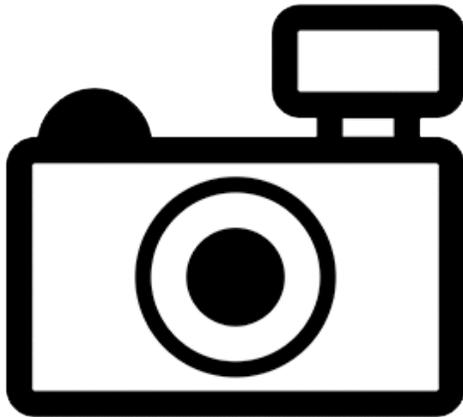


Usumacinta Cichlid (*Kihnichthys ufermanni*)

Ecological Risk Screening Summary

U.S. Fish and Wildlife Service, January 2013
Revised, January 2018 and August 2018
Web Version, 8/3/2018



No Photo Available

1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2017):

“Central America: Atlantic slope in the Usumacinta River basin in Guatemala and Mexico.”

From McMahan et al. (2015):

“Few specimens exist in museum collections for this species, and most material comes from the Río La Pasion system, a tributary to the Río Usumacinta in Peten, Guatemala.”

Status in the United States

This species has not been reported as introduced or established in the United States. No aquarium retailers were found listing this species for sale, but an internet discussion board suggests that it may appear occasionally.

From MonsterFishKeepers.com (2017):

“There was some conversation in another thread about different new world cichlids in the [aquarium] hobby. I've posted these [sic] [photos] before, but [*Kihnichthys ufermanni*] is a cichlid that you don't normally see in tanks or in pet stores. I had three of them for several years [...].”

Means of Introductions in the United States

Not reported in the United States.

Remarks

This species was known as *Cichlasoma ufermanni* (ITIS 2018) or *Vieja ufermanni* (Eschmeyer et al. 2018) until a recent taxonomic revision (McMahan et al. 2015). These two names were used, along with the currently accepted scientific name, to search for information for this report.

From McMahan et al. (2015):

“Allgayer (2002) placed this enigmatic cichlid in *Vieja* in its original description. Few specimens exist in museum collections for this species, and most material comes from the Río La Pasión system, a tributary to the Río Usumacinta in Peten, Guatemala. Little is known about this cichlid and more comparative material and natural history information are certainly needed.”

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 Acanthopterygii
Order Perciformes
Suborder Labroidei
Family Cichlidae
Genus *Cichlasoma*
Species *Cichlasoma ufermanni* (Allgayer, 2002)”

From Eschmeyer et al. (2018):

“Current status: Valid as *Kihnichthys ufermanni* (Allgayer 2002).”

Size, Weight, and Age Range

From Froese and Pauly (2017):

“Max length : 25.0 cm SL male/unsexed; [Kullander 2003].”

Environment

From Froese and Pauly (2017):

“Freshwater; benthopelagic.”

Climate/Range

From Froese and Pauly (2017):

“Tropical.”

Distribution Outside the United States

Native

From Froese and Pauly (2017):

“Central America: Atlantic slope in the Usumacinta River basin in Guatemala and Mexico.”

From McMahan et al. (2015):

“Few specimens exist in museum collections for this species, and most material comes from the Río La Pasión system, a tributary to the Río Usumacinta in Peten, Guatemala.”

Introduced

No known introductions.

Means of Introduction Outside the United States

No known introductions.

Short Description

From McMahan et al. (2015):

“Diagnosis. *Kihnichthys [ufermanni]* is diagnosed by the presence of a dark caudal blotch filling the center, posterior portion of the caudal peduncle, as well as the presence of spatulate or chisel-like teeth in the anterior portions of the upper and lower jaws. Species of this genus possess a deep skull and large head with a small mouth. The lower jaw extends slightly beyond the upper jaw. The combination of these characters differentiates this genus from all other herichthyin genera. *Vieja* possesses a similar but larger caudal blotch, but also has conical or bicuspid (versus spatulate) teeth. *Cincolichthys* gen. nov. possesses spatulate teeth but has a small spot on the caudal peduncle (versus a larger spot in *Kihnichthys*).”

Biology

Not available.

Human Uses

From MonsterFishKeepers.com (2017):

“There was some conversation in another thread about different new world cichlids in the [aquarium] hobby. I've posted these [sic] [photos] before, but [*Kihnichthys ufermanni*] is a cichlid that you don't normally see in tanks or in pet stores. I had three of them for several years [...].”

Diseases

Not available.

Threat to Humans

From Froese and Pauly (2017):

“Harmless.”

3 Impacts of Introductions

No known introductions.

4 Global Distribution



Figure 1. Known global distribution of *K. ufermanni*, reported from Central America. Map from GBIF Secretariat (2017).

5 Distribution Within the United States

No known occurrences within the United States.

6 Climate Matching

Summary of Climate Matching Analysis

The Climate 6 score (Sanders et al. 2018; 16 climate variables; Euclidean distance) for the contiguous United States was 0.003, which is low. The range for a low climate match is from 0.000 to 0.005, inclusive. The highest match was located in peninsular Florida, most of which had a medium match. The remainder of the contiguous United States had a low match.

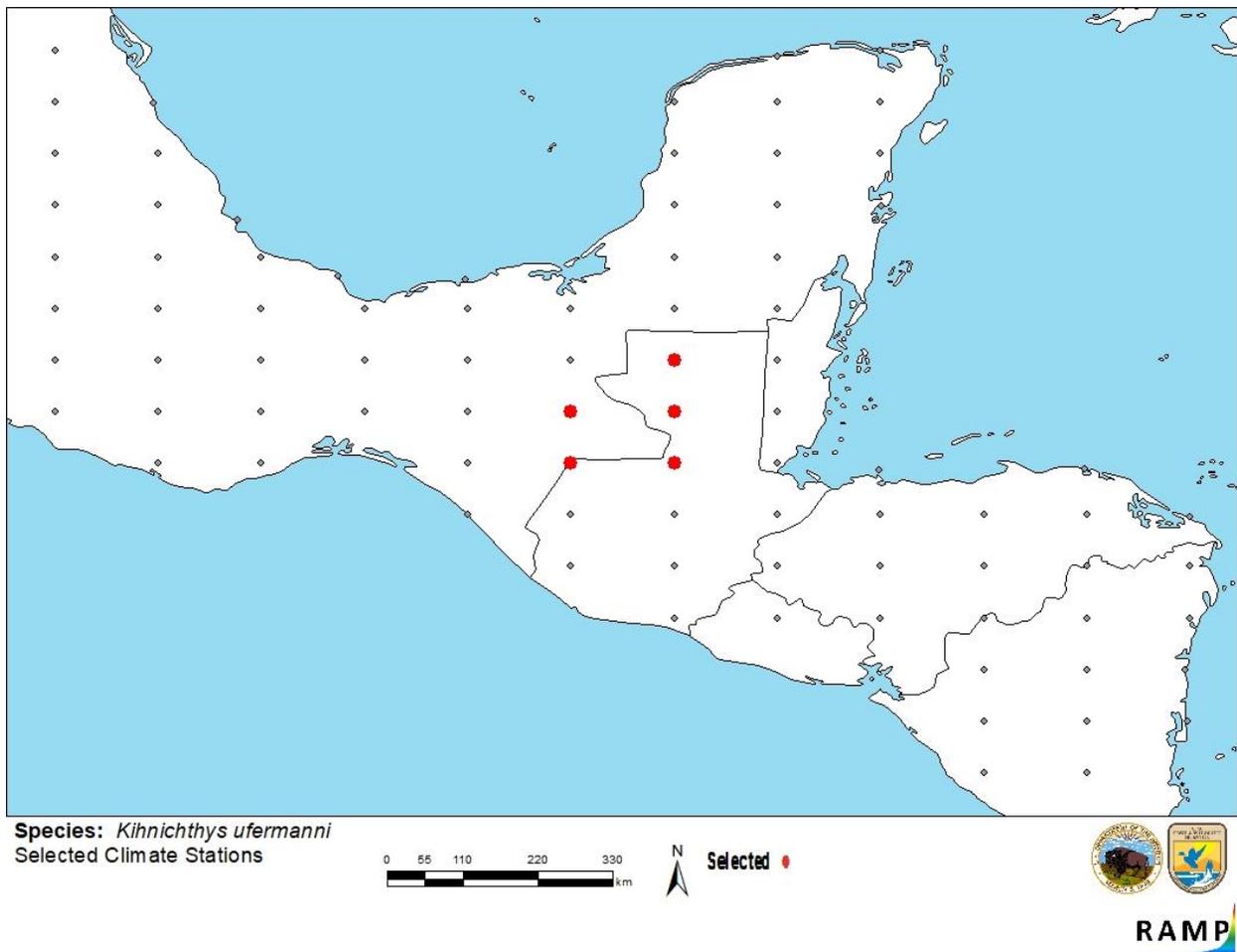


Figure 2. RAMP (Sanders et al. 2018) source map showing weather stations in Central America selected as source locations (red; Guatemala-Mexico border) and non-source locations (gray) for *K. ufermanni* climate matching. Source locations from GBIF Secretariat (2017).

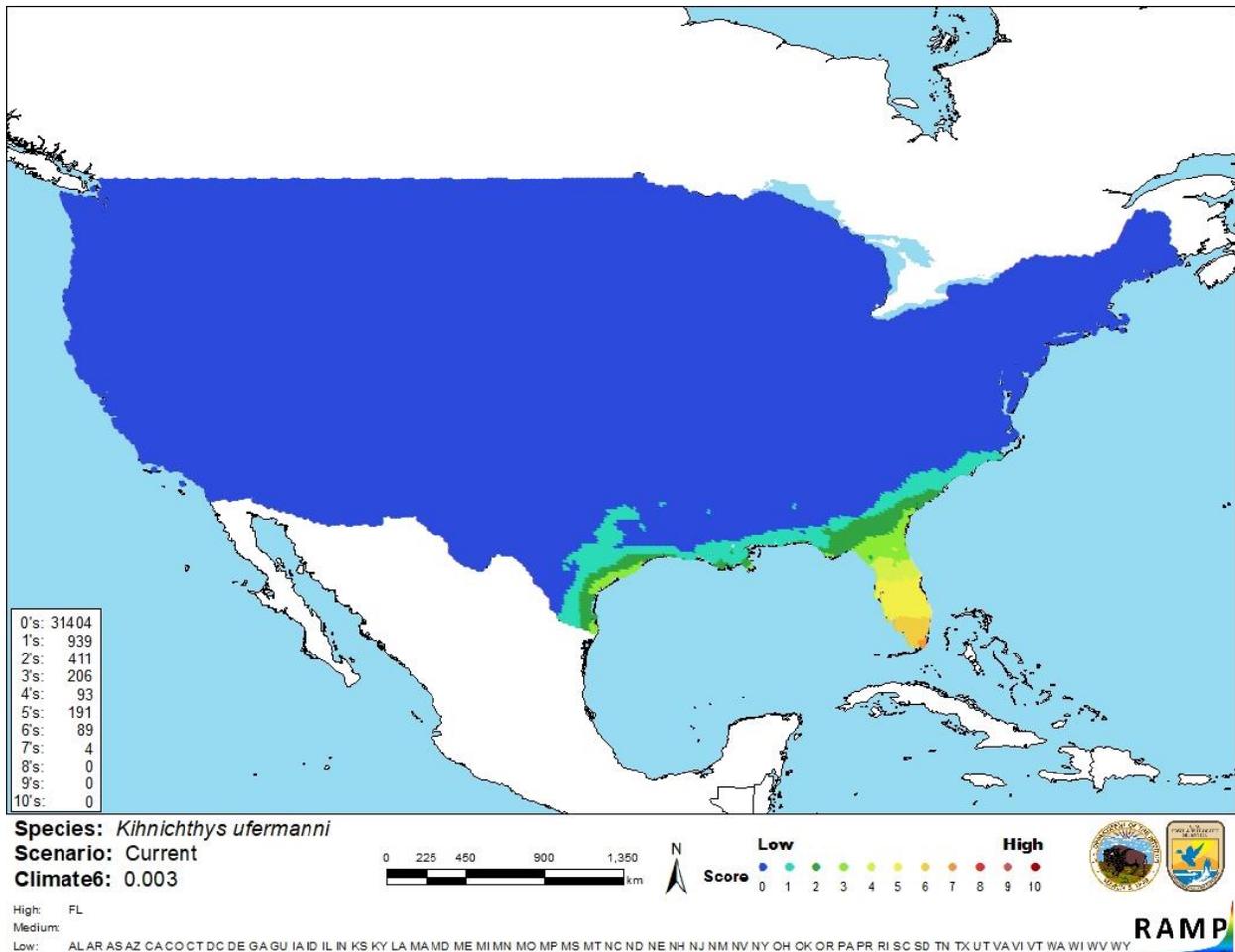


Figure 3. Map of RAMP (Sanders et al. 2018) climate matches for *K. ufermanni* in the contiguous United States based on source locations from GBIF Secretariat (2017). 0=Lowest match, 10=Highest match.

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

7 Certainty of Assessment

Little peer-reviewed literature on the biology, ecology, and distribution associated with *Kihnichthys ufermanni* is available. The species has not been reported outside its native range, therefore no information is available on its potential invasiveness. Additional information and research on this species is needed to increase the certainty of this assessment. Based on available data, the certainty of this assessment is low.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Usumacinta Cichlid (*Kihnichthys ufermanni*) is a fish with a distribution limited to the Usumacinta River basin in Guatemala and Mexico. It is used in the aquarium trade, but only rarely. *K. ufermanni* is not known to be introduced outside of its native range. Little to no information is available about the biology, distribution, and invasiveness of this species. The climate match to the contiguous United States is low. However, most of peninsular Florida has a medium match. The certainty of this assessment is low. Overall risk to the contiguous United States 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.

Eschmeyer, W. N., R. Fricke, and R. van der Laan, editors. 2017. Catalog of fishes: genera, species, references. Available: <http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp>. (January 2018).

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GBIF Secretariat. 2017. GBIF backbone taxonomy: *Kihnichthys ufermanni* (Allgayer, 2002). Global Biodiversity Information Facility, Copenhagen. Available: <https://www.gbif.org/species/9362017>. (August 2018).

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McMahan, C. D., W. A. Matamoros, K. R. Piller, and P. Chakrabarty. 2015. Taxonomy and systematics of the herichthyins (Cichlidae: Tribe Heroini), with the description of eight new Middle American Genera. *Zootaxa* 3999(2):211-234.

MonsterFishKeepers.com. 2017. Today in the Fishroom ~ *Kihnichthys ufermanni*. Available: <https://www.monsterfishkeepers.com/forums/threads/today-in-the-fishroom-kihnichthys-ufermanni.672316/>. (January 2018).

Sanders, S., C. Castiglione, and M. H. Hoff. 2018. Risk Assessment Mapping Program: RAMP, version 3.1. 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.

Allgayer, R. 2002. *Vieja ufermanni*, sp. nov., un cichlidé nouveau du bassin du Rio Usumacinta et du Rio de la Pasión, Amérique central (Pisces: Perciformes). L'an Cichlidé 2: 14–17.

Kullander, S.O. 2003. Cichlidae (Cichlids). p. 605-654. In R.E. Reis, S.O. Kullander and C.J. Ferraris, Jr. (eds.) Checklist of the Freshwater Fishes of South and Central America. EDIPUCRS, Porto Alegre, Brazil.