

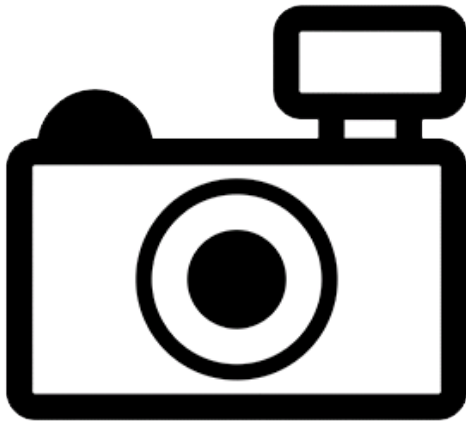
***Cambeva guaraquessaba* (a catfish, no common name)**

Ecological Risk Screening Summary

U.S. Fish and Wildlife Service, January 2017

Revised, May 2018

Web Version, 8/20/2019



No Photo Available

1 Native Range and Status in the United States

Native Range

From Fricke et al. (2019):

“Bracinho River, Atlantic coastal basin, Paraná, Brazil.”

Status in the United States

This species has not been reported as introduced in the United States. There is no evidence that this species is in trade in the United States, based on a search of the literature and online aquarium retailers.

From Arizona Secretary of State (2006):

“Fish listed below are restricted live wildlife [in Arizona] as defined in R12-4-401. [...] South American parasitic catfish, all species of the family Trichomycteridae and Cetopsidae [...]”

From Dill and Cordone (1997):

“[...] At the present time, 22 families of bony and cartilaginous fishes are listed [as prohibited in California], e.g. all parasitic catfishes (family Trichomycteridae) [...]”

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.

[The list of prohibited nonnative species includes:]

Parasitic catfishes [...]

Trichomycterus guaraquessaba”

From Louisiana House of Representatives Database (2010):

“No person, firm, or corporation shall at any time possess, sell, or cause to be transported into this state [Louisiana] by any other person, firm, or corporation, without first obtaining the written permission of the secretary of the Department of Wildlife and Fisheries, any of the following species of fish: [...] all members of the families [...] *Trichomycteridae* (pencil catfishes) [...]”

From Mississippi Secretary of State (2019):

“All species of the following animals and plants have been determined to be detrimental to the State's native resources and further sales or distribution are prohibited in Mississippi. No person shall import, sell, possess, transport, release or cause to be released into the waters of the state any of the following aquatic species or hybrids thereof.

[The list includes all species of] Family Trichomycteridae”

From Legislative Council Bureau (2018):

“Except as otherwise provided in this section and NAC 504.486, the importation, transportation or possession of the following species of live wildlife or hybrids thereof, including viable embryos or gametes, is prohibited [in Nevada]: [...]

All species in the families Cetopsidae and Trichomycteridae”

From Utah DNR (2012):

“All species of fish listed in Subsections (2) through (30) are classified [in Utah] as prohibited for collection, importation and possession [...]

Parasitic catfish (candiru, carnero) family Trichomycteridae (All species)”

Means of Introductions in the United States

This species has not been introduced in the United States.

Remarks

From Katz et al. (2018):

“*Cambeva* **gen. n.** is distinguished from all other trichomycterines by the presence of a bony flap on the channel of the maxillo-dentary ligament, the interopercle shorter than the opercle, a deep constriction on the basal portion of the antero-dorsal arm of the quadrate, absence of teeth in the coronoid process of the dentary, the maxilla shorter than the premaxilla, the cranial fontanel extending from the the medial posterior of frontal to the medial region of supraoccipital, and absence of the postorbital process of the sphenotic-prootic-pterosphenoid.”

“The following species, were not examined or lack the necessary osteological information on their original descriptions, but have the general external appearance and occur in the same basins that *Cambeva* is distributed, so they are tentatively included in the new genus: [...] *Cambeva guaraquessaba* (Wosiacki, 2005) [...]”

Both the valid scientific name *Cambeva guaraquessaba*, as well as the synonym *Trichomycterus guaraquessaba*, were used in searching for information on this species.

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

From Froese and Pauly (2018b):

“Biota > Animalia (Kingdom) > Chordata (Phylum) > Vertebrata (Subphylum) > Gnathostomata (Superclass) > Pisces (Superclass) > Actinopterygii (Class) > Siluriformes (Order) > Trichomycteridae (Family) > Trichomycterinae (Subfamily) > *Trichomycterus* (Genus) > *Trichomycterus guaraquessaba* (Species)”

From Fricke et al. (2019):

“**Current status:** Valid as *Cambeva guaraquessaba* (Wosiacki 2005). Trichomycteridae: Trichomycterinae.”

Size, Weight, and Age Range

From Froese and Pauly (2018a):

“Max length : 9.1 cm SL male/unsexed; [Wosiacki 2005]”

Environment

From Froese and Pauly (2018a):

“Freshwater; demersal.”

Climate/Range

From Froese and Pauly (2018a):

“Tropical”

Distribution Outside the United States

Native

From Fricke et al. (2019):

“Bracinho River, Atlantic coastal basin, Paraná, 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 Froese and Pauly (2018a):

“Dorsal spines (total): 2; Dorsal soft rays (total): 6-8; Anal spines: 2; Anal soft rays: 5”

Biology

From Froese and Pauly (2018a):

“Inhabits river with clear water, falls, rapids and moderate current flowing over the rocky beds, intercalated with pools [Wosiacki 2005]. Occurs in association with stones and plant debris on the bottom [Wosiacki 2005].”

From Wosiacki (2005):

“The rio Bracinho, type locality of *Trichomycterus guaraquessaba*, is a typical Atlantic Rain Forest stream, with clear water, falls, rapids and moderate current flowing over the rocky beds, intercalated with pools. The river runs in an alluvial valley bordered by the slopes of adjacent hills, and the riparian vegetation is a dense, well preserved forest. *Trichomycterus guaraquessaba* occurs associated with stones and plant debris on the bottom and is syntopic with *Astyanax* sp., *Deuterodon langei* Travassos, *Hollandichthys multifasciatus* (Eigenmann & Norris), *Mimagoniates microlepis* (Steindachner), *Characidium* sp., *Oligosarcus hepsetus* (Cuvier), *Rhamdioglanis* sp., *Pimelodella* sp., *Acentronichthys leptos* Eigenmann & Eigenmann, *Rhamdia quelen* (Quoy & Gaimard), *Ancistrus* sp., *Pseudotothyris obtusa* (Miranda-Ribeiro), *Scleromystax barbatus* (Quoy & Gaimard), and *Gymnotus carapo* Linnaeus.”

Human Uses

No information available.

Diseases

No information available. No OIE-listed diseases (OIE 2019) have been documented in this species.

Threat to Humans

From Froese and Pauly (2018a):

“Harmless”

3 Impacts of Introductions

No introductions of *Cambeva guaraquessaba* have been reported outside its native range so no impacts of introduction are known.

The importation, possession, or trade of the parasitic catfish *Cambeva guaraquessaba* is prohibited or restricted in the following states: Arizona (Arizona Secretary of State 2006), California (Dill and Cordone 1997), Florida (FFWCC 2016), Louisiana (Louisiana House of Representatives Database 2010), Mississippi (Mississippi Secretary of State 2019), Nevada (Legislative Council Bureau 2018), and Utah (Utah DNR 2012).

4 Global Distribution



Figure 1. Map showing the location of Guaraqueçaba within the State of Paraná, with inset map showing the location of the State of Paraná within Brazil. No georeferenced occurrences were available for *Cambeva guaraquessaba* (GBIF Secretariat 2018); the type locality for this species is in Guaraqueçaba, and is mapped by Wosiacki (2005). Map by Raphael Lorenzeto de Abreu. Licensed under Creative Commons BY 2.5. Available: <https://commons.wikimedia.org/w/index.php?curid=1362085>. (August 2019).

5 Distribution Within the United States

This species has not been recorded in the United States.

6 Climate Matching

Summary of Climate Matching Analysis

The climate match (Sanders et al. 2018; 16 climate variables; Euclidean Distance) for the contiguous United States was low overall, reflected in a Climate 6 score of 0.000. Scores between 0.000 and 0.005, inclusive, are classified as low. Locally, the climate match was medium throughout most of Florida and in southern Louisiana, and low elsewhere. All States had low individual climate scores.

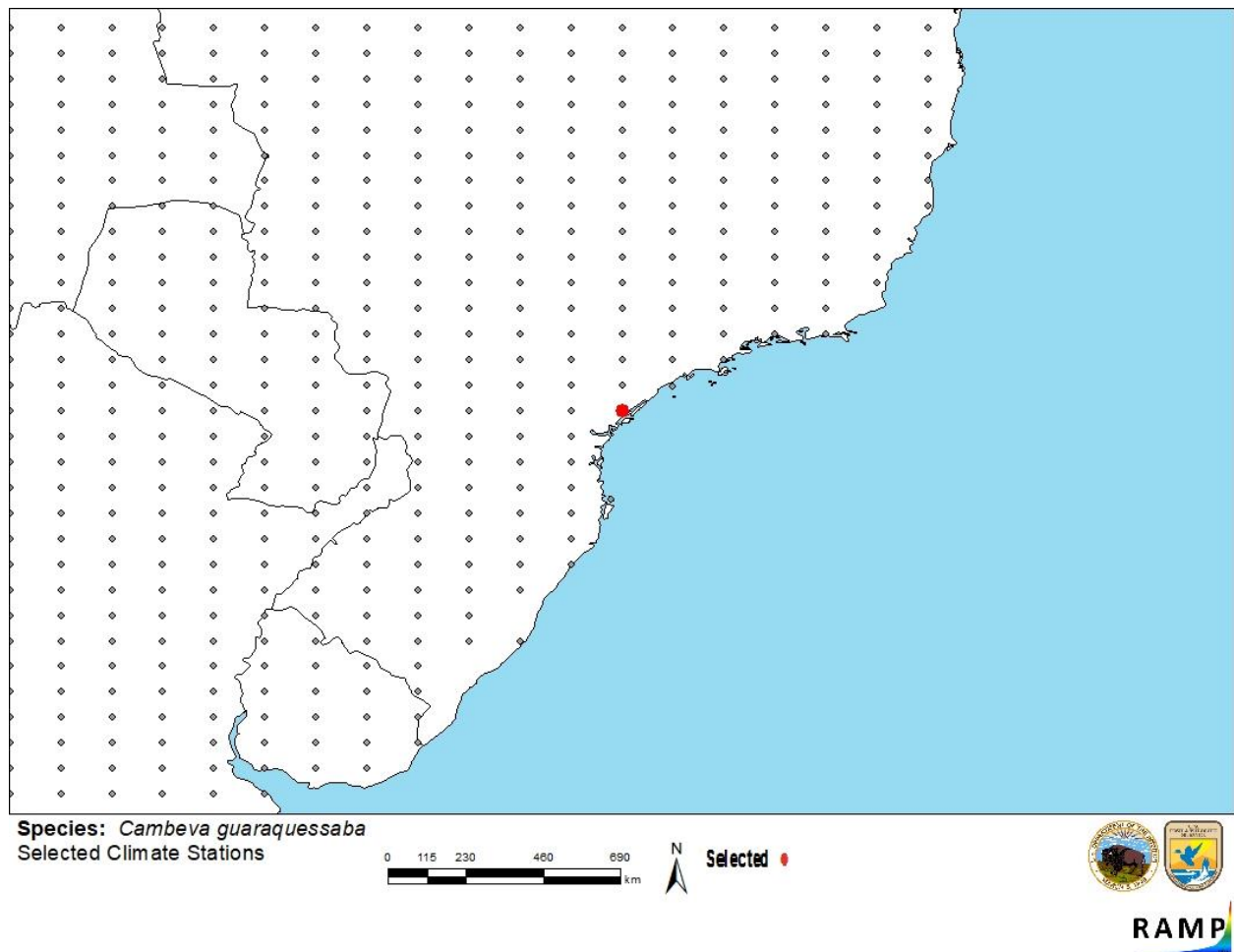


Figure 2. RAMP (Sanders et al. 2018) source map showing weather stations in eastern South America selected as source locations (red; southeastern Brazil) and non-source locations (gray) for *Cambeva guaraquessaba* climate matching. Source location approximated from map in Wosiacki (2005).

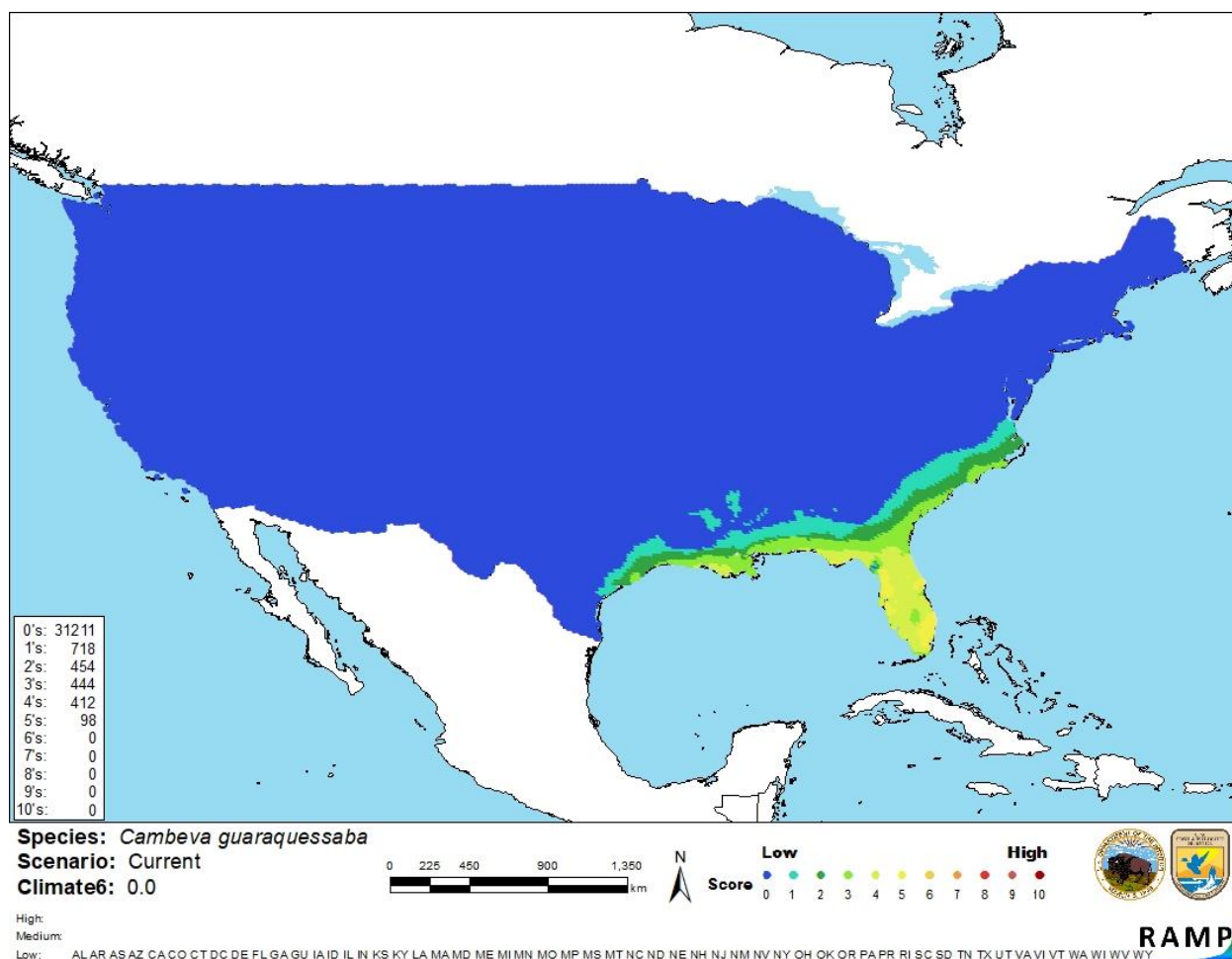


Figure 3. Map of RAMP (Sanders et al. 2018) climate matches for *Cambeva guaraquessaba* in the contiguous United States based on source locations reported by Wosiacki (2005). 0 = Lowest match, 10 = Highest match. Counts of climate match scores are tabulated on the left

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 some information available on the biology and ecology of *Cambeva guaraquessaba*. There are no records showing introductions of this species outside of its native range. Little information is known to conclude what kind of effect it could have if it were introduced. Due to lack of information, the certainty of assessment is low.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Cambeva guaraquessaba is a freshwater parasitic catfish from South America. It has not been reported outside of its native range in coastal southeastern Brazil. Due to lack of introduction history, the history of invasiveness is uncertain. This species has a low overall climate match with the contiguous United States. Locally, medium match occurred only in Florida and coastal Louisiana. Due to the lack of information about potential impacts of introductions, the certainty of assessment is low. The overall risk posed by *C. guaraquessaba* 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

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