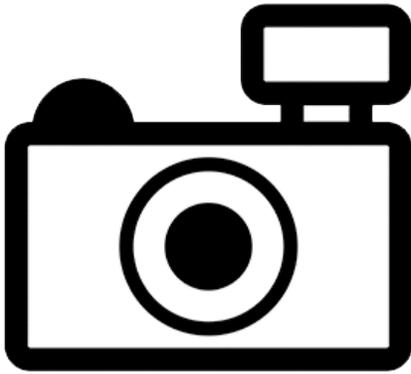


# *Scleronema operculatum* (a catfish, no common name)

## Ecological Risk Screening Summary

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



No Photo Available

## 1 Native Range and Status in the United States

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### Native Range

From Eschmeyer et al. (2017):

“Rio Uruguay drainage, Argentina, Brazil and Uruguay [Litz and Koerber 2014].”

### Status in the United States

This species has not been reported in the United States.

*Scleronema operculatum*, 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

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### 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 operculatum*”

“Taxonomic Status: valid”

### Size, Weight, and Age Range

From Froese and Pauly (2016):

“Max length : 8.0 cm 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 Eschmeyer et al. (2017):

“Rio Uruguay drainage, Argentina, Brazil and Uruguay [Litz and Koerber 2014].”

## Introduced

No known introductions outside of native range.

## Means of Introduction Outside the United States

No known introductions outside of native range.

## Short Description

From Eigenmann (1917):

“Head 5.66; D. 12.5 ; A. 7.5 counting the rudimentary rays; P. 7; eye in anterior half of the head; interocular 5 in the length of the head; width of the mouth nearly half the length of the head. Nasal barbel short, reaching just beyond posterior nares ; maxillary barbel reaching about halfway to the tips of the opercular spines, the bony base much longer than the soft filament; a broad, free membrane above from near the anterior nares to the tip of the osseous base of the barbel, a narrower membrane along the outer edge of the base of the barbel ; six spines in the main row of the interopercle; opercular flap reaching to near base of the last pectoral ray; pectoral about as long as the head; origin of ventrals a little nearer to the snout than to the base of the middle caudal rays ; ventrals reaching beyond the anus, not quite to the anal, equal to the portion of the head behind the nasal barbels; origin of anal under the antepenultimate dorsal ray, the distance from the base of its last ray to the caudal four times in the length; caudal narrow and long, equal to the length of the head; its margin slightly obliquely rounded; origin of dorsal over posterior half of ventrals, the distance from the first ray to the caudal 1.34 in its distance from the snout. Middle of sides with a series of faint, large spots, similar but smaller spots along the back.”

## 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

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This species has not been reported outside of its native range; therefore no impacts of introductions have been documented.

*Scleronema operculatum*, 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

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**Figure 1.** Known global established location of *Scleronema operculatum* in Uruguay. Map from GBIF (2016).

## 5 Distribution Within the United States

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This species has not been reported in the United States.

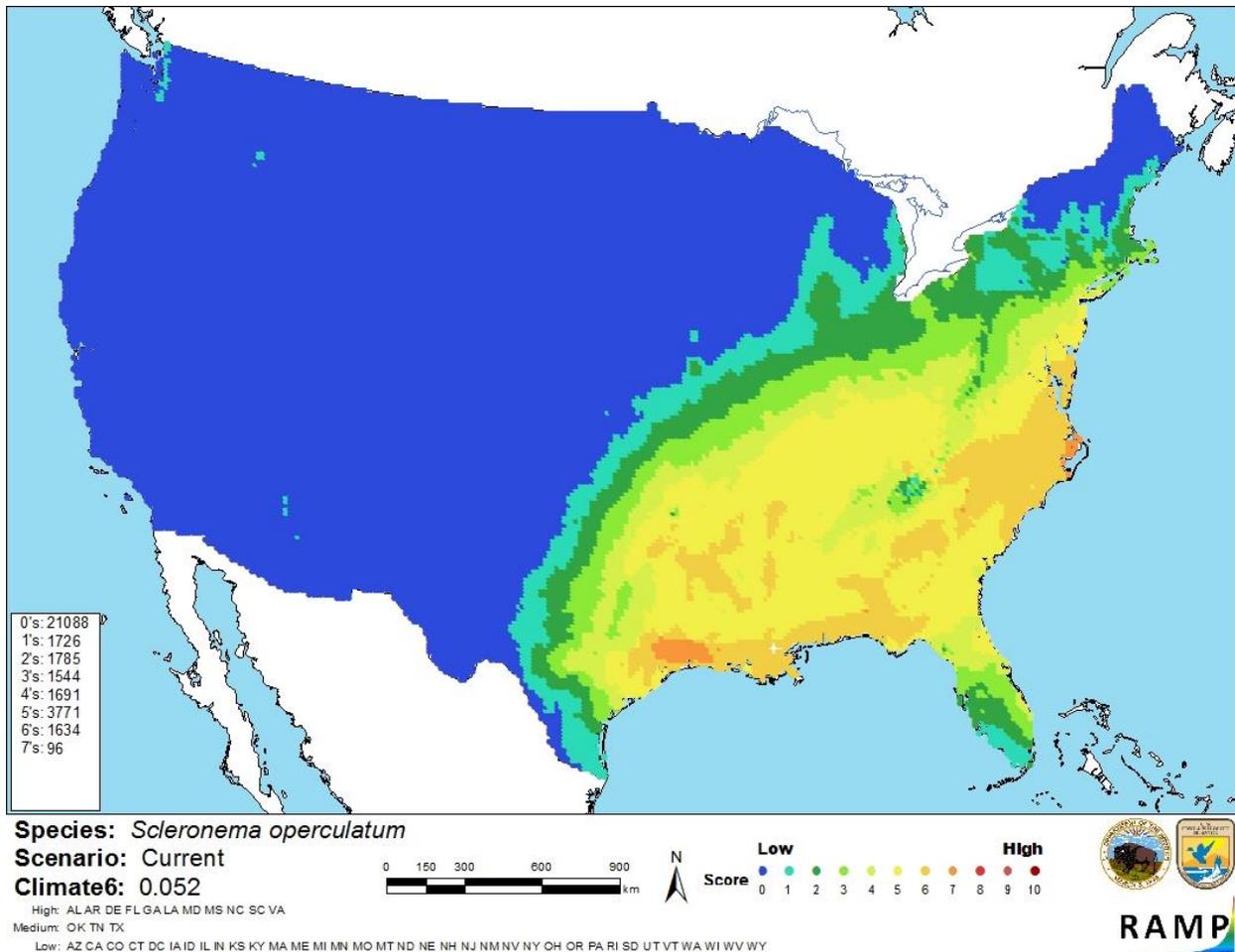
## 6 Climate Matching

### Summary of Climate Matching Analysis

The Climate 6 score (Sanders et al. 2014; 16 climate variables; Euclidean Distance) for the contiguous U.S. was medium. The range for a medium Climate 6 score is 0.005-0.103; the score for *Scleronema operculatum* was 0.052. The Mid-Atlantic coast and the Southeastern U.S. showed medium climate matches, with small areas of high match in coastal North Carolina and coastal eastern Texas. The remainder of the contiguous U.S. was a low match.



**Figure 2.** RAMP (Sanders et al. 2014) source map showing weather stations in South America selected as source locations (red; Uruguay, Brazil) and non-source locations (gray) for *Scleronema operculatum* climate matching. Source locations from Eigenmann (1917) and GBIF (2016).



**Figure 3.** Map of RAMP (Sanders et al. 2014) climate matches for *Scleronema operculatum* in the contiguous United States based on source locations reported by Eigenmann (1917) and 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
$\geq 0.103$	High

## 7 Certainty of Assessment

There was very little information available on the species *Scleronema operculatum*. *S. operculatum* is not known to have been introduced outside of its native range, so no information on potential impacts of introductions is available. With such little information available, the certainty of this assessment is low.

## 8 Risk Assessment

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### Summary of Risk to the Contiguous United States

*Scleronema operculatum* is a trichomycterid catfish species that has received little research attention. The known distribution is the Uruguay River basin in southern Brazil and Uruguay, and there have been no reports of the species outside of its native range. Along with the rest of its taxonomic family, it is listed as a prohibited species in the state of Florida. Climate match to the contiguous U.S. is medium, with the highest matches in North Carolina and Texas. The overall risk for this species is uncertain.

### Assessment Elements

- **History of Invasiveness (Sec. 3): Uncertain**
- **Climate Match (Sec. 6): Medium**
- **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.**

Eigenmann, C. H. 1917. Descriptions of sixteen new species of Pygidiidae. Proceedings of the American Philosophical Society 56(7):690-703.

Eschmeyer, W. N., R. Fricke, and R. van der Laan, editors. 2017. Catalog of fishes: genera, species, references. Available: <http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp>. (January 2017).

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/#Scleronema>. (January 2017).

Froese, R., and D. Pauly, editors. 2016. *Scleronema operculatum* Eigenmann, 1917. FishBase. Available: <http://fishbase.org/summary/Scleronema-operculatum.html>. (January 2017).

GBIF (Global Biodiversity Information Facility). 2016. GBIF backbone taxonomy: *Scleronema operculatum* Eigenmann, 1917. Global Biodiversity Information Facility, Copenhagen. Available: <http://www.gbif.org/species/5202909>. (January 2017).

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Sanders, S., C. Castiglione, and M. H. 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.**

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.

Litz, T. O., and S. Koerber. 2014. Check list of the freshwater fishes of Uruguay (CLOFF-UY). *Ichthyological Contributions of PecesCriollos* 28:1-40.