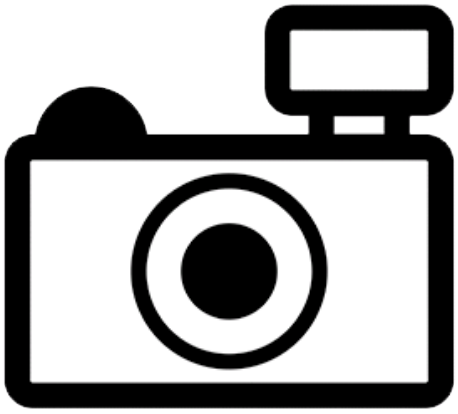
Scleronema minutum (a catfish, no common name)

Ecological Risk Screening Summary

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



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1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2016):

"South America: Rio Grande do Sul, Brazil."

Status in the United States

This species has not been reported in the United States.

The parasitic catfish, *Scleronema minutum*, 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 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 Trichomycterinae
Genus *Scleronema*
Species *Scleronema minutum* (Boulenger, 1891)"

"Taxonomic Status: valid"

Size, Weight, and Age Range

From Froese and Pauly (2016):

"Max length : 4.0 cm SL male/unsexed; [de Pinna 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: Rio Grande do Sul, Brazil."

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

Means of Introduction Outside the United States
This species has not been reported as introduced outside of its native range.

Short Description
From Evers and Seidel (2005):

"[*Scleronema*] differs from all other genera by possessing a dermal lobe on the opercula."

Biology
No information available.

Human Uses
No information available.

Diseases
No information available.

Threat to Humans
From Froese and Pauly (2016):

"Harmless"

3 Impacts of Introductions
This species has not been reported as introduced outside of its native range.

The parasitic catfish, *Scleronema minutum*, 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. Municipality of São Luiz Gonzaga (highlighted in red), Brazil, in which the type locality of *S. minutum* is located (São Lourenço das Missões; de Pinna and Wosiacki 2003). Map by Raphael Lorenzeto de Abreu. Licensed under CC BY 2.5. Available: https://commons.wikimedia.org/w/index.php?curid=1104703.

5 Distribution Within the United States

This species has not been reported within 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 throughout the contiguous U.S. except for southern Louisiana, where medium matches were

seen. Climate 6 proportion indicated that the contiguous U.S. is a low match overall. The range of proportions signaling a low climate match is 0.000 to 0.005; the Climate 6 proportion of *Scleronema minutum* was 0.000.

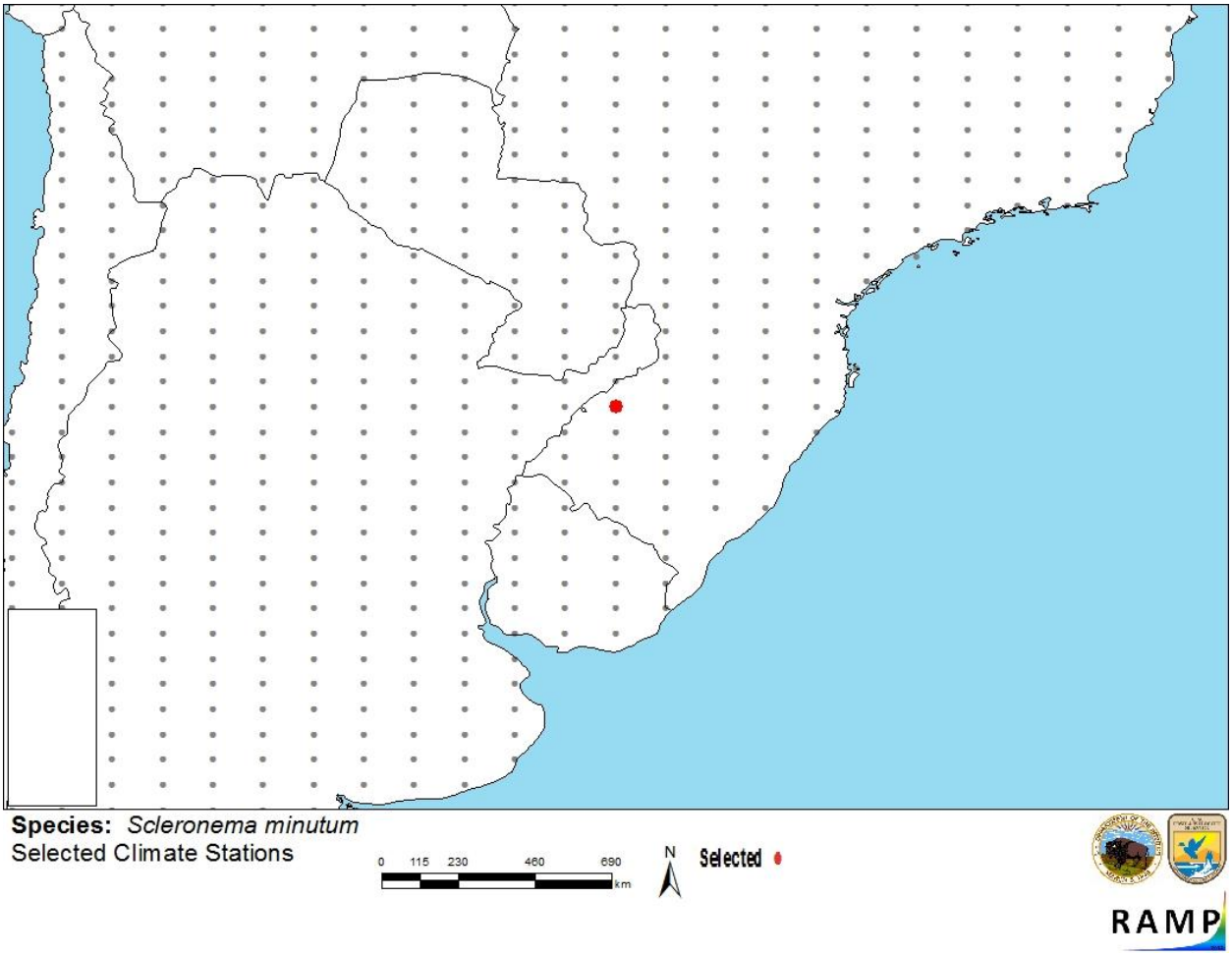

Figure 2. RAMP (Sanders et al. 2014) source map showing weather stations in Brazil selected as source location (red) and non-source locations (gray) for *Scleronema minutum* climate matching. Source location from de Pinna and Wosiacki (2003).

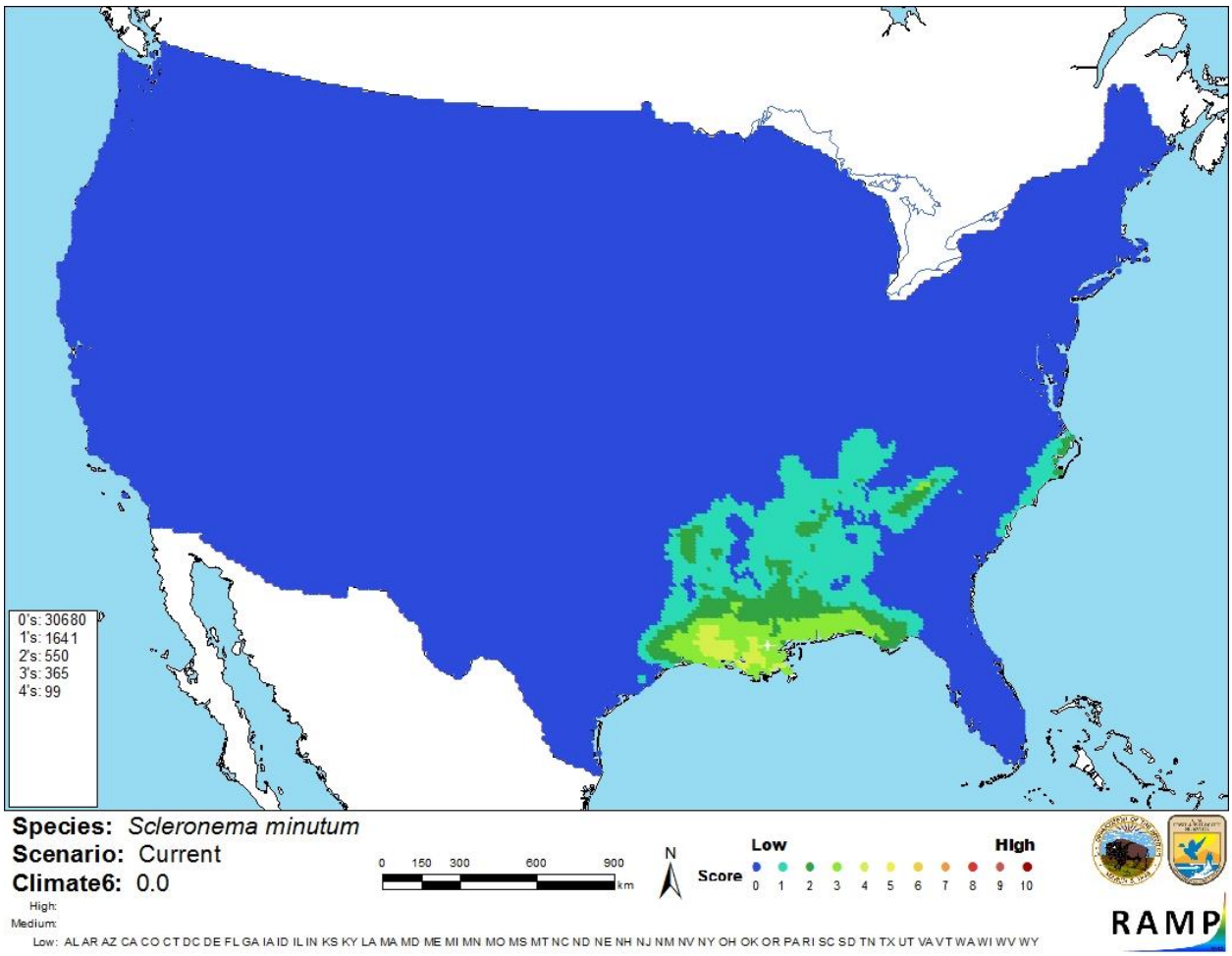

Figure 3. Map of RAMP (Sanders et al. 2014) climate matches for *Scleronema minutum* in the contiguous United States based on source location reported by de Pinna and Wosiacki (2003). 0= Lowest match, 10=Highest match. Counts of climate match scores are tabulated on the left.

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

7 Certainty of Assessment

There was limited information available on the species *Scleronema minutum*. This species has not been reported outside of its native range so impacts of introduction are unknown. With such little information known about this species, the certainty of this assessment is low.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Scleronema minutum is a trichomycterid catfish found in the state of Rio Grande do Sul, Brazil. There have been no reports of *S. minutum* outside of its native range, so any impacts of introduction remain unknown. Possession or trade of this species is prohibited in the state of Florida. Due to its low climate match and absence of introduction history, the overall risk posed by *S. minutum* 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

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.

Evers, H. G., and I. Seidel. 2005. Catfish atlas volume 1: South American catfishes of the families Loricariidae, Cetopsidae, Nematogenyidae and Trichomycteridae. Mergus Verlag GmbH, Melle, Germany.

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/#nogo. (January 2017).

Froese, R., and D. Pauly, editors. 2016. *Scleronema minutum* (Boulenger, 1891). FishBase. Available: http://www.fishbase.us/summary/SpeciesSummary.php?ID=48710 &genusname=Scleronema&speciesname=minutum&AT=Scleronema+minutum&lang=English. (January 2017).

ITIS (Integrated Taxonomic Information System). 2017. *Scleronema minutum* (Boulenger, 1891). Integrated Taxonomic Information System, Reston,Virginia. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=682162#null. (January 2017).

Sanders, S., C. Castiglione, and M. H. Hoff. 2014. Risk Assessment Mapping Program: RAMP. U.S. Fish and Wildlife Service.