Ochmacanthus orinico (a catfish, no common name)

Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, December 2016
Revised, January 2017
Web Version, 3/23/2018

Photo: C. S. Neto. Used with permission (Neto 2014, p. ii). Available: http://www.teses.usp.br/teses/disponiveis/38/38131/tde-05092014-085426/en.php. (December 2016).

1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2016):

"South America: Negro and Orinoco River basins [Brazil and Venezuela]."

From Neto and de Pinna (2016):

"Brazil: […] rio Tocantins […]"

Status in the United States

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

From FFWCC (2017):

"Prohibited nonnative species are considered to be dangerous to the ecology and/or the health and welfare of the people of Florida. These species are not allowed to be personally possessed or used for commercial activities. Very limited exceptions may be made by permit from the Executive Director for research or for public exhibition by facilities that meet biosecurity criteria […]
Freshwater Aquatic Species […]
Parasitic catfishes […]
Ochmacanthus orinoco"

Means of Introductions in the United States

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

2 Biology and Ecology

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 Siluriformes
Family Trichomycteridae
Subfamily Stegophilinae
Genus *Ochmacanthus*
Species *Ochmacanthus orinoco* (Myers, 1927)"

"Current Standing: valid"

Size, Weight, and Age Range
From Froese and Pauly (2016):

"Max length : 4.6 cm SL male/unsexed; [de Pínna and Wosiacki 2003]"

Environment
From Froese and Pauly (2016):

"Freshwater; benthopelagic."

"[…] 23°C - 26°C [Baensch and Riehl 1995; assumed to represent recommended aquarium water temperatures]"

Climate/Range
From Froese and Pauly (2016):

"Tropical; […]"

Distribution Outside the United States
Native
From Froese and Pauly (2016):

"South America: Negro and Orinoco River basins [Brazil and Venezuela]."

From Neto and de Pinna (2016):

"Brazil: […] rio Tocantins […]"

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 Myers (1927):

"Maxillary barbels reaching middle of interopercular spine-patch, lower barbels much shorter, with a membranous flap below. Head flattened, its width equal to its length with opercular spines. Ten large spines in interopercular patch, ten or twelve in the opercular patch. Teeth of premaxillary very small, in fine series as in *Stegophilus*. A prominent pectoral pore. Pelvics inserted midway between caudal base and front of interopercular spine-patch. Anal origin under last part of dorsal base. Caudal rounded, with many accessory rays, not tadpole-like."

"Back mottled. A single series of oblong dark patches of unequal length down the middle of the sides to caudal base."

Biology

From Baskin et al. (1980):

"[…] Stegophilinae (*Stegophilus*, *Homodiaetus*, and *Ochmacanthus*) are tentatively classified as scale eaters."

Human Uses

No information available.

Diseases

No information available. No OIE-reportable diseases have been documented for this species.

Threat to Humans

From Froese and Pauly (2016):

"Harmless"

3 Impacts of Introductions

This species has not been reported as introduced or established outside of its native range.

From FFWCC (2017):

"Prohibited nonnative species are considered to be dangerous to the ecology and/or the health and welfare of the people of Florida. These species are not allowed to be personally possessed or used for commercial activities. Very limited exceptions may be made by permit from the Executive Director for research or for public exhibition by facilities that meet biosecurity criteria […]
Freshwater Aquatic Species […]
Parasitic catfishes […]
Ochmacanthus orinoco"

4 Global Distribution

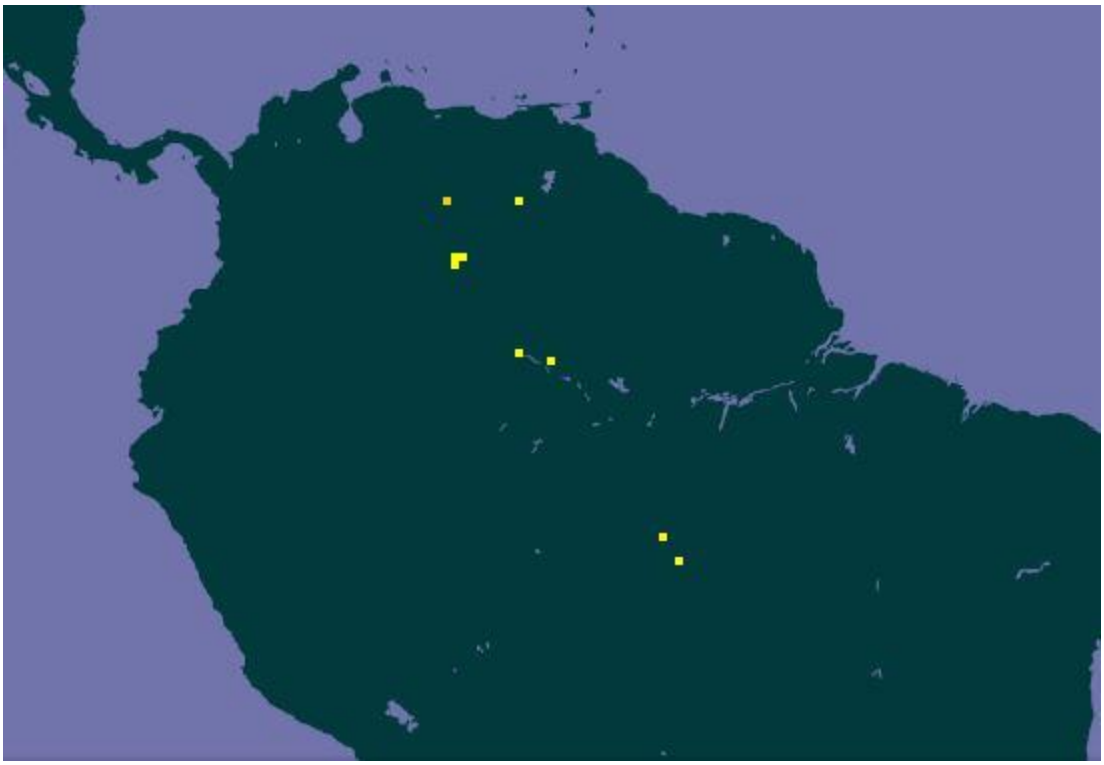

Figure 1. Known global established locations of *Ochmacanthus orinoco*. Map from GBIF (2016). Locations in central Brazil were excluded from climate matching because they are outside the known range of the species (see Distribution Outside the United States, above).

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 match (Sanders et al. 2014; 16 climate variables; Euclidean Distance) was low across nearly all of the United States, except for a small area of medium climate match in southern Florida. Climate 6 proportion indicated that the contiguous U.S. had a low climate match overall. The range for a low climate match is 0.000-0.005; the Climate 6 proportion of *Ochmacanthus orinoco* was 0.0.

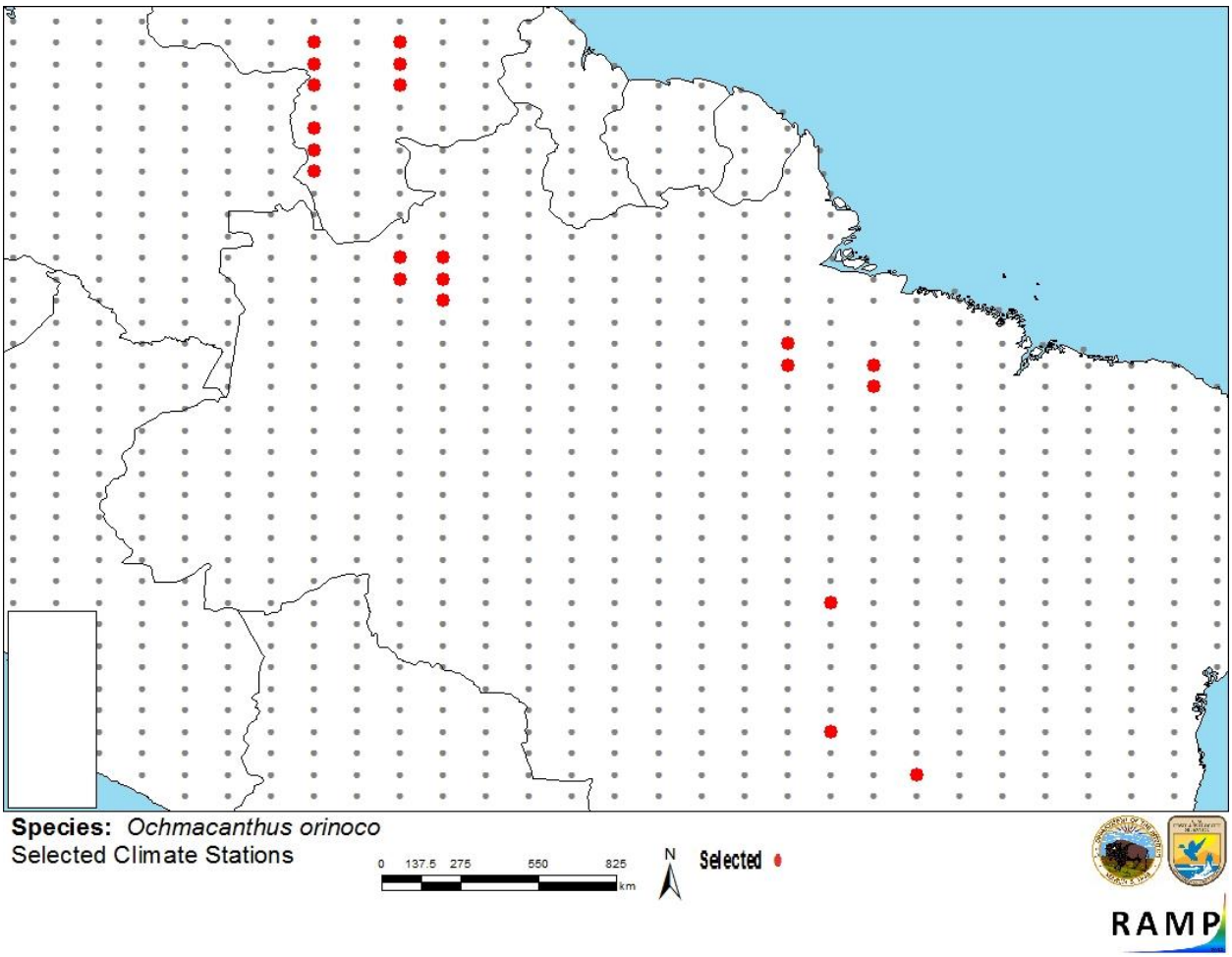

Figure 2. RAMP (Sanders et al. 2014) source map showing weather stations selected as source locations (red) and non-source locations (gray) for *Ochmacanthus orinoco* climate matching. Source locations from GBIF (2016) and, for the Rio Tocantins basin in Brazil, Neto (2014).

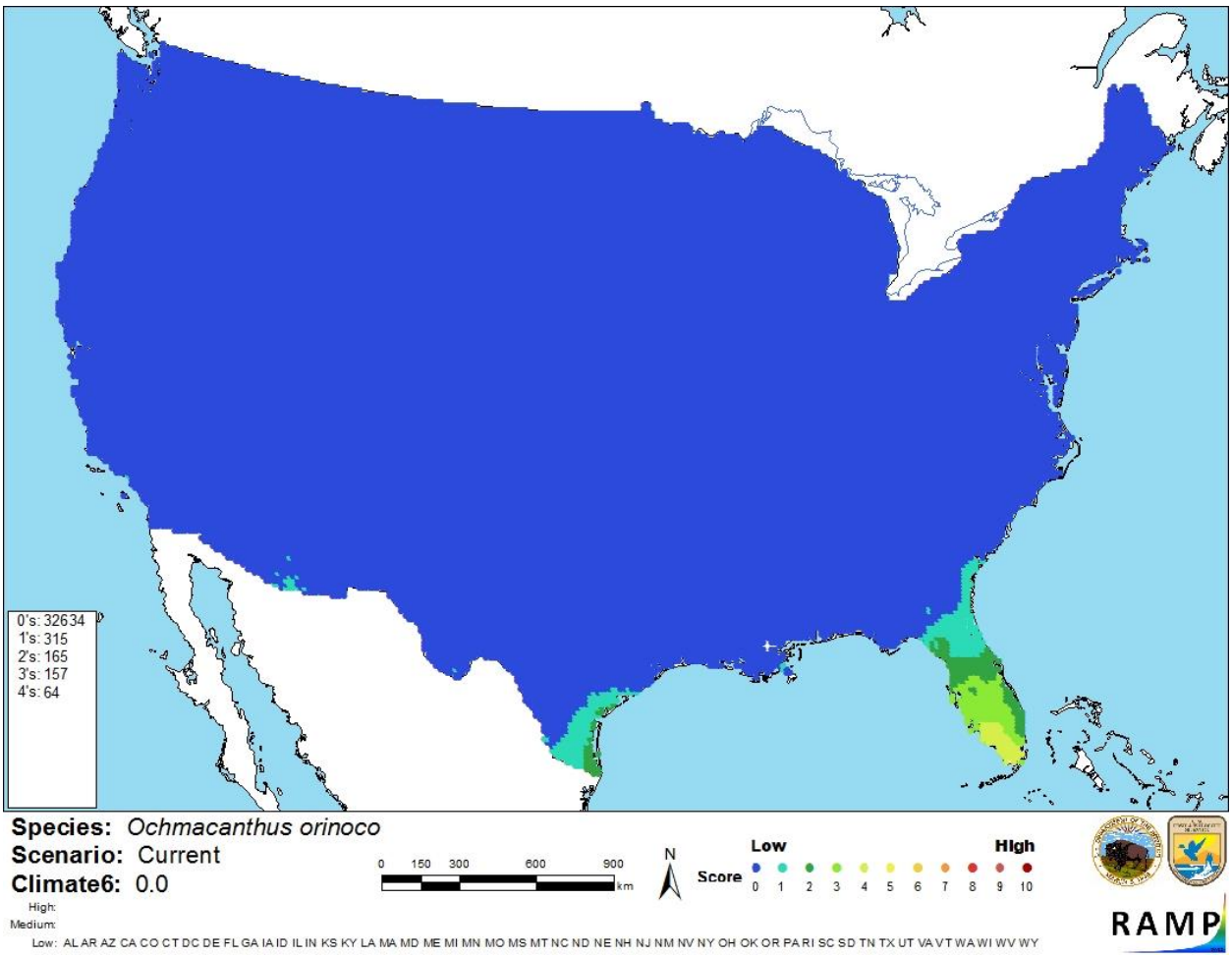

Figure 3. Map of RAMP (Sanders et al. 2014) climate matches for *Ochmacanthus orinoco* in the contiguous United States based on source locations reported by GBIF (2016) and Neto (2014). 0= Lowest match, 10=Highest match. Counts of climate match scores are tabulated on the left.

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≤0.005	Low
0.005<X<0.103	Medium
≥0.103	High

7 Certainty of Assessment

There is very little information available on the biology and ecology of *Ochmacanthus orinoco*. The species has not been reported as introduced outside its native range. Further information on the biology and distribution of *O. orinoco* is needed to conduct a thorough assessment of the risk and potential negative impacts of this species outside of its native range. Certainty of this assessment is low.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Ochmacanthus orinoco is a catfish native to the Negro, Orinoco, and Tocantins-Araguaia River basins in Brazil and Venezuela. There have been no documented introductions of the species outside its native range, so any impacts of introduction are unknown. State authorities currently consider *O. orinoco* dangerous to the ecology or the health and welfare of the people of Florida, where personal possession or commercial use of this species is prohibited by law. *O. orinoco* has a low climate match with the contiguous United States. Overall risk assessment category for this species 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.

Baskin, J. N., T. M. Zaret, and F. Mago-Leccia. 1980. Feeding of reportedly parasitic catfishes (Trichomycteridae and Cetopsidae) in the Rio Portuguesa Basin, Venezuela. Biotropica 12(3):182-186.

FFWCC (Florida Fish and Wildlife Conservation Commission). 2017. Prohibited species list. Florida Fish and Wildlife Conservation Commission, Tallahassee, Florida. Available: http://myfwc.com/wildlifehabitats/nonnatives/regulations/prohibited/#Ochmacanthus. (January 2017).

Froese, R., and D. Pauly, editors. 2016. *Ochmacanthus orinoco* (Myers, 1927). FishBase. Available: http://www.fishbase.us/summary/48777. (December 2016).

GBIF (Global Biodiversity Information Facility). 2016. GBIF backbone taxonomy: *Ochmacanthus orinoco* (Myers, 1927). Global Biodiversity Information Facility, Copenhagen. Available: http://www.gbif.org/species/2342888. (December 2016).

ITIS (Integrated Taxonomic Information System). 2016. *Ochmacanthus orinoco* (Myers, 1927). Integrated Taxonomic Information System, Reston, Virginia. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=682143#null. (December 2016).

Myers, G. S. 1927. Descriptions of new South American fresh-water fishes collected by Dr. Carl Ternetz. Bulletin of the Museum of Comparative Zoology 68:107-135.

Neto, C. S. 2014. Sistemática do gênero *Ochmacanthus*: um grupo de bagres neotropicais lepidófagos (Teleostei: Siluriformes: Trichomycteridae). Master's thesis. University of São Paulo, São Paulo, Brazil. Available: http://www.teses.usp.br/teses/disponiveis/38/38131/tde-05092014-085426/en.php. (December 2016).

Neto, C. S., and M. de Pinna. 2016. Redescription of *Ochmacanthus batrachostoma* (Miranda-Ribeiro, 1912) (Siluriformes: Trichomycteridae): a possible case of incipient paedomorphism. Neotropical Ichthyology 14(1):e150030.

Sanders, S., C. Castiglione, and M. Hoff. 2014. Risk Assessment Mapping Program: RAMP. 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.

Baensch, H. A., and R. Riehl. 1995. Aquarien atlas, volume 4. Mergus Verlag GmbH, Verlag für Natur-und Heimtierkunde, Melle, Germany.

de Pínna, M. C. C., and W. Wosiacki. 2003. Trichomycteridae (pencil or parasitic catfishes). Pages 270-290 *in* R. E. Reis, S. O. Kullander, and C. J. Ferraris, Jr., editors. Checklist of the freshwater fishes of South and Central America. EDIPUCRS, Porto Alegre, Brazil.