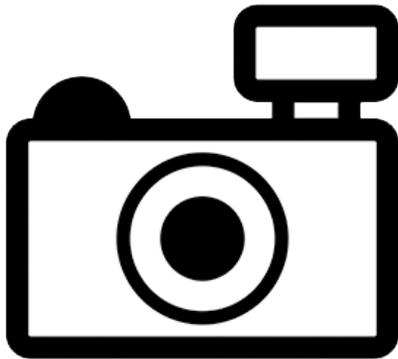


Copionodon lianae (a catfish, no common name)

Ecological Risk Screening Summary

U.S. Fish and Wildlife Service, January 2017
Web Version, 6/18/2018



No Photo Available

1 Native Range and Status in the United States

Native Range

From Reis et al. (2003):

“South America: Grisante River, tributary to Mucujê River (Paraguaçu River basin).”

Status in the United States

This species has not been reported in the United States.

The parasitic catfish, *Copionodon lianae*, is a prohibited nonnative species in Florida. According to the 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.”

Means of Introductions in the United States

This species has not been reported 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 Copionodontinae
Genus *Copionodon*
Species *Copionodon lianae* Campanario and de Pinna, 2000”

“Taxonomic Status: valid”

Size, Weight, and Age Range

From Froese and Pauly (2016):

“Max length: 6.4 cm SL male/unsexed; [DoNascimento et al. 2014]”

Environment

From Froese and Pauly (2016):

“Freshwater; benthopelagic.”

Climate/Range

From Froese and Pauly (2016):

“Tropical, preferred ?”

Distribution Outside the United States

Native

From Reis et al. (2003):

“South America: Grisante River, tributary to Mucujê River (Paraguaçu River basin).”

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): 6-8; Anal soft rays: 9. Body uniformly dark-brown. Interopercle with 3 rows of odontodes; posterior region of interopercle close to anterior margin of pectoral fin; interopercular patch of odontodes long (38-48% HL). Upper lip wide with margin of mouth distant from tip of snout. Adipose fin small, emerging gradually posterior to dorsal fin. Prepelvic (49-52% SL) and predorsal (50-55% SL) long. Head wide 94-103% HL). Orbital rim free. Eyes large, about 8 times in HL. Caudal fin bilobed. Maxillary and nasal barbels not reaching posterior margin of pectoral fin and rictal barbel not extending beyond half length of interopercle. Outer row premaxillary and dentary teeth overlapping distally; dentary teeth not extending to coronoid process of lower jaw; dentary teeth inclined relative to surface of dentary bone. Lower lip split in 2 bilateral halves by median constriction [Campanario and de Pinna 2000].”

Biology

From Bichuette et al. (2008):

“Copionodontines occupy the upper reaches of fast-flowing streams on rocky beds, often with tiny or no water flow in the dry season. Fish tend to concentrate on quiet deep pools, though some individuals lodge in narrow rock crevices in fast flowing sectors. Habitat preferences also vary according to species. Water in the upper reaches of the Chapada Diamantina is cool and usually black (tea-stained), but there are records of copionodontines in a few clear water streams as well. Usually they share their environment with few or no other fish species.”

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 parasitic catfish, *Copionodon lianae*, is a prohibited nonnative species in Florida. According to the 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.”

4 Global Distribution



Figure 1. Known global established distribution of *Copionodon lianae*, reported from 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 6 score (Sanders et al. 2014; 16 climate variables; Euclidean Distance) was low for the contiguous U.S., reflected in a Climate 6 proportion of 0.0. The range for Climate 6 proportions indicating a low climate match is 0.000 to 0.005. Regionally, medium climate matches occurred in southern Florida and southern coastal Texas, with low matches elsewhere.

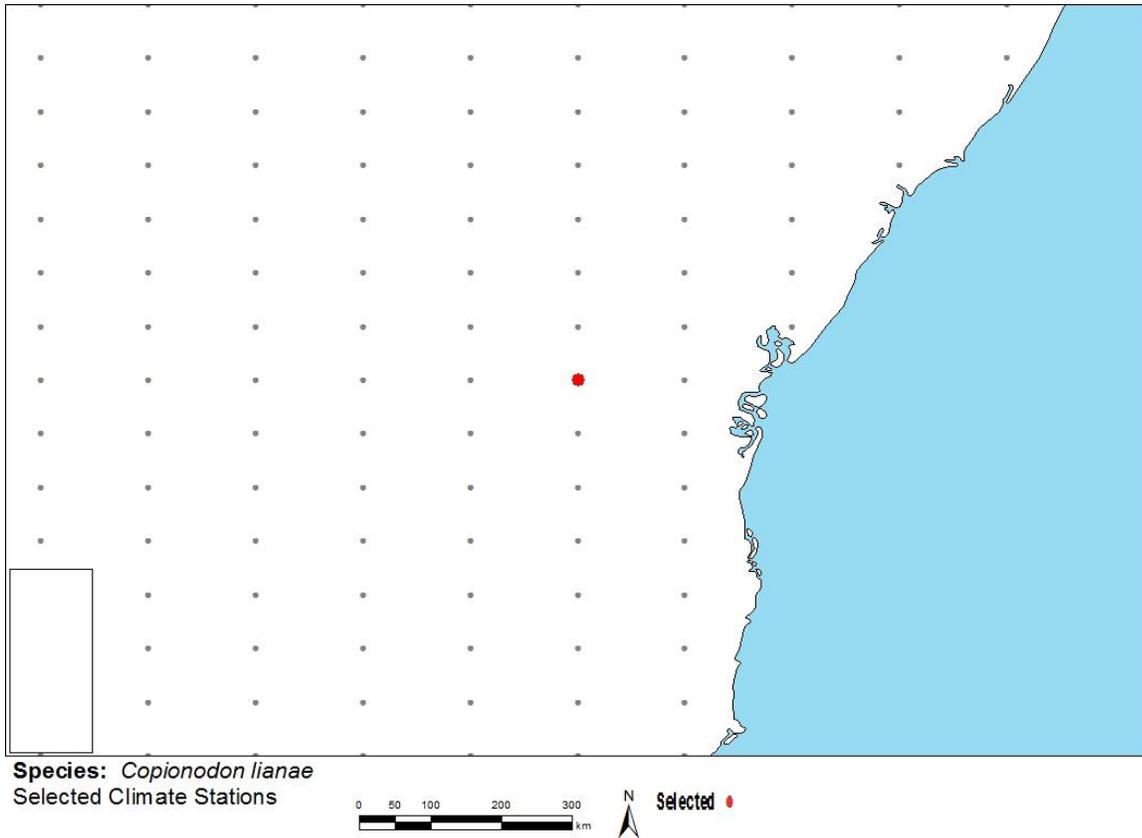


Figure 2. RAMP (Sanders et al. 2014) source map showing weather stations in Brazil selected as source locations (red) and non-source locations (gray) for *Copionodon lianae* climate matching. Source locations from GBIF (2016).

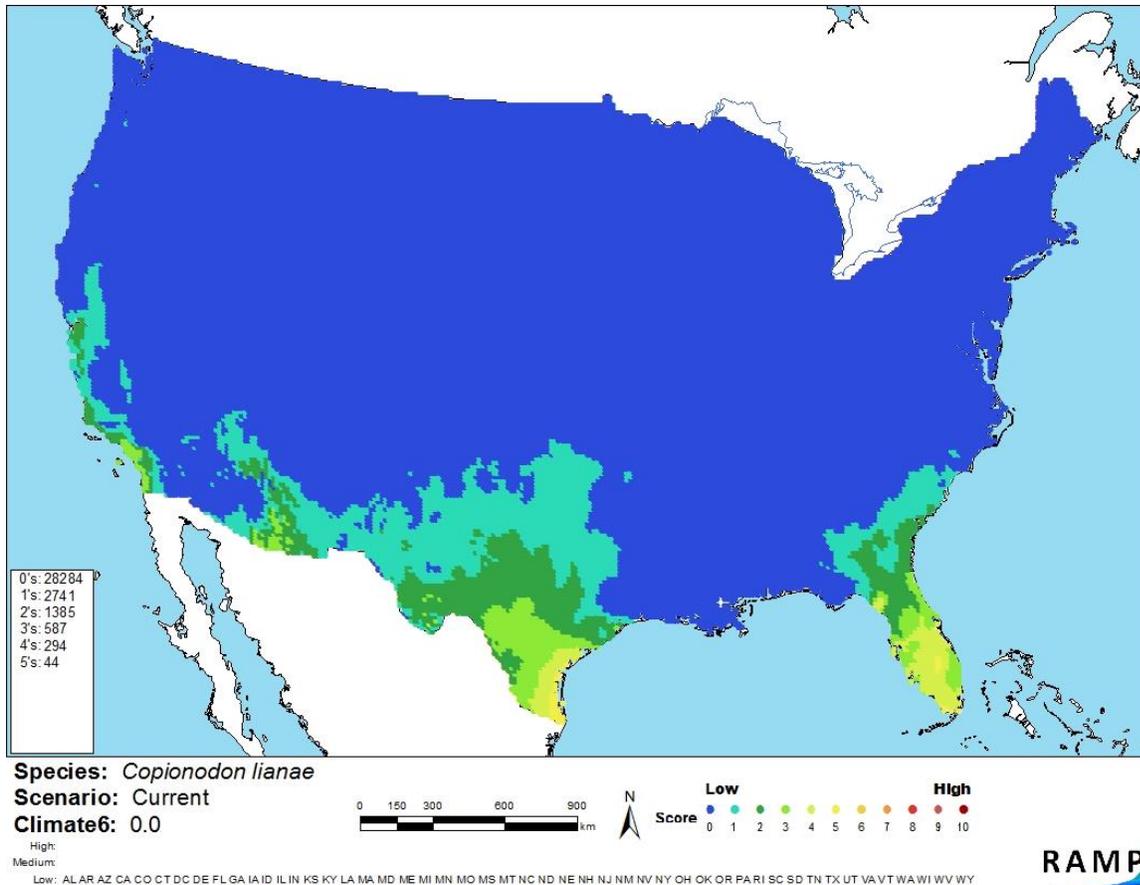


Figure 3. Map of RAMP (Sanders et al. 2014) climate matches for *Copionodon lianae* in the contiguous United States based on source locations reported by GBIF (2016). 0= Lowest match, 10=Highest match. Counts of climate match scores are tabulated on the left.

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 limited information available on the biology and distribution of *Copionodon lianae*. The species has not been reported as introduced outside its native range, so impacts of introduction are unknown. Due to this lack of information, the certainty of this assessment is low.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Copionodon lianae is a trichomycterid catfish species native to Brazil. *C. lianae* currently has no known populations in the United States, and it is a prohibited species in the state of Florida. Very little is known about the species' 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 *C. lianae* 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.

- Bichuette, M. E., M. C. C. de Pinna, and E. Trajano. 2008. A new species of *Glaphyropoma*: the first subterranean copionodontine catfish and the first occurrence of opercular odontodes in the subfamily (Siluriformes: Trichomycteridae). *Neotropical Ichthyology* 6(3):301-306.
- 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. *Copionodon lianae* Campanario & de Pinna, 2000. FishBase. Available: <http://fishbase.org/summary/Copionodon-lianae.html>. (January 2017).
- GBIF (Global Biodiversity Information Facility). 2016. GBIF backbone taxonomy: *Copionodon lianae* Campanario & de Pinna, 2000. Global Biodiversity Information Facility, Copenhagen. Available: <http://www.gbif.org/species/2342970>. (January 2017).
- ITIS (Integrated Taxonomic Information System). 2017. *Copionodon lianae* Campanario & de Pinna, 2000. Integrated Taxonomic Information System, Reston, Virginia. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=682099#null. (January 2017).
- Reis, R. E., S. O. Kullander, and C. J. Ferraris, Jr. 2003. Check list of the freshwater fishes of South and Central America. EDIPUCRS, Porto Alegre, Brazil.

Sanders, S., C. Castiglione, and M. H. 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.

Campanario, C. M., and M. C. C. de Pinna. 2000. A new species of the primitive trichomycterid subfamily Copionodontinae from northeastern Brazil (Teleostei: Trichomycteridae). *Ichthyological Exploration of Freshwaters* 11:369-375.

DoNascimento, C., S. Prada-Pedreras, and J. Guerrero-Kommritz. 2014. A new catfish species of the genus *Trichomycterus* (Siluriformes: Trichomycteridae) from the río Orinoco versant of Páramo de Cruz Verde, Eastern Cordillera of Colombia. *Neotropical Ichthyology* 12:717-728.