

# ***Schultzichthys bondi* (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**

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### **Native Range**

From Froese and Pauly (2016):

“South America: Amazon and Orinoco River basins.”

### **Status in the United States**

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

The parasitic catfish, *Schultzichthys bondi*, 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.

## Remarks

From GBIF (2016):

“BASIONYM [i.e., original scientific name]  
*Acanthopoma bondi* Myers, 1942”

## 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 Ostariophysii  
Order Siluriformes  
Family Trichomycteridae  
Subfamily Stegophilinae  
Genus *Schultzichthys*  
Species *Schultzichthys bondi* (Myers, 1942)”

“Current Standing: valid”

### Size, Weight, and Age Range

From Froese and Pauly (2016):

“Max length : 3.7 cm SL male/unsexed; [de Pínna 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: Amazon and Orinoco River basins.”

### **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):

“Autapomorphies: 1. 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. Diagnostic homoplasies: 1. Short posterior process of basipterygium medially or posterolaterally directed. *Schultzichthys* shares with *Homodiaetus* a short posterior process [...], but unlike the latter, it is polymorphically either medially or posterolaterally directed. These differently orientated processes occur homoplastically in *Paravandellia* sp. (Caquetá; medial), and *Bullockia* and *Scleronema* (posterolateral). [...] In his diagnosis of *Schultzichthys*, Dahl (1960) listed a series of general and uninformative characters for stegophilines (e.g., mouth inferior, large and semicircular), although he correctly recognized the strongly reversed lower lip that extends posteriorly when extruded as unique. This character was not listed above in the diagnosis, because it occurs homoplastically in other stegophilines (*Apomatoceros* and *Haemomaster*) [...]”

## **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

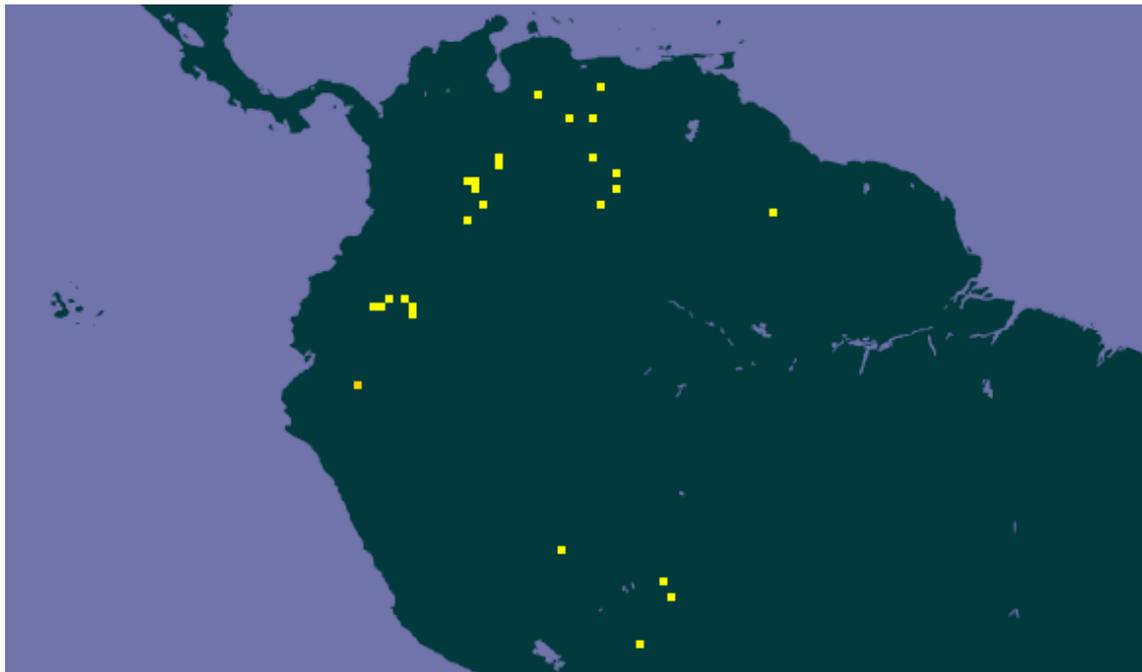
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### 4 Global Distribution

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**Figure 1.** Known global established locations of *Schultzichthys bondi* in northern South America. Map from GBIF (2016). The point in Guyana was not included in climate matching because that location is outside of the river basins where *S. bondi* is known to occur (see Distribution Outside the United States, above).

### 5 Distribution Within the United States

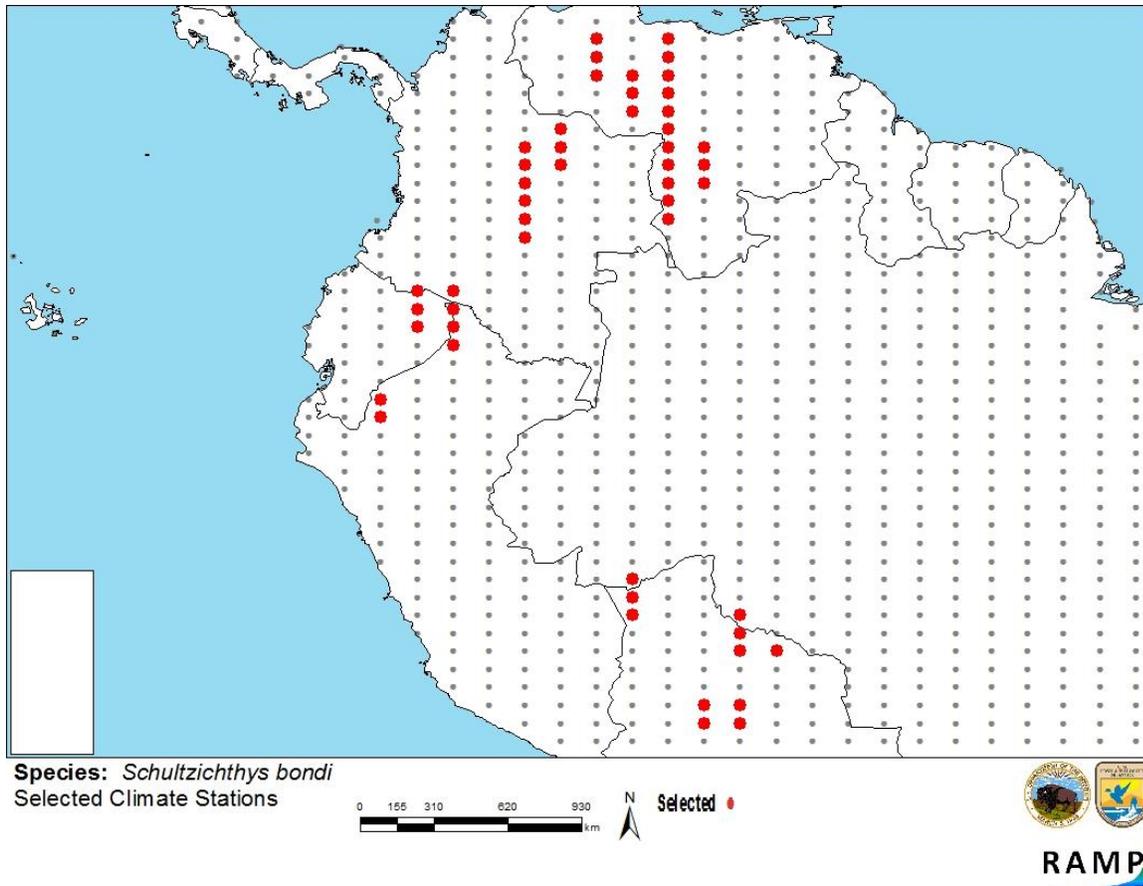
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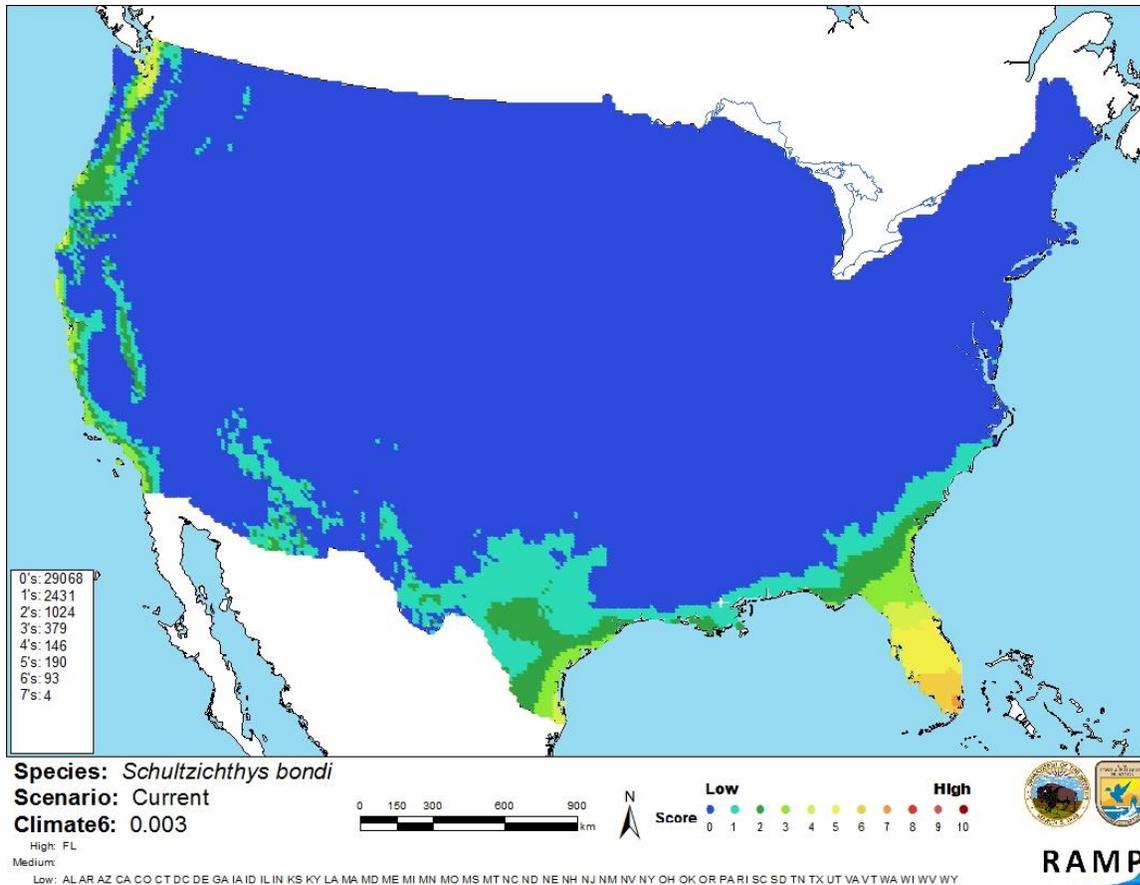
## 6 Climate Matching

### Summary of Climate Matching Analysis

The climate match (Sanders et al. 2014; 16 climate variables; Euclidean Distance) was medium in peninsular Florida and along parts of the Pacific coastline, and low elsewhere. The Climate 6 proportion indicated a low climate match for the contiguous U.S. The range of Climate 6 proportions indicating a low climate match is 0.000 to 0.005; the Climate 6 proportion of *Schultzichthys bondi* was 0.003.



**Figure 2.** RAMP (Sanders et al. 2014) source map showing weather stations in Colombia, Venezuela, Guyana, Ecuador, Peru, and Bolivia selected as source locations (red) and non-source locations (gray) for *Schultzichthys bondi* climate matching. Source locations from GBIF (2016).



**Figure 3.** Map of RAMP (Sanders et al. 2014) climate matches for *Schultzichthys bondi* 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
$\geq 0.103$	High

## 7 Certainty of Assessment

There is very limited information available on the biology of *Schultzichthys bondi* and the potential impacts of an introduction, as no introductions of the species have been reported. Due to this lack of information, the certainty of this assessment is low.

## 8 Risk Assessment

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### Summary of Risk to the Contiguous United States

*Schultzichthys bondi* is a trichomycterid catfish species native to Colombia, Bolivia, Ecuador, Venezuela, and Peru. Very little is known about its biology, and it has not been reported as introduced outside its native range, so impacts of introduction are unknown. As with other trichomycterids, possession of this species is prohibited in the state of Florida. Climate match to the contiguous U.S. is low. Overall risk posed by *S. bondi* 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.**

- 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 bondi* (Myers, 1942). FishBase. Available: <http://www.fishbase.org/summary/Schultzichthys-bondi.html>. (January 2017).
- GBIF (Global Biodiversity Information Facility). 2016. GBIF backbone taxonomy: *Schultzichthys bondi* (Myers, 1942). Global Biodiversity Information Facility, Copenhagen. Available: <http://www.gbif.org/species/2343222>. (January 2017).
- ITIS (Integrated Taxonomic Information System). 2017. *Schultzichthys bondi* (Myers, 1942). Integrated Taxonomic Information System, Reston, Virginia. Available: [https://www.itis.gov/servlet/SingleRpt/SingleRpt?search\\_topic=TSN&search\\_value=682159#null](https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=682159#null). (January 2017).
- 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.**

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.