

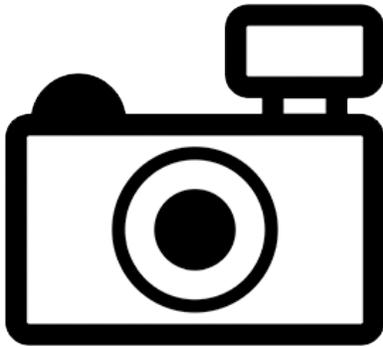
***Stegophilus septentrionalis* (a catfish, no common name)**

Ecological Risk Screening Summary

U.S. Fish and Wildlife Service, December 2016

Revised, February 2017

Web Version, 7/3/2018



No Photo Available

1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2016):

“South America: Orinoco River basin.”

Status in the United States

This species has not been reported as introduced or established in the U.S.

The parasitic catfish, *Stegophilus septentrionalis*, is a prohibited nonnative species in Florida. According to the 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.”

Means of Introductions in the United States

This species has not been reported as introduced or established in the U.S.

Remarks

From DoNascimento (2015):

“Identification of the genus *Stegophilus* has been problematic in the absence of any unique diagnostic characters.”

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 Ostariophysii
Order Siluriformes
Family Trichomycteridae
Subfamily Stegophilinae
Genus *Stegophilus*
Species *Stegophilus septentrionalis* Myers, 1927”

“Current Standing: valid”

Size, Weight, and Age Range

From Froese and Pauly (2016):

“Max length : 4.4 cm SL male/unsexed; [de Pínna and Wosiacki 2003]”

Environment

From Froese and Pauly (2016):

“Freshwater; demersal.”

Climate/Range

From Froese and Pauly (2016):

“Tropical, preferred ?”

Distribution Outside the United States

Native

From Froese and Pauly (2016):

“South America: Orinoco River basin.”

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 DoNascimento (2015):

“*Stegophilus septentrionalis* has a mostly free branchiostegal membrane only narrowly fused to the isthmus [...], and the teeth in the anteriormost row of dentary are larger than those of more posterior rows, differing also in being medially tilted [...].”

From Myers (1927):

“Head $5 \frac{4}{5}$ in body length. Depth $6 \frac{3}{4}$. Dorsal 8. Anal 6. Pectoral 7. Eye equal to snout and interorbital, 4 in head. Maxillary barbels reaching the interopercular spines, lower barbel much shorter; an attached membranous flap below the lower barbel. Head flat below, its width equal to head without the opercular spines. Ten or eleven long sharp hooks in two irregular series on the interopercle. About twelve shorter hooks irregularly arranged at tip of opercle. Teeth in several minute, even series in the premaxillaries, less numerous than in *Haemomaster*; two series on the lips. Pelvic fins inserted midway between caudal base and pectoral tips. Anal inserted under end of dorsal base. One or two prominent accessory dorsal and anal rays. Caudal emarginate. Whitish; a series of oblong dark blotches down the middle of the side, these becoming obsolete forward. An indefinite series of small, diffuse streaks above the side series anteriorly, and another on midline of back. A small black spot on base of central caudal rays, continued outward as a straight black line to the end of the central rays. Upper and lower caudal tips mottled.”

Biology

No information available.

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.

The parasitic catfish, *Stegophilus septentrionalis*, is a prohibited nonnative species in Florida. According to the FFWCC (2016), “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.”

4 Global Distribution



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

5 Distribution Within the United States

This species has not been reported as introduced or established in the U.S.

6 Climate Matching

Summary of Climate Matching Analysis

The climate match (Sanders et al. 2014; 16 climate variables; Euclidean Distance) was low across the contiguous U.S., reflected in a Climate 6 proportion of 0.000. Climate 6 proportions between 0.000 and 0.005, inclusive, indicate a low climate match.

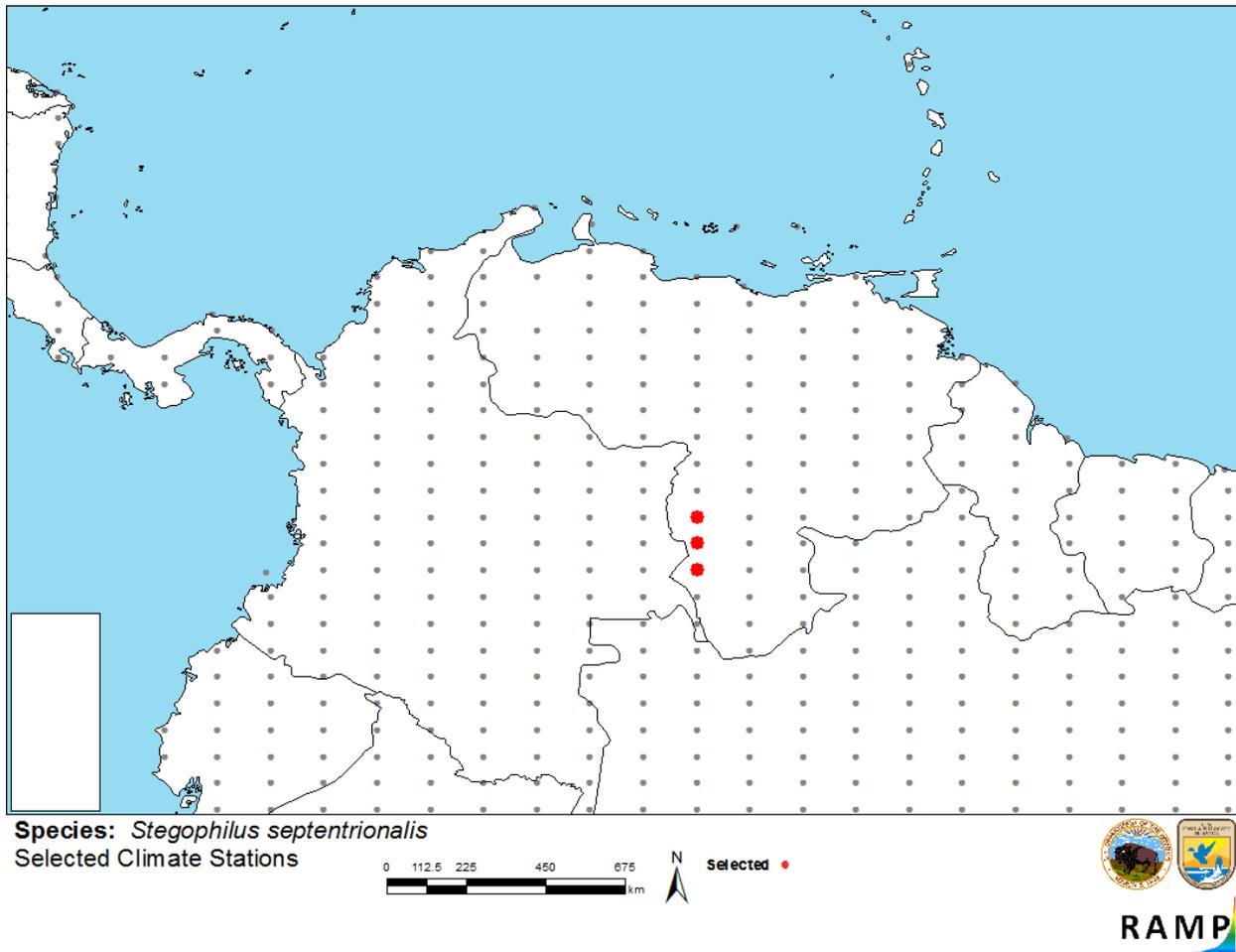


Figure 2. RAMP (Sanders et al. 2014) source map showing weather stations in northern South America selected as source locations (red) and non-source locations (gray) for *Stegophilus septentrionalis* climate matching. Source locations from GBIF (2016).

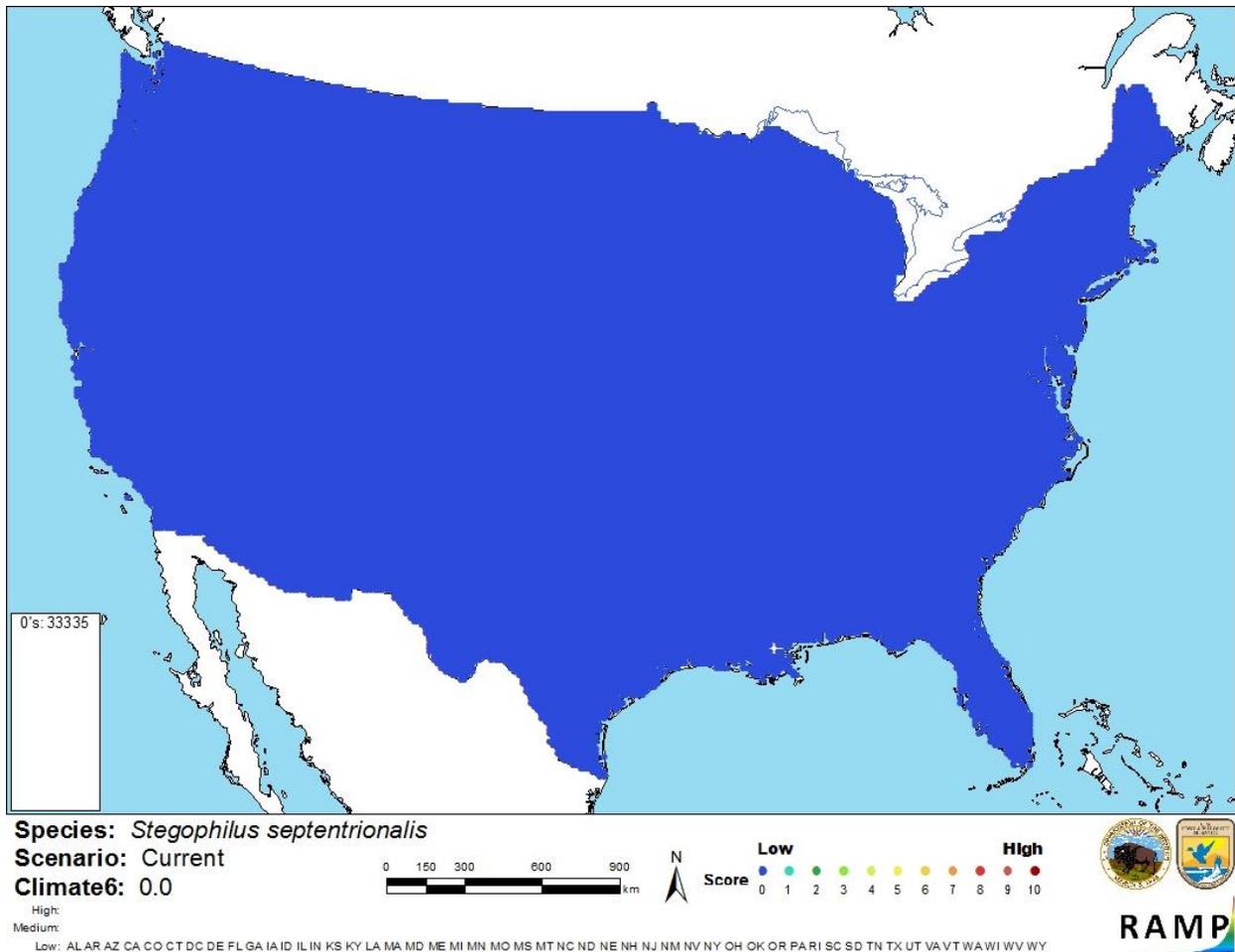


Figure 3. Map of RAMP (Sanders et al. 2014) climate matches for *Stegophilus septentrionalis* in the contiguous United States based on source locations reported by GBIF (2016). 0= Lowest match, 10=Highest match. Counts of climate match scores are tabulated on the left.

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

There is little information available on *S. septentrionalis* besides a detailed account of its morphology. Further information on the biology of this species is needed to evaluate the risk this species poses if introduced to the United States. Certainty of this assessment is low.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Stegophilus septentrionalis is a small freshwater catfish native to the Lower Amazon River basin in South America. *S. septentrionalis* has a low climate match with the contiguous U.S. There is very little information available on the biology of this species, and it has no documented history of introduction so potential impacts of introduction remain unknown. Because of this, 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.

- DoNascimento, C. 2015. Morphological evidence for the 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/>. (February 2017).
- Froese, R., and D. Pauly, editors. 2016. *Stegophilus septentrionalis* (Myers, 1927). FishBase. Available: <http://www.fishbase.org/summary/Stegophilus-septentrionalis.html>. (December 2016).
- GBIF (Global Biodiversity Information Facility). 2016. GBIF backbone taxonomy: *Stegophilus septentrionalis*, Myers, 1927. Global Biodiversity Information Facility, Copenhagen. Available: <http://www.gbif.org/species/2343244>. (December 2016).
- ITIS (Integrated Taxonomic Information System). 2016. *Stegophilus septentrionalis* (Myers, 1927). Integrated Taxonomic Information System, Reston, Virginia. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=682169#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(3):109-133.

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.

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.