

Species Status Assessment

Class: Actinopterygii
Family: Catostomidae
Scientific Name: *Erimyzon sucetta*
Common Name: Lake chubsucker

Species synopsis:

The lake chubsucker is a freshwater fish. It can be found in clear, highly vegetated areas of lakes and slow moving parts of streams (Smith 1985). Its range includes most states from New York southward to Florida and westward to North Dakota, Nebraska and even Texas (NatureServe 2012). Many populations are in decline (DFO 2011, NatureServe 2012).

The species had been considered possibly extirpated in New York, with the last record documented in the 1930s (NYSDEC 2013). In 2008, however, the species was documented in the headwaters of the Welland River, just west of the Niagara River in Ontario (D. Carlson, pers. comm.). A refugia population exists there and monitoring efforts continue by the Ontario Ministry of Natural Resources (Marson et al. 2009).

I. Status

a. Current and Legal Protected Status

- i. **Federal** _____ **Not Listed** _____ **Candidate?** No
ii. **New York** _____ **Threatened; SGCN** _____

b. Natural Heritage Program Rank

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

Other Rank:

Canadian Species at Risk Act (SARA) Schedule 1/Annexe 1 Status: Endangered
Committee on the Status of Endangered Wildlife in Canada (COSEWIC): Endangered

Lake chubsucker was listed on Schedule 1 of the Species at Risk Act (SARA) when the Act was proclaimed in June 2003. It is now listed as Endangered on Schedule 1.

Status Discussion:

Lake chubsucker populations have declined throughout most of its range in the eastern United States. Over the past ten years, populations have likely seen a decline of 10-30%, and 50-70% in the past five decades (NatureServe 2012). The populations found in the southeastern states are thought to be more stable than those of the northern states (NatureServe 2012).

Remaining populations are small and exist in a restricted geographic Canadian range. Lake chubsucker has very specific and narrow habitat preferences; as such, populations are under continued stress. Two populations have been lost, and of the 11 extant populations, 3 are in serious decline as a result of the continuing and increasing threats posed by agricultural, industrial and urban development that are expected to impact the remaining populations of Lakes Erie and St. Clair. Lake chubsucker was listed on Schedule 1 of the Species at Risk Act (SARA) when the Act was proclaimed in June 2003. Lake chubsucker is now listed as Endangered on Schedule 1 (DFO 2011).

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: Past 20 years (NatureServe 2012)

b. Regional

i. Abundance

 X declining increasing stable unknown

ii. Distribution:

 X declining increasing stable unknown

Regional Unit Considered: Region 5 - Northeast

Time Frame Considered: Past 20 years (NatureServe 2012)

c. Adjacent States and Provinces

CONNECTICUT Not Present X No data

MASSACHUSETTS Not Present X No data

NEW JERSEY Not Present X No data

VERMONT Not Present X No data

ONTARIO Not Present No data

i. Abundance

 X declining increasing stable unknown

ii. Distribution:

 X declining increasing stable unknown

Time frame considered: Past 20 years (NatureServe 2012)

Listing Status: Threatened

Trends Discussion:

Lake chubsucker populations have been in decline in the eastern United States for the past 30 years (NatureServe 2012). This species has been extirpated or localized in many watersheds of New York, Pennsylvania, Ohio, Missouri, Arkansas, Tennessee, and Iowa (NatureServe 2012). Many populations assessed in Canada are in decline or extirpated (DFO 2011). The 2008 record in Lyons Creek at the headwaters of the Welland River in Ontario indicate that lake chubsucker likely still occurs in Lake Ontario and could show up in one of the bays along New York's shoreline (D. Carlson, pers. comm.).

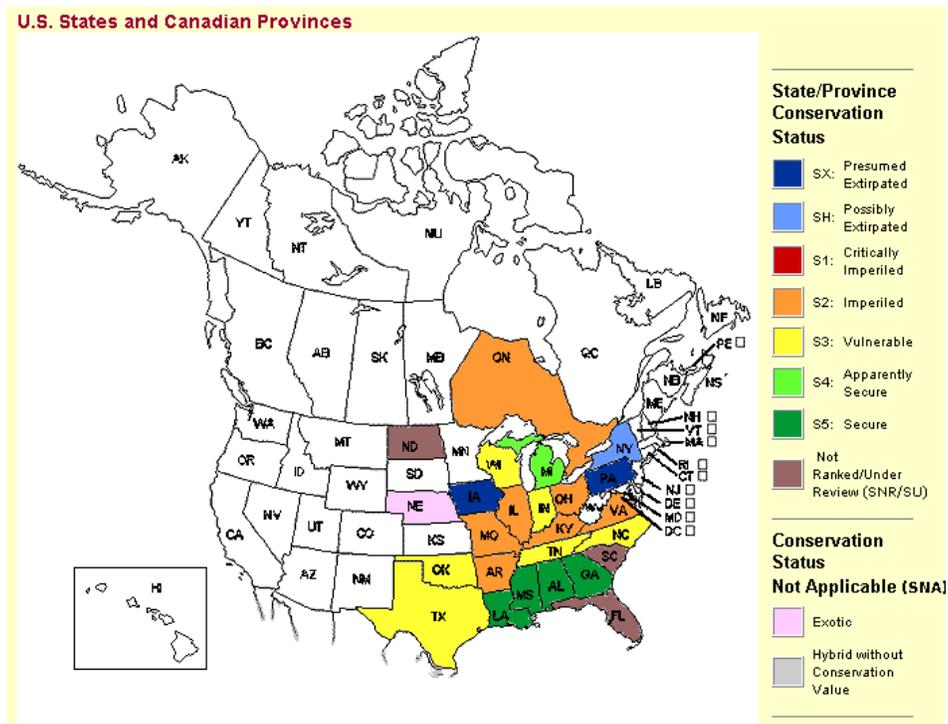


Figure 1: Conservation status of lake chubsucker in North America (NatureServe 2012).

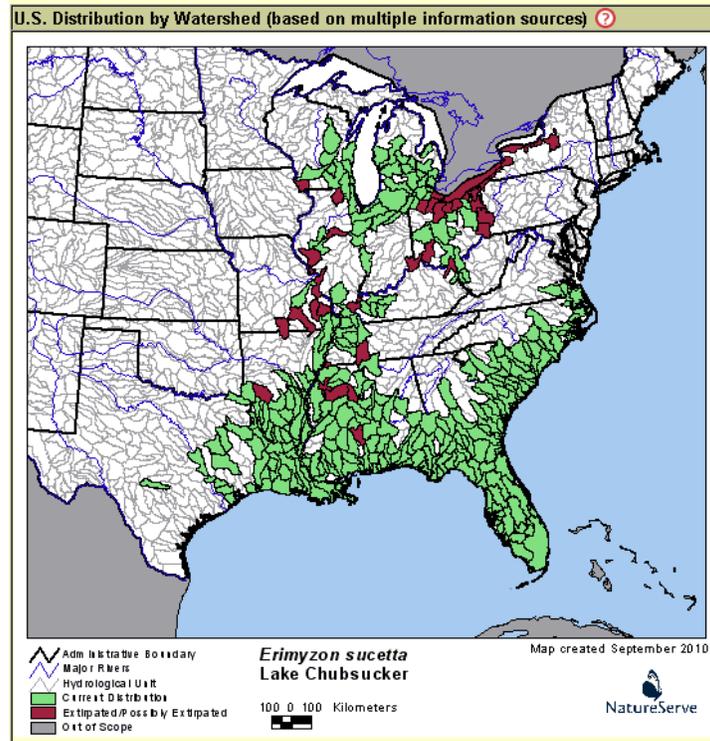


Figure 2: Lake chubsucker distribution in the United States by watershed (NatureServe 2012).

III. New York Rarity, if known:

Historic	<u># of Animals</u>	<u># of Locations</u>	<u>% of State</u>
prior to 1970	_____	_____	<u>1%</u>
prior to 1980	_____	_____	_____
prior to 1990	_____	_____	_____

Details of historic occurrence:

The lake chubsucker has been found in embayments along the southern shore of Lake Ontario and the Lake Erie drainage basin (NYSDEC 2013). It was found in the Oneida, Salmon-Sandy, Irondequoit-Ninemile, Oak Orchard-Twelvemile, Buffalo-Eighteenmile, and Chautauqua-Conneaut watersheds, but is now extirpated (NatureServe 2012).

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

Details of current occurrence:

There have been no reports of lake chubsucker in New York for the past 60 years (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> ~500 miles </u>

IV. Primary Habitat or Community Type:

1. Oligotrophic Pond
2. Headwater/Creek

- 3. Backwater Slough
- 4. Oxbow Lake
- 5. Reservoir/Artificial Impoundment
- 6. Summer-stratified Monomictic Lake

Habitat or Community Type Trend in New York:

Declining Stable Increasing Unknown

Time frame of decline/increase: Past 20 years (NatureServe 2012)

Habitat Specialist? Yes No

Indicator Species? Yes No

Habitat Discussion:

The lake chubsucker is found in ponds, lakes, oxbows, sloughs, swamps, impoundments, quiet pools of creeks and small rivers, and similar waters of little or no flow that are clear and have bottoms of sand or silt mixed with organic debris (DFO 2011, NatureServe 2012, NYSDEC 2013). These waters are typically clear and vegetated with sandy or fine graveled bottoms (NYSDEC 2012).

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:

Lake chubsuckers spawn in June-July (Smith 1985). Eggs are non-adhesive, about 2 mm in diameter, and broadcast over vegetation. Each female can produce between 3,000 and 20,000 eggs that hatch within 5 to 7 days (Smith 1985). Individuals reach sexually maturity at three years of age, have a lifespan of approximately 5-7 years, and can grow to about 41 cm (DFO 2011, NatureServe 2012). They prey on small crustaceans, chironomid larvae, algae, and other small aquatic organisms (NatureServe 2012).

VI. Threats:

Lake chubsucker is extremely susceptible to habitat change driven by urban, industrial and agricultural practices resulting in increased turbidity (DFO 2011). Siltation from poor agricultural practices and drainage of already limited natural habitat for other anthropogenic uses are the main threats to this species and are causing population declines (NatureServe 2012). Some areas with mining are experiencing water acidification, which may also contribute to population decline (NatureServe 2012).

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

No Unknown
 Yes

The lake chubsucker is listed as a threatened 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. However, agricultural activity is exempt from these regulations and not all streams are adequately protected by Article 15.

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

Agricultural best management practices which reduce siltation and excess runoff are needed to help maintain the integrity of the remaining lake chubsucker habitat. Widespread regulatory mechanisms to reduce acid deposition and mercury accumulation will benefit this species.

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

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 the lake chubsucker.

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

- DFO. 2011. Recovery Potential Assessment of Lake Chubsucker (*Erimyzon sucetta*) in Canada. DFO Can. Sci. Advis. Sec. Sci. Advis. Rep. 2011/033.
- Marson, D., N. E. Mandrak, and D. A. R. Drake. 2009. Targeted sampling of fish species at risk in Lyons and Tea Creeks, 2004. Canadian Manuscript Rep. Fish. Aquat. Sci 2910;iv + 18p.
- NatureServe. 2012. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Available at: <http://www.natureserve.org/explorer>. (Accessed: February 7, 2013).
- NYSDEC. 2013. Lake chubsucker. Bureau of Fisheries. Available at: <http://www.dec.ny.gov/animals/26036.html> (Accessed: February 7, 2013).
- Smith, L.C. 1985. The Inland Fishes of New York State. NYSDEC. Albany, NY.

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