Cyprinus micristius (a carp, no common name)

Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, September 2011
Revised, November 2018
Web Version, 1/30/2019

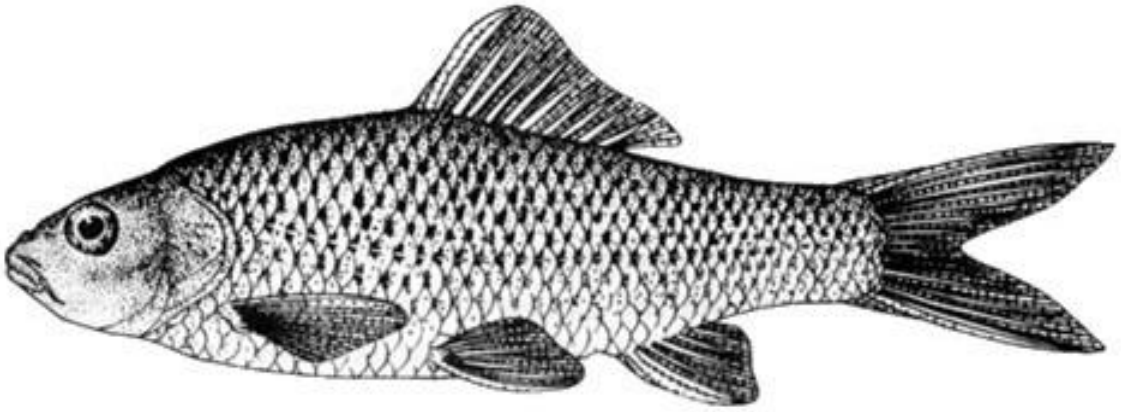

Image: Chinese Academy of Fishery Sciences. Licensed under Creative Commons BY-NC 3.0 Unported. Available: http://www.fishbase.se/photos/PicturesSummary.php?ID=9781&what=species. (2011).

1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2011):

"Asia: Dian chi Lake, Yunnan, China."

"Formerly known from the Dianchi Lake, Fuxian Lake and Xingyun Lake of Yunnan. Apparently extinct in the Dianchi and Xingyun lakes and a small population is existing in the Fuxian Lake."

Status in the United States

No records of *Cyprinus micristius* in the wild or in trade in the United States were found.

Means of Introductions in the United States

No records of *Cyprinus micristius* in the wild in the United States were found.

Remarks
From Froese and Pauly (2018):

"Critically Endangered"

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing
According to Fricke et al. (2018), *Cyprinus micristius* Regan 1906 is the valid and original name for this species.

From ITIS (2018):

"Kingdom Animalia
Subkingdom Bilateria
Infrakingdom Deuterostomia
Phylum Chordata
Subphylum Vertebrata
Infraphylum Gnathostomata
Superclass Actinopterygii
Class Teleostei
Superorder Ostariophysi
Order Cypriniformes
Superfamily Cyprinoidea
Family Cyprinidae
Genus *Cyprinus*
Species *Cyprinus micristius* Regan 1906"

Size, Weight, and Age Range
From Froese and Pauly (2018):

"Max length : 20.0 cm TL male/unsexed; […]; common length : 10.4 cm SL male/unsexed; [Nichols 1943]."

Environment
From Froese and Pauly (2018):

"Freshwater; benthopelagic."

Climate/Range
From Froese and Pauly (2018):

"Subtropical; 25°N - 24°N"

Distribution Outside the United States

Native

From Froese and Pauly (2011):

"Asia: Dian chi Lake, Yunnan, China."

"Formerly known from the Dianchi Lake, Fuxian Lake and Xingyun Lake of Yunnan. Apparently extinct in the Dianchi and Xingyun lakes and a small population is existing in the Fuxian Lake."

Introduced

No records of *Cyprinus micristius* introductions were found.

Means of Introduction Outside the United States

No records of *Cyprinus micristius* introductions were found.

Short Description

From Froese and Pauly (2018):

"Body red in upper half part of eyes; dark gray on back, light yellow on lower sides and abdomen; dorsal and caudal fins grayish green and margins of other fins yellow. Body carp-shaped, compressed and back slightly convex; barbels 2 pairs."

From Yang et al. (2010):

"It should be noted that, although all *Cyprinus* species possess serrated anal spine, some of them have fewer than 14 branched dorsal-fin rays, e.g. *Cyprinus micristius* (10–12), […]"

Biology

From Yang et al. (2008):

"Occurs in calm water with plenty of aquatic vegetation. It is a microphagic omnivore feeding mainly on shrimps (Wu et al. 1963)."

"Spawning occurs from May to July around lake periphery over mud and sand (Wu et al. 1963)."

Human Uses

From Yang et al. (2008):

"[…] main commercial fish catch prior to the 1960s (Zhou 1989)."

Diseases

No information on diseases of *Cyprinus micristius* was found. **No records of OIE-reportable diseases were found.**

Threat to Humans

From Froese and Pauly (2018):

"Harmless"

3 Impacts of Introductions

No records of *Cyprinus micristius* introductions were found; therefore, there is no evidence of impacts of introductions.

4 Global Distribution

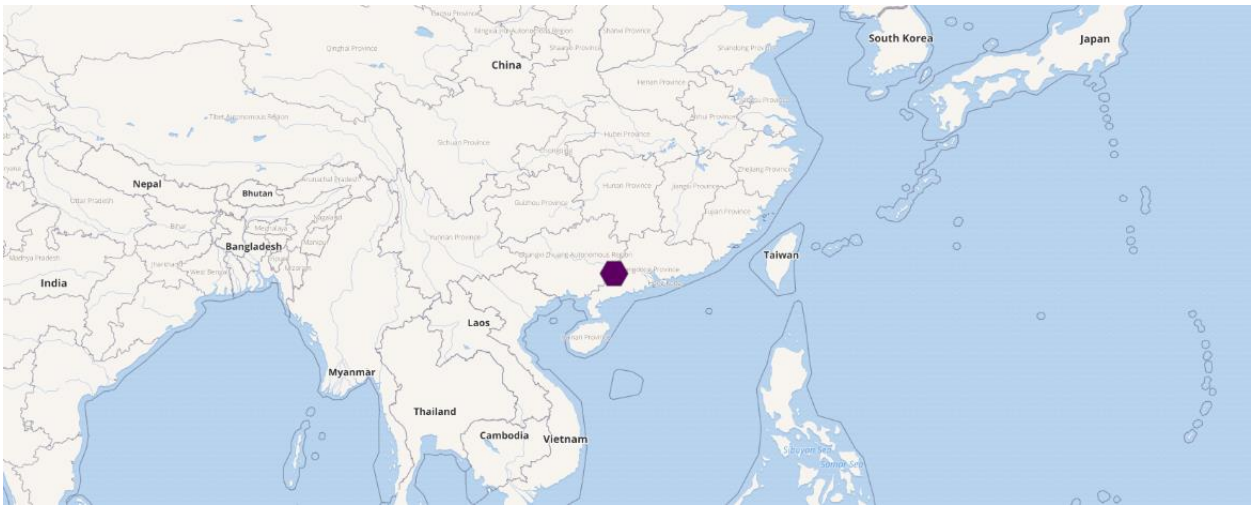

Figure 1. Known global distribution of *Cyprinus micristius*. Locations are in Yunnan, China. Map from GBIF Secretariat (2018).

5 Distribution Within the United States

No records of *Cyprinus micristius* in the wild in the United States were found.

6 Climate Matching

Summary of Climate Matching Analysis

The climate match for *Cyprinus micristius* was low for much of the contiguous United States. There were areas of medium climate match in southeastern Texas, northern Florida, southeastern Georgia, and eastern South Carolina. Peninsular Florida had a high climate match. The Climate 6 score (Sanders et al. 2018; 16 climate variables; Euclidean distance) for the contiguous United States was 0.013, medium. The range for a medium climate score is between 0.005 and 0.103. All states had low individual climate scores except for Florida, which had a high individual score and Georgia, which had a medium individual score.

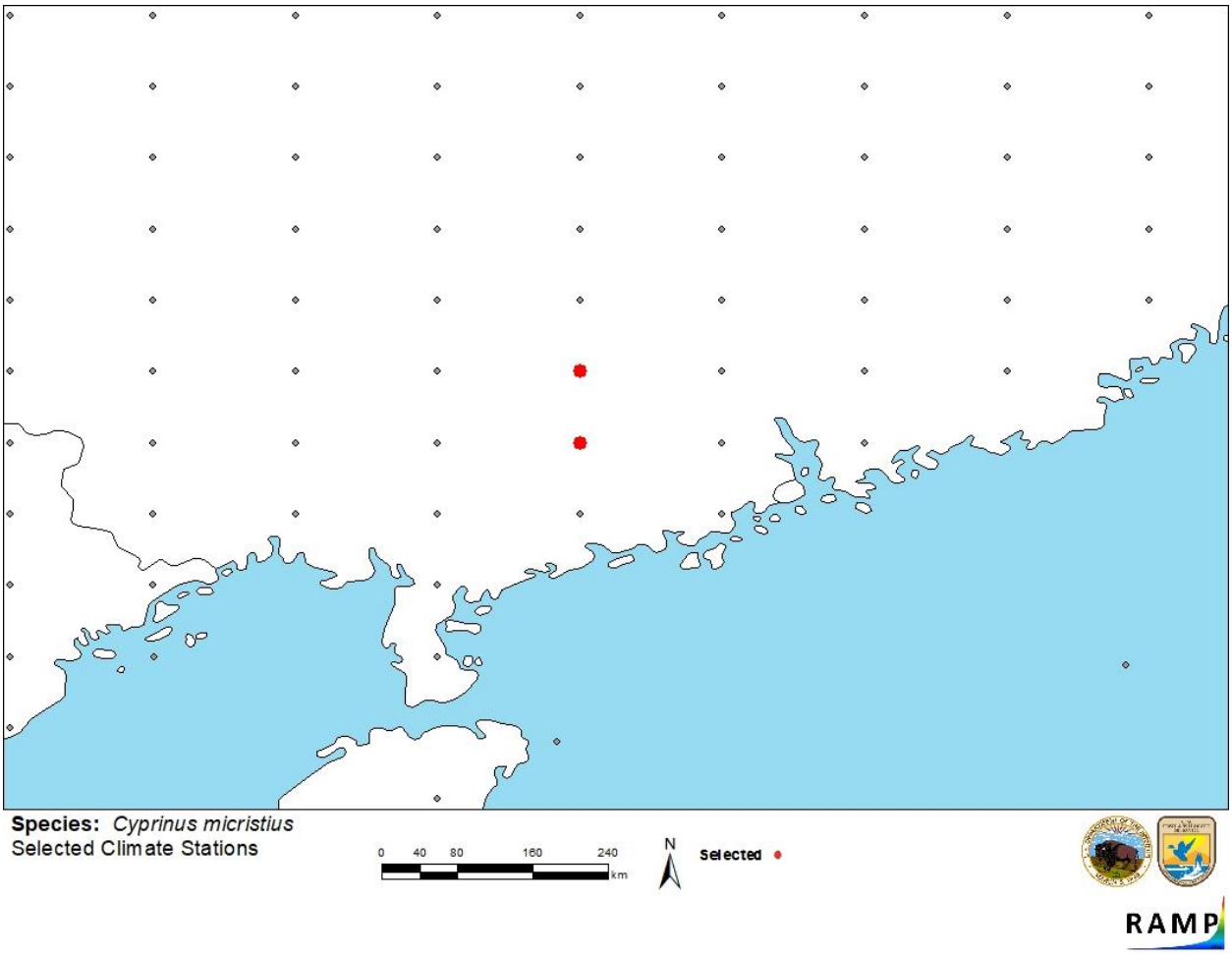

Figure 2. RAMP (Sanders et al. 2018) source map showing weather stations in southern China selected as source locations (red) and non-source locations (gray) for *Cyprinus micristius* climate matching. Source locations from GBIF Secretariat (2018).

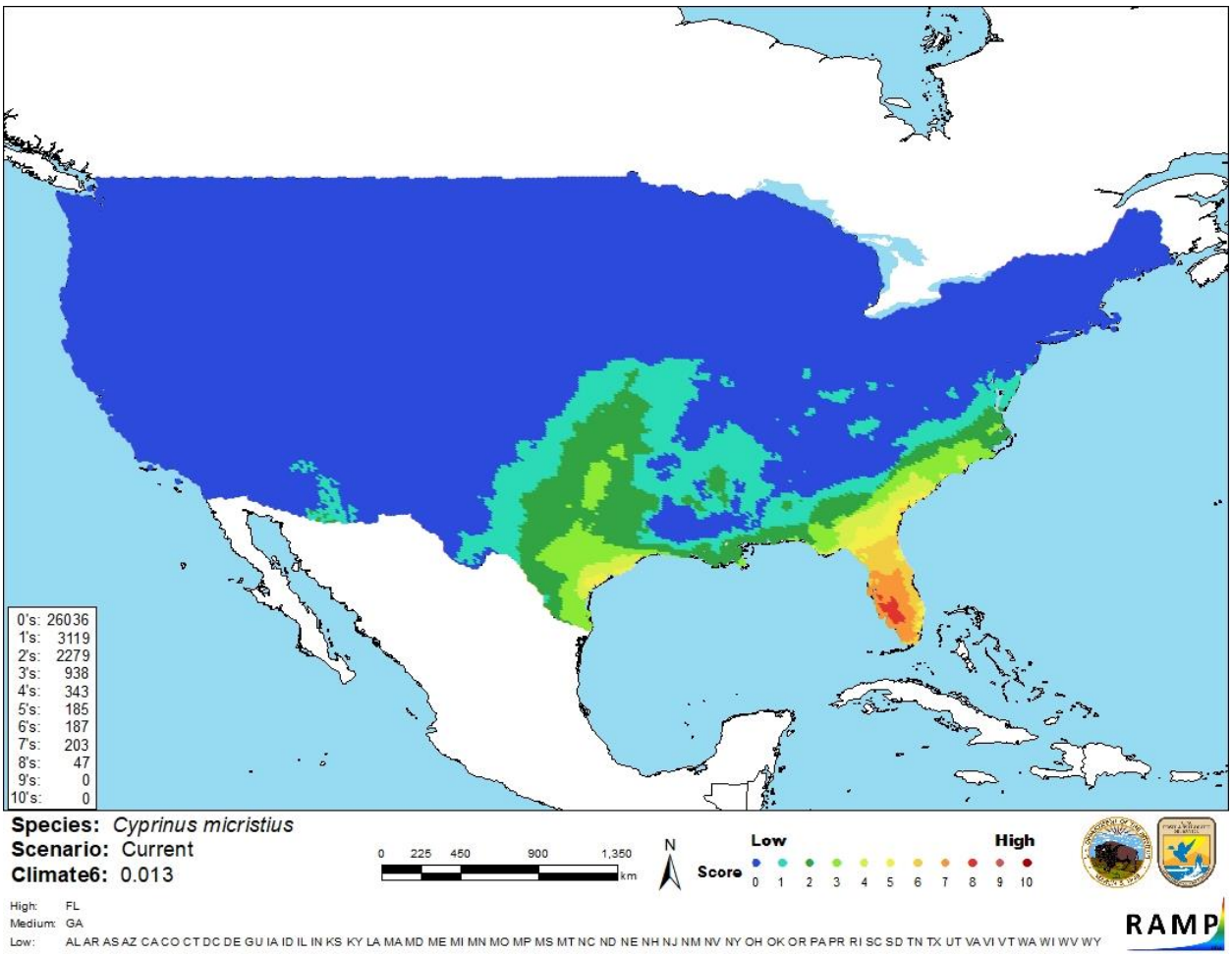

Figure 3. Map of RAMP (Sanders et al. 2018) climate matches for *Cyprinus micristius* in the contiguous United States based on source locations reported by GBIF Secretariat (2018). 0 = Lowest match, 10 = Highest match.

The High, Medium, and Low Climate match Categories are based on the following table:

Climate 6: Proportion of (Sum of Climate Scores 6-10) / (Sum of total Climate Scores)	Climate Match Category
0.000≤X≤0.005	Low
0.005<X<0.103	Medium
≥0.103	High

7 Certainty of Assessment

The certainty of assessment is low. There is some biological and ecological information available for *Cyprinus micristius*. No records of introductions were found so there is no information on impacts of introductions to evaluate.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Cyprinus micristius is a species of carp native to a few lakes in southeastern China. It has been the base of a commercial fishery in the past. It is considered critically endangered by IUCN (in Froese and Pauly 2018). The history of invasiveness is uncertain. No records of introduction were found. No records of this species in trade were found. The climate match for the contiguous United States was medium. There was an area of high climate match in peninsular Florida. The certainty of assessment is low. The overall risk assessment category is uncertain.

Assessment Elements

- **History of Invasiveness (Sec. 3): Uncertain**
- **Climate Match (Sec. 6): Medium**
- **Certainty of Assessment (Sec. 7): Low**
- **Remarks/Important additional information:** No additional information.
- **Overall Risk Assessment Category: Uncertain**

9 References

Note: The following references were accessed for this ERSS. References cited within quoted text but not accessed are included below in Section 10.

Fricke, R., W. N. Eschmeyer, and R. van der Laan, editors. 2018. Catalog of fishes: genera, species, references. Available: http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp. (November 2018).

Froese, R., and D. Pauly, editors. 2018. *Cyprinus micristius* Regan, 1906. FishBase. Available: http://www.fishbase.se/summary/Cyprinus-micristius.html. (November 2018).

GBIF Secretariat. 2018. GBIF backbone taxonomy: *Cyprinus micristius* Regan, 1906. Global Biodiversity Information Facility, Copenhagen. Available: https://www.gbif.org/species/2367206. (November 2018).

ITIS (Integrated Taxonomic Information System). 2018. *Cyprinus micristius* Regan, 1906. Integrated Taxonomic Information System, Reston, Virginia. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=688962#null. (November 2018).

Sanders, S., C. Castiglione, and M. Hoff. 2018. Risk assessment mapping program: RAMP, version 3.1. U.S. Fish and Wildlife Service.

Yang, J., X.-Y. Chen, and J.-X. Yang. 2008. Threatened fishes of the world: *Cyprinus micristius* Regan 1906 (Cypriniformes: Cyprinidae). Environmental Biology of Fishes 83:221–222.

Yang, L., R. L. Mayden, T. Sado, D. He, K. Daitoh, and M. Miya. 2010. Molecular phylogeny of the fishes traditionally referred to Cyprinini *sensu stricto* (Teleostei: Cypriniformes). Zoologica Scripta 39(6):527–550.

10 References Quoted But Not Accessed

Note: The following references are cited within quoted text within this ERSS, but were not accessed for its preparation. They are included here to provide the reader with more information.

Nichols, J. T. 1943. The freshwater fishes of China. Natural history of Central Asia, volume IX. The American Museum of Natural History, New York.

Wu, X. W., G. R. Yang, P. Q. Yue, and H. J. Huang, editors. 1963. Fauna sinica, freshwater fishes. Science Press, Beijing.

Zhou, W. 1989. Cyprininae. *In* X. L. Chu, and Y. R. Chen, editors. The fishes of Yunnan, China, Part I. Science Press, Beijing.