

# *Chanodichthys recurviceps* (a fish, no common name)

## Ecological Risk Screening Summary

U.S. Fish and Wildlife Service, June 2012

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<http://naturewatch.org.nz/taxa/187285-Culter-recurviceps>. (November 2016).

## 1 Native Range and Status in the United States

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### Native Range

From Zhao and Cui (2011):

“Known from Zhu Jiang River (Pearl River) in Guangdong and Guanxi Provinces, and Hainan Province in China.”

### Status in the United States

This species has not been reported in the United States.

## Means of Introductions in the United States

This species has not been reported in the United States.

## 2 Biology and Ecology

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### Taxonomic Hierarchy and Taxonomic Standing

From ITIS (2016):

“Kingdom Animalia  
Subkingdom Bilateria  
Infrakingdom Deuterostomia  
Phylum Chordata  
Subphylum Vertebrata  
Infraphylum Gnathostomata  
Superclass Osteichthyes  
Class Actinopterygii  
Subclass Neopterygii  
Infraclass Teleostei  
Superorder Ostariophysi  
Order Cypriniformes  
Superfamily Cyprinoidea  
Family Cyprinidae  
Genus *Culter* Basilewsky, 1855  
Species *Culter recurviceps* (Richardson, 1846)”

From Eschmeyer et al. (2016):

“*recurviceps*, *Leuciscus* Richardson [J.] 1846:295 [Report of the British Association for the Advancement of Science 15th meeting [1845] [...]] Canton, China. No types known. Based solely on an illustration by Reeves (see Whitehead 1970:210, Pl. 17a [...]). •Valid as *Erythroculter recurviceps* (Richardson 1846) -- (Lu in Pan et al. 1991:93 [...]). •Questionably the same as *Culter alburnus* Basilewsky 1855 -- (Bogutskaya & Naseka 1996:24 [...], Naseka 1998:75 [...]). •Valid as *Culter recurviceps* (Richardson 1846) -- (Luo & Chen in Chen et al. 1998:188 [...], Zhang et al. 2016:59 [...]). •Valid as *Chanodichthys recurviceps* (Richardson 1846) -- (Kottelat 2013:87 [...]). **Current status:** Valid as *Chanodichthys recurviceps* (Richardson 1846).”

### Size, Weight, and Age Range

From Froese and Pauly (2016):

“Max length : 42.8 cm SL male/unsexed; [Luo and Chen 1998]”

## **Environment**

From Froese and Pauly (2016):

“Freshwater; benthopelagic.”

## **Climate/Range**

From Froese and Pauly (2016):

“Subtropical, preferred ?”

## **Distribution Outside the United States**

Native

From Zhao and Cui (2011):

“Known from Zhu Jiang River (Pearl River) in Guangdong and Guanxi Provinces, and Hainan Province in China.”

Introduced

No introductions of this species have been reported.

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

No introductions of this species have been reported.

## **Short Description**

No information available.

## **Biology**

From Zhao and Cui (2011):

“Lives in fresh water lakes and rivers; found in the upper and middle layers of the water body.”

“The species likes open water and may benefit from the creation of reservoirs by dams.”

## **Human Uses**

From Froese and Pauly (2016):

“Utilized for food [Zheng et al. 1989].”

## **Diseases**

From Chai et al. (2012):

“Foodborne trematode (FBT) infections are an important public health concern in various Asian countries, including Lao PDR, Vietnam, Cambodia, Thailand, the Philippines, Taiwan, China,

and the Republic of Korea. [...] In this area of China [i.e., Guangxi Zhuang Autonomous Region], 18 fish species [including] *Culter recurviceps* [...] were listed as hosts for *H[aplorchus] pumilio* [Sohn et al. 2009].”

From Rim et al. (2013):

“*H[aplorchis] taichui* metacercariae have been recorded in fish from some Asian counties, i.e., India, China, Thailand, the Philippines, and Lao PDR. They have been detected in 35 fish species, i.e., [...] *Culter recurviceps* [...] in endemic countries [Pearson 1964; Nath and Pande 1970; Velasquez 1973; Pande and Premvati 1977; Scholz et al. 1990; Rim et al. 2008; Sohn et al. 2009].”

### Threat to Humans

From Froese and Pauly (2016):

“Harmless”

## 3 Impacts of Introductions

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No introductions of this species have been reported.

## 4 Global Distribution

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**Figure 1.** Known established locations of *C. recurviceps*, reported from southeastern China. Map from VertNet (2016). Locations outside of described range (see Native Range in Section 1) were excluded from climate matching.

## 5 Distribution within the United States

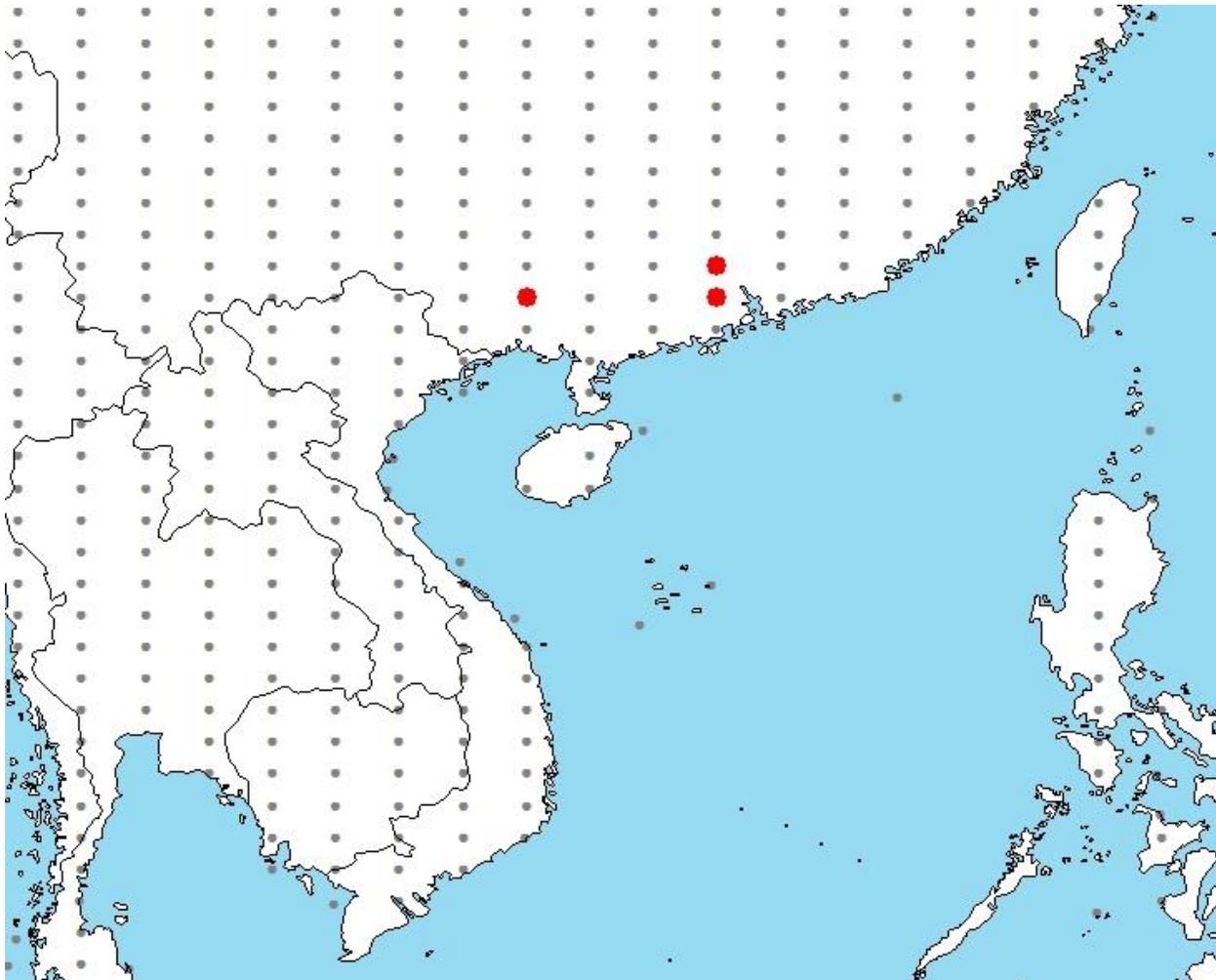
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This species has not been reported in the United States.

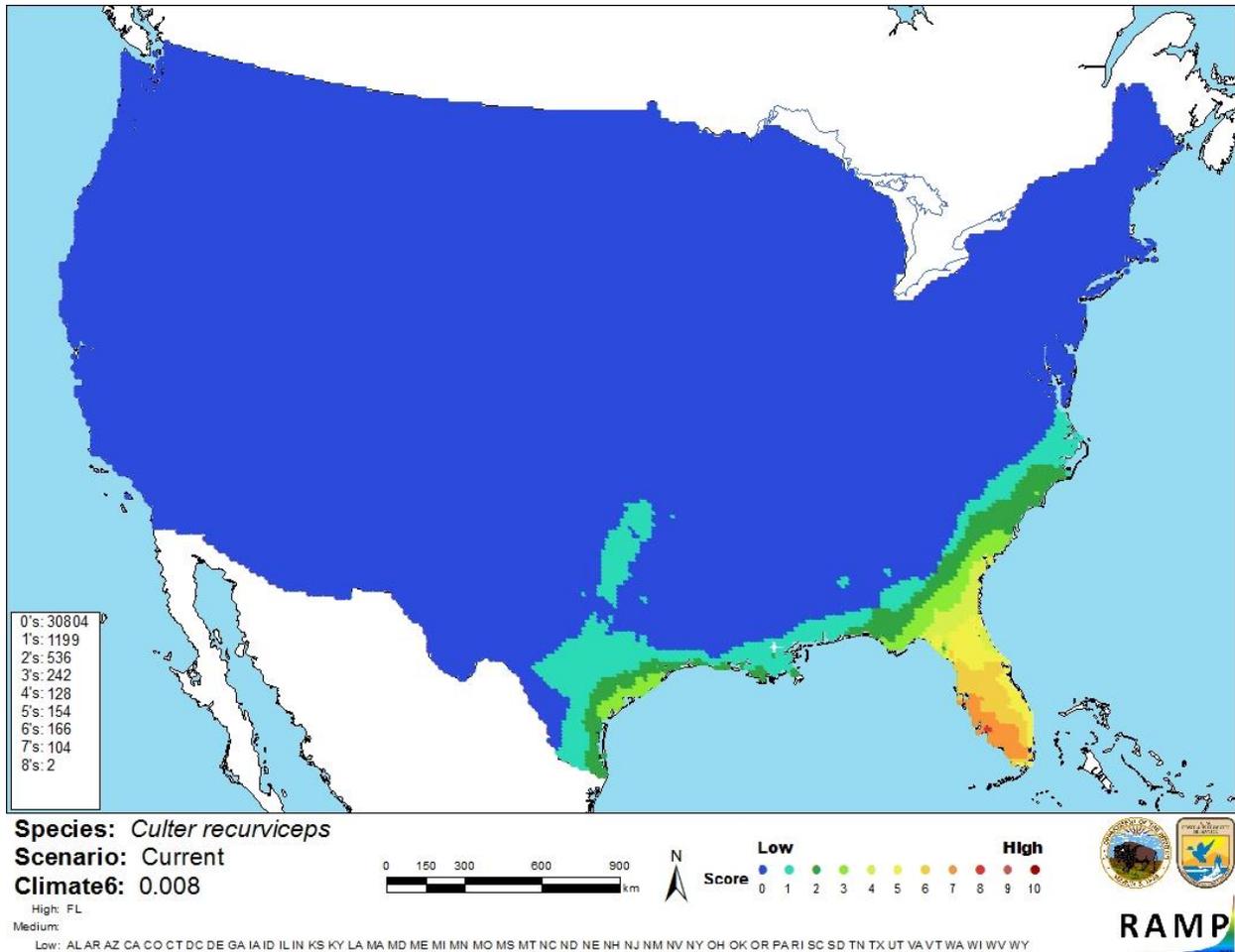
## 6 Climate Matching

### Summary of Climate Matching Analysis

The climate match (Sanders et al. 2014; 16 climate variables; Euclidean Distance) was medium-high in southwestern Florida, which was the location of highest match within the continental U.S. Climate match was medium throughout the rest of peninsular Florida, and low across the remainder of the contiguous U.S. Climate 6 score indicated that the continental U.S. has a medium climate match. The range of Climate 6 scores indicating a medium climate match is 0.005 - 0.103; Climate 6 score of *C. recurviceps* was 0.008.



**Figure 2.** RAMP (Sanders et al. 2014) source map showing weather stations selected as source locations (red; southeastern China) and non-source locations (gray) for *C. recurviceps* climate matching. Source locations from GBIF (2016) and Froese and Pauly (2016); locations within those references but outside Guangxi, Guangdong, and Hainan provinces were excluded from climate matching (see Native Range in Section 1).



**Figure 3.** Map of RAMP (Sanders et al. 2014) climate matches for *Culter recurviceps* in the contiguous United States based on source locations reported by GBIF (2016) and Froese and Pauly (2016). 0=Lowest match, 10=Highest match. Counts of climate match scores are tabulated on the left side of the map.

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

## 7 Certainty of Assessment

Little information is available on the biology, ecology, or distribution of *C. recurviceps*, and the species has not been reported as introduced outside its native range. Certainty of this assessment is high because the risk is unambiguously uncertain.

## 8 Risk Assessment

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### Summary of Risk to the Contiguous United States

*C. recurviceps* is a cyprinid fish native to southern China. It is consumed by humans as food and is a host for human parasites. *C. recurviceps* has not been reported as introduced outside its native range, so no history of invasiveness exists. Within the contiguous United States, climate match is highest in southwestern peninsular Florida. Overall risk is uncertain.

### Assessment Elements

- **History of Invasiveness: Uncertain**
- **Climate Match: Medium**
- **Certainty of Assessment: High**
- **Overall Risk Assessment Category: Uncertain**

## 9 References

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

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## 10 References Quoted But Not Accessed

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**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.**

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