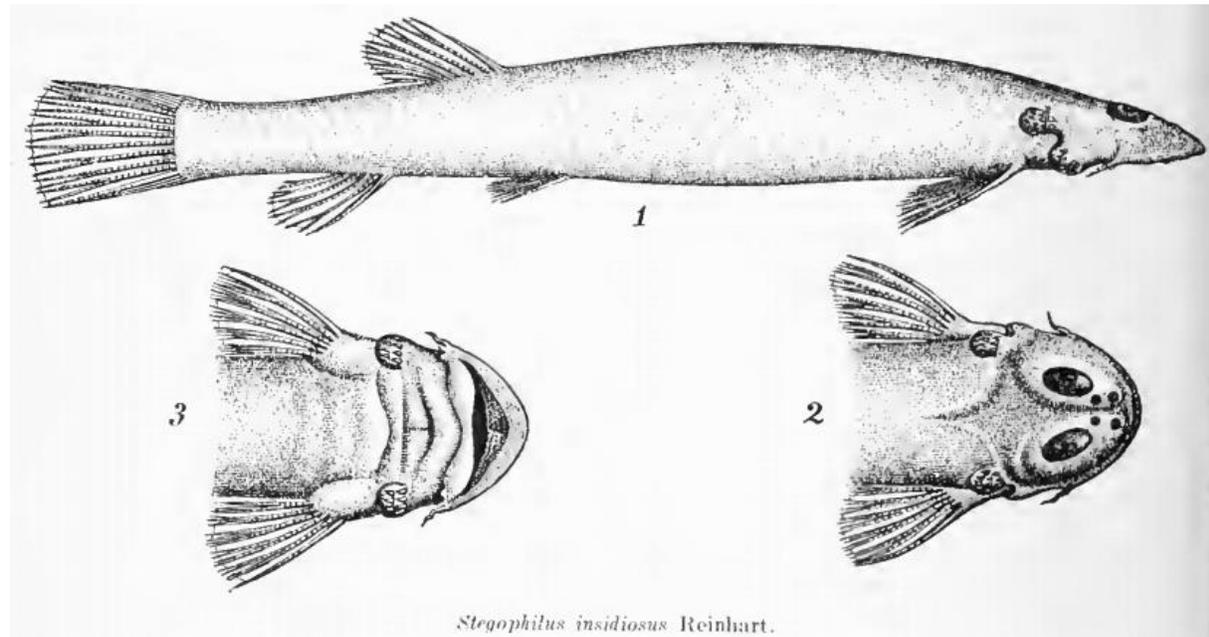


# *Stegophilus insidiosus* (a catfish, no common name)

## Ecological Risk Screening Summary

U.S. Fish and Wildlife Service, December 2016  
Revised, February 2017  
Web Version, 7/3/2018



*Stegophilus insidiosus* Reinhart.

Photo: C. H. Eigenmann (1918). Public domain.

## 1 Native Range and Status in the United States

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### Native Range

From Froese and Pauly (2016):

“South America: São Francisco River basin in Brazil.”

### Status in the United States

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

The parasitic catfish, *Stegophilus insidiosus*, 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

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### 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 *Stegophilus*  
Species *Stegophilus insidiosus* Reinhardt, 1859”

“Current Standing: valid”

### Size, Weight, and Age Range

From DoNascimento (2015):

“28.5 mm SL”

### 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: São Francisco River basin in Brazil.”

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 Eigenmann and Eigenmann (1890):

“Elongate, compressed behind, depressed forward; head somewhat longer than wide, snout pointed; eye large, 1 in the snout, 3½ in the head. Mouth large; upper lip with two series of teeth; intermaxillaries and mandibles with four series of depressible teeth, those of the inner series enlarged at the tip. Lower lip not dilated, barbel shorter than the eye. Opercle with two spines; preopercle with 5 or 6 claw-like spines. Origin of dorsal about equidistant from tip of caudal and occiput; caudal emarginate; anal placed entirely behind the dorsal; origin of ventrals equidistant from bases of caudal and pectoral. Light brown; entire upper surface with rather large dark brown spots; a series of larger dark spots along the middle line of the sides, the spots becoming larger towards the tail; caudal with a few, faint dark spots. Head 5½; D. 9; A. 7.”

## **Biology**

From Froese and Pauly (2016):

“A true parasite living in the gill chambers of larger fishes, including catfishes like *Sorubim lima*. It uses its strong teeth to bite into the gill filaments to suck the blood [Burgess 1989].”

## **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 insidiosus*, 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.”

## 4 Global Distribution



**Figure 1.** Map of the São Francisco River basin in Brazil. The type locality of *S. insidiosus* is the Das Velhas River (de Pinna and Wosiacki 2003). Map copyrighted free use from Wikipedia. Available: <https://commons.wikimedia.org/w/index.php?curid=36271>. (February 2017).

## 5 Distribution Within the United States

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

## 6 Climate Matching

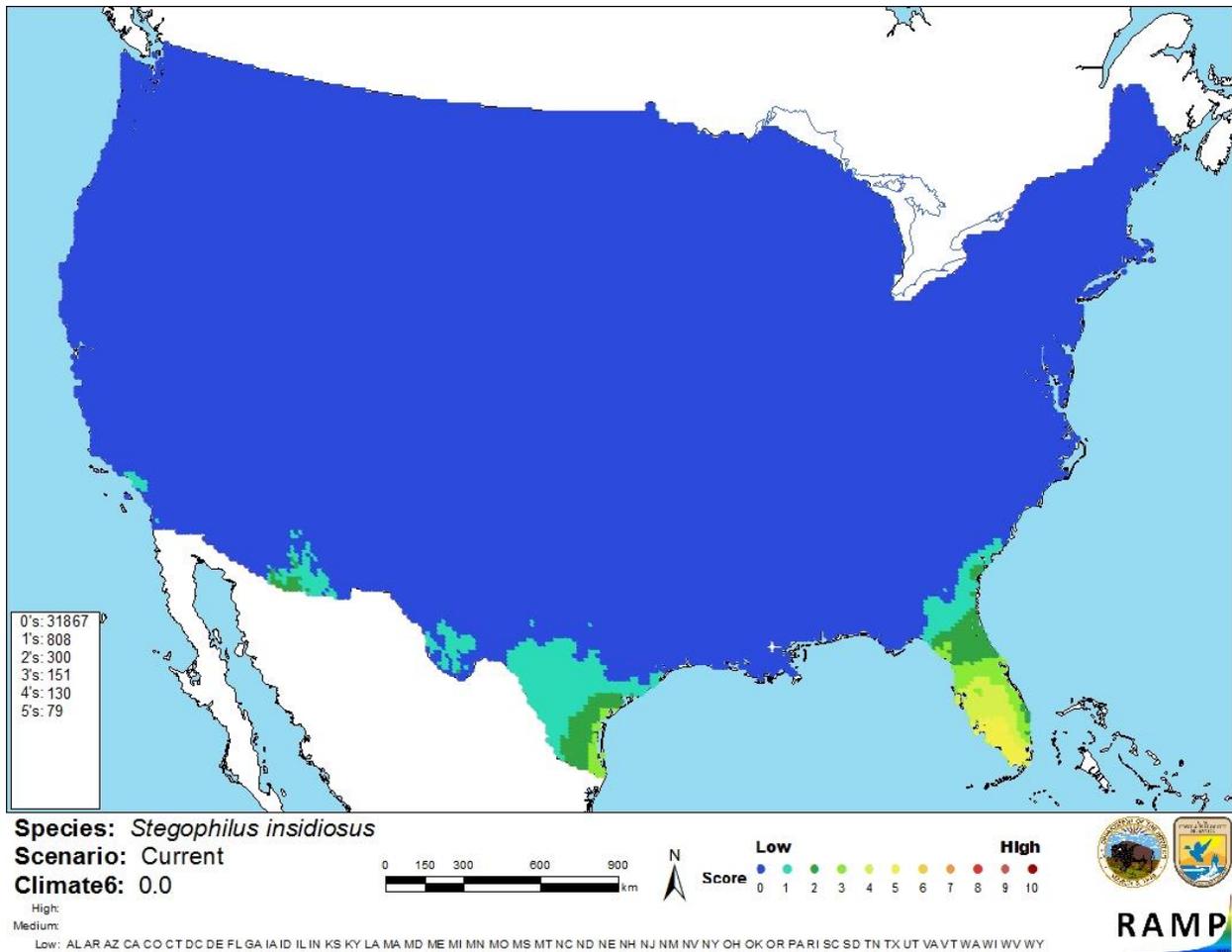
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### Summary of Climate Matching Analysis

The climate match (Sanders et al. 2014; 16 climate variables; Euclidean Distance) was medium in southern Florida and low elsewhere in the contiguous U.S. Climate 6 proportion indicated that the contiguous U.S. has a low climate match. The range of proportions indicating a low climate match is 0.000-0.005; the Climate 6 proportion of *Stegophilus insidiosus* is 0.000.



**Figure 2.** RAMP (Sanders et al. 2014) source map showing weather stations in Brazil selected as source locations (red) and non-source locations (gray) for *Stegophilus insidiosus* climate matching. Source locations describe the type locality of *S. insidiosus* given by de Pinna and Wosiacki (2003).



**Figure 3.** Map of RAMP (Sanders et al. 2014) climate matches for *Stegophilus insidiosus* in the contiguous United States based on source locations described by de Pinna and Wosiacki (2003). 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
$0.000 \leq X < 0.005$	Low
$0.005 < X < 0.103$	Medium
$\geq 0.103$	High

## 7 Certainty of Assessment

There is some information available on the biology and morphology of *S. insidiosus*. There is a lack of recorded georeferenced occurrences for this species, so climate matching was based on general distribution information. *S. insidiosus* has not been recorded as introduced outside its native range, so impacts of introduction remain unknown. Certainty of this assessment is low.

## 8 Risk Assessment

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### Summary of Risk to the Contiguous United States

*Stegophilus insidiosus* is a species of parasitic catfish native to the São Francisco River basin in eastern Brazil. Along with other parasitic catfishes, *S. insidiosus* is listed as a prohibited species in the state of Florida. *S. insidiosus* has a low climate match with the contiguous United States and no history of introduction. Overall risk assessment category for *S. insidiosus* 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

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**Note: The following references were accessed for this ERSS. References cited within quoted text but not accessed are included below in Section 10.**

- 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.
- 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.
- Eigenmann, C. H. 1918. The Pygidiidae. Pages 59-66 in L. F. Bennett, editor. Proceedings of the Indiana Academy of Science 1917. Wm. R. Burford, Indianapolis.
- Eigenmann, C. H., and R. S. Eigenmann. 1890. A revision of the South American Nematognathi or cat-fishes. California Academy of Sciences, San Francisco.
- 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 insidiosus* Reinhardt, 1859. FishBase. Available: <http://www.fishbase.org/summary/Stegophilus-insidiosus.html>. (December 2016).
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[https://www.itis.gov/servlet/SingleRpt/SingleRpt?search\\_topic=TSN&search\\_value=682167#null](https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=682167#null). (December 2016).

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**

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**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.