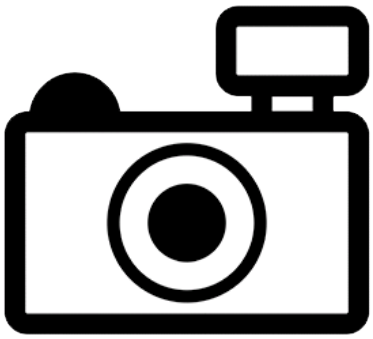
Listrura picinguabae (a catfish, no common name)

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 Froese and Pauly (2016):

"South America: small tributary streams of rio da Fazenda, southeastern Brazil."

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 […]
Listrura picinguabae"

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 GBIF (2016):

"KINGDOM Animalia
PHYLUM Chordata
CLASS Actinopterygii
ORDER Siluriformes
FAMILY Trichomycteridae
GENUS *Listrura*
SPECIES *Listrura picinguabae*"

"TAXONOMIC STATUS
accepted species"

Size, Weight, and Age Range

From Froese and Pauly (2016):

"Max length : 4.9 cm SL male/unsexed; [Villa-Verde and Costa 2006]"

Environment

From Froese and Pauly (2016):

"Freshwater; demersal."

From Villa-Verde and Costa (2006):

"The new species was collected in narrow (about 50 cm wide) and shallow (about 20 cm deep) streams in a dense tropical forest (Mata Atlântica)."

Climate/Range

From Froese and Pauly (2016):

"Tropical, preferred ?"

Distribution Outside the United States

Native
From Froese and Pauly (2016):

"South America: small tributary streams of rio da Fazenda, southeastern Brazil."

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 Villa-Verde and Costa (2006):

"Body elongate, subcylindrical on anterior portion of trunk, to strongly compressed on caudal peduncle. Dorsal and ventral profiles straight or slightly curved on anterior portion of body. Skin papillae minute. Head depressed, trapezoidal with square anterior portion in dorsal view […]. Snout blunt. Mouth subterminal and narrow. Teeth conical, tips pointed and curved. Jaw teeth distributed in two rows. […] Eyes anteriorly located on head, nearer snout tip than opercular patch of odontodes. Tip of nasal barbel reaching between posterior margin of interopercular patch of odontodes and posterior margin of opercular patch of odontodes. Tip of maxillary barbel reaching beyond posterior margin of interopercular patch of odontodes. Tip of rictal barbel reaching between middle of interopercular patch of odontodes and posterior margin of opercular patch of odontodes. […] Dorsal and anal fins triangular. […] Caudal-fin rounded. Pectoral-fin with single long ray. Pelvic fin and pelvic girdle absent. […] Lateral-sensory system extremely reduced. […] Coloration in alcohol: Side of body light brown, with horizontal midlateral brown line. […] Ventral surface almost white. Dorsal portion of head with large, trapezoidal brown blotch narrower anteriorly, between nape and vertical through eyes. Barbels and fins nearly white."

Biology
From Villa-Verde and Costa (2006):

"*Listrura* species inhabit interstitial spaces in the substrate (i. e., sand, litter) of shallow forest streams (Landim & Costa, 2002; de Pinna & Wosiacki, 2002)."

"Individuals were found buried in the litter bottom. No other fishes were observed, but tadpoles (unidentified) were present."

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 […]
Listrura picinguabae"

4 Global Distribution

Figure 1. Known global established locations of *Listrura picinguabae* in Brazil. Map from GBIF (2016).

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 peninsular Florida and low elsewhere in the contiguous U.S. The Climate 6 proportion indicated a low climate match for the contiguous U.S. overall. The range of Climate 6 proportions indicating a low climate match is 0.000 to 0.005; the Climate 6 proportion for *Listrura picinguabae* was 0.002.

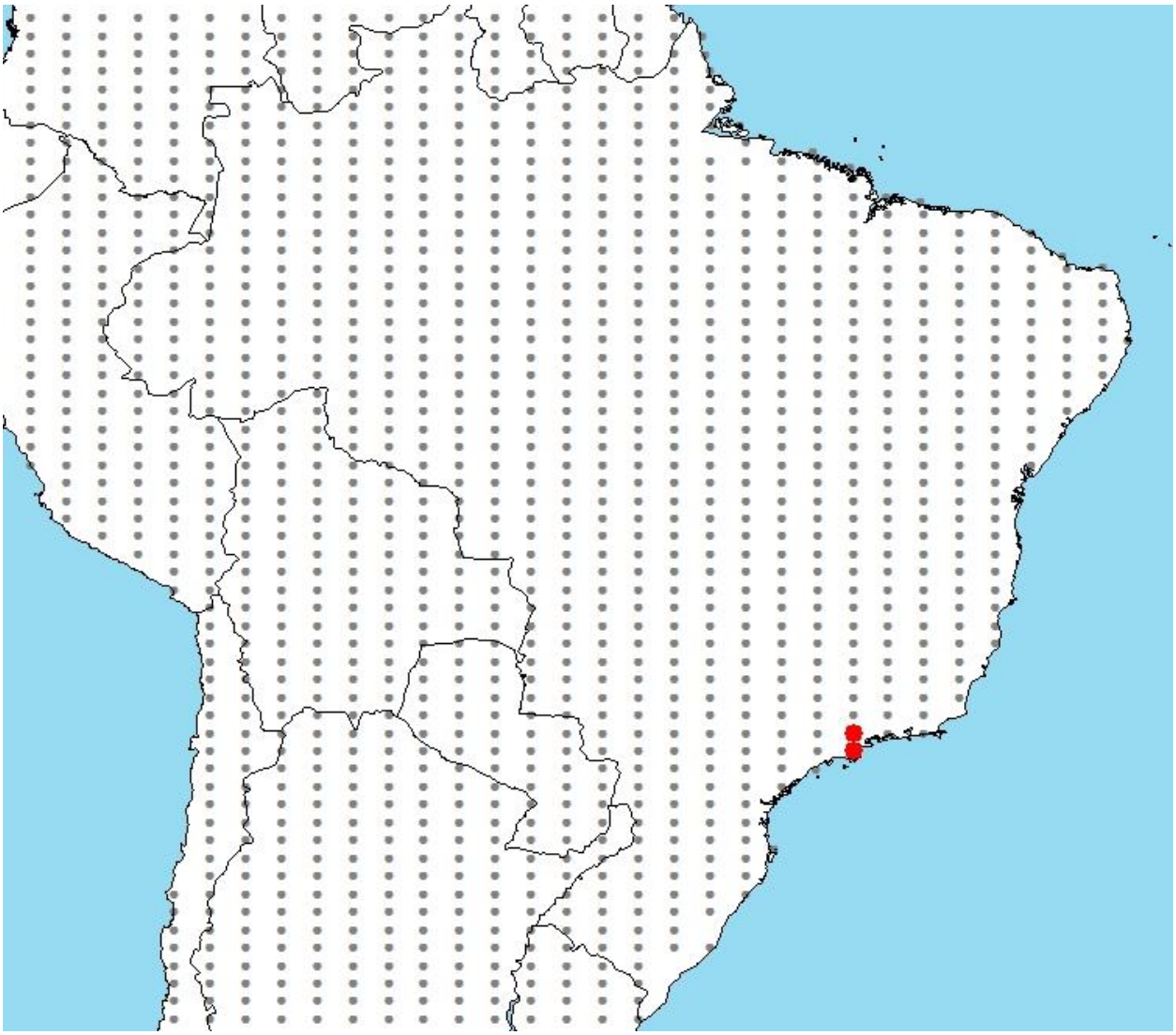


Figure 1. RAMP (Sanders et al. 2014) source map showing weather stations in South America selected as source locations (red; in southeastern Brazil) and non-source locations (gray) for *Listrura picinguabae* climate matching. Source locations from GBIF (2016).

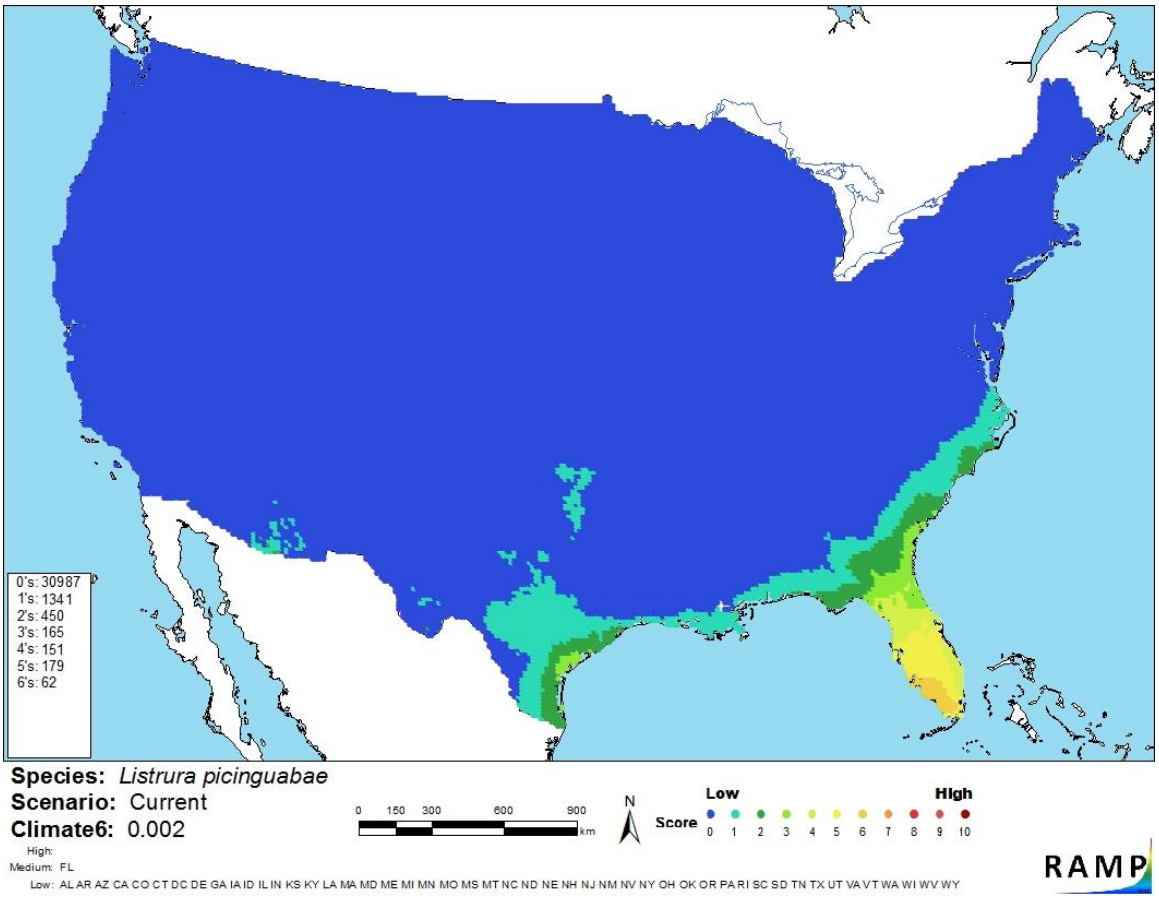


Figure 2. Map of RAMP (Sanders et al. 2014) climate matches for *Listrura picinguabae* in the contiguous United States based on source locations reported by GBIF (2016). 0= Lowest match, 10=Highest match. Counts of climate match scores are tabulated on the left.

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 very limited information available on the biology of *Listrura picinguabae*. The potential impacts of an introduction are unknown because the species has yet to be observed in a novel environment. Due to this lack of information, the certainty of this assessment is low.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Listrura picinguabae is a trichomycterid catfish native to southeastern 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. Climate match to the contiguous U.S. is low. Overall risk posed by *L. picinguabae* 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/#nogo. (December 2016).

Froese, R., and D. Pauly, editors. 2016. *Listrura picinguabae* Villa-Verde & Costa, 2006. FishBase. Available: http://www.fishbase.org/summary/Listrura-picinguabae.html. (January 2017).

GBIF (Global Biodiversity Information Facility). 2016. GBIF backbone taxonomy: *Listrura picinguabae* Villa-Verde & Costa, 2006. Global Biodiversity Information Facility, Copenhagen. Available: http://www.gbif.org/species/2343313. (January 2017).

Sanders, S., C. Castiglione, and M. H. Hoff. 2014. Risk Assessment Mapping Program: RAMP. U.S. Fish and Wildlife Service.

Villa-Verde, L., and W. J. E. M. Costa. 2006. A new glanapterygine catfish of the genus *Listrura* (Siluriformes: Trichomycteridae) from the southeastern Brazilian coastal plains. Zootaxa 1142:43-50.

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 Pinna, M. C. C., and W. B. Wosiacki. 2002. A new interstitial catfish of the genus *Listrura* from southern Brazil (Siluriformes: Trichomycteridae: Glanapteryginae). Proceedings of the Biological Society of Washington 115:720-726.

Landim, M. I., and W. J. E. M. Costa. 2002. *Listrura tetraradiata* (Siluriformes: Trichomycteridae): a new glanapterygine catfish from the southeastern Brazilian coastal plains. Copeia 2002:152-156.