

Patano Cichlid (*Cincelichthys pearsei*)

Ecological Risk Screening Summary

U.S. Fish and Wildlife Service, August 2011

Revised, September 2018

Web Version, 12/19/2018



Photo: Goh Yong Teng. Licensed under CC BY 3.0. Available: <https://www.fishbase.de/photos/ThumbnailsSummary.php?Genus=Cincelichthys&Species=pearsei>. (August 2018).

1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2018):

“Central America: Atlantic slope of southeastern Mexico and northern Guatemala.”

Status in the United States

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

From That Fish Place (2018):

“Pantano Cichlid - *Cichlasoma pearsei* – Juvenile [...] \$9.99 [...] Out of Stock”

Means of Introductions in the United States

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

Remarks

This species is commonly referred to in the literature as *Cichlasoma pearsei*. This name, the synonym *Herichthys pearsei*, and the currently accepted name *Cincelichthys pearsei* were used when researching in preparation of this report.

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

From GBIF Secretariat (2018):

“Kingdom Animalia
Phylum Chordata
Class Actinopterygii
Order Perciformes
Family Cichlidae
Genus *Cincelichthys* (McMahan & Piller, 2015)
Species *Cincelichthys pearsei* (Hubbs, 1936)”

From Eschmeyer et al. (2018):

“Current status: Valid as *Cincelichthys pearsei* (Hubbs 1936). Cichlidae: Cichlinae.”

Size, Weight, and Age Range

From Froese and Pauly (2018):

“Max length : 20.0 cm SL male/unsexed; [Kullander 2003]”

From Seriously Fish (2018):

“This is a large species. Males can reach 17” (42.5cm) while females tend to be a little smaller at around 14” (35cm).”

Environment

From Froese and Pauly (2018):

“Freshwater; brackish; benthopelagic; pH range: 7.5 - 8.5; dH range: 3 - 14. [...] 26°C - 30°C [Conkel 1993]”

“Tolerates brackish water.”

Climate/Range

From Froese and Pauly (2018):

“Tropical”

Distribution Outside the United States

Native

From Froese and Pauly (2018):

“Central America: Atlantic slope of southeastern Mexico and northern Guatemala.”

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

From Seriously Fish (2018):

“Males grow larger than females, are more brightly coloured and tend to develop a higher forehead as they mature.”

Biology

From Froese and Pauly (2018):

“Inhabits lakes and lower river valley. [...] Feeds on both aquatic and terrestrial plants which line the river banks.”

From Seriously Fish (2018):

“Inhabits river basins and lakes, where it tends to be found in vegetated marginal areas. It’s also been recorded in brackish water on occasion, although it’s unknown if it withstand these conditions long term.”

Human Uses

From Inda-Díaz et al. (2009):

“Subsistence fishing was surveyed in the communities of Nueva Esperanza and Loma Bonita of the Lacandon Forest in the Usumacinta River Basin of Chiapas, Mexico from March to August 2005. [...] The most prevalent species in terms of biomass extracted were the pantano cichlid, *Herichthys pearsei* (Hubbs), grass carp, *Ctenopharyngodon idella* (Valenciennes), northern

checkmark cichlid, *Vieja intermedia* (Günther), bigmouth sleeper, *Gobiomorus dormitor* Lacepède, machaca, *Brycon guatemalensis* Regan, and blue catfish, *Ictalurus furcatus* (Lesueur).”

This species may be in trade in the U.S.

From That Fish Place (2018):

“Pantano Cichlid - *Cichlasoma pearsei* – Juvenile [...] \$9.99 [...] Out of Stock”

Diseases

Poelen et al. (2014) list the following as parasites of *Cincelichthys pearsei*: *Atrophecaecum astorquii*, *Pelaezia loossi*, *Riberoia ondatrae*, *Cladocystis trifolium*, *Neoechinorhynchus golvani*, *Floridosentis mugilis*, *Polymorphus mutabilis*, *Sciadicleithrum bravohollisae*, *Atractis vidali*, *Orientattractis campechensis*, *Raillietnema kritscheri*, *Mexiconema cichlasomae*, *Cichlasotrema ujati*, *Homalometron pallidum*, *Oligogonotylus manteri*, *Ascocotyle tenuicollis*, *Perezitrema bychowskyi*, *Clinostomum complanatum*, *Diplostomum compactum*, *Posthodiplostomum minimum*, *Echinochasmus leopoldinae*, *Genarchella isabellae*, *Ascocotyle leighi*, *Ascocotyle nana*, *Ascocotyle nunezae*, *Ribeiroia ondatrae*, *Rhabdochona kidderi*, *Physocephalus sexalatus*, and *Crassicutis cichlasomae* (Strona et al. 2013).

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 *Cincelichthys pearsei*, reported from southern Mexico and northern Guatemala. 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 0.004, which is a low climate match. A Climate 6 score of 0.005 or lower indicates a low climate match. The only state with a high climate score was Florida; all other states in the contiguous United States had a low climate score. The climate match was very low in all but the southernmost areas of the contiguous United States. The southern portions of Florida and Texas, and the extreme southern areas of California, Arizona, and Louisiana had a medium match, and far southern Florida had a high match.

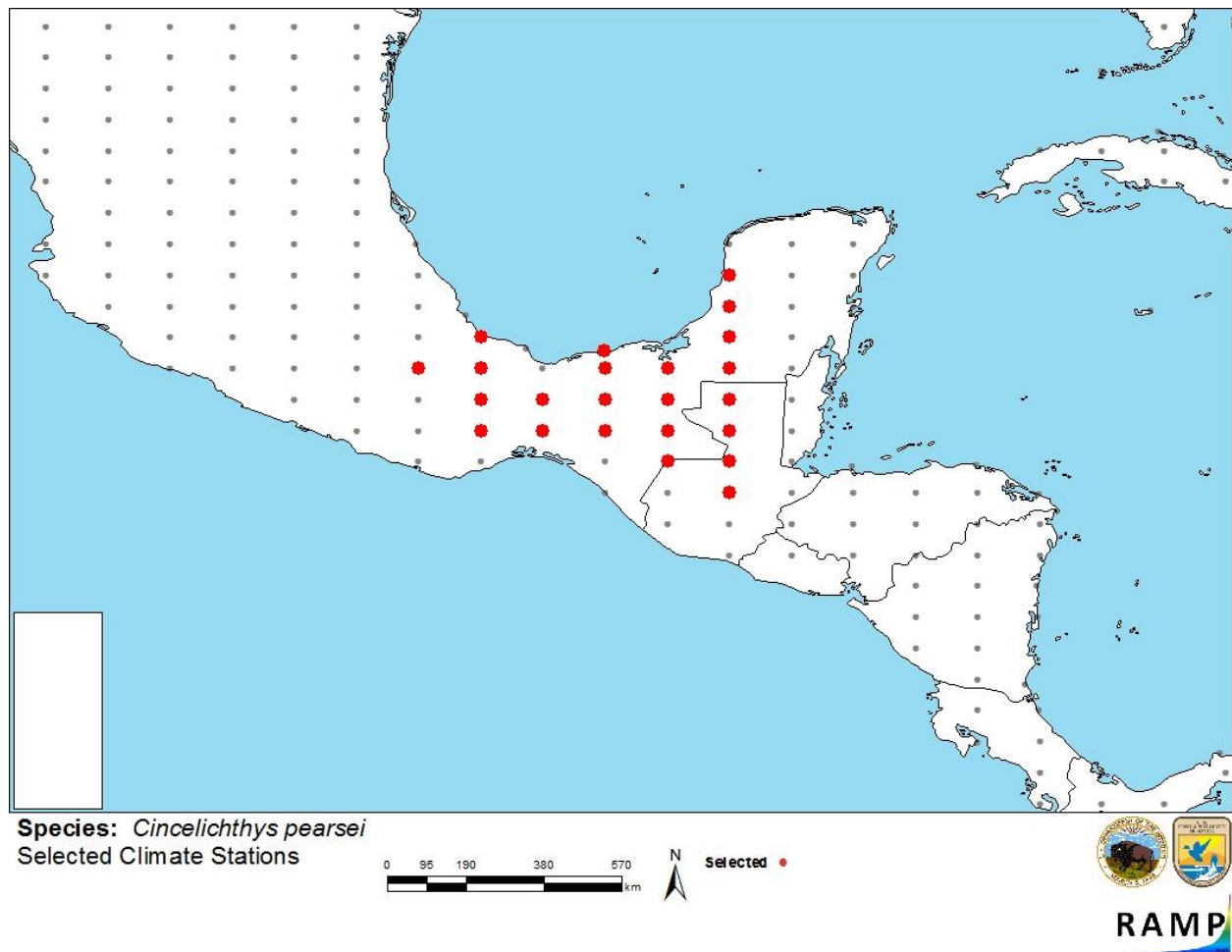


Figure 2. RAMP (Sanders et al. 2014) source map showing weather stations selected as source locations (red: Mexico, Guatemala) and non-source locations (gray) for *Cincelichthys pearsei* climate matching. Source locations from GBIF Secretariat (2018).

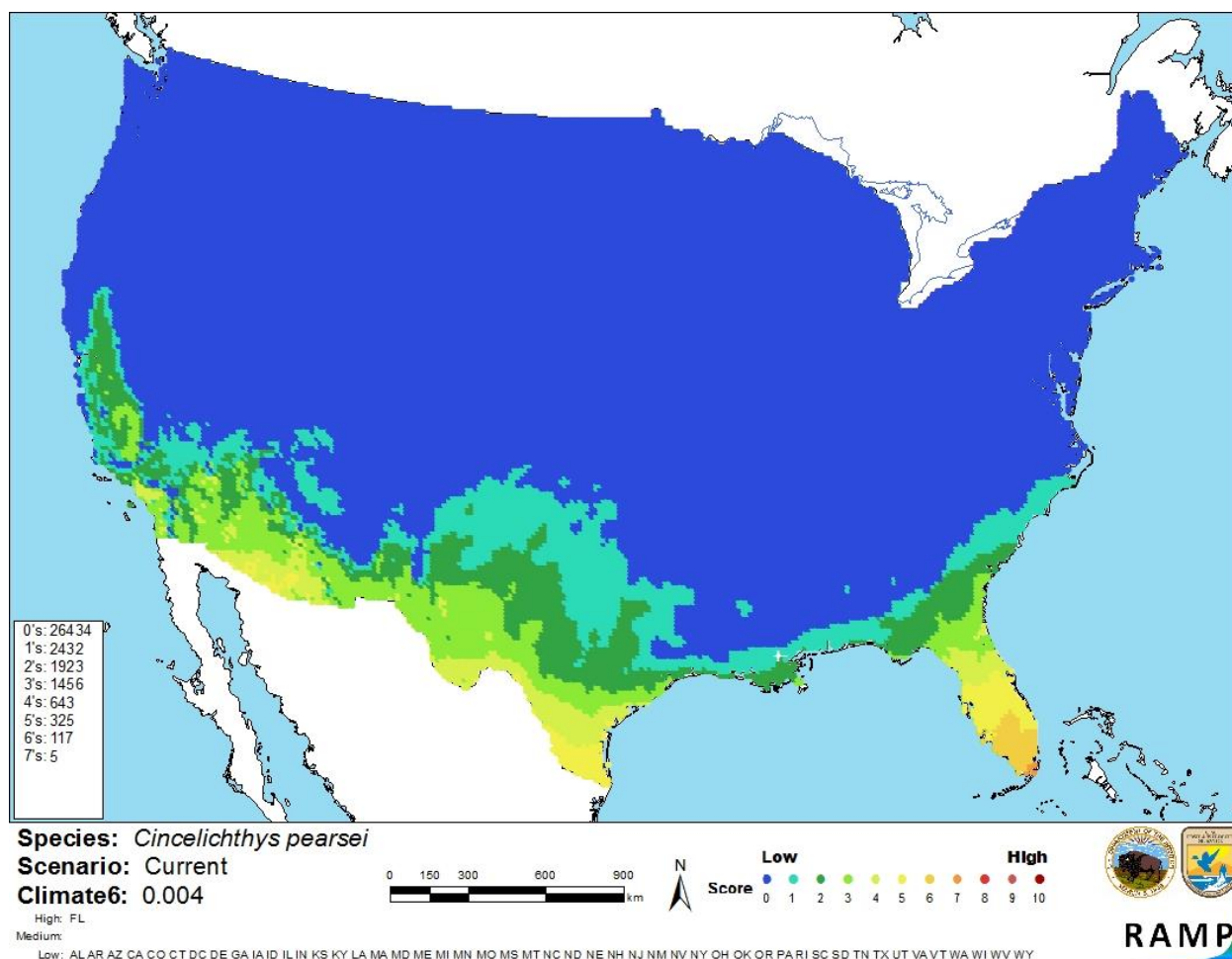


Figure 3. Map of RAMP (Sanders et al. 2014) climate matches for *Cincelichthys pearsei* in the contiguous United States based on source locations reported by GBIF Secretariat (2018). 0=Lowest match, 10=Highest match.

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 limited information available on the biology of *Cincelichthys pearsei*. It has never been reported as introduced or established outside of its native range. Therefore, there is no information available on impacts of introductions on which to base an assessment of risk. Because of this, the certainty of this assessment is low.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Cincelichthys pearsei, the Patano Cichlid, is a relatively large cichlid fish species native to the Atlantic drainages of Guatemala and Southern Mexico. This species has not been documented as introduced or established outside of its native range. History of invasiveness is uncertain. It has been in trade in the United States and utilized in subsistence fishing in its native range. *C. pearsei* has a low climate match with the contiguous United States. The only state with a high climate score was Florida. Because this species has not been documented outside its native range and no information is available on invasiveness, 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**
- **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.

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<https://www.thatpetplace.com/Cichlasoma-pearsei-pantano-cichlid-267675>. (September 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.

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Strona, G., M. Lourdes, D. Palomares, N. Bailly, P. Galli, and K. D. Lafferty. 2013. Host range, host ecology, and distribution of more than 11800 fish parasite species. *Ecology* 94:544.