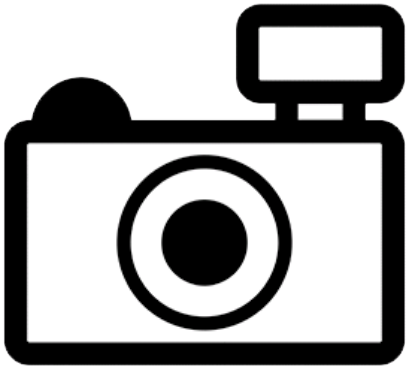
Homodiaetus graciosa (a catfish, no common name)
Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, November 2016
Revised, December 2016
Web Version, 1/16/2018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1 Native Range and Status in the United States

Native Range
From Froese and Pauly (2016):

"South America: coastal basins of southeastern Brazil in Paraná and São Paulo."

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 […]
Homodiaetus graciosa"

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 graciosa* Koch, 2002"

"Taxonomic Status: valid"

Size, Weight, and Age Range

From Froese and Pauly (2016):

"Max length : 3.5 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 of southeastern Brazil in Paraná and São Paulo."

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 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. graciosa* sp. nov. with 5-6 dentary rows, 7-9 opercular odontodes and 16-23 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 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 […]
Homodiaetus graciosa"

4 Global Distribution

Figure 1. States of São Paulo (top) and Paraná (bottom) in Brazil. The known established distribution of *Homodiaetus graciosa* includes coastal river basins of these states (Froese and Pauly 2016). Maps by Raphael Lorenzeto de Abreu. Licensed under CC BY 2.5. Available: https://commons.wikimedia.org/w/index.php?curid=724784 and https://commons.wikimedia.org/w/index.php?curid=724847. (December 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 medium to high in peninsular Florida and coastal Texas, medium along the Atlantic Coast as far north as Virginia, and low across the rest of the contiguous U.S. Climate 6 proportion indicated that the contiguous U.S. is a medium climate match overall. Proportions indicating a medium climate match are those greater than 0.005 and less than 0.103; the Climate 6 proportion for *Homodiaetus graciosa* was 0.024.

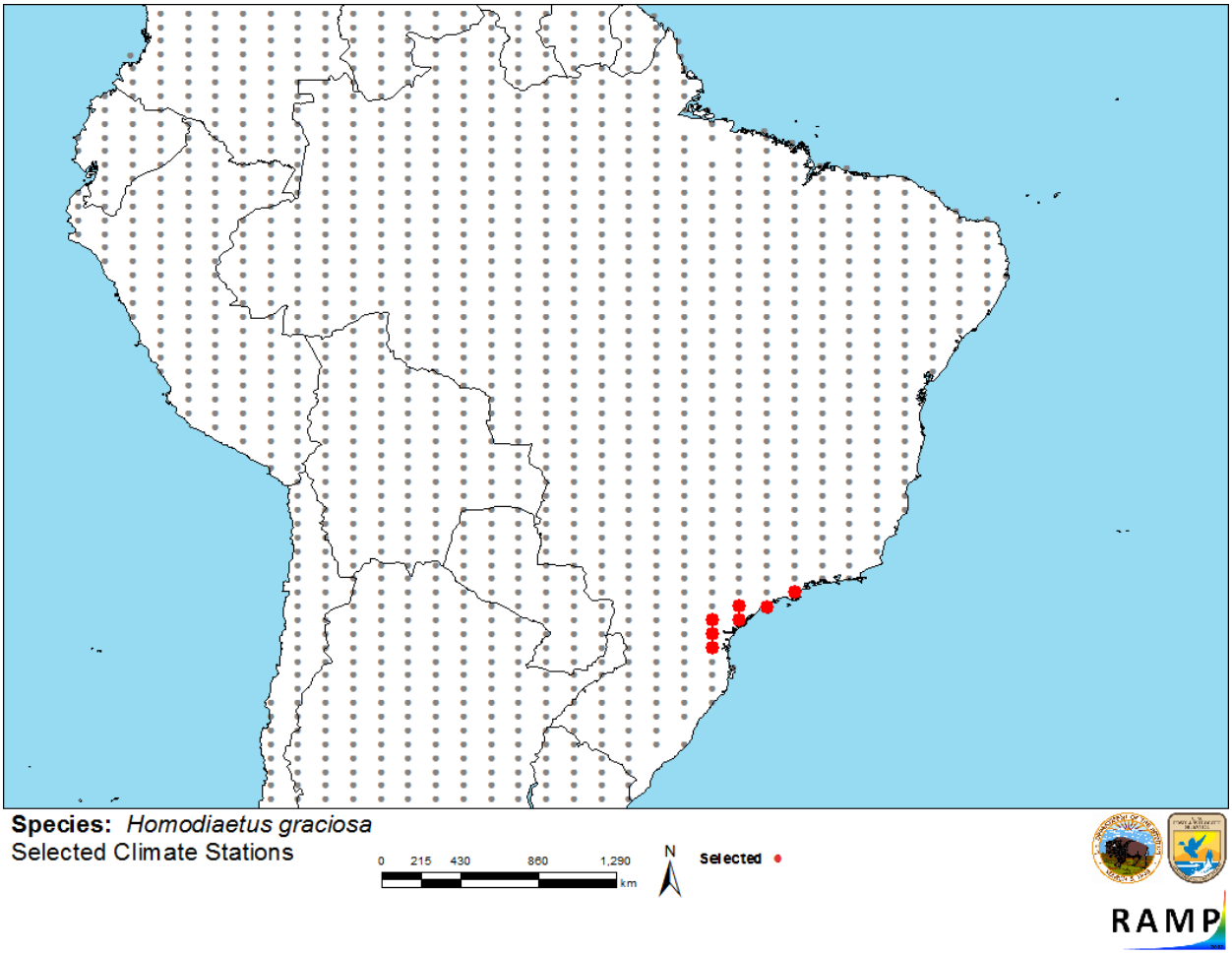

Figure 2. RAMP (Sanders et al. 2014) source map showing weather stations in South America selected as source locations (red) and non-source locations (gray) for *Homodiaetus graciosa* climate matching. Source locations based on known distribution as described by Froese and Pauly (2016; see Native Range).

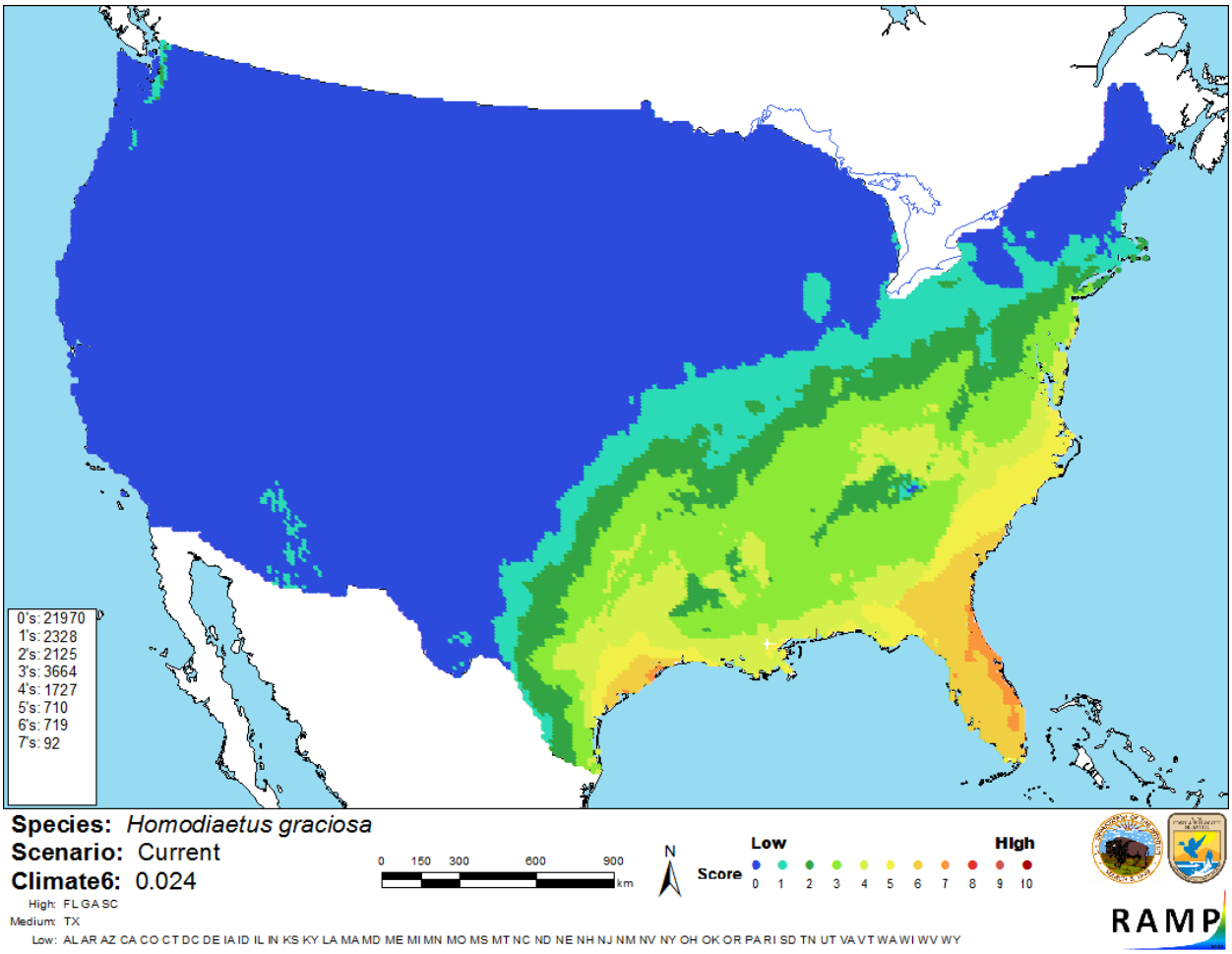

Figure 3. Map of RAMP (Sanders et al. 2014) climate matches for *Homodiaetus graciosa* in the contiguous United States based on source locations estimated from the known distribution as described by Froese and Pauly (2016; see Native Range). 0= Lowest match, 10=Highest match. Counts of climate match 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 about *Homodiaetus graciosa* available. Climate matching for this risk assessment was based on an approximate known distribution of this species in the coastal basins of the Brazilian states of Paraná and São Paulo, not records of collected specimens. Further information on the biology and distribution of *H. graciosa* is 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 graciosa is a freshwater catfish currently known to be native to the coastal basins of Paraná and São Paulo in Brazil. It is listed as a prohibited species in the State of Florida, along with other members of its genus. Little information is available about the species. *H. graciosa* has a medium climate match with the contiguous United States based on climate stations selected that represent the coastal regions of Paraná and São Paulo. Further information is needed to completely assess the risk of this species. Overall risk assessment category is Uncertain.

Assessment Elements

- **History of Invasiveness (Sec. 3): Uncertain**
- **Climate Match (Sec. 6): Medium**
- **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 graciosa* (Koch, 2002). FishBase. Available: http://www.fishbase.org/summary/Homodiaetus-graciosa.html. (November 2016).

ITIS (Integrated Taxonomic Information System). 2016. *Homodiaetus graciosa* (Koch, 2002). Integrated Taxonomic Information System, Reston, Virginia. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=682114#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.