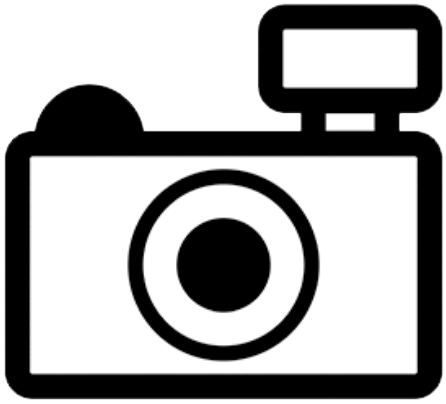
Homodiaetus banguela (a catfish, no common name)
Ecological Risk Screening Summary

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: São João 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 […]
Homodiaetus banguela"

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 Stegophilinae
Genus *Homodiaetus*
Species *Homodiaetus banguela* Koch, 2002"

"Taxonomic Status: 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: São João River in 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 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. banguela* sp. nov. with 9 opercular odontodes, 17-19 lower procurrent caudal-fin rays, 17-22 upper procurrent caudal-fin rays, reduction of fourth pharyngobranchial with only three teeth and untoothed fifth ceratobranchial […]"

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 banguela"

4 Global Distribution

Figure 1. Location of the São João River Basin in Brazil, which is the known distribution of *Homodiaetus banguela.* Map from Wikipedia.org; public domain.

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, and low throughout the rest of the continental United States. Climate 6 proportion indicated that the contiguous U.S. has a medium climate match. The proportions indicating a medium climate match are those greater than 0.005 and less than 0.103; the Climate 6 proportion for *Homodiaetus banguela* is 0.007.

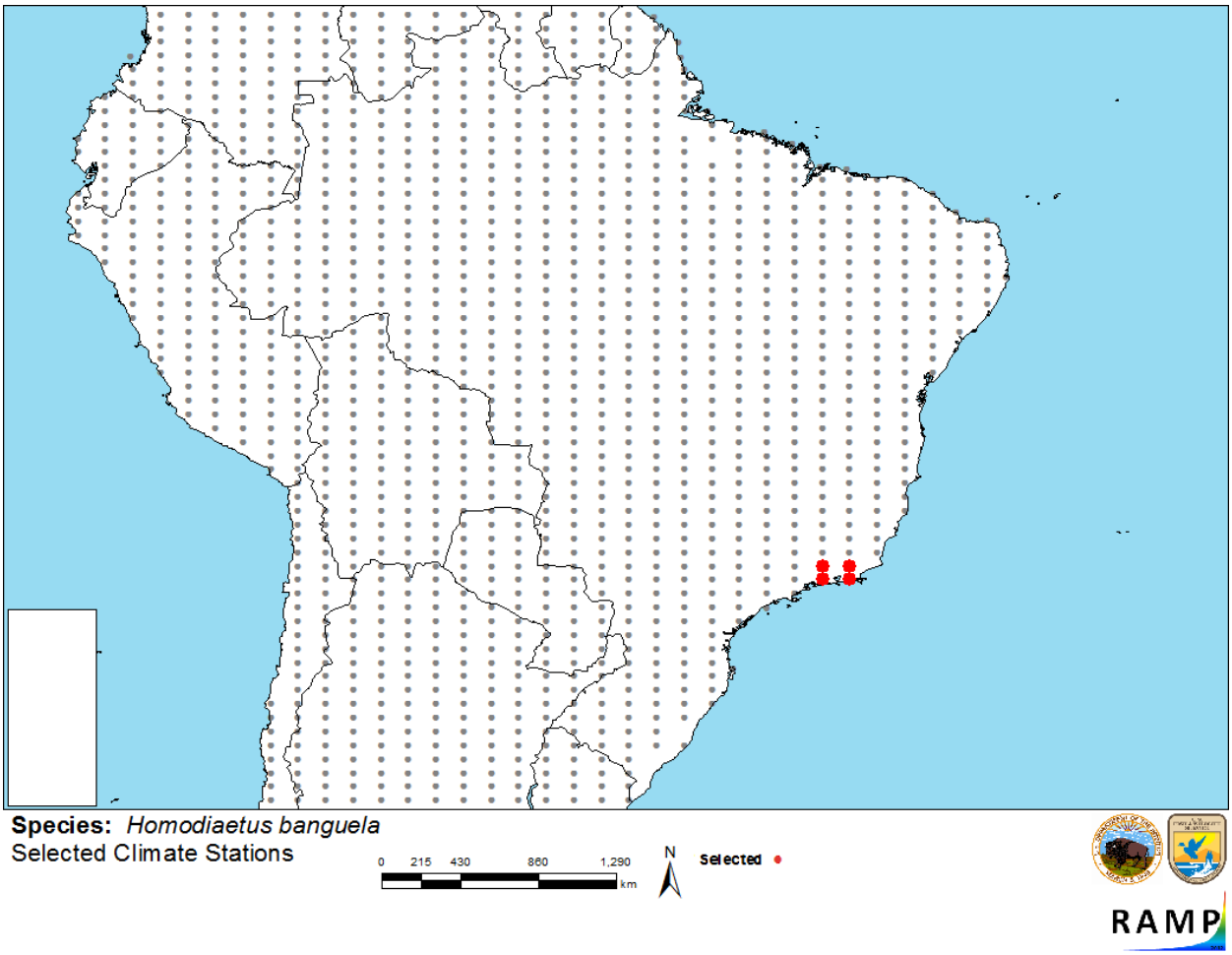

Figure 2. RAMP (Sanders et al. 2014) source map showing weather stations selected as source locations (red) and non-source locations (gray) for *Homodiaetus banguela* climate matching. Source locations represent the location of the São João River Basin in Brazil.

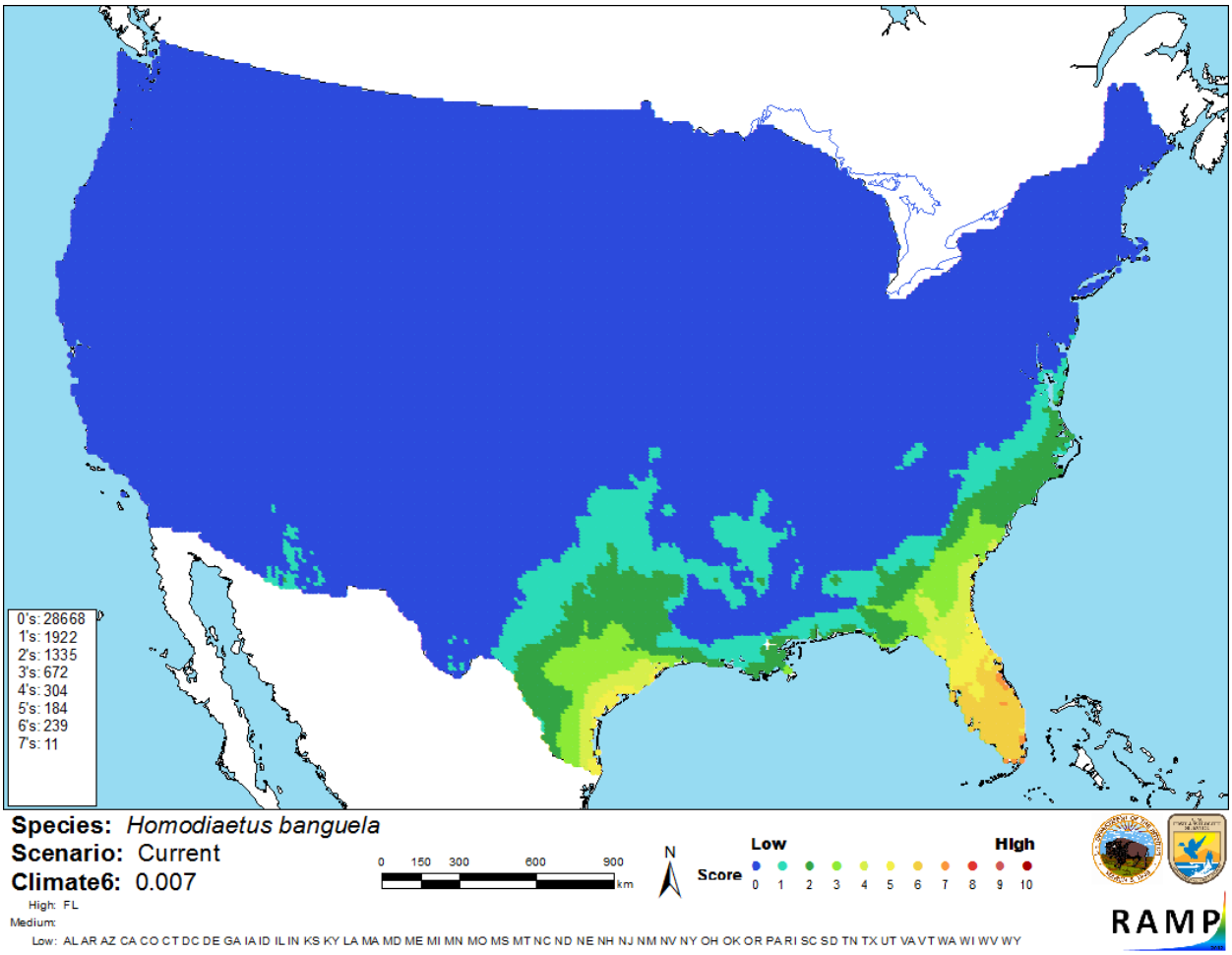

Figure 3. Map of RAMP (Sanders et al. 2014) climate matches for *Homodiaetus banguela* in the contiguous United States based on source locations of the São João River Basin, which is the distribution of *Homodiaetus banguela* as reported by Froese and Pauly (2016). 0= Lowest match, 10=Highest match. 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 on *Homodiaetus banguela* available. Climate matching for this risk assessment was based on a general known distribution of this species in the São João River Basin, not records of collected specimens. Further information on the biology and distribution of *H. banguela* is needed to conduct a thorough risk assessment. Certainty of this assessment is low because of the lack of information.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Homodiaetus banguela is a freshwater catfish currently known to be native to the São João River in Brazil. Little information is available about this species. *H. banguela* has a medium climate match with the contiguous United States based on climate in the São João River Basin, where *H. banguela* is native. 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 banguela* (Koch, 2002). FishBase. Available: http://www.fishbase.org/summary/Homodiaetus-banguela.html (November 2016).

ITIS (Integrated Taxonomic Information System). 2016. *Homodiaetus banguela* (Koch, 2002). Integrated Taxonomic Information System, Reston, Virginia. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=682113#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.