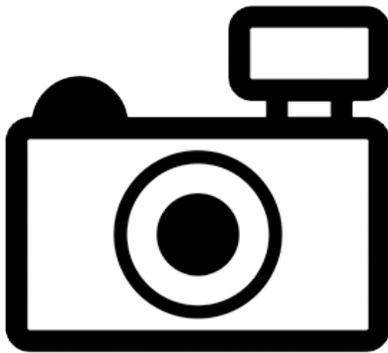


Megalocentor echthrus (a catfish, no common name)

Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, January 2017
Revised, February 2017
Web Version, 2/9/2018



No Photo Available

1 Native Range and Status in the United States

Native Range

From DoNascimento (2015):

“*Megalocentor echthrus* is widely distributed in the Amazon River basin, in Bolivia, Brazil, and Peru (de Pinna and Britski, 1991) and is also present in the upper basin of the Rio Negro (Casiquire River) and lower basin of the Orinoco River in Venezuela (DoNascimento, 2001). The apparently fragmented distribution in Venezuela and scarce records from that country are possibly the result of inadequate sampling methods.”

Status in the United States

This species has not been reported as introduced 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 [...]

Megalocentor echthrus”

Means of Introductions in the United States

This species has not been reported as introduced 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 Stegophilinae
Genus *Megalocentor*
Species *Megalocentor echthrus* de Pinna and Britski, 1991”

“Current Standing: valid”

Size, Weight, and Age Range

From Froese and Pauly (2016):

“Max length : 8.8 cm SL male/unsexed; [de Pinna and Britski 1991]”

Environment

From Froese and Pauly (2016):

“Freshwater; benthopelagic.”

Climate/Range

From Froese and Pauly (2016):

“Tropical, preferred ?”

Distribution Outside the United States

Native

From DoNascimento (2015):

“*Megalocentor echthrus* is widely distributed in the Amazon River basin, in Bolivia, Brazil, and Peru (de Pinna and Britski, 1991) and is also present in the upper basin of the Rio Negro (Casiquire River) and lower basin of the Orinoco River in Venezuela (DoNascimento, 2001). The apparently fragmented distribution in Venezuela and scarce records from that country are possibly the result of inadequate sampling methods.”

Introduced

No introductions of this species have been reported.

Means of Introduction Outside the United States

No introductions of this species have been reported.

Short Description

From Froese and Pauly (2016):

“Dorsal soft rays (total): 9; Anal soft rays: 7”

From DoNascimento (2015):

“The following autapomorphies were originally proposed and described in detail by de Pinna and Britski (1991) in their description of the genus and species *Megalocentor echthrus*, and are here confirmed as valid diagnostic characters for this genus, and unique within trichomycterids: 1. Hypertrophied single odontode on interopercle. 2. Interopercular dorsal facet for articulation with preopercle narrow and bifurcated, projecting conspicuously from dorsal margin. 3. Long articular surface between hyomandibula and opercle.”

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

No introductions of this species have been reported.

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 [...]

Megalocentor echthrus”

4 Global Distribution

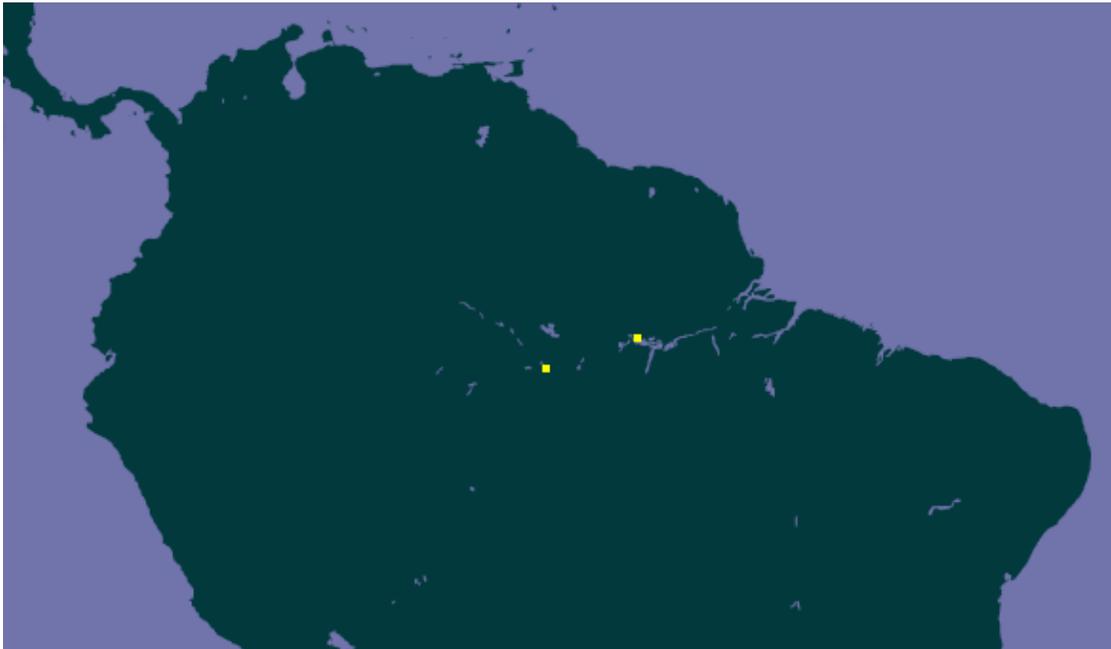


Figure 1. Reported established locations of *Megalocentor echthrus* in Brazil. Map from GBIF (2016). No other locations were reported by GBIF (2016), although the species is known to be established in other locations (see Distribution Outside the Native Range).

5 Distribution Within the United States

This species has not been reported 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 low throughout the contiguous U.S., reflected in a Climate 6 proportion of 0.0. The range for Climate 6 proportions categorized as “low” climate matches is 0.000 to 0.005.

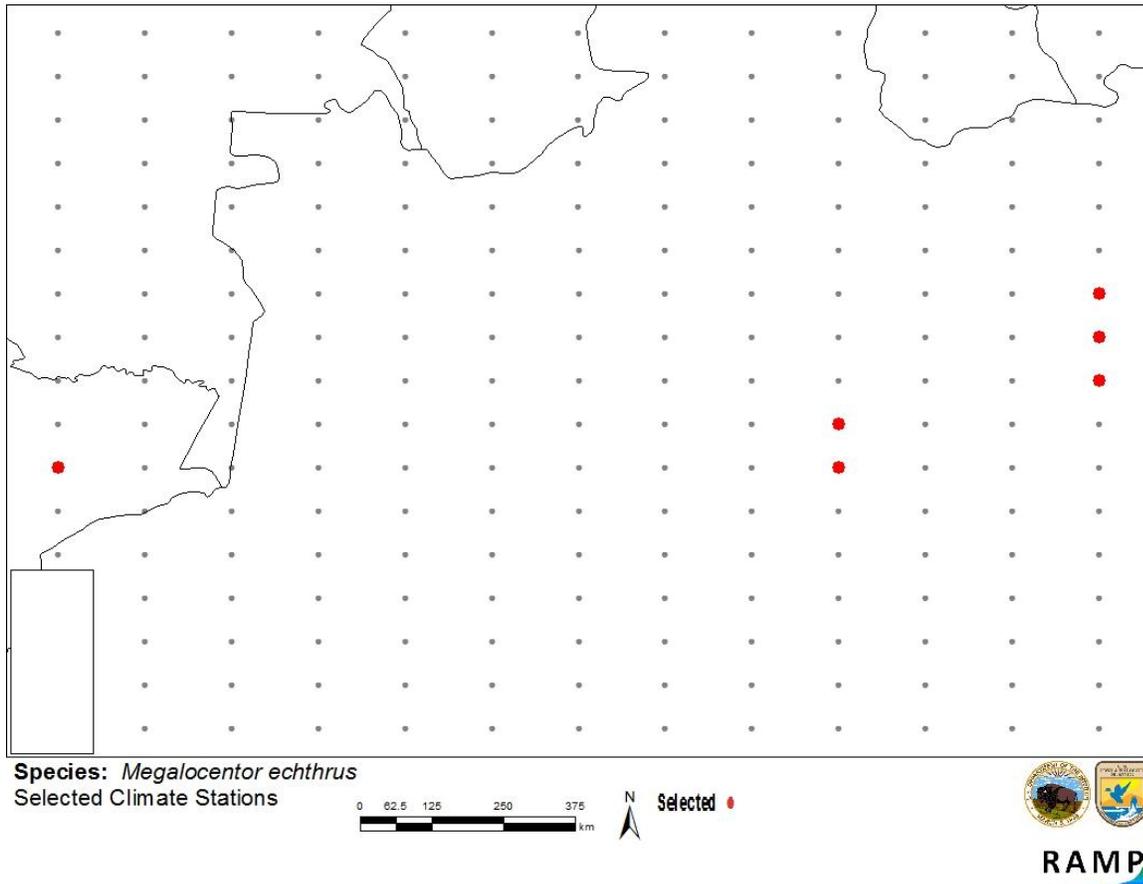


Figure 1. RAMP (Sanders et al. 2014) source map showing weather stations in northern Brazil and Peru selected as source locations (red) and non-source locations (gray) for *Megalocentor echthrus* climate matching. Source locations from GBIF (2016) and VertNet (2016).

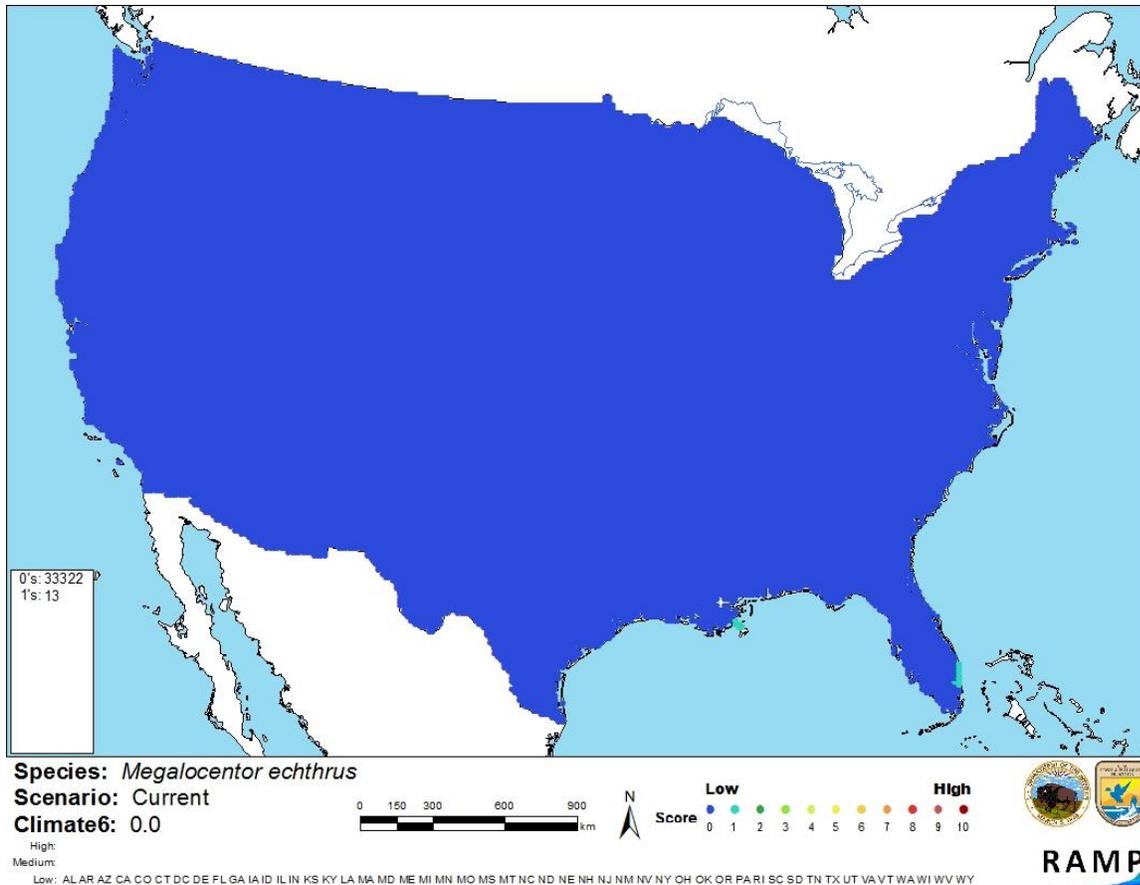


Figure 2. Map of RAMP (Sanders et al. 2014) climate matches for *Megalocentor echthrus* in the contiguous United States based on source locations reported by GBIF (2016) and VertNet (2016). 0= Lowest match, 10=Highest match. Counts of climate match scores are tabulated on the left.

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 also very limited information available on the biology and distribution of *Megalocentor echthrus*. Potential impacts of an introduction are unknown because the species has not been reported as introduced. Due to the lack of information, the certainty of this assessment is low.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Megalocentor echthrus is a trichomycterid catfish species native to Venezuela, Bolivia, Peru, and Brazil. Very little is known about its biology, and it has not been reported as introduced outside its native range, so impacts of introduction are unknown. Along with other trichomycterids, *M. echthrus* is listed as a prohibited species in the state of Florida. Climate match to the contiguous U.S. is low. Overall risk posed by *M. echthrus* 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.

- DoNascimento, C. 2015. Morphological evidence for the monophyly of the subfamily of parasitic catfishes Stegophilidae (Siluriformes, Trichomycteridae) and phylogenetic diagnoses of its genera. *Copeia* 103(4):933-960.
- 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. *Megalocentor echthrus* de Pinna & Britski, 1991. FishBase. Available: <http://www.fishbase.org/summary/Megalocentor-echthrus.html>. (January 2017).
- GBIF (Global Biodiversity Information Facility). 2016. GBIF backbone taxonomy: *Megalocentor echthrus* de Pinna & Britski, 1991. Global Biodiversity Information Facility, Copenhagen. Available: <http://www.gbif.org/species/2343350>. (January 2017).
- ITIS (Integrated Taxonomic Information System). 2017. *Megalocentor echthrus* de Pinna and Britski, 1991. Integrated Taxonomic Information System, Reston, Virginia. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=682136#null. (January 2017).
- Sanders, S., C. Castiglione, and M. H. Hoff. 2014. Risk Assessment Mapping Program: RAMP. U.S. Fish and Wildlife Service.

VertNet. 2016. VertNet. Available: <http://portal.vertnet.org/search?q=megalocentor+echthrus>.
(February 2017).

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 H. A. Britski. 1991. *Megalocentor*, a new genus of parasitic catfish from the Amazon basin: the sister group of *Apomatoceros* (Trichomycteridae: Stegophilinae). *Ichthyological Exploration of Freshwaters* 2:113-128.

DoNascimento, C. 2001. Las especies de la subfamilia Stegophilinae (Siluriformes, Trichomycteridae) y su distribución geográfica en Venezuela. Unpublished thesis. Universidad Central de Venezuela, Caracas, Venezuela.