

Lyre Tail Pleco (*Acanthicus hystrix*)

Ecological Risk Screening Summary

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1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2013):

“Known from the Amazon River basin [Fisch-Muller 2003].”

Status in the United States

No records of *Acanthicus hystrix* in the United States were found.

Means of Introductions in the United States

No records of *Acanthicus hystrix* in the United States were found.

Remarks

No additional remarks.

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

From ITIS (2013):

“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 Loricariidae
Subfamily Hypostominae
Genus *Acanthicus* Agassiz in Spix and Agassiz, 1829
Species *Acanthicus hystrix* Agassiz in Spix and Agassiz, 1829”

From Eschmeyer et al. (2017):

“*hystrix*, *Acanthicus* Spix [J. B. von] & Agassiz [L.] 1829:3 [...], Pl. 1 (figs. 1-2) [Reise nach Griechenland und der Türkei] Amazon River. Holotype (unique): destroyed in World War II. Type catalog: Ferraris 2007:218 [...]. Name first published in Cuvier 1829. Author also seen as Agassiz in Spix & Agassiz. •Valid as *Acanthicus hystrix* Spix & Agassiz 1829 -- (Isbrücker 1980:75 [...], Ortega & Vari 1986:16 [...], Burgess 1989:438 [...], Montoya-Burgos et al. 1998:367 [...], Isbrücker 2001:25 [...], Isbrücker 2002:11 [...], Ferraris 2003:865 [...], Fisch-Muller in Reis et al. 2003:373 [...], Ferraris 2007:218 [...], Chamon 2016:397 [...]). **Current status:** Valid as *Acanthicus hystrix* Spix & Agassiz 1829. Loricariidae: Hypostominae.”

Size, Weight, and Age Range

From Froese and Pauly (2013):

“Max length: 53.0 cm SL male/unsexed; [Fisch-Muller 2003]”

“Reported to reach 70 cm TL [Baensch and Riehl 1991].”

Environment

From Froese and Pauly (2013):

“Freshwater; demersal. [...]; 22°C - 27°C [assumed to be recommended aquarium temperature range] [Baensch and Riehl 1991]”

Climate/Range

From Froese and Pauly (2013):

“Tropical; [...]”

Distribution Outside the United States

Native

From Froese and Pauly (2013):

“Known from the Amazon River basin [Fisch-Muller 2003].”

Introduced

No records of *Acanthicus hystrix* introductions were found.

Means of Introduction Outside the United States

No records of *Acanthicus hystrix* introductions were found.

Short Description

From Lujan et al. (2010):

“Although comparable length and weight data are not available for large specimens of *P[anaque]. schaeferi* and *A. hystrix*, *P. schaeferi* has a much deeper body and larger head than *A. hystrix*, suggesting that *P. schaeferi* is heavier than *A. hystrix* at equivalent body lengths and is likely the largest loriciid species in terms of weight, if not also in terms of length.”

Biology

From Gilles et al. (2014):

“Specimens of *Liposarcus pardalis* Castelnau, 1855 (n = 19), and *Acanthicus hystrix* Spix and Agassiz, 1829 (n = 9) were incorporated into the ecosystem in March 2012. These species are grazers that feed on algae (periphyton), detritus, and opportunistically on small invertebrates as well (Fisch-Muller, 2003).”

Human Uses

From Froese and Pauly (2013):

“Aquarium: public aquariums”

Diseases

No information on diseases of *Acanthicus hystrix* was found.

Threat to Humans

From Froese and Pauly (2013):

“Harmless”

3 Impacts of Introductions

No introductions of *Acanthicus hystrix* were recorded.

4 Global Distribution

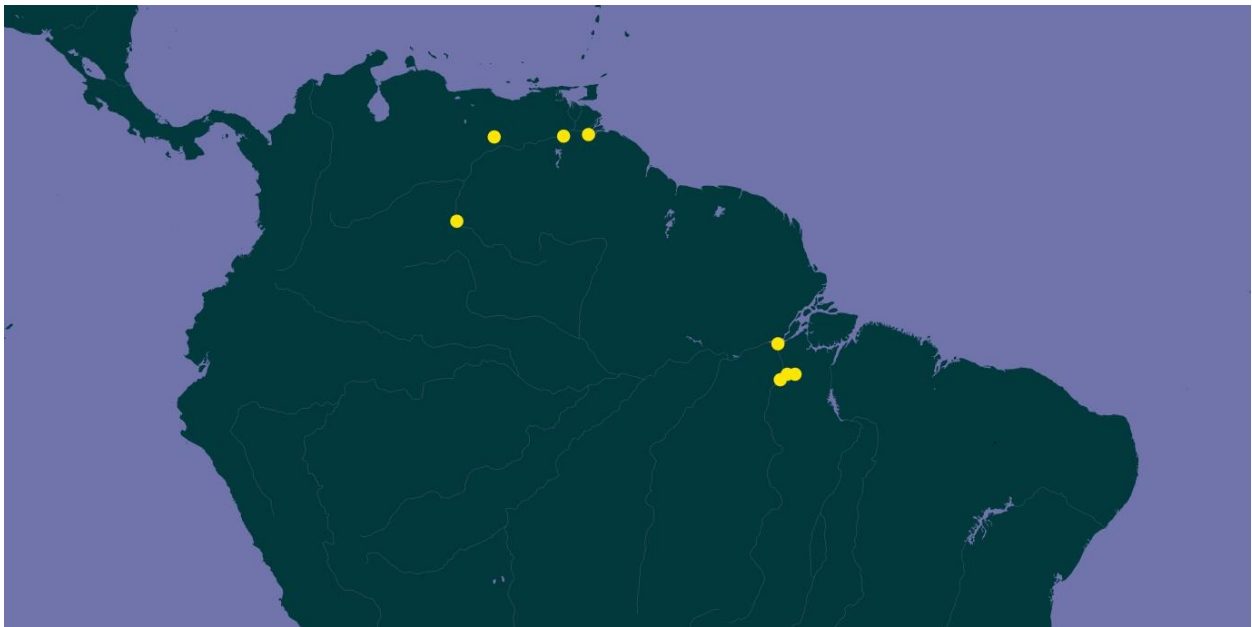


Figure 1. Known global distribution of *Acanthicus hystrix* in northern South America. Map from GBIF Secretariat (2017).

5 Distribution Within the United States

No records of *Acanthicus hystrix* in the United States were found.

6 Climate Matching

Summary of Climate Matching Analysis

The climate match for *Acanthicus hystrix* was low for most of the contiguous United States. Extreme southern Texas and most of Florida had a low to moderate match, with the southern tip of Florida having a moderate match. The Climate 6 score (Sanders et al. 2014; 16 climate variables; Euclidean distance) for the contiguous U.S. was 0.001, low, and no states had an individually high climate match.

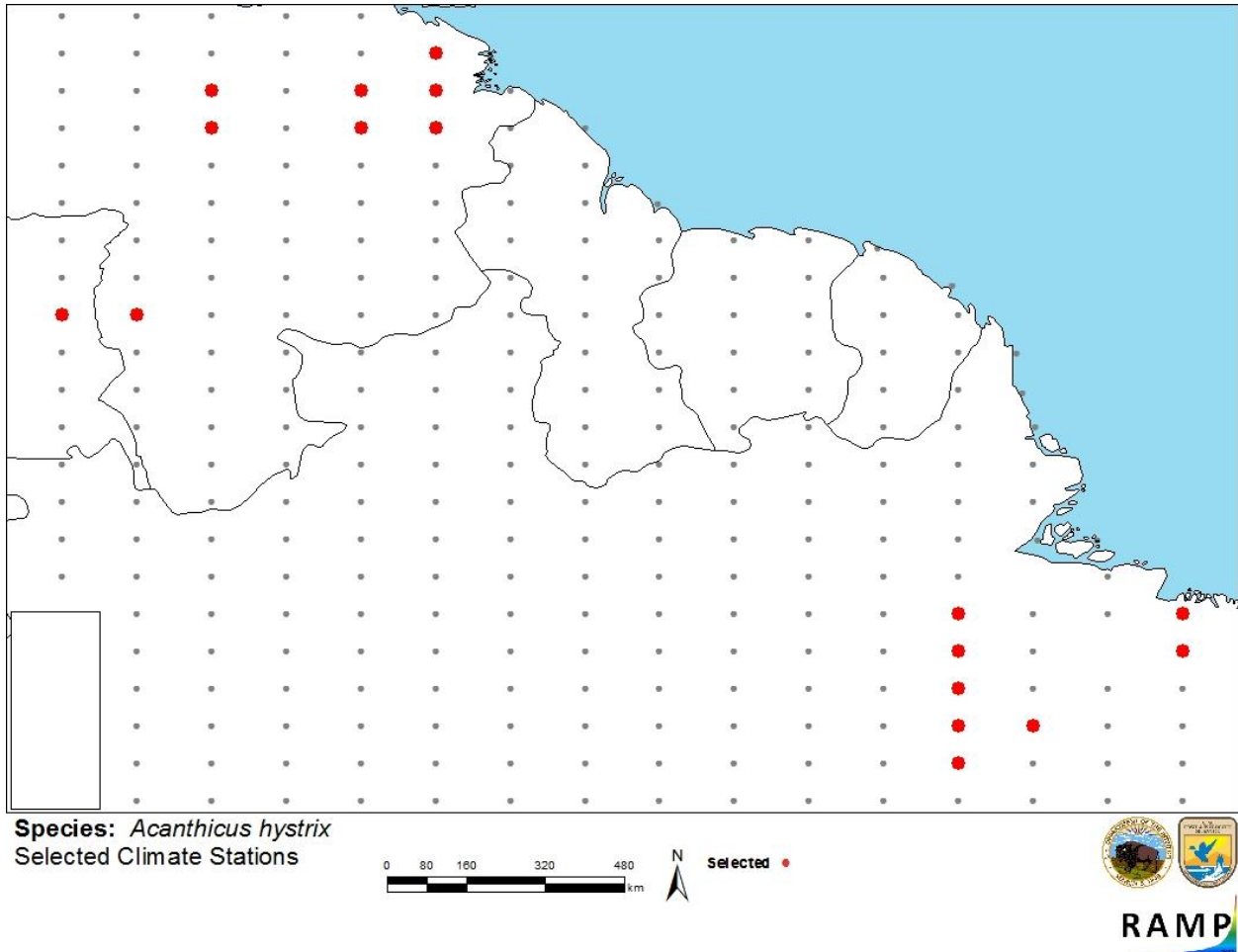


Figure 2. RAMP (Sanders et al. 2014) source map showing weather stations in Brazil, Venezuela, and Colombia selected as source locations (red) and non-source locations (grey) for *Acanthicus hystrix* climate matching. Source locations from GBIF Secretariat (2017).

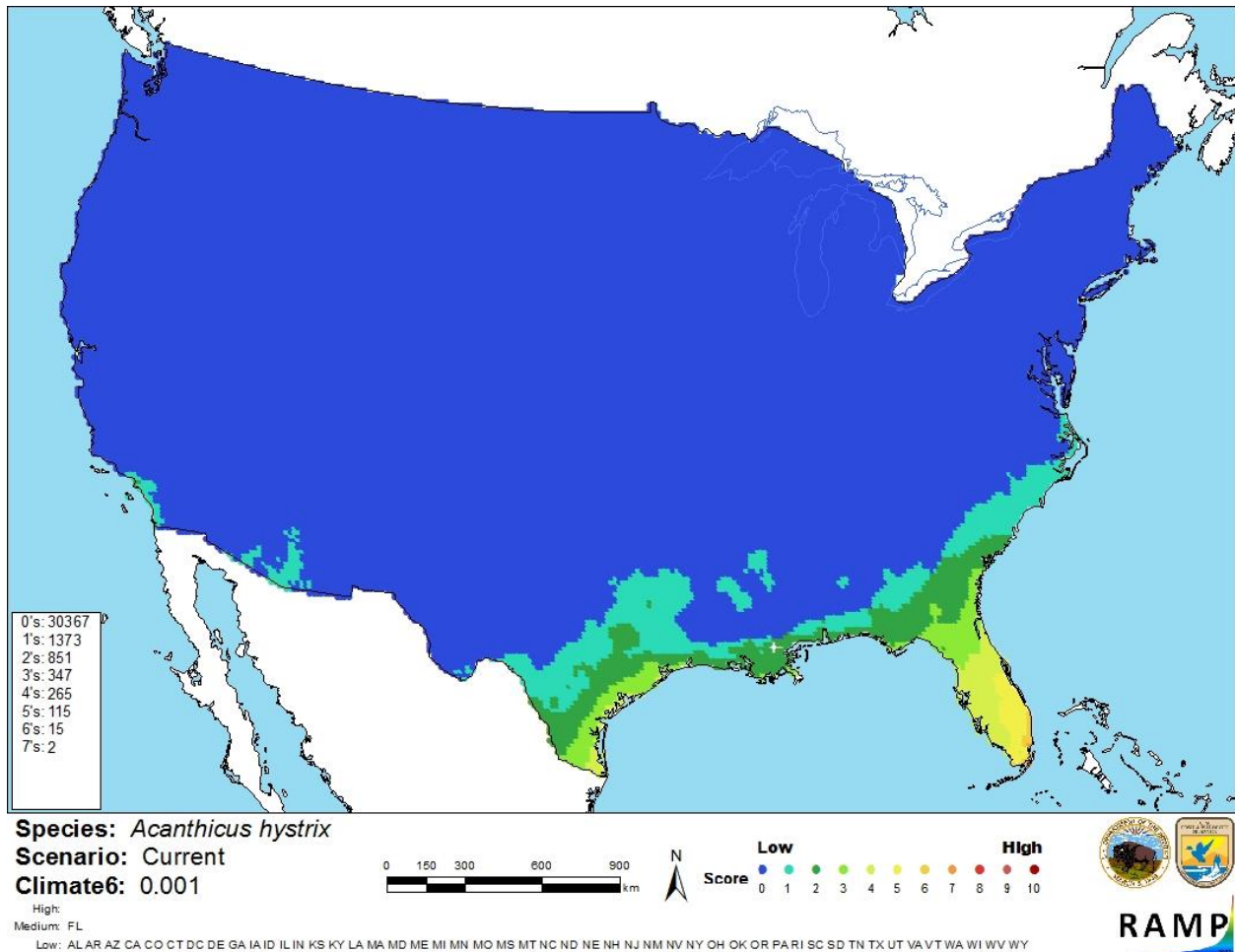


Figure 3. Map of RAMP (Sanders et al. 2014) climate matches for *Acanthicus hystrix* in the contiguous United States based on source locations reported by GBIF Secretariat (2017). 0 = Lowest match, 10 = Highest match. Counts of climate match scores are tabulated on the left.

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

The certainty of assessment is low. The information available for *Acanthicus hystrix* is limited. Even though this species is present in the aquarium trade there were no records for introductions.

8 Risk Assessment

Summary of Risk to the Contiguous United States

The history of invasiveness is uncertain. There were no records of introduction for *Acanthicus hystrix*. The climate match is 0.001, low. It indicates that there are very few areas with suitable climate conditions for the species to establish, mainly in the southern extremes of Florida. The certainty of assessment is low. The 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**
- **Remarks/Important additional information** No additional remarks.
- **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.

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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.

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