

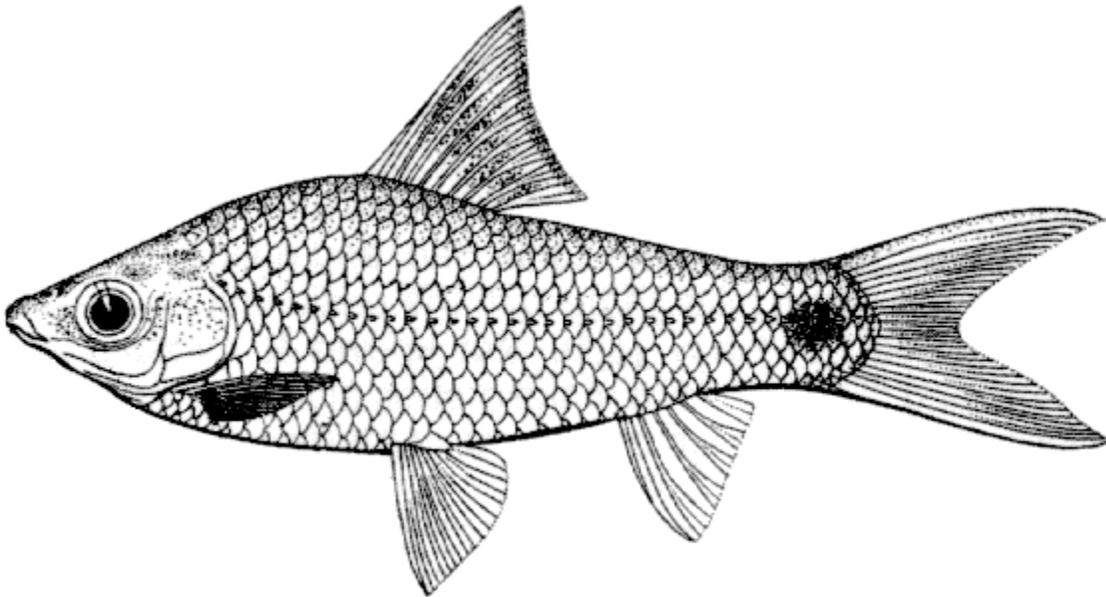
Lesser Silver Mud Carp (Cirrhinus caudimaculatus)

Ecological Risk Screening Summary

Web Version – 10/31/2012



Photo: Mustafa-Asmuni From Froese and Pauly (2011)



FAO

Drawing of *Cirrhinus caudimaculatus* (Food and Agriculture Organization of the United Nations, From Froese and Pauly (2011))

1 Native Range, and Status in the United States

Native Range

From Froese and Pauly (2011):

“Asia: Chao Phraya basin in Thailand (Roberts 1997) and Tonlé Sap, Cambodia (Lim et al. 1999).”

A synonym for *Cirrhinus caudimaculatus* is *Gymnostomus caudimaculatus* (Vidthayanon 2012). Regarding the native range for *Gymnostomus caudimaculatus*, Vidthayanon (2012) states: “This species is abundant throughout most of its range in Thailand, it is rarer in Cambodia where the habitat is less suitable. Recorded from the Chao Phraya in Thailand and the Mekong in Thailand, and Cambodia (Stung Treng and most likely in the Great Lake). It has also been reported from Lao PDR (central) and Viet Nam. The type locality is from Chiang Mai.”

Status in the United States

No currently known nonindigenous occurrences

Means of Introductions in the United States

No currently known means of introductions

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

From ITIS (2011):

Kingdom Animalia
 Phylum Chordata
 Subphylum Vertebrata
 Superclass Osteichthyes
 Class Actinopterygii
 Subclass Neopterygii
 Infraclass Teleostei
 Superorder Ostariophysi
 Order Cypriniformes
 Superfamily Cyprinoidea
 Family Cyprinidae
 Genus *Cirrhinus*
 Species *Cirrhinus caudimaculatus*

Current Taxonomic Standing: valid

Size, Weight, Age

From Froese and Pauly (2011):

“Max length: 13.0 cm TL male/unsexed; (Rainboth 1996)”

Environment

From Froese and Pauly (2011):

“Freshwater; benthopelagic; potamodromous (Riede 2004)”

Climate/Range

From Froese and Pauly (2011): “Tropical”

Habitat

A synonym for *Cirrhinus caudimaculatus* is *Gymnostomus caudimaculatus* (Vidthayanon 2012). Regarding the habitat for *Gymnostomus caudimaculatus*, Vidthayanon (2012) states: “Inhabits marshlands, swamps and floodplains with dense vegetation. Occurs marginally in rivers and larger tributaries, as well as flowing waters in canals. The species migrates into temporary standing waters in the rainy season where it reproduces. Famous for its large mixed-species migrations at the end of the breeding season. Feeds on plants, algae, and other micro-organisms.”

Distribution

From Froese and Pauly (2011):

“Asia: Chao Phraya basin in Thailand (Roberts 1997) and Tonlé Sap, Cambodia (Lim et al. 1999)”

Short description

From Froese and Pauly (2011):

“Vertebrae: 32. Differs from *Cirrhinus lobatus* in having a dark round spot on the caudal peduncle; it is small, small-headed species, often (but not always) with a strongly projecting snout not observed in other species.”

Biology

From Froese and Pauly (2011):

“Found at bottom depths in canals, ditches and small streams in large river floodplains. Migrates up small rivers and streams and out onto floodplains. Feeds on phytoplankton, periphyton,

benthic algae, detritus and some zooplankton. Most likely used to make prahoc (Rainboth 1996).”

Diseases

None reported.

Threat to humans

From Froese and Pauly (2011): “Harmless”

3 Impacts of Introductions

No currently known impacts of introductions

4 Global Distribution



Figure 1 (above). Map displaying Chao Phraya, Thailand and Tonle Sap, Cambodia were *Cirrhinus caudimaculatus* is known to be distributed. Map from Google Earth (2011).

5 Distribution within the United States

No currently known distribution within the United States

6 CLIMATCH

Summary of Climate Matching Analysis

The climate match (Australian Bureau of Rural Sciences 2010; 16 climate variables; Euclidean Distance) was shown as being Medium in southern areas of Florida and Texas and Low throughout the rest of the United States. Climate 6 match indicated that the Continental U.S. has a low climate match. The range for a low climate match is 0.0 – 0.005 and the climate match of *Cirrhinus caudimaculatus* is 0.002.

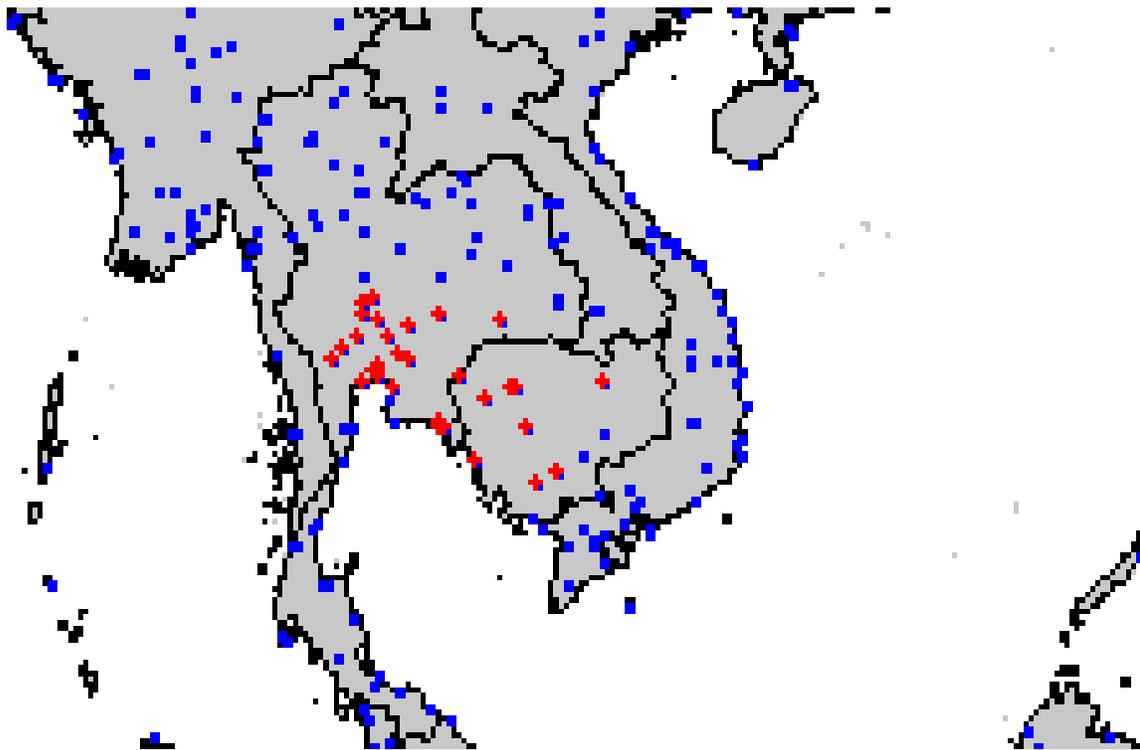


Figure 2 (above). CLIMATCH (Australian Bureau of Rural Sciences 2010) source map showing weather stations selected as source locations (red) and non-source locations (blue) for *Cirrhinus caudimaculatus* climate matching. Source locations from Froese and Pauly (2011).

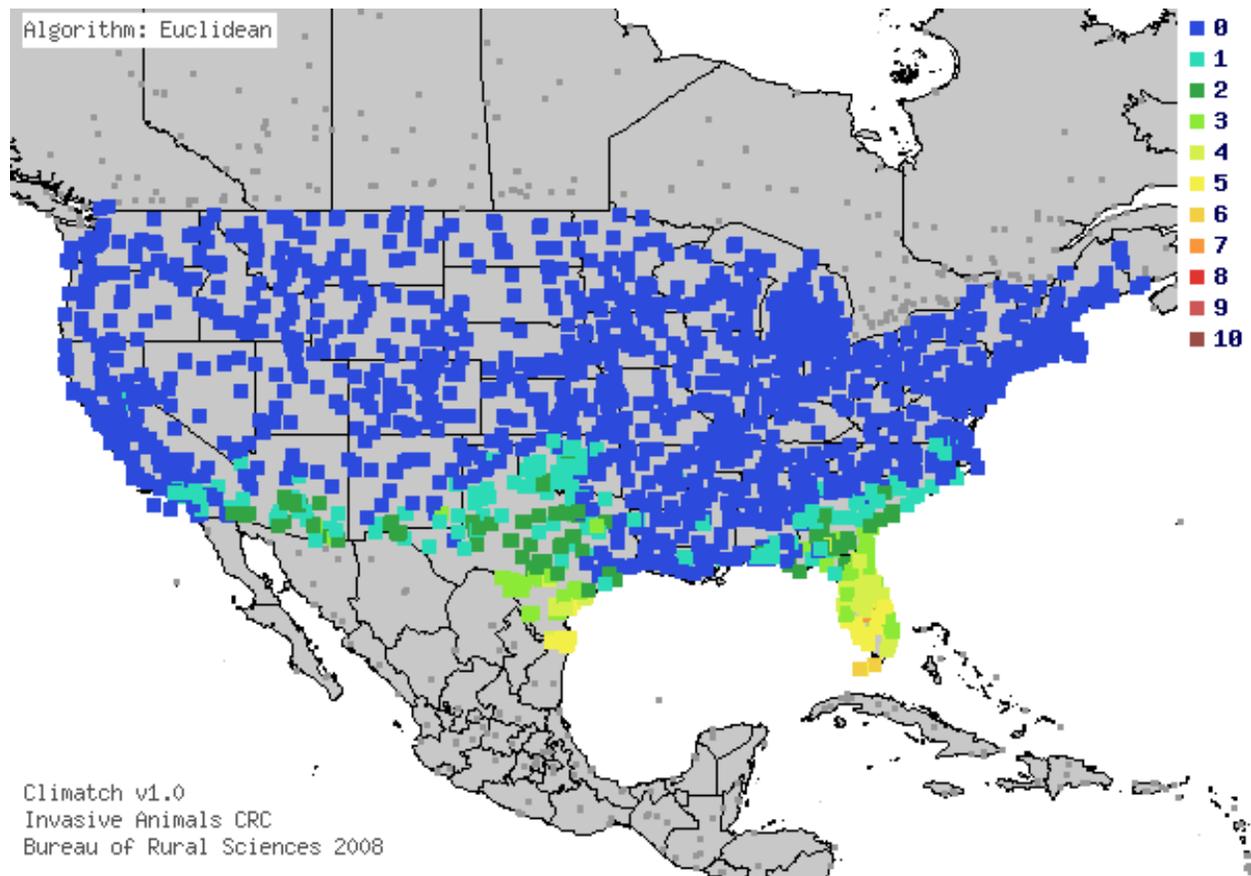


Figure 3 (above). Map of CLIMATCH (Australian Bureau of Rural Sciences 2010) climate matches for *Cirrhinus caudimaculatus* in the continental United States based on source locations reported by Froese and Pauly (2011). 0= Lowest match, 10=Highest match.

Table 1 (below). CLIMATCH (Australian Bureau of Rural Sciences 2010) climate match scores

CLIMATCH Score	0	1	2	3	4	5	6	7	8	9	10
Count	1528	173	110	66	50	27	3	1	0	0	0
Climate 6 Proportion =	0.002 (Low)										

7 Certainty of Assessment

Peer-reviewed literature on the biology, ecology, and distribution associated with *Cirrhinus caudimaculatus* as well as information on its potential invasiveness is extremely limited. More information and research on this species will be needed to strengthen the certainty of this assessment. The risk level is therefore uncertain, and the certainty of this risk is low.

8 Risk Assessment

Summary of Risk to the Continental United States

The overall risk assessment category for *Cirrhinus caudimaculatus* is uncertain. This species is not known to be in the aquarium or aquaculture industries and little else is known about the species. It has a low climate match and no history of invasiveness.

Assessment Elements

- **History of Invasiveness (Sec. 3):** Low
- **Climate Match (Sec. 6):** Low
- **Certainty of Assessment (Sec. 7):** Low
- **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.

Australian Bureau of Rural Sciences. 2011. CLIMATCH. Available:
<http://adl.brs.gov.au:8080/Climatch/> (Accessed August 2011).

Froese, R. and D. Pauly (Eds.). 2011. *Cirrhinus caudimaculatus*. FishBase. Available:
<http://www.fishbase.org/summary/Cirrhinus-caudimaculatus.html> Photo license and drawing available: <http://creativecommons.org/licenses/by-nc/3.0/legalcode>. (Accessed August 2011).

Google Inc. 2011. Google Earth (Version 6.0.3.2197) [Software].
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ITIS. 2011. *Cirrhinus caudimaculatus* Integrated Taxonomic Information System. Available:
http://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=688891 (Accessed August 2011).

Vidthayanon, C. 2012. *Gymnostomus caudimaculatus*. In: IUCN 2012. IUCN Red List of Threatened Species. Version 2012.2. Available:
<http://www.iucnredlist.org/details/188096/0> (Accessed October 22, 2012).

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.

Lim, P., S. Lek, S.T. Touch, S.O. Mao and B. Chhouk. 1999. Diversity and spatial distribution of freshwater fish in Great Lake and Tonle Sap River (Cambodia, Southeast Asia). *Aquat. Living Resour.* 12(6):379-386.

Rainboth, W.J. 1996. *Fishes of the Cambodian Mekong*. FAO Species Identification Field Guide for Fishery Purposes. FAO, Rome, 265 p.

Riede, K. 2004. Global register of migratory species - from global to regional scales. Final Report of the R&D-Projekt 808 05 081. Federal Agency for Nature Conservation, Bonn, Germany. 329 p.

Roberts, T.R. 1997. Systematic revision of the tropical Asian labeon cyprinid fish genus *Cirrhinus*, with descriptions of new species and biological observations on *C. lobatus*. *Nat. Hist. Bull. Siam Soc.* 45:171-203.