985, Potter and Fleischer 1992).

Current	<u># of Animals</u>	<u># of Locations</u>	<u>% of State</u>
	_____	<u>0</u>	_____

Details of current occurrence:

The spoonhead sculpin is considered to be possible extirpated from New York (Smith 1985, NYSDEC 2013).

New York’s Contribution to Species North American Range:

% of NA Range in New York	Classification of New York Range
<u> </u> 100 (endemic)	<u> </u> Core
<u> </u> 76-99	<u> X </u> Peripheral
<u> </u> 51-75	<u> </u> Disjunct
<u> </u> 26-50	Distance to core population:
<u> X </u> 1-25	<u> ~100 miles </u>

IV. Primary Habitat or Community Type:

1. Summer-stratified Monomictic Lake
2. Great Lakes Deepwater Community

3. Large/Great River

Habitat or Community Type Trend in New York:

Declining Stable Increasing Unknown

Time frame of decline/increase: _____

Habitat Specialist? Yes No

Indicator Species? Yes No

Habitat Discussion:

In the Great Lakes this species is found in moderately deep water from the shore to 450 feet, its optimum depth being 200 feet (Smith 1985). Farther north it can be found in large rivers and sometimes swift streams, and occasionally it will be found in brackish waters (Smith 1985, Houston 1990).

V. New York Species Demographics and Life History

Breeder in New York

Summer Resident

Winter Resident

Anadromous

Non-breeder in New York

Summer Resident

Winter Resident

Catadromous

Migratory only

Unknown

Species Demographics and Life History Discussion:

The spoonhead sculpin probably spawns in the summer (Cooper 1983, Smith 1985). Females can produce 280-1,200 eggs (Hendricks 1997). Males clear a small cave under a rock and spawn with several females on the roof of the cave; eggs are then guarded by the male until shortly after hatching (Hendricks 1997, ODNR 2013). This species rarely grows longer than 2.5 inches (Cooper 1983). Spoonhead sculpin feed mainly on amphipods, *Mysis*, and copepods but may also feed on fish eggs and insects (NatureServe 2012).

VI. Threats:

No major threats are known to the majority of the spoonhead sculpin populations (NatureServe 2012). Causes of the decline of populations in the southern extent the range including New York are unknown but might include pesticide and herbicide pollution, predation by or competition with the alewife, habitat degradation due to siltation, and chronic trace contaminant exposure or changes in species composition in the deepwater communities (NatureServe 2012).

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

No Unknown

Yes

The spoonhead sculpin is listed as an endangered species in New York and is protected by Environmental Conservation Law (ECL) section 11-0535 and the New York Code of Rules and Regulations (6 NYCRR Part 182). A permit is required for any proposed project that may result in a take of a species listed as Threatened or Endangered, including, but not limited to, actions that may kill or harm individual animals or result in the adverse modification, degradation or destruction of habitat occupied by the listed species.

The Protection of Waters Program provides protection for rivers, streams, lakes, and ponds under Article 15 of the NYS Conservation Law.

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

Research to determine if there are any extant populations in New York’s waterways should continue.

Conservation actions following IUCN taxonomy are categorized in the following table.

Conservation Actions	
Action Category	Action
Land/Water Management	Habitat/Natural Process Restoration
Species Management	Species Recovery
Species Management	Species Reintroduction
External Capacity Building	Alliance & Partnership Development

The Comprehensive Wildlife Conservation Strategy (NYSDEC 2005) includes recommendations for the following actions for extirpated fishes, which includes spoonhead sculpin.

Habitat monitoring:

___ Inventories will be completed in all areas where restoration might be practical.

Relocation/reintroduction:

___ Re-establish, if feasible, populations of those endangered fish species now believed to be extirpated from New York.

VII. References

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