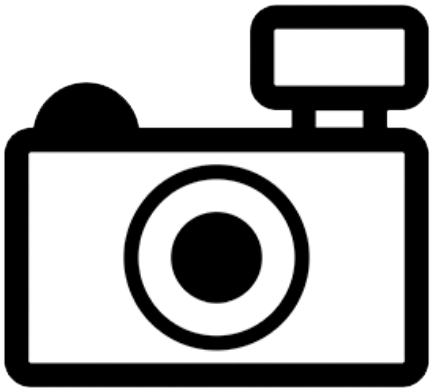
Homodiaetus passarellii (a catfish, no common name)

Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, November 2016
Revised, December 2016
Web Version, 1/16/2018



No Photo Available

1 Native Range, and Status in the United States

Native Range

From Froese and Pauly (2016):

"South America: coastal basins in Rio de Janeiro, 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 […]
Homodiaetus passarellii"

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
Phylum Chordata
Subphylum Vertebrata
Superclass Osteichthyes
Class Actinopterygii
Subclass Neopterygii
Infraclass Teleostei
Superorder Ostariophysi
Order Siluriformes
Family Trichomycteridae
Subfamily Stegophilinae
Genus *Homodiaetus*
Species *Homodiaetus passarellii* (Miranda Ribeiro 1944)"

"Taxonomic Standing: valid"

Size, Weight, and Age Range

From Froese and Pauly (2016):

"Max length : 3.8 cm SL male/unsexed [de Pínna and Wosiacki 2003]"

Environment

From Froese and Pauly (2016):

"Freshwater; demersal."

Climate/Range

From Froese and Pauly (2016):

"Tropical"

Distribution Outside the United States

Native

From Froese and Pauly (2016):

"South America: coastal basins in Rio de Janeiro, Brazil."

Introduced

This species has not been documented as introduced or established outside of its native range.

Means of Introduction Outside the United States

This species has not been documented as introduced or established outside of its native range.

Short Description

From Koch (2002):

"*Homodiaetus* is currently distinguished from other genus of Stegophilinae by the combination of the following characters: origin of ventral-fin at midlength between the snout tip and the caudal-fin origin; opercle with three or more odontodes; and gill membranes confluent with the istmus. [. . .] *H. passarellii* (Ribeiro, 1944) with 6-7 opercular odontodes, 21-24 lower procurrent caudal-fin rays and 23-26 upper procurrent caudal-fin rays […]"

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

This species has not been documented 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 […]
Homodiaetus passarellii"

4 Global Distribution



Figure 1. Known global distribution of *Homodiaetus passarellii* on the southeast coast of Brazil. Map from GBIF (2016).

5 Distribution Within the United States

This species has not been documented 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 medium to high in peninsular Florida and coastal Texas, and low in the rest of the U.S. Climate 6

proportion indicated that the contiguous U.S. is a low climate match. The proportions indicating a low climate match are those less than or equal to 0.005; the Climate 6 proportion for *Homodiaetus passarellii* was 0.005.

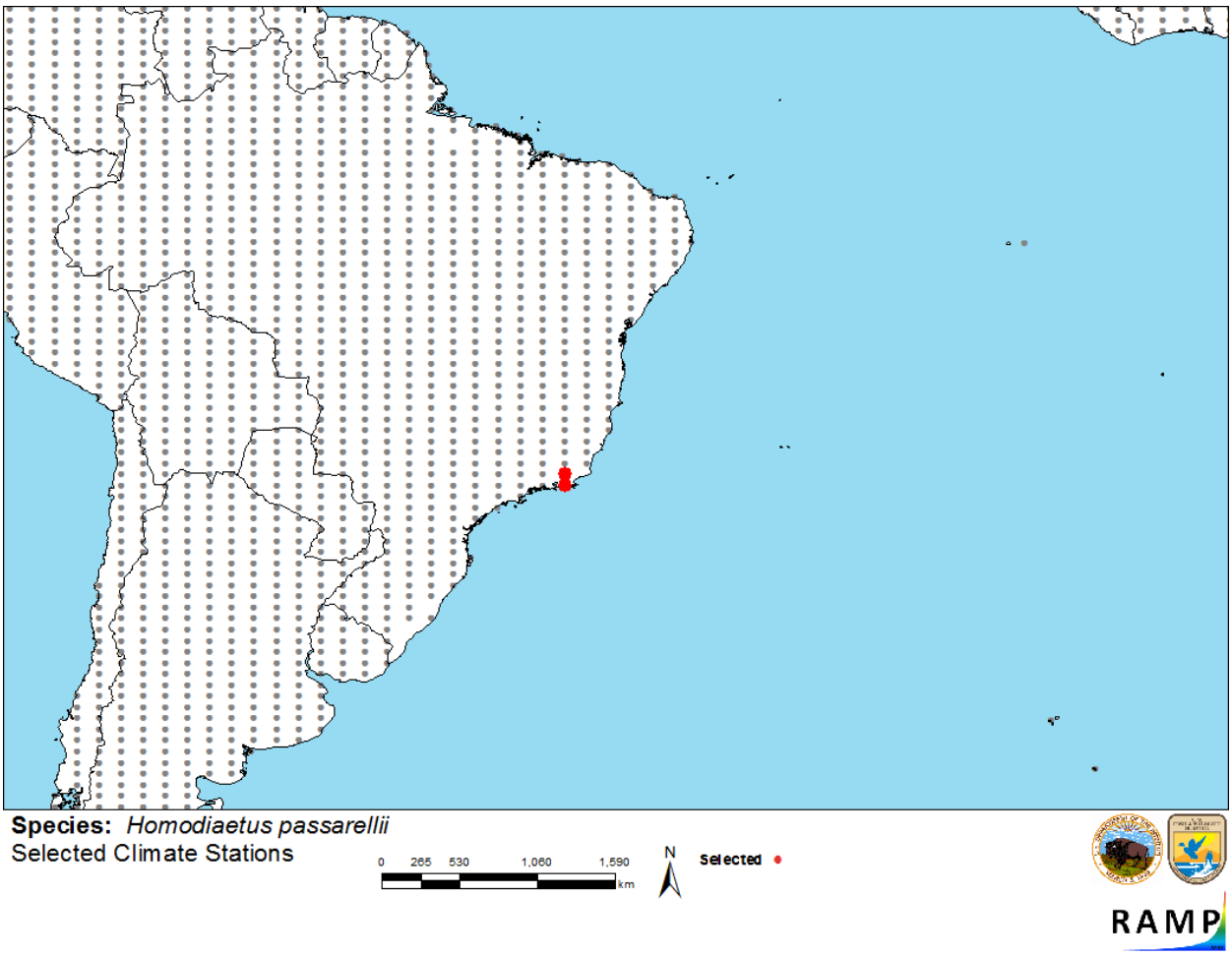


Figure 2. RAMP (Sanders et al. 2014) source map showing weather stations selected as source locations (red, in Brazil) and non-source locations (gray) for *Homodiaetus passarellii* climate matching. Source locations from GBIF (2016).

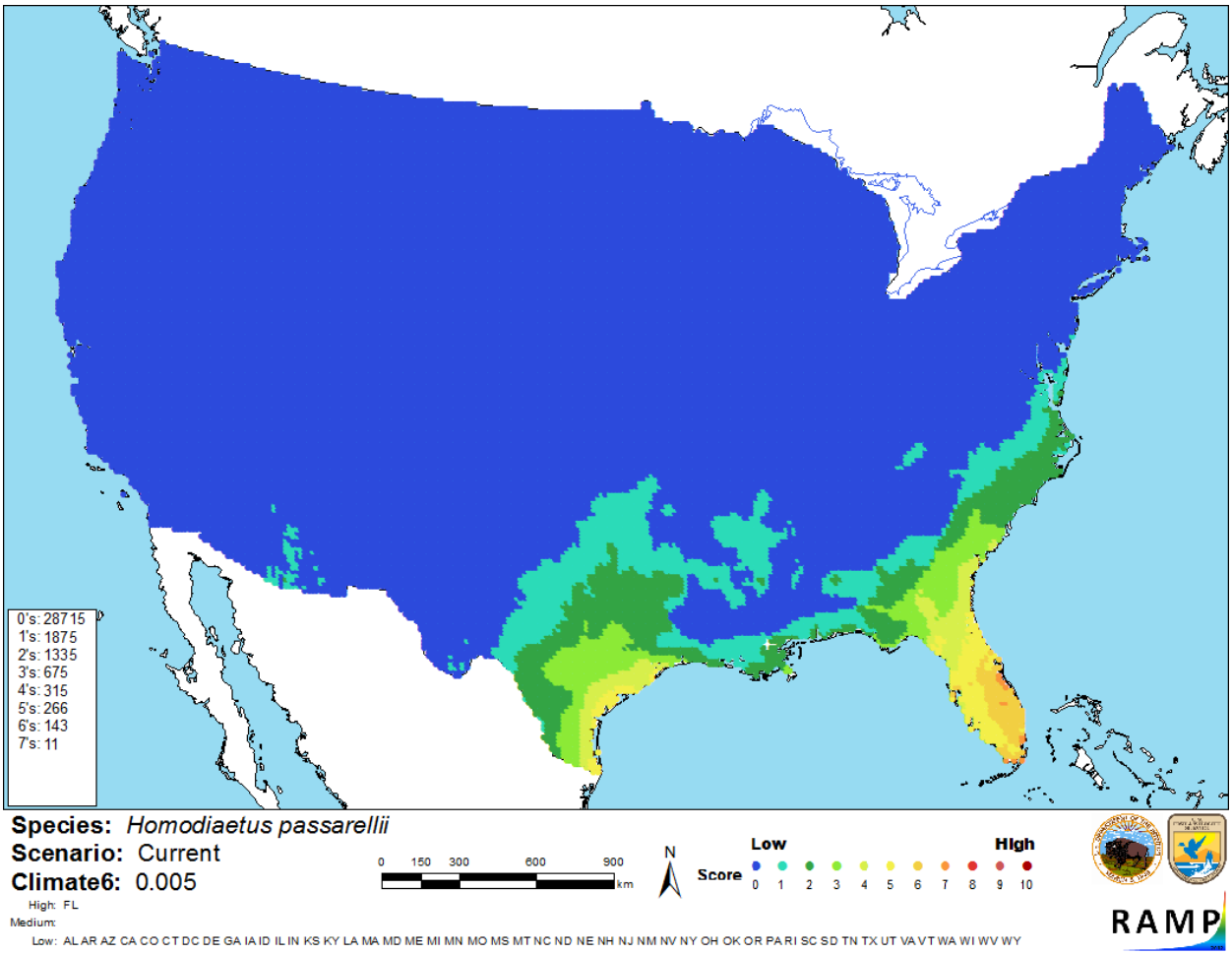


Figure 3. Map of RAMP (Sanders et al. 2014) climate matches for *Homodiaetus passarellii* in the contiguous United States based on source locations reported by GBIF (2016). 0= Lowest match, 10=Highest match. Counts of climate match scores are tabulated on the left.

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≤X≤0.005	Low
0.005<X<0.103	Medium
≥0.103	High

7 Certainty of Assessment

There is almost no information available on *Homodiaetus passarellii*. The species is not known to be introduced outside its native range so impacts of introduction are unknown, and further information on the biology and ecology of *H. passarellii* would also be needed to conduct a thorough risk assessment. Certainty of this assessment is low due to the lack of information.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Homodiaetus passarellii is a freshwater fish native to the coastal basins of Rio de Janeiro in Brazil. Little information is available about this species. No history of invasiveness has been documented for this species. *H. passarellii* has a low climate match with the United States. Further information is needed to assess the risk this species may pose. Overall risk assessment category 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.

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/#Homodiaetus. (December 2016).

Froese, R., and D. Pauly, editors. 2016. *Homodiaetus passarellii* (Miranda Ribeiro 1944). FishBase. Available: http://www.fishbase.org/summary/48763. (November 2016).

GBIF (Global Biodiversity Information Facility). 2016. GBIF backbone taxonomy: *Homodiaetus passarellii* (Miranda Ribeiro, 1944). Global Biodiversity Information Facility, Copenhagen. Available: http://www.gbif.org/species/2342951. (November 2016).

ITIS (Integrated Taxonomic Information System). 2016. *Homodiaetus passarellii* (Miranda Ribeiro 1944). Integrated Taxonomic Information System, Reston, Virginia. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=682115#null. (November 2016).

Koch, W. R. 2002. Taxonomic revision of genus *Homodiaetus* (Teleostei, Siluriformes, Trichomycteridae). Iheringia, Série Zoologia 92(3):33-46.

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.

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.