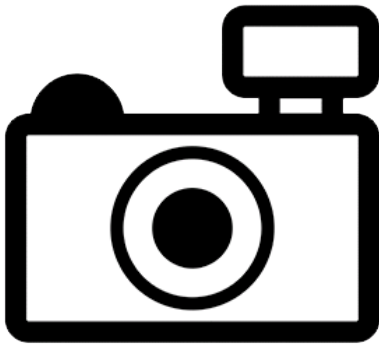


# ***Paracanthopoma parva* (a catfish, no common name)**

## **Ecological Risk Screening Summary**

U.S. Fish & Wildlife Service, November 2016  
Revised, December 2016 and March 2018  
Web Version, 3/28/2018



No Photo Available

## **1 Native Range, and Status in the United States**

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### **Native Range**

From Eschmeyer et al. (2018):

“Distribution: Amazon and Essequibo River basins: Brazil, Ecuador, Colombia, Bolivia and Guyana.”

From Schmidt (1993):

“The specimens I collected extend the species’ range to the tidal lowland Essequibo River [...] My specimens and those reported by Baskin et al. (1980) from high llanos of the Rio Portuguesa (Orinoco drainage [Venezuela]) expand the range of this species beyond the Amazon basin.”

### **Status in the United States**

This species has not been reported as introduced or established 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. [...]

Freshwater Aquatic Species [...]

Parasitic catfishes [...]

*Paracanthopoma parva*”

## Means of Introductions in the United States

This species has not been reported as introduced or established in the U.S.

## 2 Biology and Ecology

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### Taxonomic Hierarchy and Taxonomic Standing

From ITIS (2016):

“Kingdom Animalia

Subkingdom Bilateria

Infrakingdom Deuterostomia

Phylum Chordata

Subphylum Vertebrata

Infraphylum Gnathostomata

Superclass Osteichthyes

Class Actinopterygii

Subclass Neopterygii

Infraclass Teleostei

Superorder Ostariophysii

Order Siluriformes

Family Trichomycteridae

Subfamily Vandelliinae

Genus *Paracanthopoma*

Species *Paracanthopoma parva* Giltay, 1935”

“Current Standing: valid”

### Size, Weight, and Age Range

From Froese and Pauly (2016):

“Max length : 2.7 cm SL male/unsexed; [de Pínna and Wosiacki 2003]”

### Environment

From Froese and Pauly (2016):

“Freshwater; demersal.”

## **Climate/Range**

From Froese and Pauly (2016):

“Tropical”

## **Distribution Outside the United States**

Native

From Eschmeyer et al. (2018):

“Distribution: Amazon and Essequibo River basins: Brazil, Ecuador, Colombia, Bolivia and Guyana.”

From Schmidt (1993):

“The specimens I collected extend the species’ range to the tidal lowland Essequibo River [...] My specimens and those reported by Baskin et al. (1980) from high llanos of the Rio Portuguesa (Orinoco drainage [Venezuela]) expand the range of this species beyond the Amazon basin.”

Introduced

This species has not been reported as introduced or established outside of its native range.

## **Means of Introduction Outside the United States**

This species has not been reported as introduced or established outside of its native range.

## **Short Description**

From Schmidt (1993):

“Giltay (1945) placed *Paracanthopoma* in the Vandelliinae as defined by Eigenmann (1918). Eigenmann (1918) defined the subfamily as having, 1) teeth reduced to a minimum, 2) rami of the lower jaw not meeting medially, 3) median premaxillary tooth patch [...], 4) ethmoid forked distally and inter-digitated with the maxilla, and 5) 2-4 claw-like teeth on the distal end of the maxilla [...].”

## **Biology**

From Zuanon and Sazima (2005):

“Species within the genus *Paracanthopoma* have the longest and most robust snout, and the stoutest body among blood-feeding candirus, besides having very long and strong dentary teeth (Spotte 2002, this study). These morphological characters provide the candirus with an apparatus for drilling holes into the tough skin of the catfish host and remaining there firmly attached but still with their eyes out to supposedly scan the surroundings [...]. Thus, the morphology of *Paracanthopoma* seems to lend further support to our suggestion of feeding on the gill chamber and taking a ride on the host’s body external surface.”

From Schmidt (1993):

“This species is parasitic, feeding on blood of at least Pimelodidae and Doradidae.”

## **Human Uses**

No information available.

## **Diseases**

No information available. No OIE-reportable diseases have been documented for this species.

## **Threat to Humans**

From Froese and Pauly (2016):

“Harmless”

## **3 Impacts of Introductions**

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This species has not been reported as introduced or established outside of its native range.

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. [...]

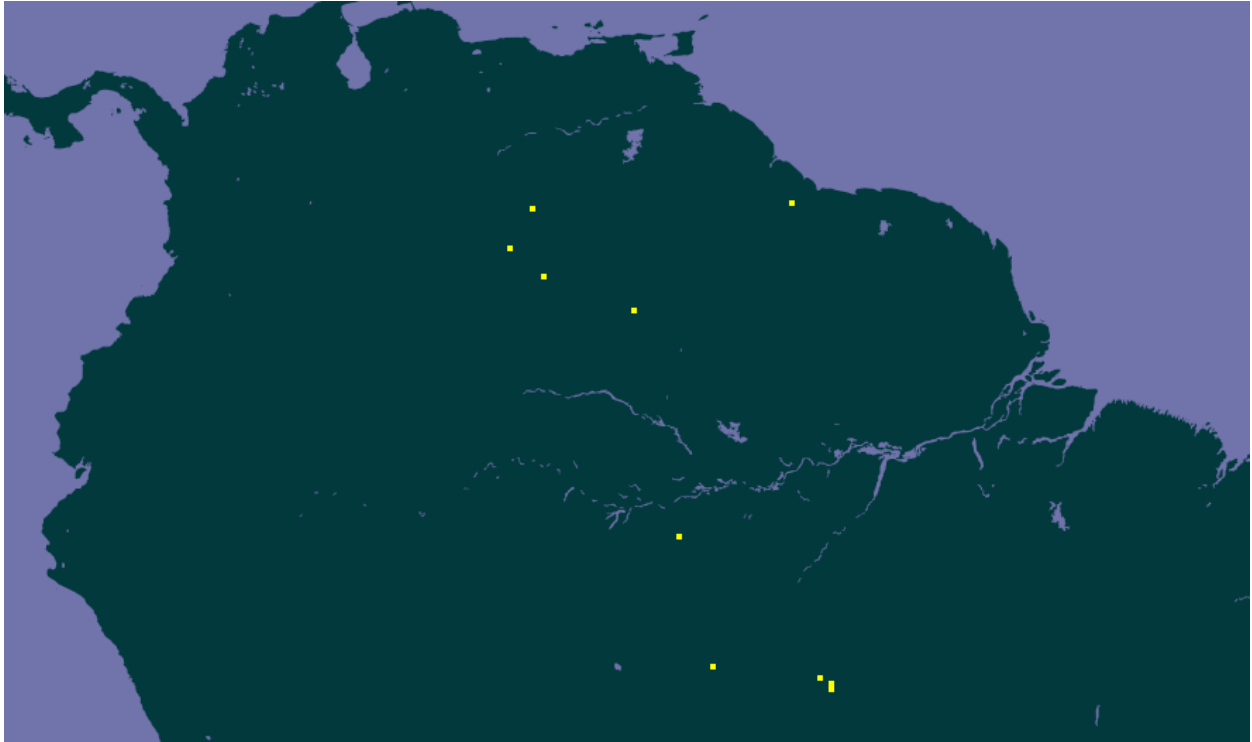
Freshwater Aquatic Species [...]

Parasitic catfishes [...]

*Paracanthopoma parva*”

## 4 Global Distribution

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**Figure 1.** Distribution of *Paracanthopoma parva*. Map from GBIF (2016).

## 5 Distribution Within the United States

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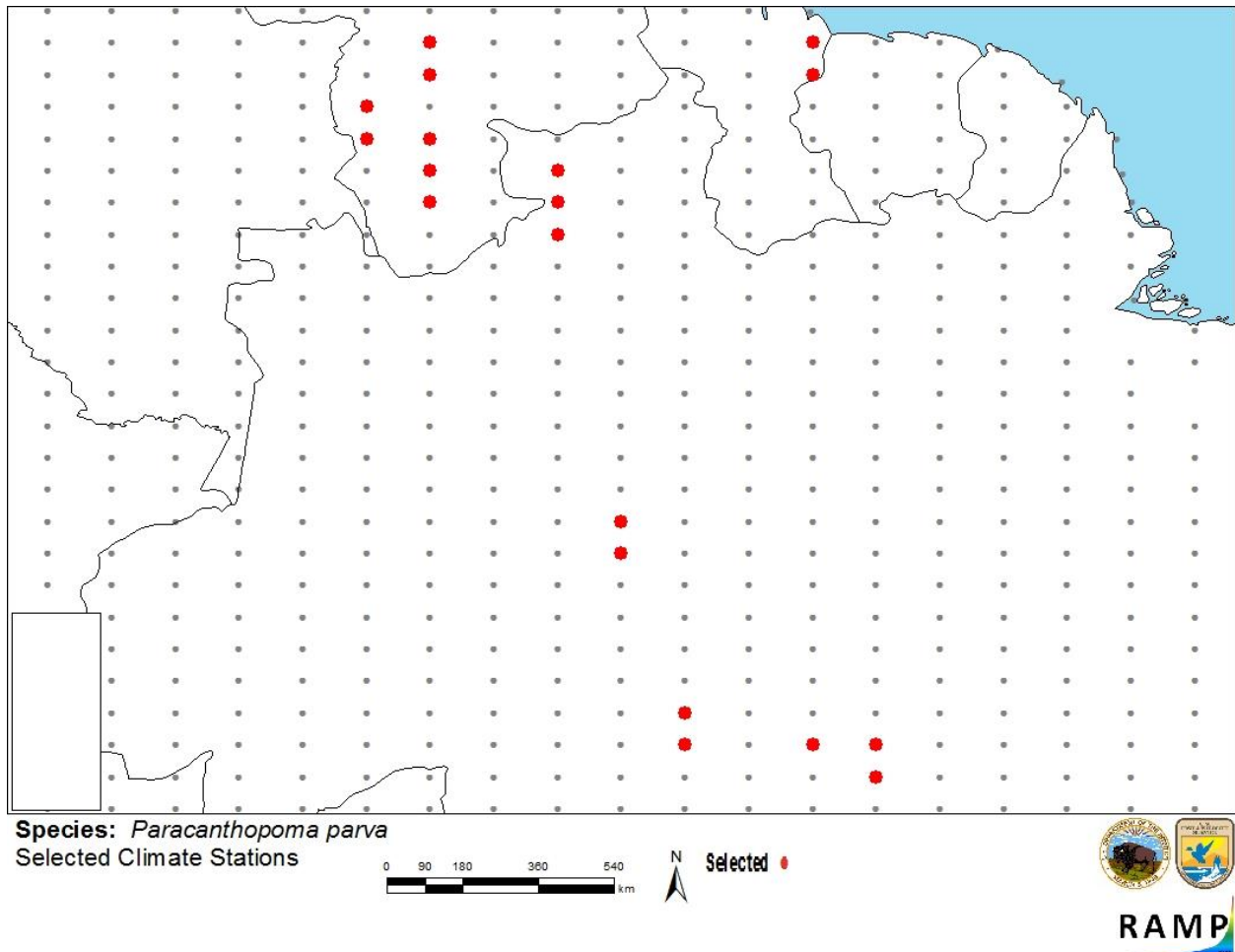
This species has not been reported as introduced or established in the U.S.

## 6 Climate Matching

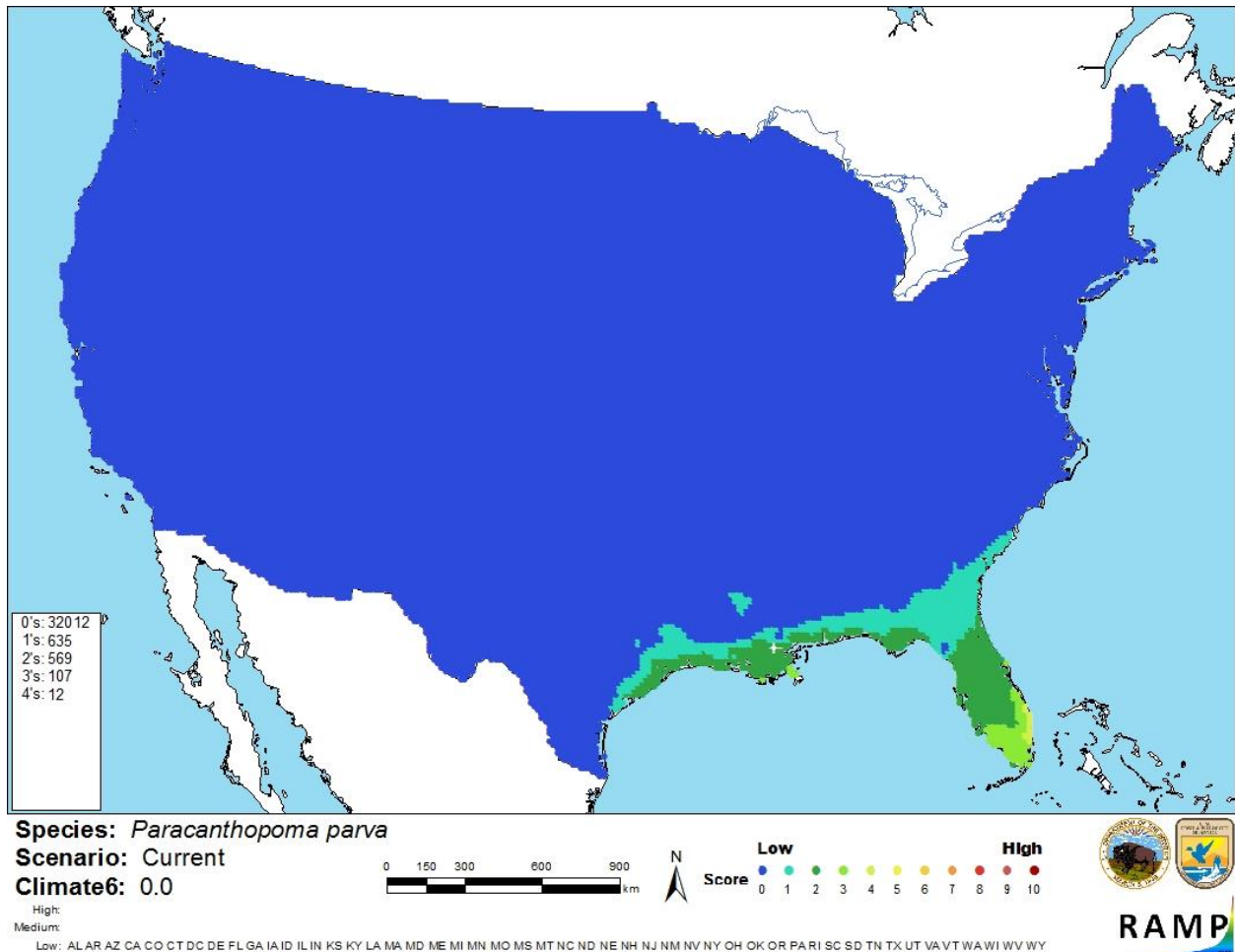
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### Summary of Climate Matching Analysis

The climate match (Sanders et al. 2014; 16 climate variables; Euclidean Distance) was low throughout the entire United States, but there was a medium-low match in southern Florida. Climate 6 proportion indicated that the contiguous U.S. has a low climate match. Climate 6 proportion indicates a low climate match if less than or equal to 0.005; the Climate 6 proportion of *Paracanthopoma parva* is 0.0.



**Figure 2.** RAMP (Sanders et al. 2014) source map showing weather stations in northern South America selected as source locations (red; Brazil, Venezuela, and Guyana) and non-source locations (gray) for *Paracanthopoma parva* climate matching. Source locations from GBIF (2016).



**Figure 3.** Map of RAMP (Sanders et al. 2014) climate matches for *Paracanthopoma parva* 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
$0.000 \leq X < 0.005$	Low
$0.005 < X < 0.103$	Medium
$\geq 0.103$	High

## 7 Certainty of Assessment

There is little information available on *P. parva*. There have been no documented introductions of this species outside of its native range, so there is no information available on any negative impacts this species may have outside of its native range. Certainty of this assessment is low.

## 8 Risk Assessment

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### Summary of Risk to the Contiguous United States

*Paracanthopoma parva* is a small, blood-sucking, parasitic catfish native to the Amazon and Essequibo River basins in South America. It has a low climate match with the United States, with the area of highest match located in southern Florida. There is no documented history of invasiveness for *P. parva* because this species has never been reported outside of its native range. State authorities currently consider *P. parva* dangerous to the ecology or the health and welfare of the people of Florida, where personal possession or commercial use of this species is prohibited by law. Overall risk assessment category for 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

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**Note: The following references were accessed for this ERSS. References cited within quoted text but not accessed are included below in Section 10.**

Eschmeyer, W. N., R. Fricke, and R. van der Laan, editors. 2018. Catalog of fishes: genera, species, references. Available: <http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp>. (March 2018).

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Froese, R., and D. Pauly, editors. 2016. *Paracanthopoma parva* (Giltay, 1935). FishBase. Available: <http://www.fishbase.org/summary/Paracanthopoma-parva.html>. (November 2016).

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

Schmidt, R. E. 1993. Relationships and notes on the biology of *Paracanthopoma parva* (Pisces: Trichomycteridae). *Ichthyological Exploration of Freshwaters* 4(2):185-191.

Zuanon, J., and I. Sazima. 2005. Free meals on long-distance cruisers: the vampire fish rides giant catfishes in the Amazon. *Biota Neotropica* 5(1):109-114.

## 10 References Quoted But Not Accessed

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**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.**

Baskin, J. N., T. M. Zaret, and F. Mago-Leccia. 1980. Feeding of reportedly parasitic catfishes (Trichomycteridae and Cetopsidae) in the Rio Portuguesa basin, Venezuela. *Biotropica* 12:182-186.

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.

Eigenmann 1918 [*Source did not provide full citation for this reference.*]

Giltay 1945 [*Source did not provide full citation for this reference.*]

Spotte, S. 2002. *Candiru: life and legend of the bloodsucking catfishes*. Creative Art Book, Berkeley, California.