

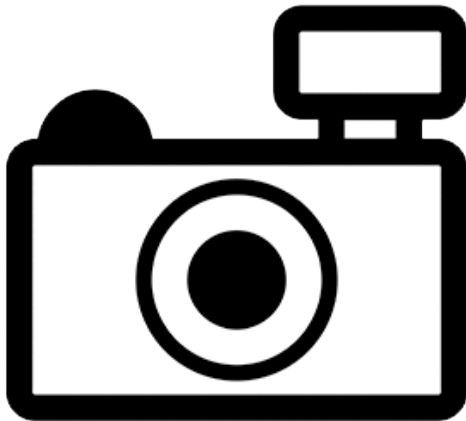
## ***Cyprinus chilia* (a fish, no common name)**

### **Ecological Risk Screening Summary**

U.S. Fish & Wildlife Service, October 2012

Revised, November 2018

Web Version, 7/29/2019



No Photo Available

## **1 Native Range and Status in the United States**

---

### **Native Range**

From Zhou and Chen (2011):

“Only recorded from lakes in Yunnan in southern China, including Yilong, Qilu, Xingyun, Fuzian, Yangzong, Diangchi, Erh Hai, Chenghai, Jianhu, and Cibi lakes, and Wenbi reservoir. In 1998-99, the lakes were surveyed and the species was only found in Fuzian Lake (121 km<sup>2</sup>), Jianhu (30km<sup>2</sup>) Lake, and Erh Hai Lake (250km<sup>2</sup>), and could not be found in other lakes (W. Zhou and X.-Y. Chen pers. comm. 2011). It may be present in other reservoirs, but surveys are required to confirm this.”

### **Status in the United States**

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

### **Means of Introductions in the United States**

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

## Remarks

This ERSS is an update of one previously published in October 2012.

## 2 Biology and Ecology

---

### Taxonomic Hierarchy and Taxonomic Standing

From Fricke et al. (2018):

“**Current status:** Valid as *Cyprinus chilia* Wu, Yang, Yue & Huang 1963.”

From ITIS (2018):

“Kingdom Animalia  
Subkingdom Bilateria  
Infrakingdom Deuterostomia  
Phylum Chordata  
Subphylum Vertebrata  
Infraphylum Gnathostomata  
Superclass Actinopterygii  
Class Teleostei  
Superorder Ostariophysii  
Order Cypriniformes  
Superfamily Cyprinoidea  
Family Cyprinidae  
Genus *Cyprinus*  
Species *Cyprinus chilia* Wu, Yang and Huang in Wu, Yang, Yue and Huang 1963”

### Size, Weight, and Age Range

Yang et al. (2011) report a SL range of 147.3 mm – 182.1 mm for *Cyprinus chilia*.

### Environment

From Froese and Pauly (2018):

“Freshwater; benthopelagic.”

From Zhou and Chen (2011):

“[...] and can not tolerate poor environmental conditions, dying quickly in turbid water.”

### Climate/Range

From Froese and Pauly (2018):

“Subtropical”

## **Distribution Outside the United States**

### **Native**

From Zhou and Chen (2011):

“Only recorded from lakes in Yunnan in southern China, including Yilong, Qilu, Xingyun, Fuzian, Yangzong, Diangchi, Erh Hai, Chenghai, Jianhu, and Cibi lakes, and Wenbi reservoir. In 1998-99, the lakes were surveyed and the species was only found in Fuzian Lake (121 km<sup>2</sup>), Jianhu (30km<sup>2</sup>) Lake, and Erh Hai Lake (250km<sup>2</sup>), and could not be found in other lakes (W. Zhou and X.-Y. Chen pers. comm. 2011). It may be present in other reservoirs, but surveys are required to confirm this.”

### **Introduced**

No records of introduction of *Cyprinus chilia* were found.

## **Means of Introduction Outside the United States**

No records of introduction of *Cyprinus chilia* were found.

## **Short Description**

A short description of *Cyprinus chilia* was not found.

## **Biology**

From Zhou and Chen (2011):

“It is a fish of the upper and middle layers of water bodies and dwells mainly in the deep parts of lakes with clear water. It swims fast [...]. It is an omnivore, feeding on benthos. Its spawning period is from April to September, but mainly in May and June. It spawns in batches on aquatic plants with viscid roe.”

## **Human Uses**

From Zhou and Chen (2011):

“Utilised in commercial and local fisheries.”

From Tang et al. (2013):

“Prior to the 1960s, there were 17 indigenous fish species in Erhai Lake, of which the large and medium-sized indigenous species such as *S. taliensis*, *C. chilia*, *B. daliensis*, and *Schizothorax yunnanensis* dominated the harvest. [...].”

“Some of the native fish species such as *S. taliensis*, *C. chilia*, and *C. longipectoralis*, have begun to recover in recent years because of stocking programs.”

## Diseases

Information on diseases of *Cyprinus chilia* was not found. **No records of OIE reportable diseases (OIE 2019) were found for *C. chilia*.**

## Threat to Humans

From Froese and Pauly (2018):

“Harmless”

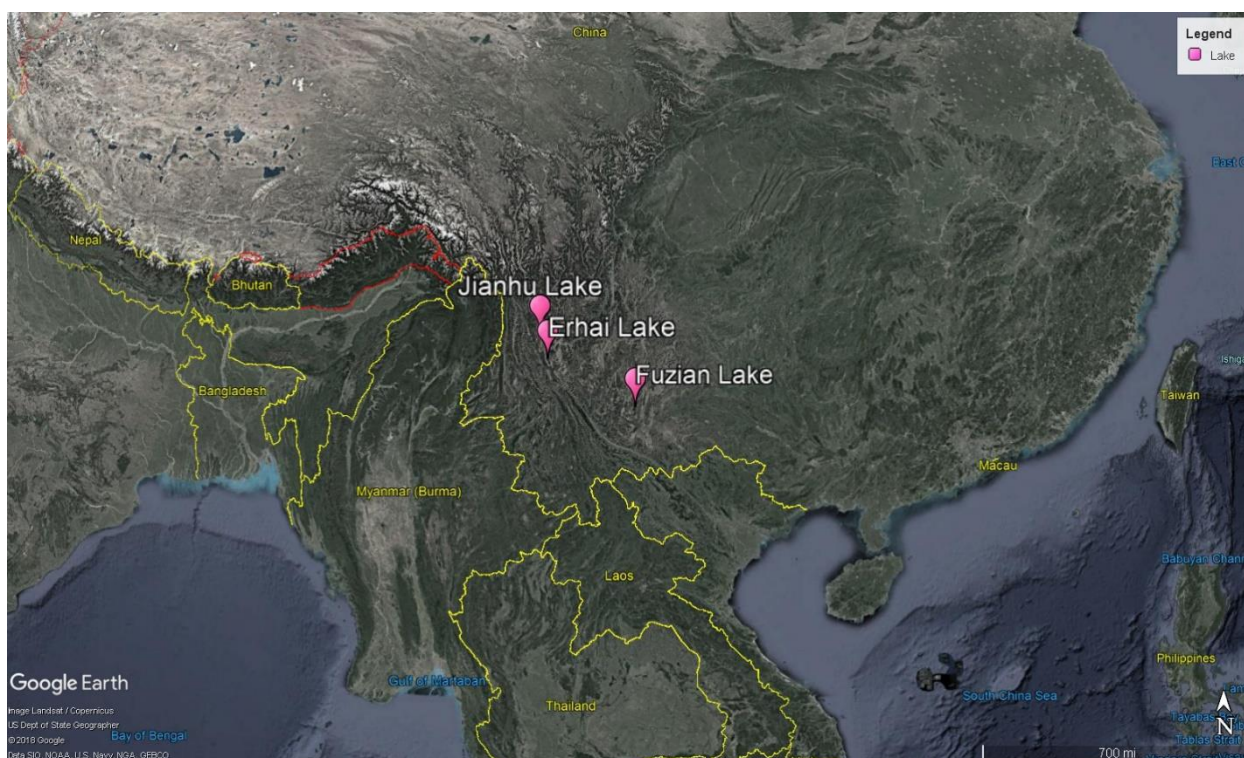
## 3 Impacts of Introductions

---

No records of introduction of *Cyprinus chilia* were found; therefore, there is no information on impacts of introduction.

## 4 Global Distribution

---



**Figure 1.** Location of Jianhu, Erhai, and Fuzian lakes in Yunnan Province, China. According to Zhou and Chen (2011) these are the only lakes with existing populations of *Cyprinus chilia*. Map from Google, Inc. (2018).

No georeferenced observations were available for *Cyprinus chilia*. Source locations for the climate match were chosen based on a center location for each of the three lakes with existing populations (Figure 1).

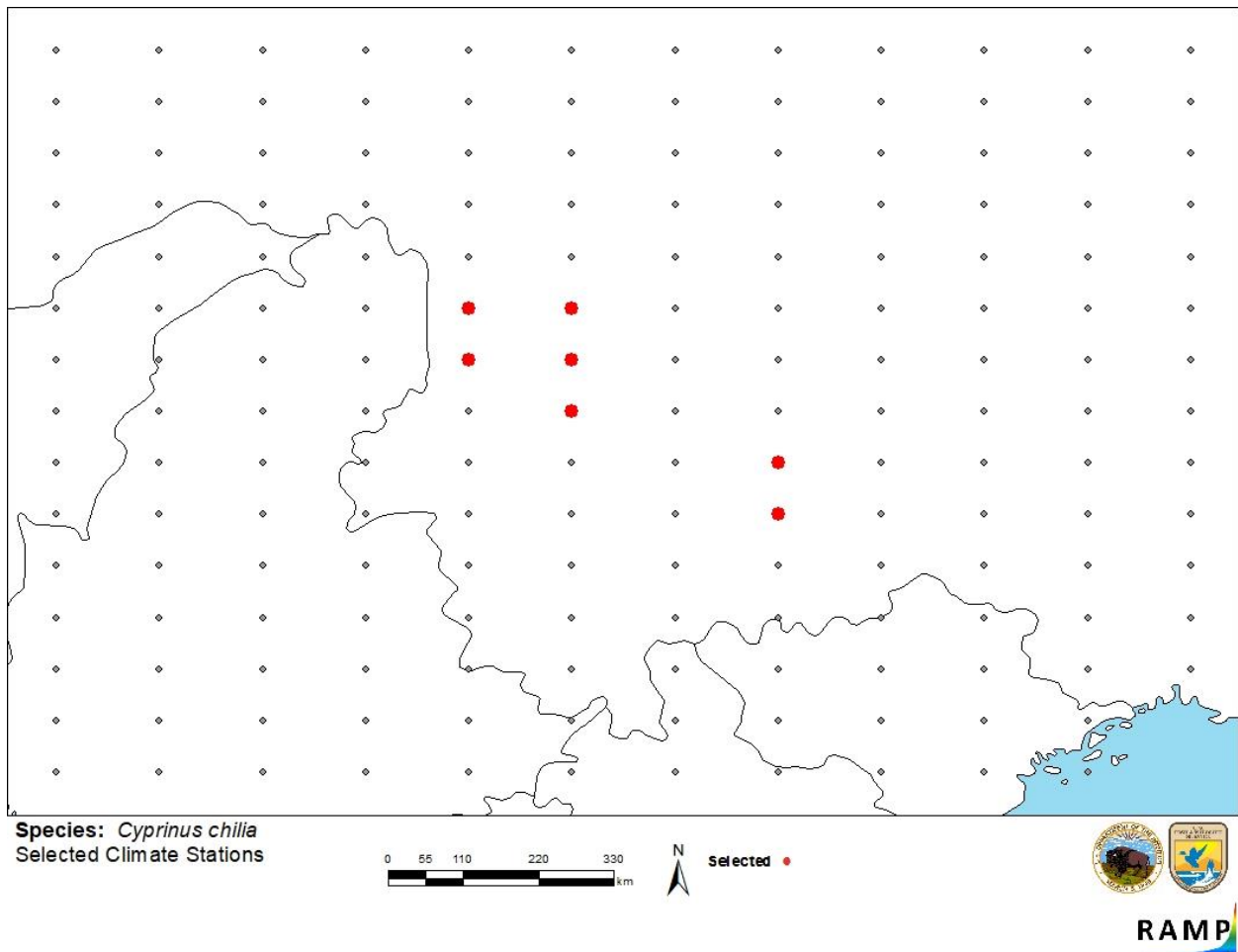
## 5 Distribution Within the United States

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

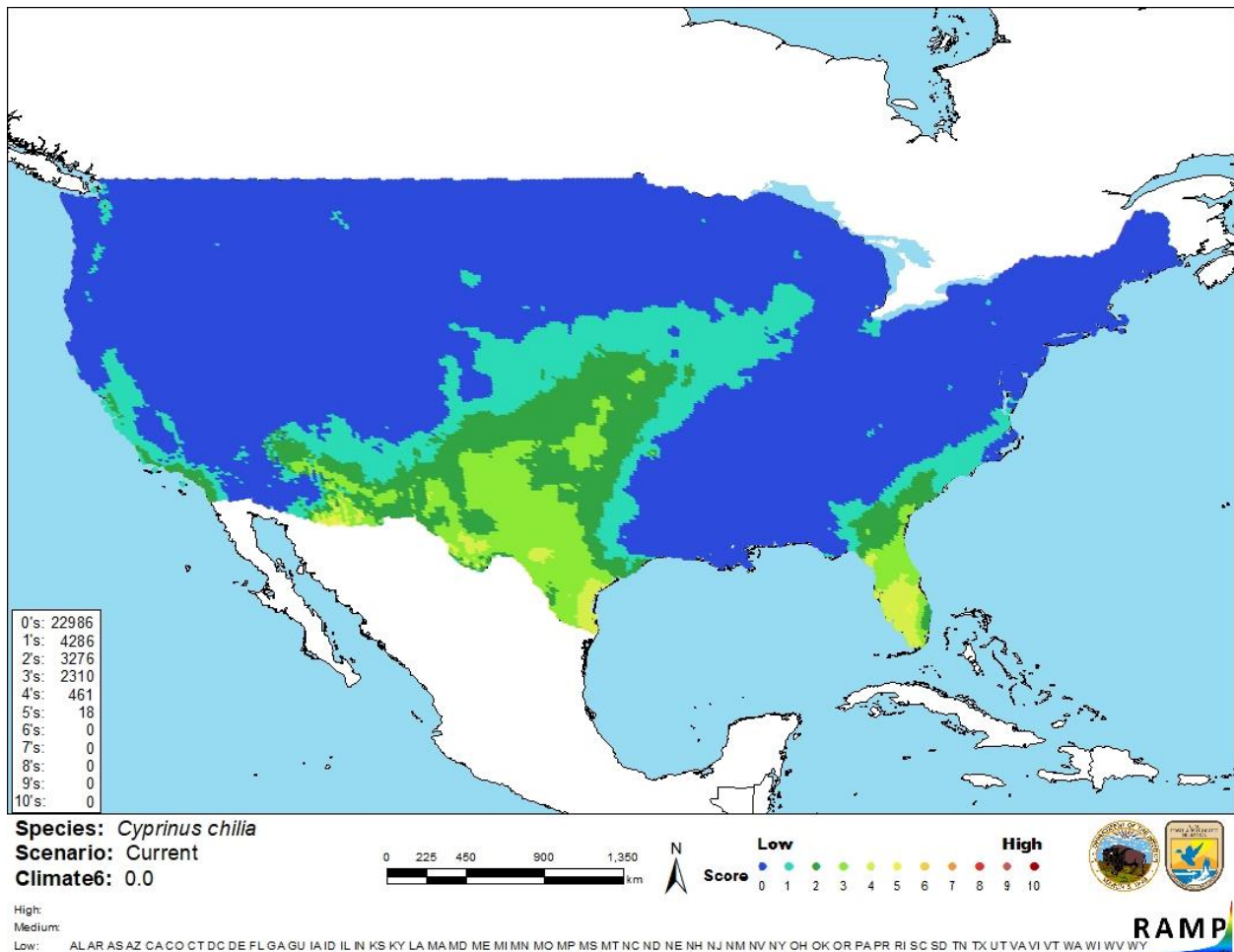
## 6 Climate Matching

### Summary of Climate Matching Analysis

The climate match for *Cyprinus chilia* was low for much of the contiguous United States. Most of southern Florida had a medium match and there were small areas of medium match in southern Texas and Arizona. There were no areas of high match. The Climate 6 score (Sanders et al. 2018; 16 climate variables; Euclidean distance) for contiguous United States was 0.000, low (scores between 0.000 and 0.005, inclusive, are classified as low). All States had low individual Climate 6 scores.



**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 chilia* climate matching. Source points chosen to represent lakes with known populations of *C. chilia* (Zhou and Chen 2011).



**Figure 3.** Map of RAMP (Sanders et al. 2018) climate matches for *Cyprinus chilia* in the contiguous United States based on source locations reported by Zhou and Chen (2011). Counts of climate match scores are tabulated on the left. 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
$\geq 0.103$	High

## 7 Certainty of Assessment

The certainty of assessment for *Cyprinus chilia* is low. Peer-reviewed literature on the biology, ecology, and distribution associated with *C. chilia* is limited. No records of introduction were found so there is no information on impacts of introduction to evaluate. The climate match is based on estimated source locations based on a text description of the range since no georeferenced observations were available.

## 8 Risk Assessment

---

### Summary of Risk to the Contiguous United States

*Cyprinus chilia* is a species of fish native to lakes in southern China. It may have experienced a range decrease in the last few decades. Previously this species was used in commercial and sustenance fisheries. The history of invasiveness is uncertain. No records of introduction were found. The climate match is low. There were small areas of medium match in southern Florida, Texas, and Arizona. 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): Low**
- **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 chilia* Wu, Yang & Huang, 1963. FishBase. Available: <http://www.fishbase.se/summary/Cyprinus-chilia.html>. (November 2018).

Google, Inc. 2018. Map of Erhai Lake, Jianhu Lake, and Fuzian Lake, China. Available: [https://earth.google.com/web/@20.37332281,91.98286949,-506.61505654a,4741580.51915646d,35y,0.03576372h,12.39853436t,0r/data=C14aXBJUCiUweDM3MjdlYWYyZWE0MDJmM2I6MHg4Mzc2N2UwMDUwYmVkJkGd\\_cXz3uoZlAIa6BrRIsEllAKhlFcmhhaSBMYWtIIFJlY2x1c2l2ZSBMaWZlGAEgASgC](https://earth.google.com/web/@20.37332281,91.98286949,-506.61505654a,4741580.51915646d,35y,0.03576372h,12.39853436t,0r/data=C14aXBJUCiUweDM3MjdlYWYyZWE0MDJmM2I6MHg4Mzc2N2UwMDUwYmVkJkGd_cXz3uoZlAIa6BrRIsEllAKhlFcmhhaSBMYWtIIFJlY2x1c2l2ZSBMaWZlGAEgASgC). (November 2018).

ITIS (Integrated Taxonomic Information System). 2018. *Cyprinus chilia* Wu, Yang and Huang in Wu, Yang, Yue and Huang, 1963. Integrated Taxonomic Information System, Reston, Virginia. Available: [https://www.itis.gov/servlet/SingleRpt/SingleRpt?search\\_topic=TSN&search\\_value=688950#null](https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=688950#null). (November 2018).

- OIE (World Organisation for Animal Health). 2019. OIE-listed diseases, infections and infestations in force in 2019. Available: <http://www.oie.int/animal-health-in-the-world/oie-listed-diseases-2019/>. (July 2019).
- Sanders, S., C. Castiglione, and M. Hoff. 2018. Risk assessment mapping program: RAMP, version 3.1. U.S. Fish and Wildlife Service.
- Tang, J., S. Ye, W. Li, J. Liu, T. Zhang, Z. Gou, F. Zhu, and Z. Li. 2013. Status and historical changes in the fish community in Erhai Lake. *Chinese Journal of Oceanology and Limnology* 31(4):712–723.
- Yang, B., X. Chen, and J. Yang. 2011. Non-native carp of the genus *Cyprinus* in Lake Xingyun, China, as revealed by morphology and mitochondrial DNA analysis. *Biological Invasions* 13:105–114.
- Zhou, W., and X.-Y. Chen. 2011. *Cyprinus chilia*. The IUCN Red List of Threatened Species 2011: e.T166210A6190864. Available: <https://www.iucnredlist.org/species/166210/6190864>. (November 2018).

## **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.**

No references in this section.