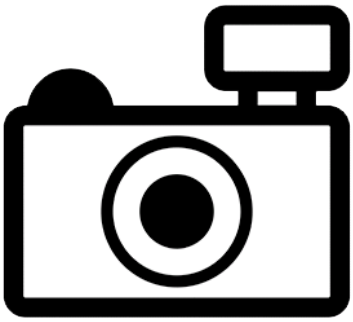
Pygidianops magoi (a catfish, no common name)

Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, January 2017
Revised, February 2017
Web Version, 4/5/2018



No Photo Available

1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2016):

"South America: lower Rio Orinoco in Venezuela."

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. […]
[The list of prohibited nonnative species includes] *Pygidianops magoi*"

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 *Pygidianops*
SPECIES *Pygidianops magoi*"

"TAXONOMIC STATUS
accepted species"

Size, Weight, and Age Range

From Froese and Pauly (2016):

"Max length : 2.0 cm SL male/unsexed; [Schaefer et al. 2005]"

Environment

From Froese and Pauly (2016):

"Freshwater; demersal."

From Schaefer et al. (2005):

"[…] *P. magoi* and *T. lundbergi* live in white water."

Climate/Range

From Froese and Pauly (2016):

"Tropical, preferred ?"

Distribution Outside the United States

Native

From Froese and Pauly (2016):

"South America: lower Rio Orinoco in Venezuela."

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 spines (total): 0; Dorsal soft rays (total): 0; Anal spines: 0; Anal soft rays: 0; Vertebrae: 35 - 41. Diagnosed from all its congeners by the absence of pectoral and anal fins, posterior naris absent, four laterosensory pores on the head, and presence of 9-10 caudal fin rays. Differs from *Pygidianops eigenmanni* by the absence of eyes [Schaefer et al. 2005]."

Biology
From Schaefer et al. (2005):

"A psammophilic habit for *Glanapteryx*, *Pygidianops*, and *Typhlobelus* has been presumed on the basis of anecdotal locality information and the extremely reduced morphologies of these species. However, until now, the exact microhabitats of the species of these genera have rarely been observed directly. […] The degree of psammophilic adaptation in species of *Pygidianops* and *Typhlobelus* is remarkable, without parallel in siluriforms and perhaps in any other freshwater fishes. Specialization for life in sand is evident in several morphological traits, such as the loss or reduction of fins, pigment, and eyes. […] species of *Pygidianops* and *Typhlobelus* are entirely disassociated from leaf litter, and occupy exclusively clear loose sand."

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. […]
[The list of prohibited nonnative species includes] *Pygidianops magoi*"

4 Global Distribution

Figure 1. Orinoco River watershed. The holotype of *P. magoi* was collected in the southern part of the Orinoco Delta (Schaefer et al. 2005). Map by R. de León and A. J. Rodríguez Díaz. Licensed under CC BY-SA 4.0. Available: https://commons.wikimedia.org/w/index.php?curid=43496066. (February 2017).

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 far southern Texas, and low elsewhere. Climate 6 proportion indicated a low climate match for the contiguous United States. The range of proportions indicating a low climate match is 0.000 to 0.005; the Climate 6 proportion for *Pygidianops magoi* was 0.0.

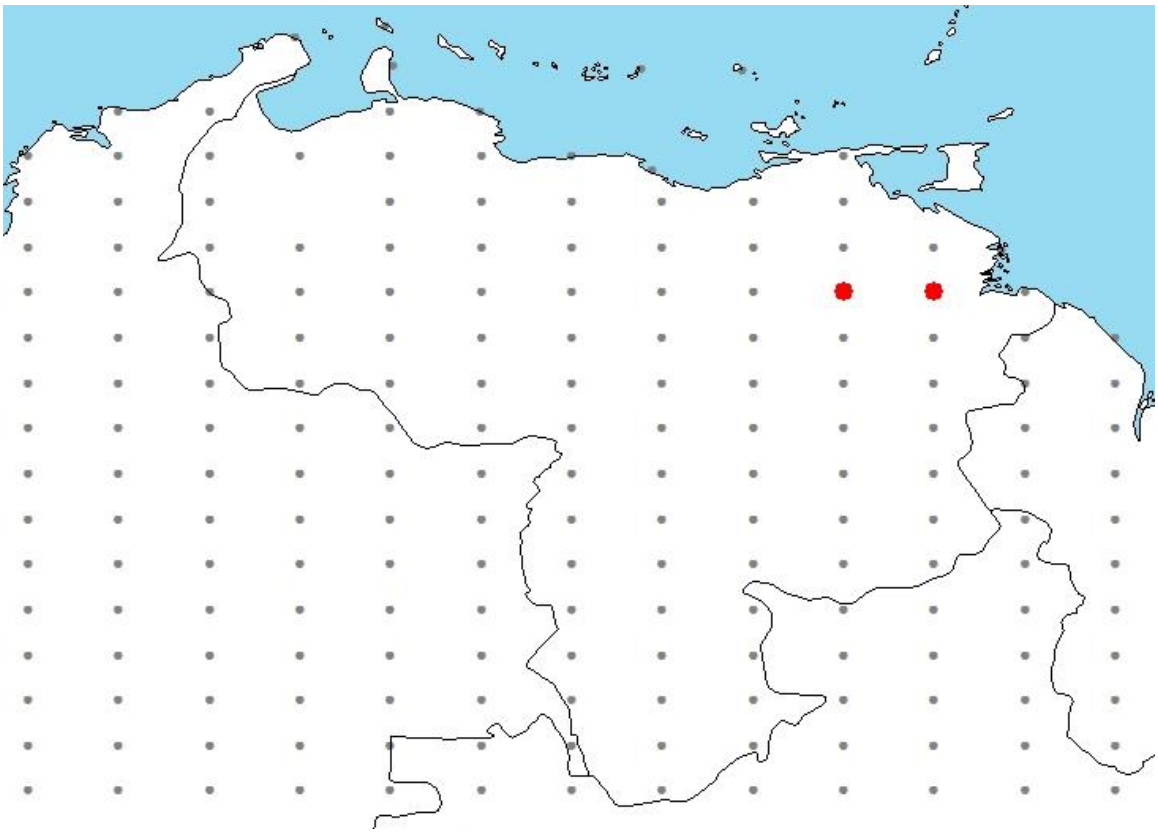


Figure 2. RAMP (Sanders et al. 2014) source map showing weather stations selected as source locations (red; Venezuela) and non-source locations (gray) for *Pygidianops magoi* climate matching. Source locations from Schaefer et al. (2005).

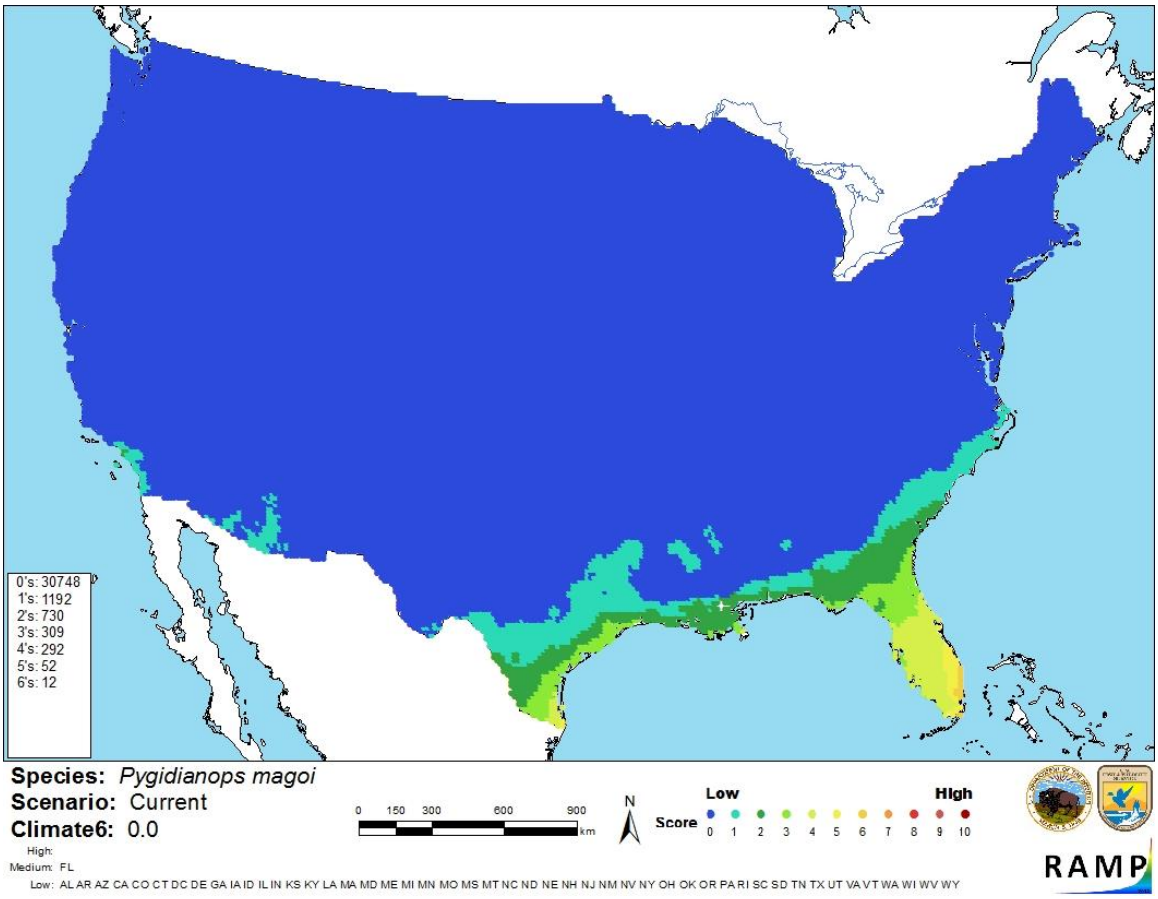


Figure 3. Map of RAMP (Sanders et al. 2014) climate matches for *Pygidianops magoi* in the contiguous United States based on source locations reported by Schaefer et al. (2005). 0= Lowest match, 10=Highest match. Counts of climate match scores are tabulated on the left.

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≤X≤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, ecology, and distribution of *Pygidianops magoi*. No introductions of this species have been reported, so impacts of introduction are unknown. Due to the lack of information, the certainty of this assessment is low.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Pygidianops magoi is a sandy-substrate dwelling catfish native to the Orinoco River basin in Venezuela. No introductions of the species have been reported, and therefore impacts of introduction remain unknown. Climate match was low for the contiguous U.S., but medium locally in Florida and a small part of Texas. The state of Florida has prohibited the sale or possession of *P. magoi*. Overall risk to the contiguous U.S. 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

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. *Pygidianops magoi* Schaefer, Provenzano, de Pinna & Baskin, 2005. FishBase. Available: http://www.fishbase.org/summary/Pygidianops-magoi.html. (January 2017).

GBIF (Global Biodiversity Information Facility). 2016. GBIF backbone taxonomy: *Pygidianops magoi* Schaefer, Provenzano, de Pinna & Baskin, 2005. Global Biodiversity Information Facility, Copenhagen. Available: http://www.gbif.org/species/2342891. (January 2017).

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

Schaefer, S. A., F. Provenzano, M. de Pínna and J. N. Baskin, 2005. New and noteworthy Venezuelan glanapterygine catfishes (Siluriformes, Trichomycteridae), with discussion of their biogeography and psammophily. American Museum Novitates 3496.