

Species Status Assessment

Class: Osteichthyes (bony fishes)
Family: Cyprinidae (minnow)
Scientific Name: *Erimystax dissimilis*
Common Name: Streamline chub

Species synopsis:

Disjunct populations of the streamline chub occur in New York, Pennsylvania, Ohio, Indiana, Missouri, Arkansas, Alabama, Tennessee, Kentucky, North Carolina, Virginia, and West Virginia. The streamline chub occurs in medium-sized and larger streams with clean gravel and is native to the eastern Allegheny watershed. Increases in range and abundance have been reported in the last 20 years and its range seems secure.

I. Status

a. Current and Legal Protected Status

- i. **Federal** None **Candidate:** No
ii. **New York** Species of Special Concern, SGCN

b. Natural Heritage Program Rank

- i. **Global** G4
ii. **New York** S1 **Tracked by NYNHP** Yes

Other Rank:

Status Discussion:

Streamline chub has a global rank of Apparently Secure and a New York rank of Critically Imperiled.

II. Abundance and Distribution Trends

a. North America

i. Abundance

declining increasing stable unknown

ii. Distribution:

declining increasing stable unknown

Time frame considered: Unknown but likely stable since 1977

b. Regional

i. Abundance

declining increasing stable unknown

ii. Distribution:

declining increasing stable unknown

Regional Unit Considered: Northeast

Time Frame Considered: _____

Monitoring in New York.

Monitoring programs are carried out by the NYSDEC Rare Fish Unit, 1998-2012.

Trends Discussion:

In New York, streamline chub has historically been found in 5 waters and their range is not declining (or gone or dangerously sparse) in the one watershed. They were abundant in the eastern subbasin of the Allegheny watershed in 1998-2011, and there were no apparent declines.

The species has always been rare, and the only collections in 1937 were in the Allegheny River, at 2% of the sites. There has been a significant increase in catches (as % frequency occurrence) in comprehensive stream surveys of the Allegheny watersheds shifting from 3% in the 1930s to 9% in 2000s.

The distribution of this species among subbasins (HUC 10) within the one watershed has undergone some change, with records from the same three units in both the recent and historic period plus three additional units in recent times. Statewide, the number of individual site records for this species has been 140 for all time periods, 80 in the last 30 years, and 49 since 1993. There are no concerns for their status at present.

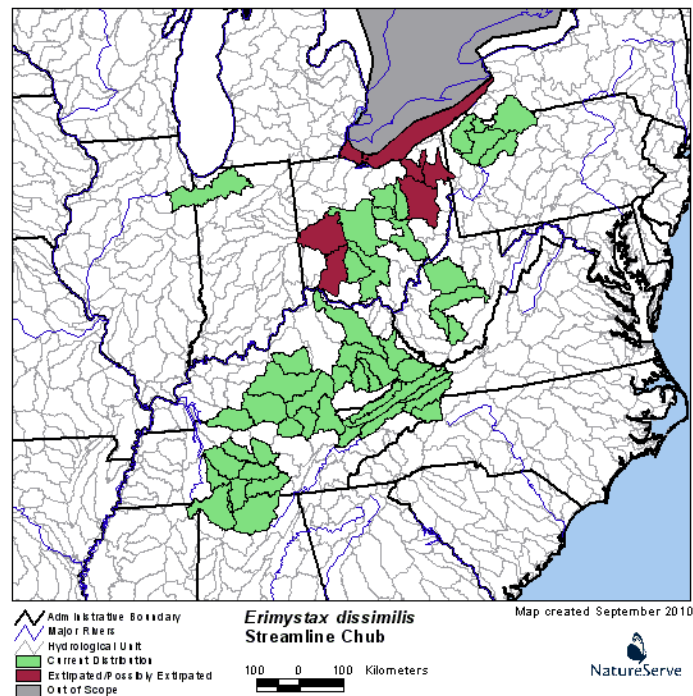


Figure 1. U.S. Distribution of streamline chub by watershed (NatureServe 2012).

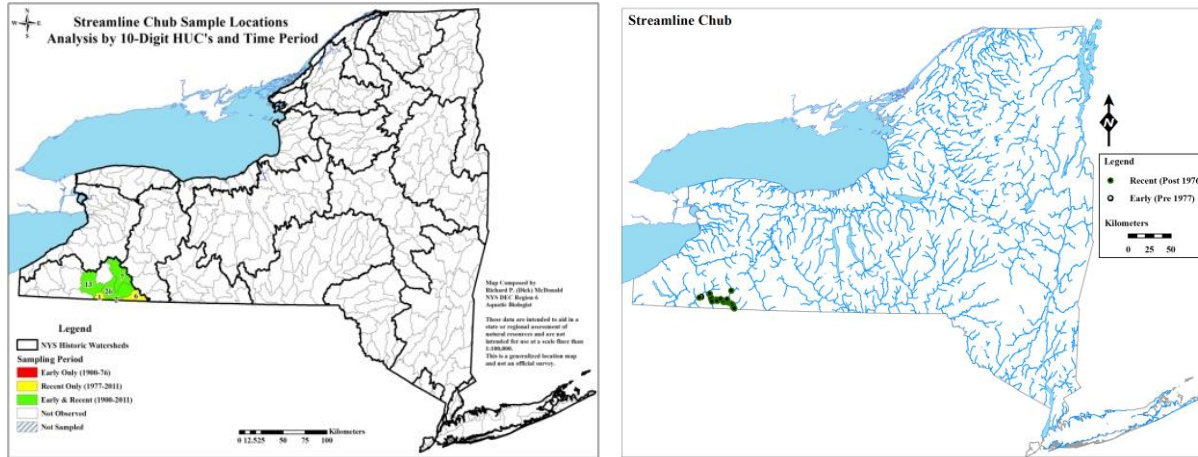


Figure 2. Streamline chub distribution in New York, depicting fish sampled before 1977 and from 1977 to current time, shown with the corresponding HUC-10 units where they were found and the number of records.

Watershed name	Total # HUC10	Early only	Recent only	both
Allegheny	6	0	3	3

Table 1. Records of rare fish species in hydrological units (HUC-10) are shown according to their watersheds in early and recent time periods (before and after 1977) to consider loss and gains. Further explanations of details are found in Carlson (2012).

III. New York Rarity, if known:

Historic	<u># of Animals</u>	<u># of Locations</u>	<u>% of State</u>
prior to 1977	_____	<u>60 site records</u>	<u>1/18 watersheds</u>
prior to 1980	_____	_____	_____
prior to 1990	_____	_____	_____

Details of historic occurrence:

Streamline chub was found in the Allegheny River and tributaries including Olean, Ischua, Oil, Fivemile and Tunungwant creeks (Leigey et al. 1955, Eaton et al. 1979, 1982).

Current	<u># of Animals</u>	<u># of Locations</u>	<u>% of State</u>
(since 1977)	_____	<u>80 site records</u>	<u>1/18 watersheds</u>

Details of current occurrence:

This species is currently found in the Allegheny River and tributaries including Olean, Ischua, Oil, Oswayo, Fivemile, and Tunungwant creeks, except it is no longer found downstream of Salamanca in the impoundment (Eaton et al. 1979; 1982, Becker 1982, Daniels 1989, Morse et al. 2009).

New York's Contribution to Species North American Range:

% of NA Range in New York

___ 100 (endemic)
 ___ 76-99
 ___ 51-75
 ___ 26-50
X 1-25

Classification of New York Range

___ Core
X Peripheral
X Disjunct

Distance to core population:

200 mi

IV. Primary Habitat or Community Type:

1. Medium River, Low-Moderate Gradient, Assume Moderately Buffered, Transitional Cool

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:

According to Smith (1985), this chub lives in riffles and over bars in moderate sized streams with clean course gravel. It is also found in moderate and slow runs and in well-flowing portions of pools (Jenkins and Burkhead 1994, Morse et al. 2009). Trautman (1981) noted its disappearance after a riffle became silted. Such impacts in the Allegheny River are unknown, but it is no longer found below Salamanca in Allegheny Reservoir. In New York, the habitats seem secure, but are poorly understood.

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 streamline chub has a relatively short life span. Little is known about the life history of this species (Werner 2004). It is thought to spawn in the spring during May and June. It feeds while in a compact aggregation with others and preys on benthic insect larvae and plant materials.

VI. Threats:

The Allegheny River has been impounded by the Kinzua Dam (which was completed in 1967, upstream of Warren, Pennsylvania), and the dam eliminated habitat and effectively isolated the population of the streamline chub in New York. This could have a negative effect on the population since immigration of specimens from farther downstream is prevented. Water quality in the New York section of the upper Allegheny is degraded because of industrial and domestic pollution and agricultural runoff. In addition, Trautman (1981) noted the disappearance of this species at a previously occupied site after the riffle became silted.

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

No Unknown
 Yes

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:

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

Conservation Actions	
Action Category	Action
Land/Water Protection	Resource/Habitat Protection
Land/Water Management	Habitat/Natural Process Restoration
Law/Policy	Policy/Regulation Change/Implementation
External Capacity Building	Alliance & Partnership Development

The Comprehensive Wildlife Conservation Strategy (NYSDEC 2005) includes recommendations for the following actions for the streamline chub.

Habitat Restoration:

---- Habitat losses and restoration are part of a State Wildlife Grants project from 2003 that is directed at the Allegheny watershed.

Population Monitoring:

---- Surveys of the Allegheny River and tributaries should occur at 10-20 year intervals to evaluate species trends

VII. References

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