

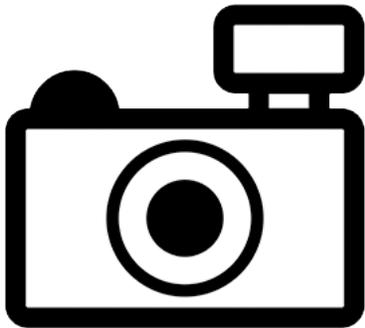
Schultzichthys gracilis (a catfish, no common name)

Ecological Risk Screening Summary

U.S. Fish and Wildlife Service, January 2017

Revised, February 2017

Web Version, 7/2/2018



No Photo Available

1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2016):

“South America: Guayabero River (Orinoco River basin) in Colombia.”

Status in the United States

This species has not been reported as introduced in the United States.

The parasitic catfish, *Schultzichthys gracilis*, 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.”

Means of Introductions in the United States

This species has not been reported as introduced 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 *Schultzichthys*
Species *Schultzichthys gracilis* Dahl, 1960

“Current Standing: valid”

Size, Weight, and Age Range

From Froese and Pauly (2016):

“Max length : 2.6 cm SL male/unsexed; [de Pinna and Wosiacki 2003]”

Environment

From Froese and Pauly (2016):

“Freshwater; benthopelagic.”

Climate/Range

From Froese and Pauly (2016):

“Tropical, preferred ?”

Distribution Outside the United States

Native

From Froese and Pauly (2016):

“South America: Guayabero River (Orinoco River basin) in Colombia.”

Introduced

No introductions of this species have been reported.

Means of Introduction Outside the United States

No introductions of this species have been reported.

Short Description

From DoNascimento (2015):

“Deep suborbital groove dorsally separating lateral portion of upper lip from rest of the head. This is a unique apomorphy of *Schultzichthys* originally proposed by de Pinna and Wosiacki (2003) to support inclusion of *Acanthopoma bondi* in the genus.”

“[...] distinguished from *S. bondi* by its smaller size (30.0 mm SL vs. 50.5 mm SL), the distal tip of the pelvic-fin reaching the anus (vs. widely separated), and small pale brownish spots, sparse on dorsum (vs. spots absent, dorsum uniformly white).”

Biology

From Kelley and Atz (1964):

“Dahl (1960, *Novedades Colombianas* 1 (5) :302-317) described *Schultzichthys gracilis* from a specimen that dropped off a large catfish, presumably from under the operculum, as it was being hauled out of the water.”

Human Uses

No information available.

Diseases

No information available.

Threat to Humans

From Froese and Pauly (2016):

“Harmless”

3 Impacts of Introductions

No introductions of this species have been reported.

The parasitic catfish, *Schultzichthys gracilis*, 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.

[https://commons.wikimedia.org/wiki/File:Mapa_de_Colombia_\(r%C3%ADos\).svg#/media/File:Mapa_de_Colombia_\(r%C3%ADos\).svg](https://commons.wikimedia.org/wiki/File:Mapa_de_Colombia_(r%C3%ADos).svg#/media/File:Mapa_de_Colombia_(r%C3%ADos).svg). (February 2017).

5 Distribution within the United States

This species has not been reported as introduced in the United States.

6 Climate Matching

Summary of Climate Matching Analysis

The climate match (Sanders et al. 2014; 16 climate variables; Euclidean Distance) for *Schultzichthys gracilis* was low throughout the contiguous U.S., reflected in a Climate 6 proportion of 0.0. The range of proportions indicating a low climate match is 0.000-0.005.

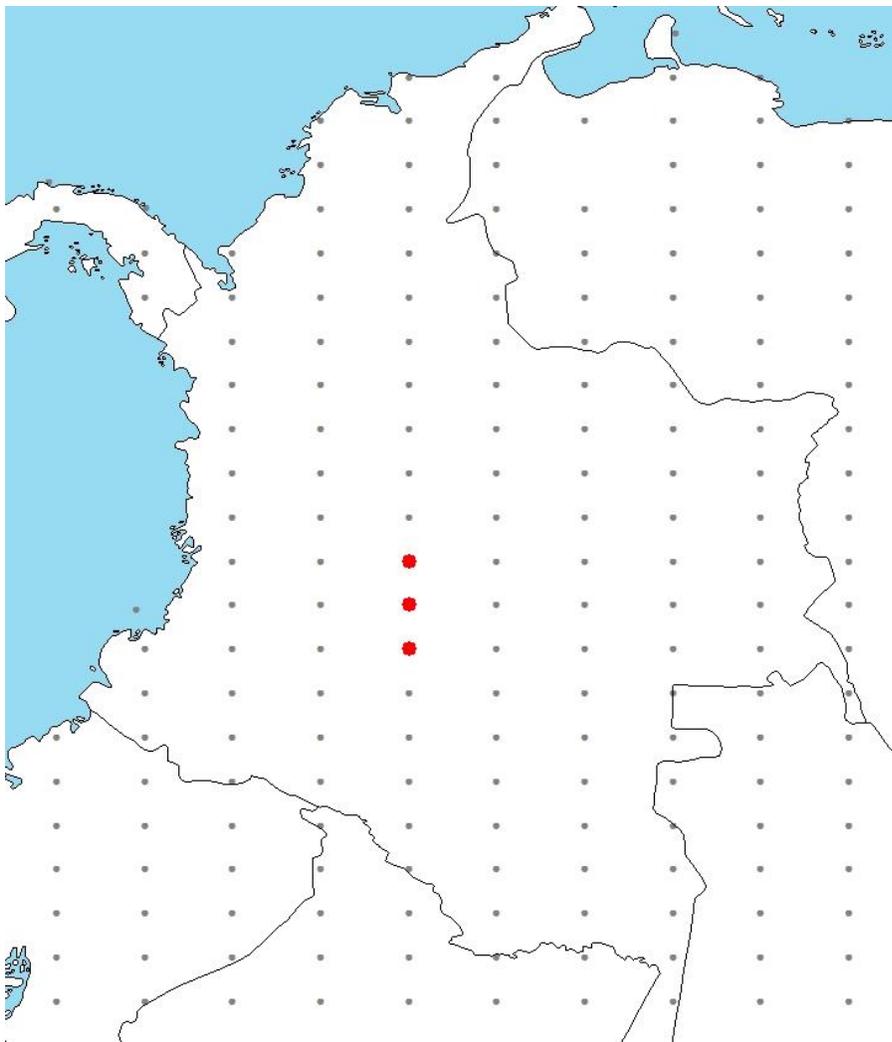


Figure 2. RAMP (Sanders et al. 2014) source map of Colombia showing weather stations selected as source locations (red) and non-source locations (gray) for *Schultzichthys gracilis* climate matching. Source locations based on distribution described by Froese and Pauly (2016; see Distribution Outside the United States).

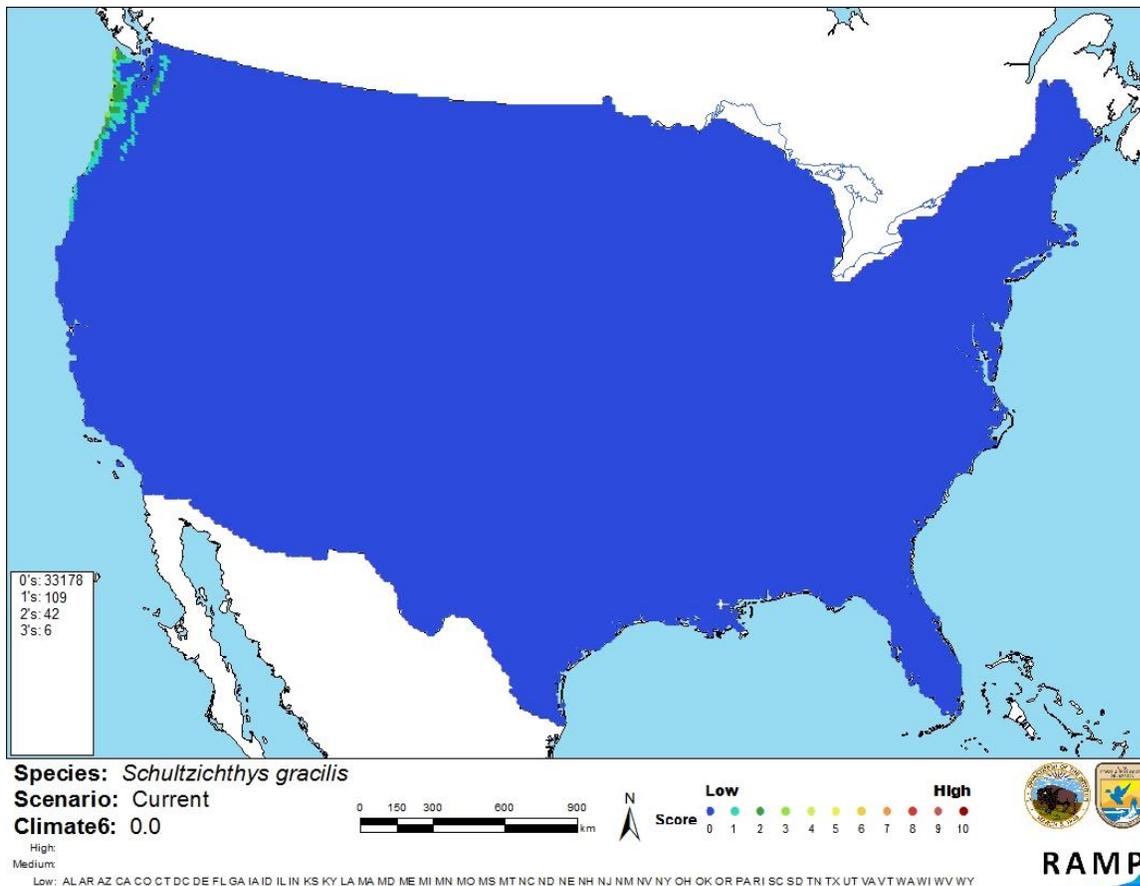


Figure 3. Map of RAMP (Sanders et al. 2014) climate matches for *Schultzichthys gracilis* in the contiguous United States based on source locations describing the distribution stated by Froese and Pauly (2016; see Distribution Outside the United States). 0= Lowest match, 10=Highest match. Counts of climate 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 was limited information available on the biology and ecology of *Schultzichthys gracilis*. This species has not been reported outside of its native range so impacts of introduction are unknown. With such little information available, the certainty of this assessment is low.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Schultzichthys gracilis is a trichomycterid catfish found in the Guayabero River basin of Colombia. There have been no reports of this fish outside of its native range. Like other trichomycterids, *S. gracilis* is on the state of Florida's prohibited species list. Due to its low climate match and absence of introduction history, the overall risk posed by 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). 2016. Prohibited species list. Florida Fish and Wildlife Conservation Commission, Tallahassee, Florida. Available: <http://myfwc.com/wildlifehabitats/nonnatives/regulations/prohibited/#nogo>. (December 2016).
- Froese, R., and D. Pauly, editors. 2016. *Schultzichthys gracilis* Dahl, 1960. FishBase. Available: <http://www.fishbase.se/summary/Schultzichthys-gracilis.html>. (January 2017).
- ITIS (Integrated Taxonomic Information System). 2017. *Schultzichthys gracilis* Dahl, 1960. Integrated Taxonomic Information System, Reston, Virginia. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=682160#null. (January 2017).
- Kelley, W. E., and J. W. Atz. 1964. A pygidiid catfish that can suck blood from goldfish. *Copeia* 1964(4):702-704.
- 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

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.

Dahl, G. 1960. Nematognathous fishes collected during the Macarena Expedition 1959, part 1. *Novedades Colombianas* 1(5):302-317.

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.