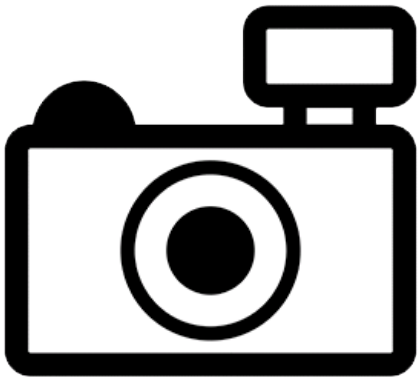
Glanapteryx niobium (catfish, no common name)
Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, January 2017
Revised, February 2017
Web Version, 12/28/17


No Photo Available

1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2016):

"South America: Morro dos Seis Lagos, Negro River basin [Brazil]."

Status in the United States

This species has not been reported in the United States.

From 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. […]
Freshwater Aquatic Species […]
Parasitic catfishes […]
Glanapteryx niobium"

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 Glanapteryginae
Genus *Glanapteryx*
Species *Glanapteryx niobium* (de Pinna, 1998)"

"Taxonomic Status: valid"

Size, Weight, and Age Range

From Froese and Pauly (2016):

"Max length : 5.5 cm male/unsexed; [de Pínna and Wosiacki 2003]"

Environment

From Froese and Pauly (2017):

"Freshwater; benthopelagic."

From de Pinna (1998):

"The water [where *G. niobium* was collected] was transparent, green at distance, still, and acidic (pH 4.0)."

Climate/Range
From Froese and Pauly (2017):

"Tropical, preferred ?"

Distribution Outside the United States
Native
From Froese and Pauly (2017):

"South America: Morro dos Seis Lagos, Negro River basin [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 de Pinna (1998):

"Body eel-like, head continuous with trunk. Body round in cross section for most of its length, gradually more compressed posterior to anal opening. Caudal peduncle gently tapering to caudal fin. Dorsal and ventral profiles of body nearly straight […] All barbels large and robust, with visible internal cores and similar to each other in general aspect […] Pectoral fin vestigial, reduced to small flap on side of body […] Pelvic fin vestigial, reduced to two roughly triangular flaps anterior to anal opening […] Dorsal, anal, and adipose fins absent. Caudal fin small and inconspicuous […]"

"Pigmentation in preservative.—Overall coloration uniform dark tan, lighter on ventral half of head and body. Wide white area (about 0.5 HL) located on body shortly posterior to head, forming well-defined collar encircling whole circumference of body."

Biology
From de Pinna (1998):

"*Glanapteryx niobium* is the only fish species known to date from the Morro dos Seis Lagos lake complex. […] The Morro dos Seis Lagos is an isolated round outcrop 6 km in diameter, about 40 km away from the nearest elevated areas (Serra do Padre, to the north). It is covered by thick laterite crust, reddish brown in color. Morro dos Seis Lagos includes six major lakes at an altitude of 300 m, plus a number of smaller water bodies. Those are the only true lakes in the Brazilian Amazon, and are permanently isolated from other water courses. The lake beds were a consequence of the collapse of underlying rocky blocks. The level of radiation in the region is extremely high, because of the concentration of radioactive minerals naturally in the soil, mainly niobium, thorium and cerium. […] There is also a thermal spring in the area."

"The spot where *G. niobium* was collected with a hand seine was about 1 m deep, and had a thick layer of leaf litter on the bottom, amidst which the fish was hiding. […] The invertebrate fauna was reported as rich by the collectors."

Human Uses
No available information.

Diseases
No available information.

Threat to Humans
From Froese and Pauly (2017):

"Harmless"

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

From 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. […]
Freshwater Aquatic Species […]
Parasitic catfishes […]
Glanapteryx niobium"

4 Global Distribution

Figure 1. Known global established location of *Glanapteryx niobium*. Map from GBIF (2016).

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., reflected in a Climate 6 proportion of 0.0. This is likely because the single known location was near the equator. The range of proportions indicating a low climate match is 0.000-0.005.

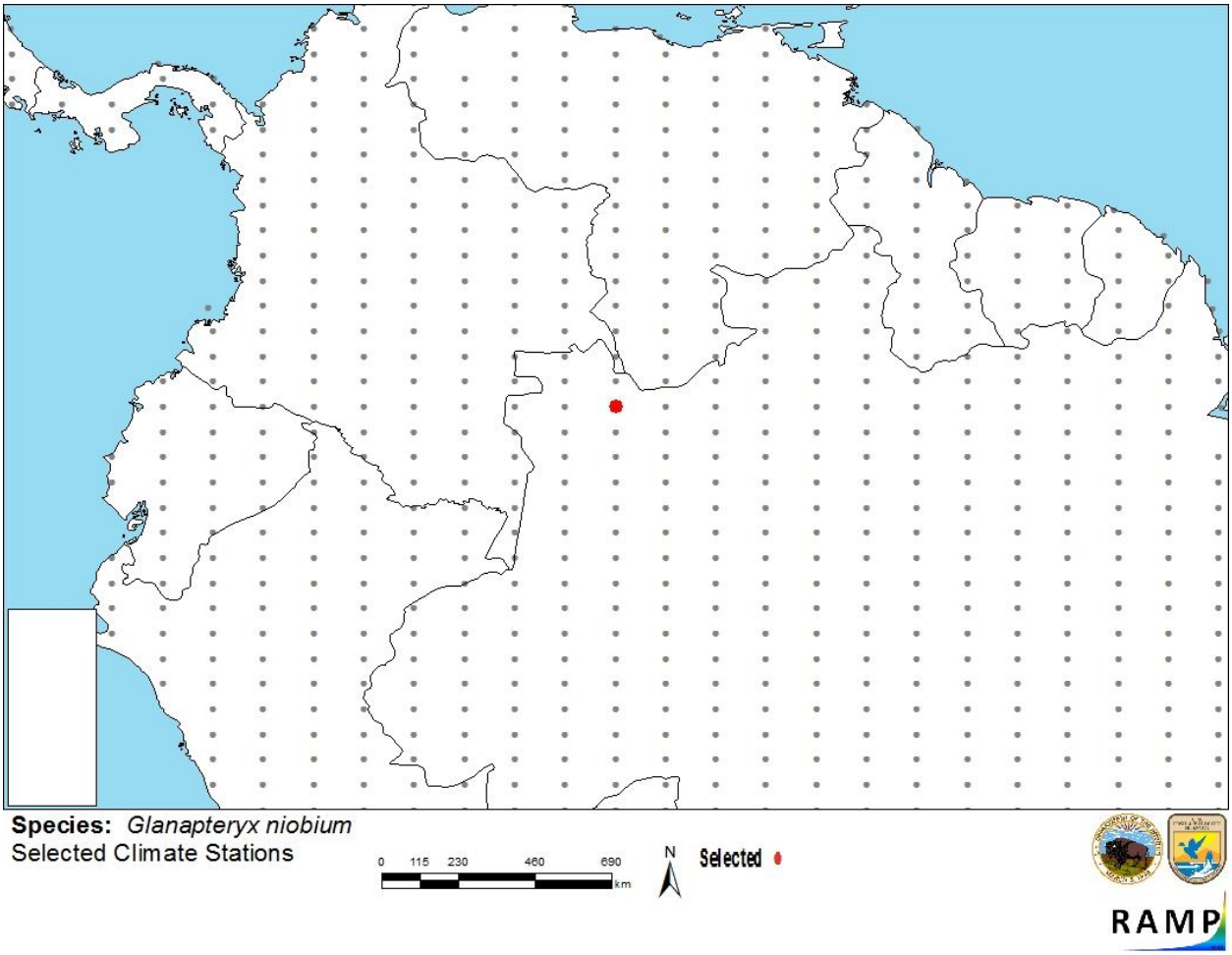


Figure 2. RAMP (Sanders et al. 2014) source map of northern South America showing weather stations selected as source location (red) in Brazil and non-source locations (gray) for *Glanapteryx niobium* climate matching. Source locations from GBIF (2016).

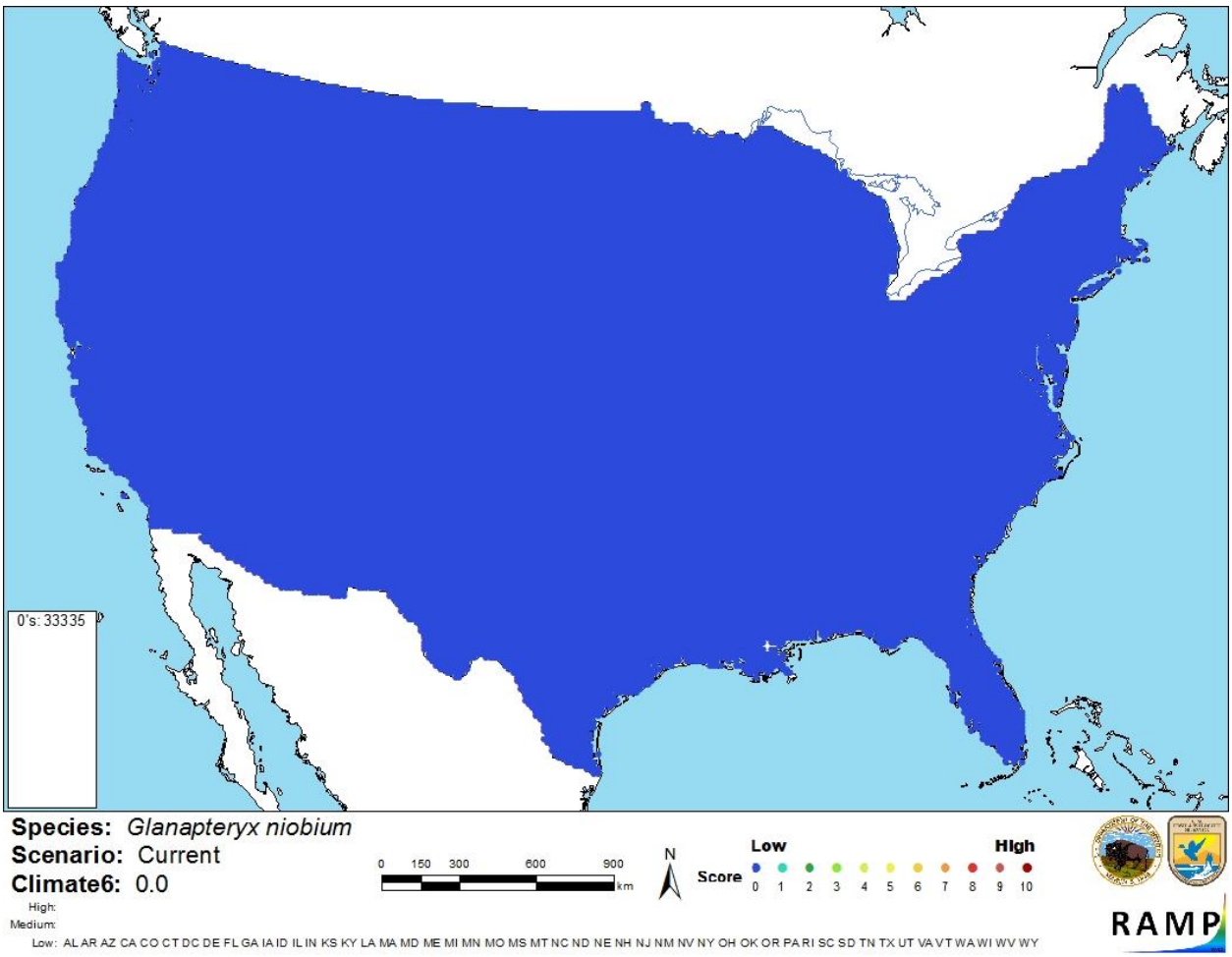


Figure 3. Map of RAMP (Sanders et al. 2014) climate matches for *Glanapteryx niobium* in the contiguous United States based on source locations reported by GBIF (2016). 0=Lowest match, 10=Highest match.

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 of *Glanapteryx niobium*. This species has not been reported outside of its native range so impacts of introduction are unknown. With so little known about this species the certainty of this assessment is low.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Glanapteryx niobium is a trichomycterid catfish native to the Morro dos Seis Lagos lake complex in northern Brazil, where it is known from a single specimen. There have been no reports of this fish outside of its native range. Possession and importation of the species are prohibited in the state of Florida. Due to its low Climate 6 score for the contiguous U.S. and absence of introduction history, the overall risk for 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.

de Pinna, M. C. C. 1998. A new species of the catfish genus *Glanapteryx* (Siluriformes: Trichomycteridae). Proceedings of the Biological Society of Washington 111(1):35-42.

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. 2016. *Glanapteryx niobium* de Pinna, 1998. FishBase. Available: http://www.fishbase.org/summary/Glanapteryx-niobium.html. (January 2017).

GBIF (Global Biodiversity Information Facility). 2017. GBIF backbone taxonomy: *Glanapteryx niobium* de Pinna, 1998. Global Biodiversity Information Facility, Copenhagen. Available: http://www.gbif.org/species/2342932. (January 2017).

ITIS (Integrated Taxonomic Information System). 2017. *Glanapteryx niobium* de Pinna, 1998. Integrated Taxonomic Information System, Reston, Virginia. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_vaue=682104#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

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.