

***Cyprinus yunnanensis* (a carp, no common name)**

Ecological Risk Screening Summary

U.S. Fish and Wildlife Service, September 2011
Revised, September 2018
Web Version, 12/19/2018

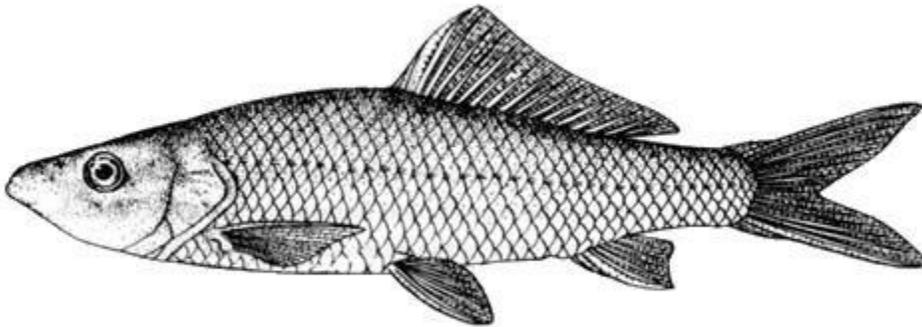


Image: Chinese Academy of Fishery Sciences. Licensed under CC BY-NC 3.0. Available: <https://www.fishbase.de/photos/PicturesSummary.php?ID=56227&what=species>. (September 2018).

1 Native Range and Status in the United States

Native Range

From Cui (2011):

“The species is only known from Qilu Lake in Yunnan province, China.”

Status in the United States

This species has not been reported as introduced or established in the United States. There is no indication that this species is in trade in the United States.

Means of Introductions in the United States

This species has not been reported as introduced or established in the United States.

Remarks

From Cui (2011):

“The species hasn't been recorded in the lake [Qilu] since the late 1970s, either in fishery records or during survey (1982-1985, W. Zhou pers. comm. 2011). However, more research is needed to confirm the species extinction in the lake. It is listed as Critically Endangered Possibly Extinct.”

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

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 yunnanensis* Tchang, 1933”

From Fricke et al. (2018):

“Current status: Valid as *Cyprinus yunnanensis* Tchang 1933. Cyprinidae: Cyprininae.”

Size, Weight, and Age Range

From Froese and Pauly (2018):

“Max length : 19.9 cm SL male/unsexed; [Luo and Yue 2000]”

From Cui (2011):

“It becomes sexually mature when grows to about 130 mm. [...] It is medium in size, generally 100-200 mm long and the large ones may weigh 500 g.”

Environment

From Froese and Pauly (2018):

“Freshwater; benthopelagic.”

Climate/Range

From Froese and Pauly (2018):

“Subtropical”

Distribution Outside the United States

Native

From Cui (2011):

“The species is only known from Qilu Lake in Yunnan province, China.”

Introduced

This species has not been reported as introduced or established outside of its native range.

Means of Introduction Outside the United States

This species has not been reported as introduced or established outside of its native range.

Short Description

No information available.

Biology

From Cui (2011):

“Found in a shallow lake, and found in dense aquatic vegetation, seeking food in the middle and lower layers of the water body. It feeds on miscellaneous food but mainly on zoogenic food such as small fishes and shrimps. It spawns viscid eggs on aquatic plants in April and May. [...] It moves swiftly, has strong adaptability and does not die easily after leaving water.”

Human Uses

From Cui (2011):

“The species was an economic fish in local areas, but has not been recorded for many years.”

Diseases

No information available. No OIE-reportable diseases have been documented for this species.

Threat to Humans

From Froese and Pauly (2018):

“Harmless”

3 Impacts of Introductions

This species has not been reported as introduced or established outside of its native range.

4 Global Distribution

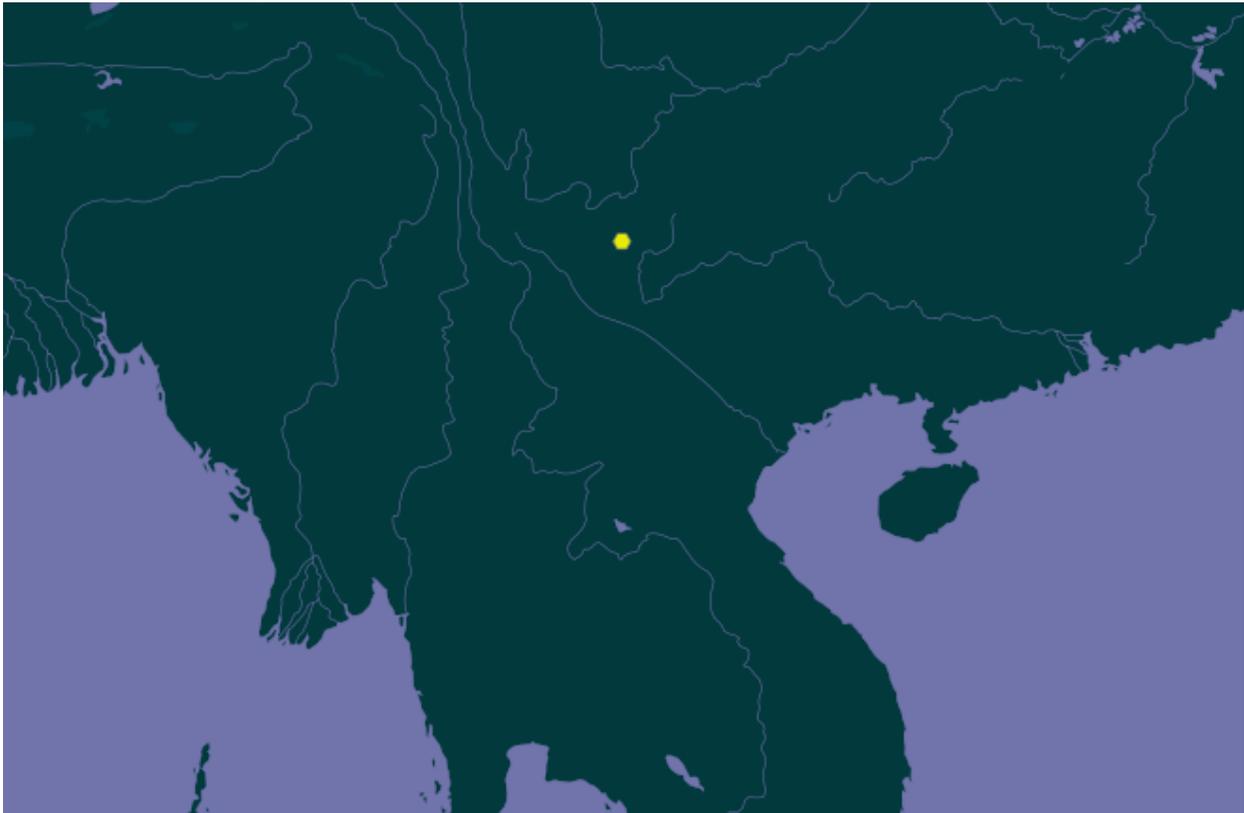


Figure 1. Known global distribution of *Cyprinus yunnanensis*, reported from Qilu Lake in Yunnan province, China. Map from GBIF Secretariat (2018).

5 Distribution Within the United States

This species has not been reported as introduced or established in the United States.

6 Climate Matching

Summary of Climate Matching Analysis

The Climate 6 score (Sanders et al. 2014; 16 climate variables; Euclidean distance) for the contiguous United States was 0.0, which is a low climate match. A Climate 6 score of 0.005 or

less indicates a low climate match. The climate match was low across almost the entire contiguous United States. There were small areas of medium to medium-low match in Florida and the Southwest.

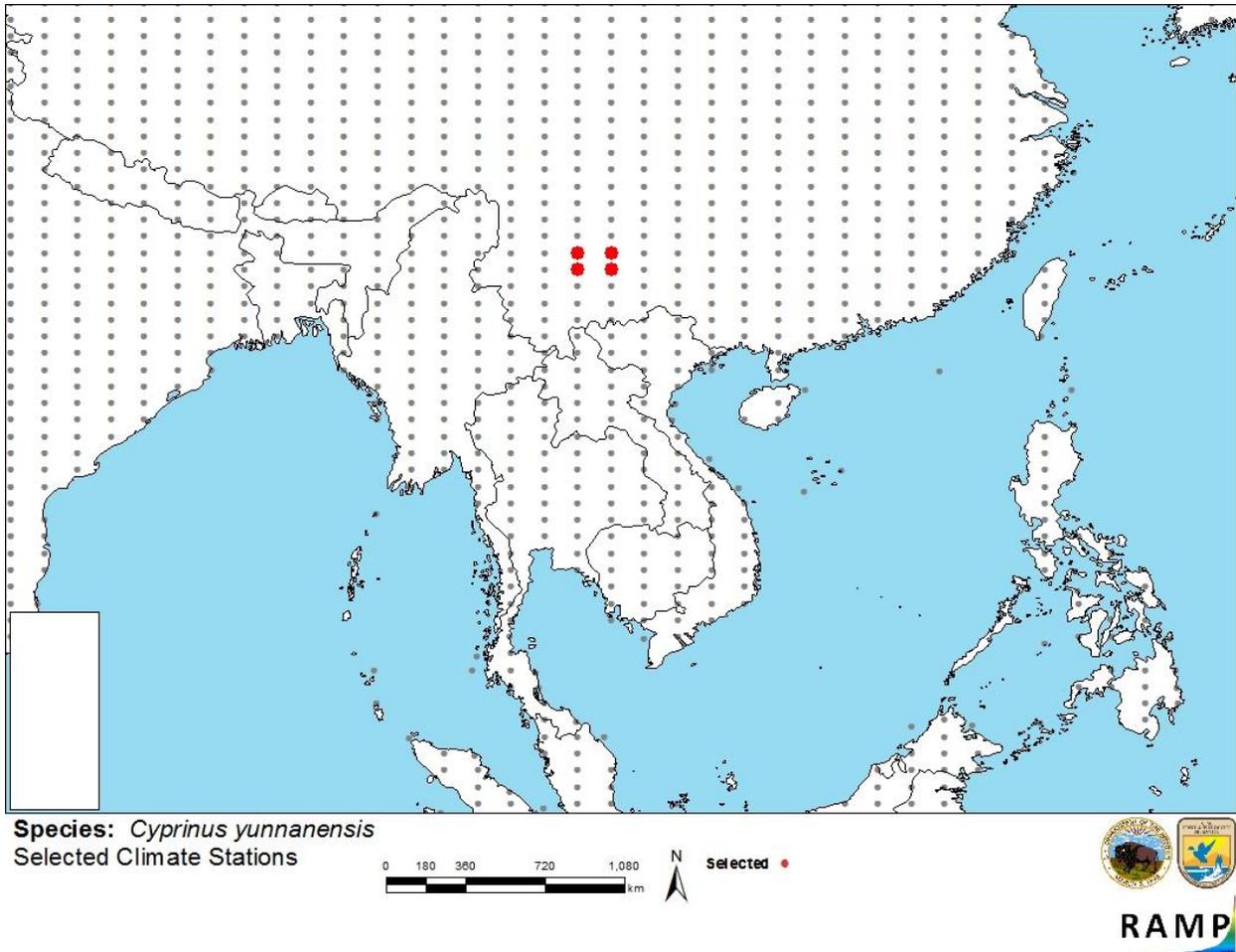


Figure 2. RAMP (Sanders et al. 2014) source map showing weather stations selected as source locations (red; Yunnan province, China) and non-source locations (gray) for *Cyprinus yunnanensis* climate matching. Source locations from GBIF Secretariat (2018).

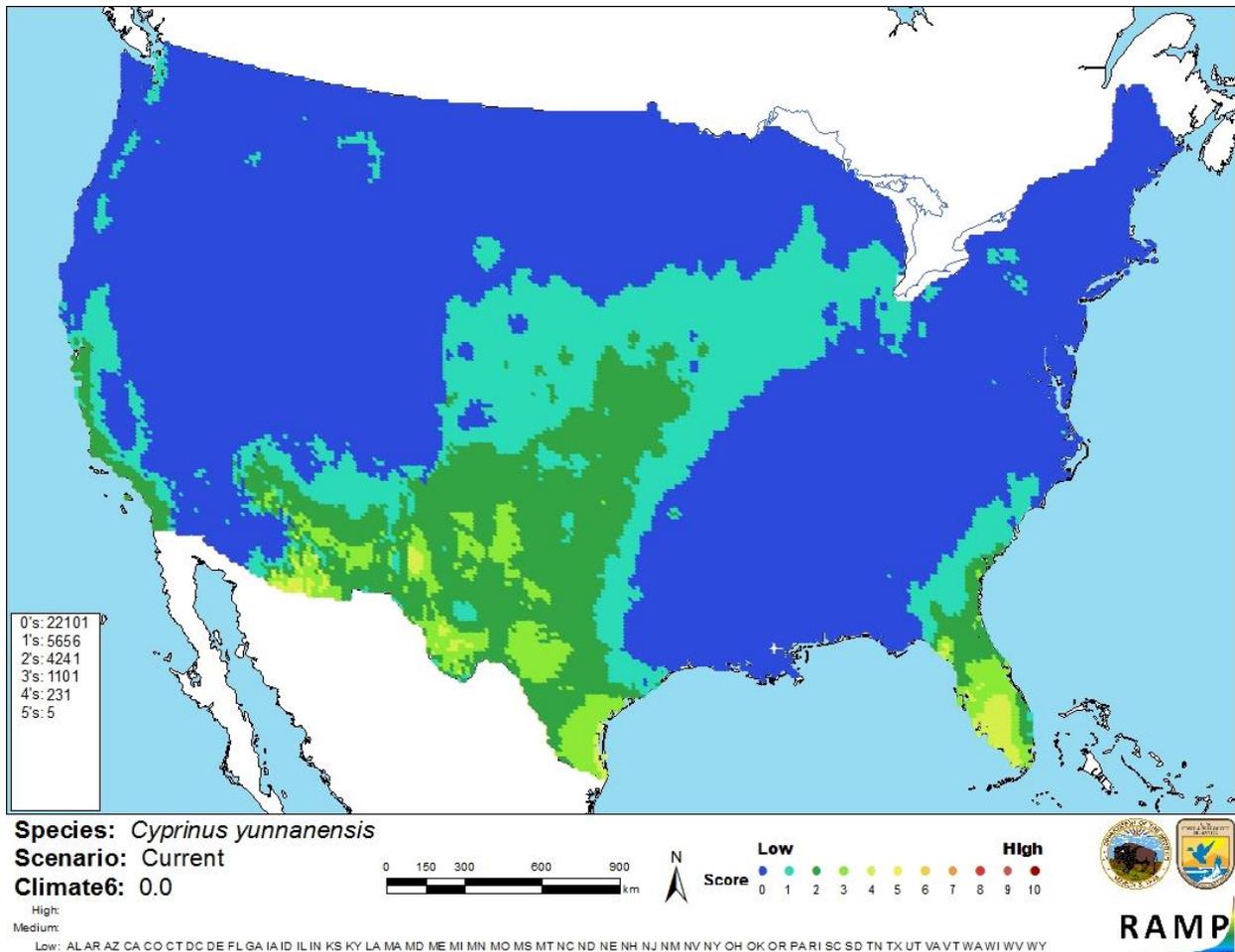


Figure 3. Map of RAMP (Sanders et al. 2014) climate matches for *Cyprinus yunnanensis* in the contiguous United States based on source locations reported by GBIF Secretariat (2018). 0=Lowest match, 10=Highest match.

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
$0.000 \leq X \leq 0.005$	Low
$0.005 < X < 0.103$	Medium
≥ 0.103	High

7 Certainty of Assessment

There is little information available about *Cyprinus yunnanensis*. There have been no documented introductions of this species outside of its native range, so no information is available from which to base an assessment of the invasive potential of this species. Certainty of this assessment is low.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Cyprinus yunnanensis is a carp species endemic to Qilu Lake in Yunnan Province, China. This species is critically endangered in its native habitat. Historically it was an important economic fish in local areas. *C. yunnanensis* has a low climate match with the contiguous United States. It has never been reported as introduced or established outside of its native range, therefore history of invasiveness is uncertain. Because there is no information from which to assess the risk this species poses to the contiguous United States, the certainty of this assessment is low. The overall risk assessment category is uncertain.

Assessment Elements

- **History of Invasiveness (Sec. 3): Uncertain**
- **Climate Match (Sec. 6): Low**
- **Certainty of Assessment (Sec. 7): Low**
- **Remarks/Important additional information: *C. yunnanensis* is listed as Critically Endangered Possibly Extinct.**
- **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.

- Cui, K. 2011. *Cyprinus yunnanensis*. The IUCN Red List of Threatened Species 2011: e.T166169A6186294. Available: <http://www.iucnredlist.org/details/166169/0>. (September 2018).
- 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>. (September 2018).
- Froese, R., and D. Pauly, editors. 2018. *Cyprinus yunnanensis* (Tchang, 1933). FishBase. Available: <https://www.fishbase.de/summary/Cyprinus-yunnanensis.html>. (September 2018).
- GBIF Secretariat. 2018. GBIF backbone taxonomy: *Cyprinus yunnanensis*, Tchang, 1933. Global Biodiversity Information Facility, Copenhagen. Available: <https://www.gbif.org/species/2367211>. (September 2018).
- ITIS (Integrated Taxonomic Information System). 2018. *Cyprinus yunnanensis* (Tchang, 1933). Integrated Taxonomic Information System, Reston, Virginia. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=688968#null. (September 2018).

Sanders, S., C. Castiglione, and M. H. Hoff. 2014. Risk Assessment Mapping Program: RAMP. U.S. Fish and Wildlife Service.

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.

Luo, Y., and P. Yue. 2000. Cyprinidae: Cyprininae. Pages 391-433 *in* P. Yue et al., editors [additional author names not provided]. Fauna Sinica. Osteichthyes. Cypriniformes III. Science Press, Beijing.