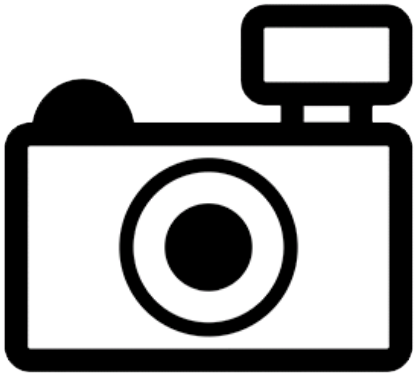
Glaphyropoma rodriguesi (catfish, no common name)
Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, November 2016
Revised, December 2016
Web Version, 12/28/2017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1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2016):

"South America: Mucujê River, tributary of Paraguaçu River in Brazil."

Status in the United States

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

From 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. […]
Freshwater Aquatic Species […]
Parasitic catfishes […]
Glaphyropoma rodriguesi"

Means of Introductions in the United States

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

2 Biology and Ecology

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 Copionodontinae
Genus Glaphyropoma
Species *Glaphyropoma rodriguesi* - de Pínna, 1992"

"Taxonomic Status: valid"

Size, Weight, and Age Range

From Froese and Pauly (2016):

"Max length : 5.1 cm SL male/unsexed; [de Pínna and W. 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: Mucujê River, tributary of Paraguaçu River 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 Froese and Pauly (2016):

"Orbital rim not free. Eyes small, about 15 times in HL. Caudal fin round-truncate. Barbels extending beyond posterior margin of pectoral fin. Outer row premaxillary and dentary teeth not overlapping distally; dentary teeth extending to base of coronoid process; dentary teeth perpendicular to dentary bone. Lower lip continuous [Campanario and de Pínna 2000]."

Biology

From Bichuette et al. (2008):

"Copionodontines occur exclusively in the Chapada Diamantina, a vast and complex plateau composed of Proterozoic terrain extending along a more or less north-south axis in the State of Bahia, northeastern Brazil. Much of the plateau is above 1000 m altitude, with several peaks reaching over 2000 m. […] Copionodontines occupy the upper reaches of fast-flowing streams on rocky beds, often with tiny or no water flow in the dry season. Fish tend to concentrate on quiet deep pools, though some individuals lodge in narrow rock crevices in fast flowing sectors. Habitat preferences also vary according to species. Water in the upper reaches of the Chapada Diamantina is cool and usually black (tea-stained), but there are records of copionodontines in a few clear water streams as well. Usually they share their environment with few or no other fish species."

"*Glaphyropoma* is the most enigmatic copionodontine. The type series of *G. rodriguesi* de Pinna, 1992 remains the largest collection of the genus yet available. That series was collected with rotenone, which is a sampling method no longer legal in Brazil. Since then, only two additional specimens have been secured, one of which from a distinct subdrainage in a locality rather distant from the type locality of *G. rodriguesi*. Those facts suggest that *Glaphyropoma* is widely distributed in the Diamantina plateau and probably not as rare in nature as might be suggested by its meager representation in collections. Their small eyes and more depressed body and head, when compared to species of *Copionodon*, indicate a more cryptic behavior and perhaps an increased ability to hide in deep narrow rock crevices difficult to reach with collecting gear."

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 or established outside of its native range.

From 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. […]
Freshwater Aquatic Species […]
Parasitic catfishes […]
Glaphyropoma rodriguesi"

4 Global Distribution

Figure 1. Distribution of *Glaphyropoma rodriguesi*. Map from GBIF (2016).

5 Distribution Within the United States

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

6 Climate Matching

Summary of Climate Matching Analysis

The climate match (Sanders et al. 2014; 16 climate variables; Euclidean Distance) was highest in Florida, yet still only had a medium climate match there. The rest of the country had low climate matches. Climate 6 proportion indicated that the contiguous U.S. has a low climate match. The range for a low climate match is 0.000 – 0.005; the Climate 6 proportion of *Glaphyropoma rodriguesi* was 0.001.

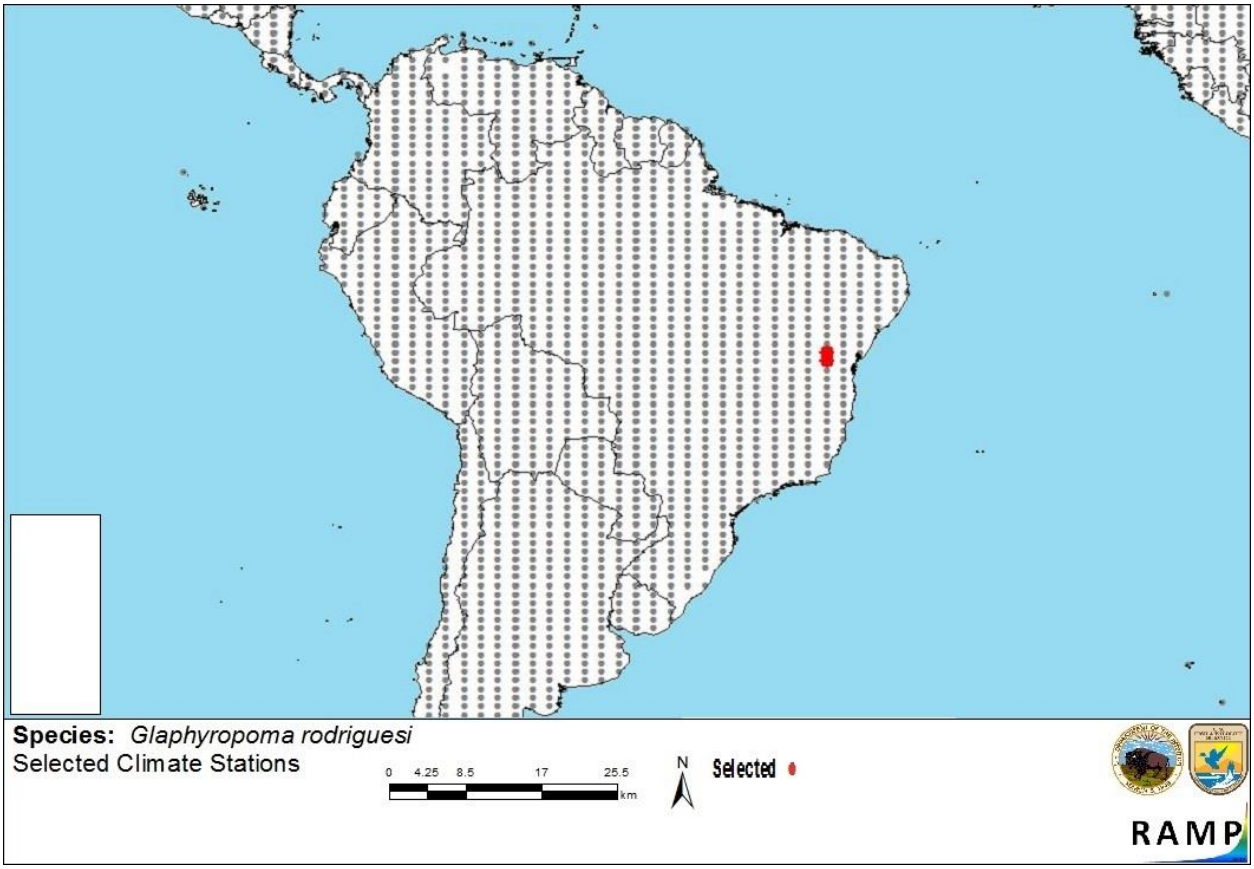

Figure 2. RAMP (Sanders et al. 2014) source map showing weather stations selected as source locations (red) in Brazil and non-source locations (gray) for *Glaphyropoma rodriguesi* climate matching. Source locations from GBIF (2016).

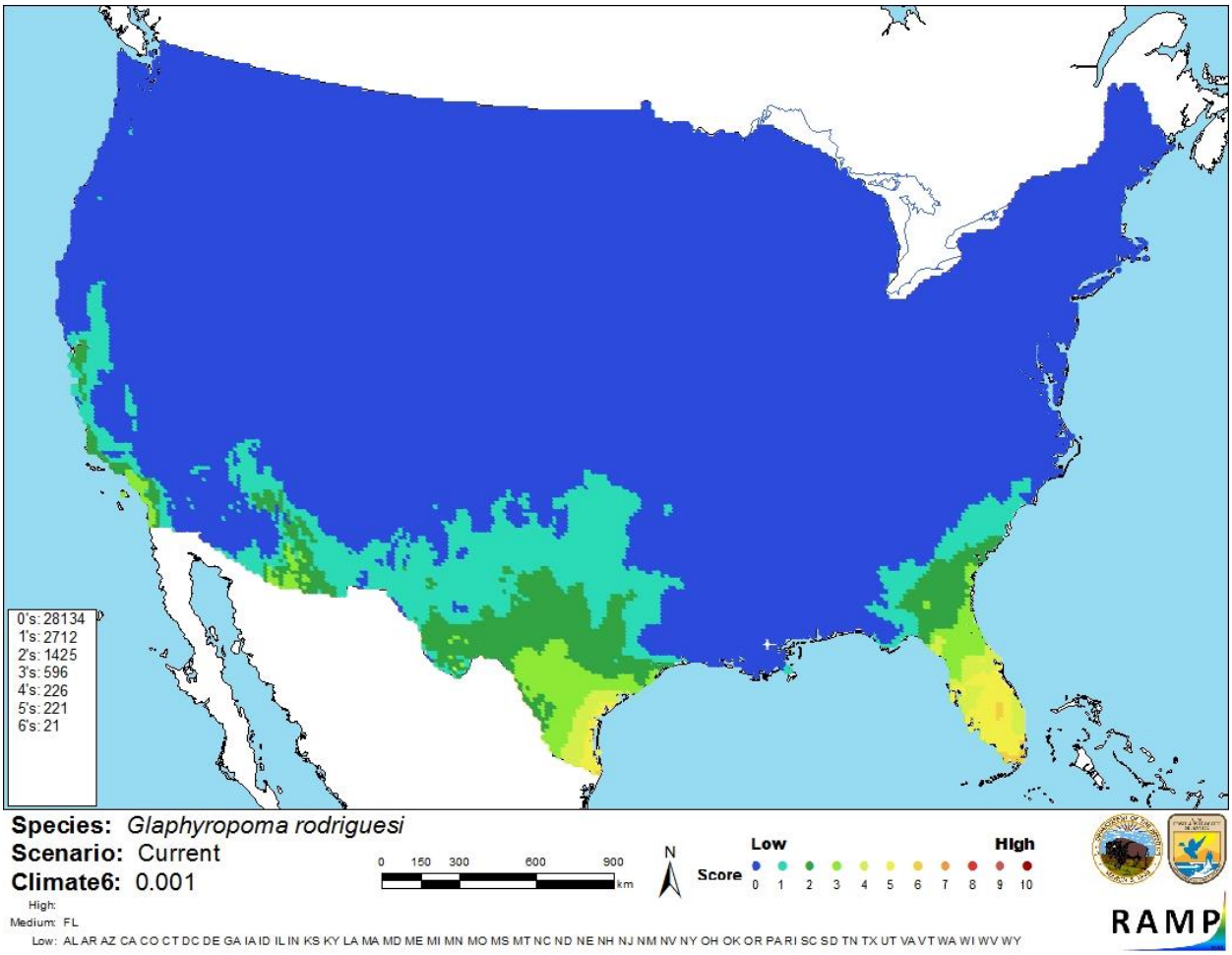

Figure 3. Map of RAMP (Sanders et al. 2014) climate matches for *Glaphyropoma rodriguesi* in the contiguous United States based on source locations reported by GBIF (2016). 0= Lowest match, 10=Highest match. Counts of climate match scores are tabulated on the left.

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
≥ 0.103	High

7 Certainty of Assessment

There is very little information available for *Glaphyropoma rodriguesi*. Climate matching for this risk assessment was based on the only two known species occurrences occurring in eastern Brazil. Further information on *G. rodriguesi* is needed to conduct a thorough assessment of the risk and to understand potential negative impacts of this species outside of its native range. Certainty of this assessment is low.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Glaphyropoma rodriguesi is native to the Mucujê River, a tributary of the Paraguaçu River in eastern Brazil. There has been no documentation of introductions outside of its native range, so potential impacts of introductions are unknown. The species is included on the State of Florida's Prohibited Species List, along with many other catfishes in the family Trichomycteridae. *G. rodriguesi* has a low climate match within the United States. Overall risk assessment for *G. rodriguesi* 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.

Bichuette, M. E., M. C. C. de Pinna, and E. Trajano. 2008. A new species of *Glaphyropoma*: the first subterranean copionodontine catfish and the first occurrence of opercular odontodes in the subfamily (Siluriformes: Trichomycteridae). Neotropical Ichthyology 6(3):301-306.

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. *Glaphyropoma rodriguesi* (Koch, 2002). FishBase. Available: http://www.fishbase.org/summary/Glaphyropoma-rodriguesi.html. (November 2016).

GBIF (Global Biodiversity Information Facility). 2016. GBIF backbone taxonomy: *Glaphyropoma rodriguesi* (de Pinna, 1992). Global Biodiversity Information Facility, Copenhagen. Available: http://www.gbif.org/species/2343338. (November 2016).

ITIS (Integrated Taxonomic Information System). 2016. *Glaphyropoma rodriguesi* de Pinna, 1992. Integrated Taxonomic Information System, Reston, Virginia. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=682105#null. (November 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

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.

Campanario, C. M., and M. C. C. de Pinna. 2000. A new species of the primitive trichomycterid subfamily Copionodontinae from northeastern Brazil (Teleostei: Trichomycteridae). Ichthyological Exploration of Freshwaters 11(4):369-375.

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.