# *Trichomycterus arleoi* (a catfish, no common name)
## Ecological Risk Screening Summary

**U.S. Fish and Wildlife Service, December 2016**
**Revised, April 2017**
**Web Version, 4/26/2018**

Image: Rodríguez-Olarte and Taphorn (2015). Licensed under CC BY-NC-SA.

# 1 Native Range and Status in the United States

## Native Range

From Froese and Pauly (2016):

"South America: Yaracuy River basin in Venezuela."

## Status in the United States

This species has not been reported in the U.S. No evidence was found that this species is in trade in the U.S.

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. Very limited exceptions may be made by permit from the Executive Director […] [The list of prohibited nonnative species includes] *Trichomycterus arleoi*"

## Means of Introductions in the United States

This species has not been reported in the U.S.

# 2 Biology and Ecology

## Taxonomic Hierarchy and Taxonomic Standing

From ITIS (2016):

"Kingdom Animalia
Subkingdom Bilateria
Infrakingdom Deuterostomia
Phylum Chordata
Subphylum Vertebratas
Infraphylum Gnathostomata
Superclass Osteichthyes
Class Actinopterygii
Subclass Neopterygii
Infraclass Teleostei
Superorder Ostariophysi
Order Siluriformes
Family Trichomycteridae
Subfamily Trichomycterinae
Genus *Trichomycterus*
Species *Trichomycterus arleoi* (Fernández-Yépez, 1972)"

"Taxonomic Status: valid"

## Size, Weight, and Age Range

From Froese and Pauly (2016):

"Max length : 5.2 cm SL male/unsexed; [de Pinna and Wosiacki 2003]"

## Environment

From Froese and Pauly (2016):

"Freshwater; benthopelagic."

## Climate/Range

From Froese and Pauly (2016)

"Tropical, preferred ?"

## Distribution Outside the United States

### Native

From Froese and Pauly (2016):

"South America: Yaracuy River basin in Venezuela."

### 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

No information available.

## 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. The Florida Fish and Wildlife Conservation Commission (FFWCC 2016) has listed the parasitic catfish *T. arleoi* as a prohibited species for the state.

# 4 Global Distribution

**Figure 1.** Known global distribution of *Trichomycterus arleoi* in Venezuela. Map from Rodríguez-Olarte and Taphorn (2015).

# 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 medium in southern Florida and low throughout the remainder of the contiguous U.S. Climate 6 proportion indicated that the contiguous U.S. is a low climate match overall. Proportions of 0.005 and less indicate a low match; the Climate 6 proportion for *T. arleoi* was 0.0.

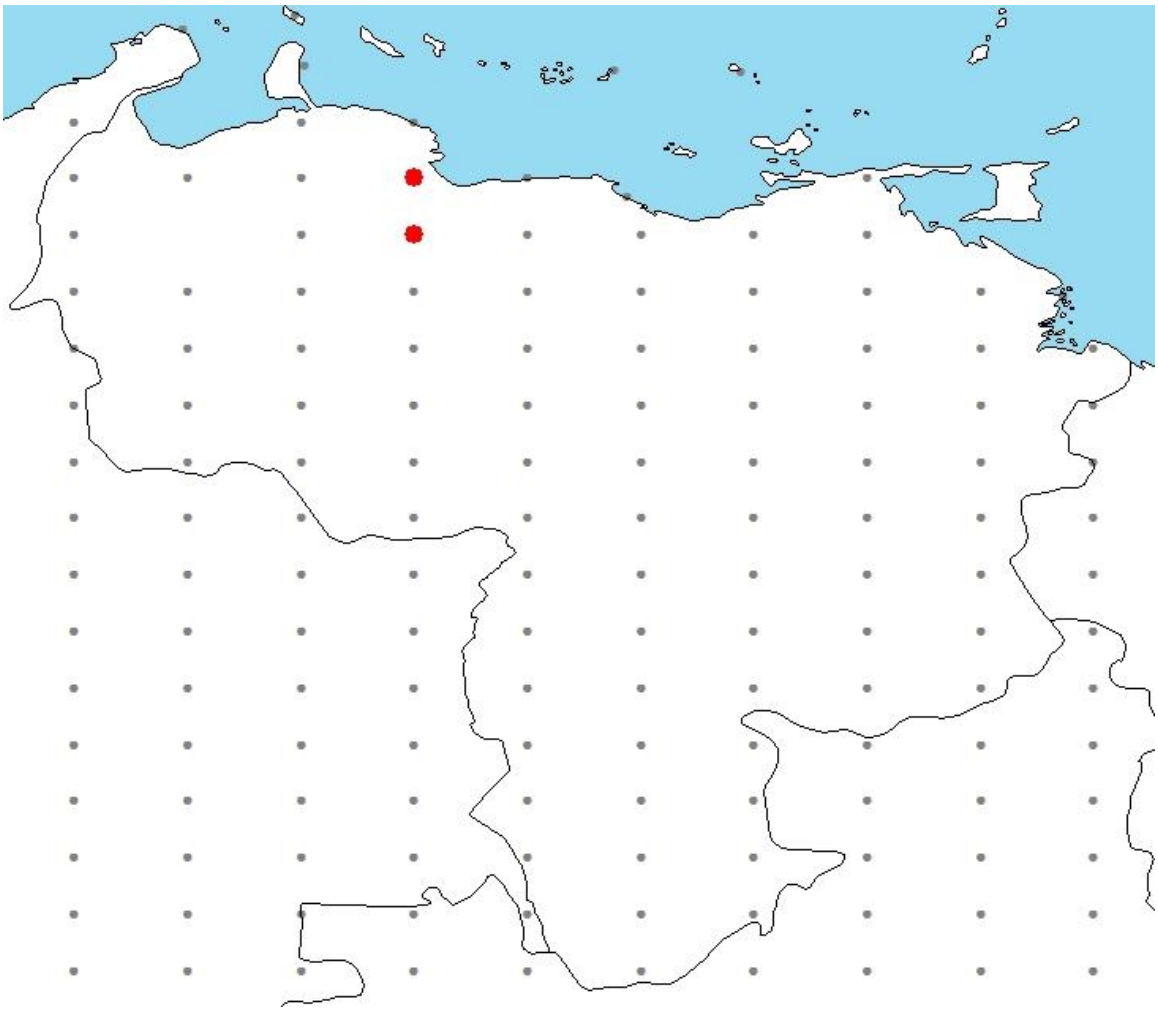

**Figure 2.** RAMP (Sanders et al. 2014) source map showing weather stations in Venezuela and neighboring countries selected as source locations (red) and non-source locations (gray) for *T. arleoi* climate matching. Source locations from Rodríguez-Olarte and Taphorn (2015).

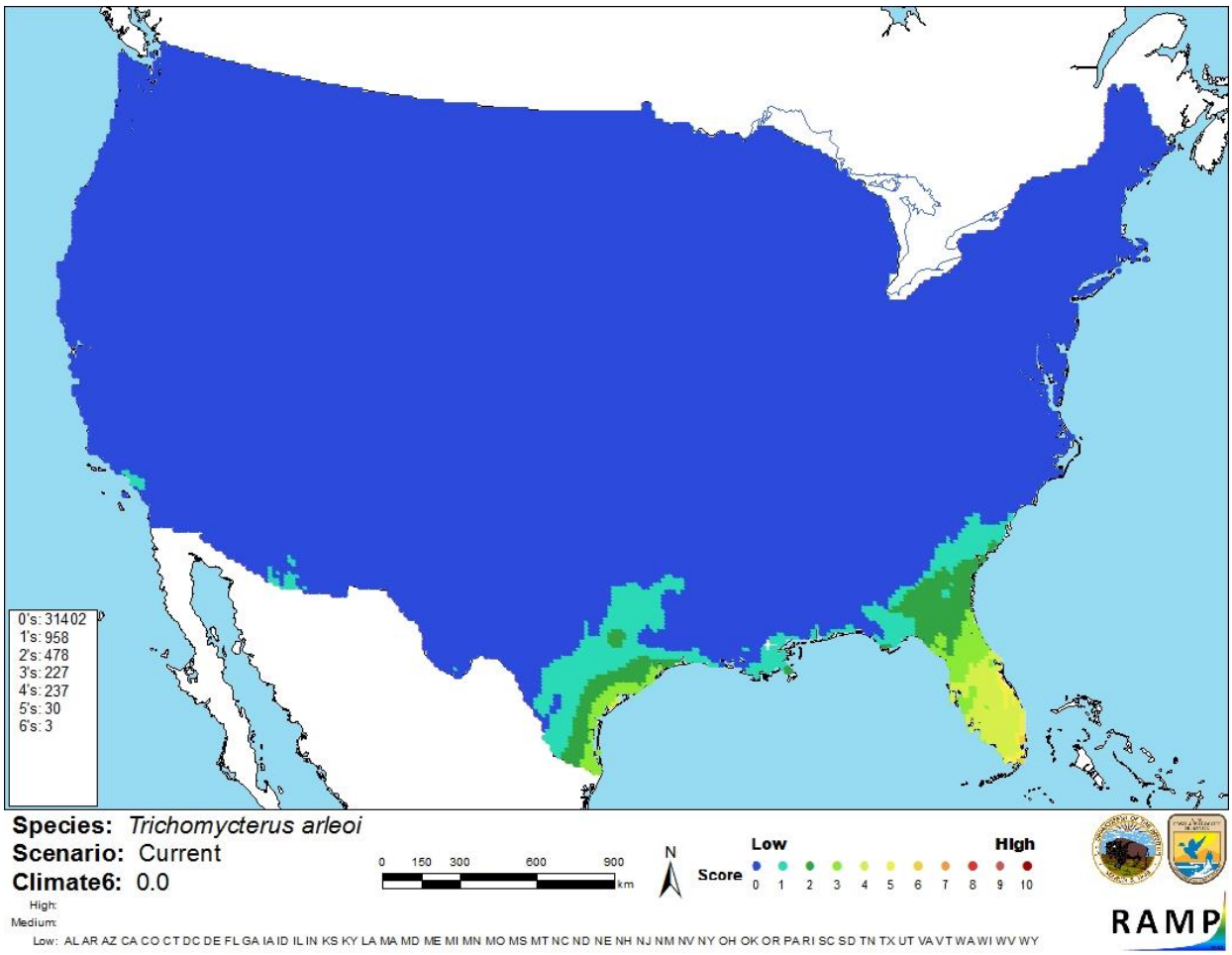


**Figure 3**. Map of RAMP (Sanders et al. 2014) climate matches for *T. arleoi* in the contiguous United States based on source locations reported by Rodríguez-Olarte and Taphorn (2015). 0=Lowest match, 10=Highest match. Counts of climate match scores are tabulated on the left.

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

The biology and ecology of *T. arleoi* are poorly known. It has never been reported as introduced outside its native range so impacts of introductions cannot be assessed. The certainty of this assessment is low.

# 8 Risk Assessment

## Summary of Risk to the Contiguous United States

*Trichomycterus arleoi* is a trichomycterid catfish native to northern Venezuela. Very little is known about this species. It has not been introduced outside of its native range. Without being able to observe introductions in other parts of the world, it is impossible to know the potential impacts of introduction of *T. arleoi* to the U.S. The Florida Fish and Wildlife Conservation Commission has listed the parasitic catfish *T. arleoi* as a prohibited species. Climate match to the contiguous U.S. is low. The overall risk posed by 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.**


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/. (December 2016).

Froese, R., and D. Pauly, editors. 2016. *Trichomycterus arleoi* (Fernández-Yépez, 1972). FishBase. Available: http://www.fishbase.se/summary/48666. (December 2016).

ITIS (Integrated Taxonomic Information System). 2016. Trichomycterus arleoi (Fernández-Yépez, 1972). Integrated Taxonomic Information System, Reston, Virginia. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=682176#null. (December 2016).

Rodríguez-Olarte, D., and D. C. Taphorn. 2015. Bagrecito sanguijuela de Yaracuy, *Trichomycterus arleoi*. *In* J. P. Rodríguez, A. García-Rawlins, and F. Rojas-Suárez, editors. Libro rojo de la fauna Venezolana, fourth edition. Provita y Fundación Empresas Polar, Caracas, Venezuela. Available: http://animalesamenazados.provita.org.ve/node/5627/pdf. (April 2017). (In Spanish).

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.