

Acanthopoma annectens

Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, March 2014

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Web Version, 4/2/2018



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http://eol.org/data_objects/26103679.

1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2017):

“South America: Upper and middle Amazon River basin.”

Status in the United States

This species has not been reported 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 [...]
Freshwater Aquatic Species [...]
Parasitic catfishes [...]
Acanthopoma annectens”

Means of Introductions in the United States

This species has not been reported in the United States.

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

From ITIS (2017):

“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 *Acanthopoma*
Species *Acanthopoma annectens*”

“Taxonomic Status: valid”

Size, Weight, and Age Range

From Froese and Pauly (2017):

“Max length : 12.0 cm SL male/unsexed; [de Pinna and Wosiacki 2003]”

Environment

From Froese and Pauly (2017):

“Freshwater; demersal.”

Climate/Range

From Froese and Pauly (2017):

“Tropical; preferred ?”

Distribution Outside the United States

Native

From Froese and Pauly (2017):

“South America: Upper and middle Amazon River basin.”

Introduced

This species has not been reported as introduced.

Means of Introduction Outside the United States

This species has not been reported as introduced.

Short Description

From DoNascimento (2015):

“The single diagnostic character traditionally used to recognize *Acanthopoma* is the branchiostegal membrane with posterior margin free from the isthmus.”

Biology

From Froese and Pauly (2017):

“Attacks like a leech and produces wounds all over the fish which it attacks. It spreads a bundle of opercular and inter-opercular spines into the wound and remains there, being very difficult to remove. Invades the 'private parts' of wading or swimming animals but apparently exist in these passages only for a short while, as they quickly die from a lack of oxygen [Burgess 1989].”

Human Uses

No information available.

Diseases

No information available. There are no known OIE reportable diseases for this species.

Threat to Humans

From Froese and Pauly (2017):

“Harmless”

3 Impacts of Introductions

There are no reported introductions for this species. Therefore, impacts from introductions cannot be evaluated at this time.

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 [...]
Freshwater Aquatic Species [...]
Parasitic catfishes [...]
Acanthopoma annectens”

4 Global Distribution



Figure 1. Known global established locations of *Acanthopoma annectens* in northern South America. Map from GBIF (2016).

5 Distribution Within the United States

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 low for a majority of the United States. Highest scores occurred in Florida, where southern peninsular Florida was a medium climate match. Climate 6 proportion indicated that the contiguous U.S. has a low climate match overall. The range for a low climate match is 0.000 – 0.005; Climate 6 proportion of *Acanthopoma annectens* was 0.0.

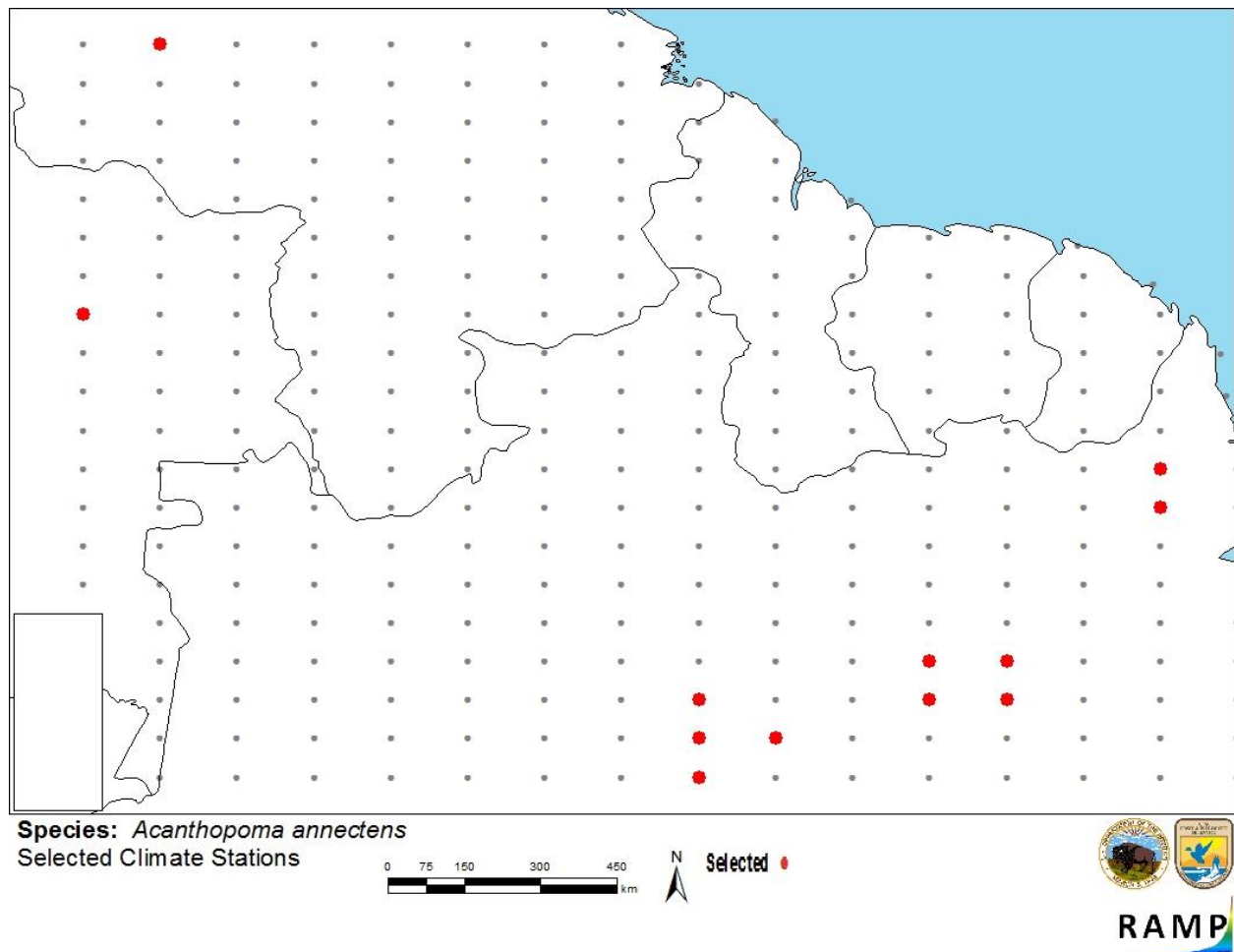


Figure 2. RAMP (Sanders et al. 2014) source map showing weather stations in northern South America selected as source locations (red) and non-source locations (gray) for *Acanthopoma annectens* climate matching. Source locations from GBIF (2016).

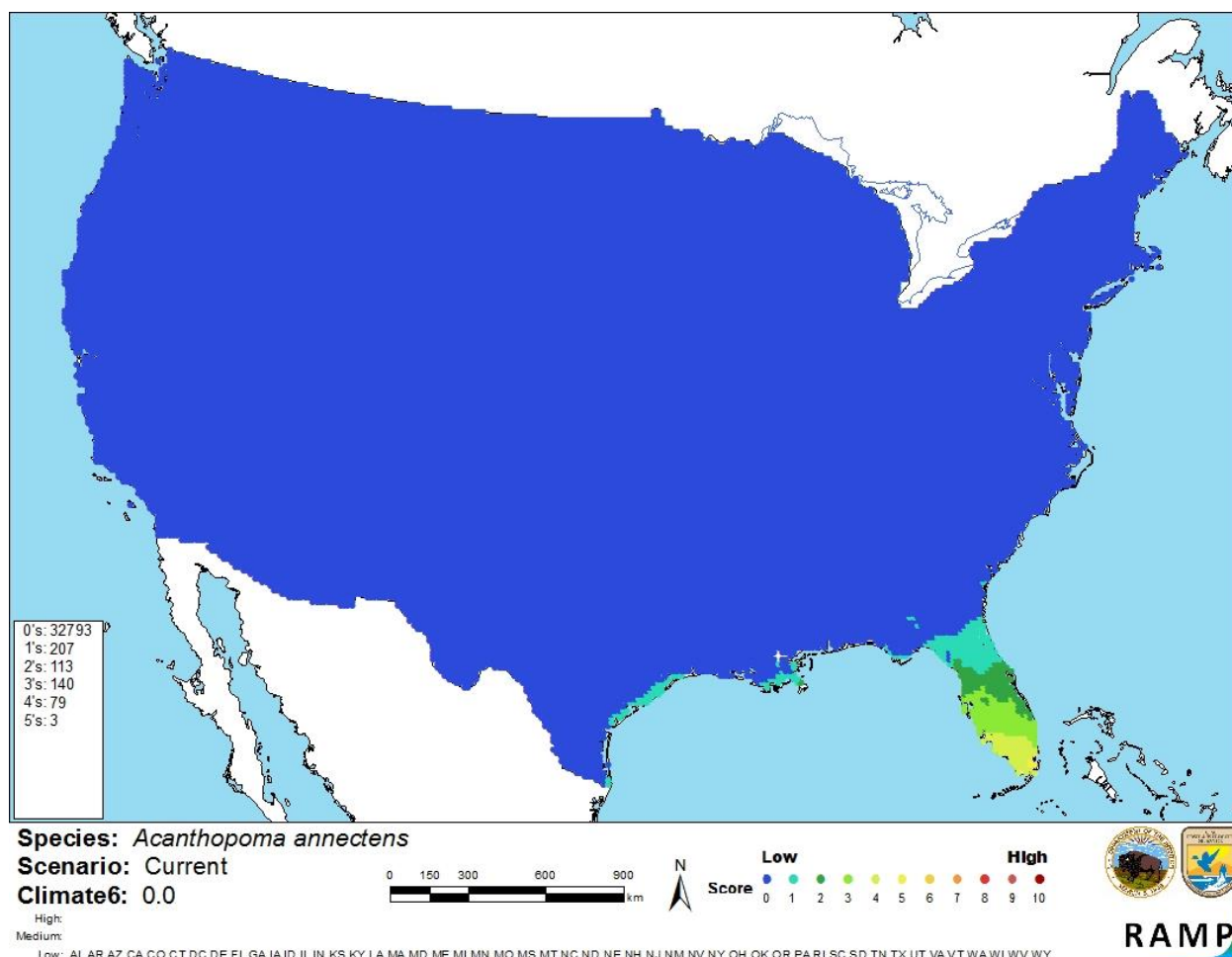


Figure 3. Map of RAMP (Sanders et al. 2014) climate matches for *Acanthopoma annectens* in the contiguous United States based on source locations reported by GBIF (2016). 0= Lowest match, 10=Highest match. Counts of climate match scores are tabulated on the left.

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

7 Certainty of Assessment

Very little information is known about *A. annectens* and no introductions for this species have been reported. Scientific information on the impacts of introductions is therefore lacking. Scientific study is needed to better understand the potential and actual impacts the species could be having in introduced areas before certainty of assessment can be anything but low.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Acanthopoma annectens is a species for which very limited information is available. It is a freshwater species native to the upper and middle Amazon River basin. *A. annectens* is reported to be parasitic, producing wounds all over its hosts. No introductions for this species have been reported. Climate match with the contiguous United States is low, with Florida likely having the only suitable climate for this species. *A. annectens* is currently listed as a prohibited species by the state of Florida. Overall risk posed by this species is uncertain at this time.

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.

- DoNascimento, C. 2015. Morphological evidence for monophyly of the subfamily of parasitic catfishes Stegophilinae (Siluriformes, Trichomycteridae) and phylogenetic diagnoses of its genera. *Copeia* 103(4):933-960.
- 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/>. (April 2017).
- Froese, R., and D. Pauly, editors. 2017. *Acanthopoma annectens* Lütken, 1892. FishBase. Available: <http://fishbase.org/summary/Acanthopoma-annectens.html>. (April 2017).
- GBIF (Global Biodiversity Information Facility). 2016. GBIF backbone taxonomy: *Acanthopoma annectens* Lütken, 1892. Global Biodiversity Information Facility, Copenhagen. Available: <http://www.gbif.org/species/2342945>. (April 2017).
- ITIS (Integrated Taxonomic Information System). 2017. *Acanthopoma annectens* Lütken, 1892. Integrated Taxonomic Information System, Reston, Virginia. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=682094#null. (April 2017).
- 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.

Burgess, W. E. 1989. An atlas of freshwater and marine catfishes. A preliminary survey of the Siluriformes. T. F. H. Publications, Inc., Neptune City, New Jersey.

de Pinna, 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.