

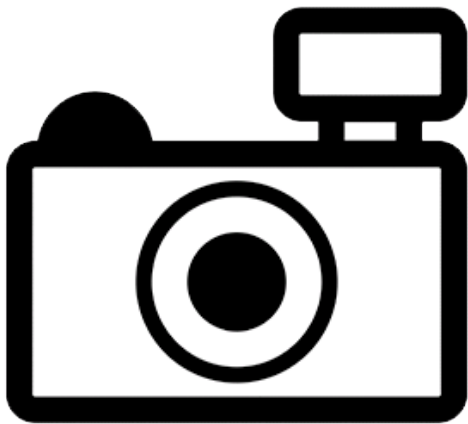
***Ammoglanis pulex* (a catfish, no common name)**

Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, March 2015

Revised, September 2017, October 2017

Web Version, 8/21/2018



No Photo Available

1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2015):

“South America: Paria Grande River , Pamoni River, and Caño Garrapata in Venezuela.”

Status in the United States

No records of *Ammoglanis pulex* in the wild or in trade in the United States were found.

The Florida Fish and Wildlife Conservation Commission has listed the parasitic catfish *A. pulex* as a prohibited species. Prohibited nonnative species (FFWCC 2018), “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

No records of *Ammoglanis pulex* in the United States were found.

Remarks

Ammoglanis pulex is on the Florida Fish and Wildlife Conservation Commission's Prohibited Species List (FFWCC 2018).

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

According to Eschmeyer et al. (2017), *Ammoglanis pulex* de Pinna & Winemiller 2000 is the valid name for this species. It is also the original name.

From ITIS (2015):

“Kingdom Animalia
Subkingdom Bilateria
Infrakingdom Deuterostomia
Phylum Chordata
Subphylum Vertebrata
Infraphylum Gnathostomata
Superclass Osteichthyes
Infraclass Teleostei
Superclass Neopterygii
Order Siluriformes
Family Trichomycteridae
Genus *Ammoglanis*
Species *Ammoglanis pulex* de Pinna and Winemiller, 2000”

Size, Weight, and Age Range

From Froese and Pauly (2015):

“Max length: 1.5 cm SL male/unsexed; [de Pinna and Wosiacki 2003]”

Environment

From Froese and Pauly (2015):

“Freshwater; benthopelagic; pH range: 5.5 - 6.2.”

“Specimens collected from sand banks near the shorelines of clear water, slightly tea-stained streams. Found buried in coarse clear sand at the stream edge, at depths ranging from about 2 to at least 20 cm, in areas shaded by dense tropical rainforest (gallery forest). Waters with slow current, pH varying between 5.5 and 6.2, [water] temperature between 27.5 and 28°C.”

Climate/Range

From Froese and Pauly (2015):

“Tropical; [...]”

Distribution Outside the United States

Native

From Froese and Pauly (2015):

“South America: Paria Grande River , Pamoni River, and Caño Garrapata in Venezuela.”

Introduced

No records of *Ammoglanis pulex* introductions were found.

Means of Introduction Outside the United States

No records of *Ammoglanis pulex* introductions were found.

Short Description

From Zuanon et al. (2006):

“Eyes are small in *Ammoglanis pulex* Pinna & Winemiller (cf. de Pinna & Winemiller, 2000)”

From Froese and Pauly (2015):

“Vertebrae: 30 - 31. Dark chromatophores inside the body, forming a banded pattern visible from both sides of its transparent body. No teeth on dentary and premaxillary. Scythe-shaped lacrimal with an anterior facet articulating with the anterior palatine cartilage.”

From de Pinna and Winemiller (2000):

“A minute trichomycterid distinguished from all other members of the family by the following autapomorphic characters: 1) dark chromatophores in interior of the body, forming a banded pattern visible from both sides by transparency in the living fish; 2) lack of dentary teeth; and 3) scythe-shaped lacrimal with an anterior facet articulating with the anterior palatine cartilage. *Ammoglanis pulex* is further distinguished from its only congener [more congeners have been described since 2000], *A. diaphanus* by: 1) lack of premaxillary teeth (vs. teeth present and well-developed); 2) pectoral-fin rays i+4 or i+5 (vs. i+6); 3) lack of metapterygoid (vs. metapterygoid small but present); 4- 30 or 31 vertebrae (vs.33); 5) principal caudal-fin rays 5/5 (vs. 6/6); 6) dorsal-fin rays ii+6 (vs. iii+6+i); 7) rictal barbel slightly longer than soft portion of maxillary barbel (vs. the reverse); 8) 6 or 7 branchiostegal rays (vs. 5); 9) mouth subterminal (vs. mouth ventral); 10) narrow anterior cartilage of palatine, its anteroposterior width less than half the maximum width of premaxilla (vs. cartilage wider than premaxilla); and 11) tip of first pectoral-fin ray reaching to about midway between bases of pectoral and pelvic fins (vs. nearly to base of latter). Other characters, plesiomorphic or of uncertain polarity, but useful to identify the species

include: 1) first pectoral-fin ray prolonged as a filament, almost twice as long as other rays; 2) body depth practically even from nape to base of caudal fin; 3) nasal barbel short, its posterior tip reaching at most the center of eye, in some specimens not reaching its anterior margin; and 4) presence of two short finger-like barbels on mentonian region.”

Biology

From Froese and Pauly (2015):

“Apparently fossorial by daylight. Its relatively short gut have [sic] no identifiable gut contents, but it is suspected to feed on microscopic fauna like protozoa, rotifers and nematodes since it inhabits interstitial spaces among sand grains in nutrient-poor, clear-water and backwater streams [de Pinna and Winemiller 2000].”

From Zuanon et al. (2006):

“The following freshwater fish species from South America may doubtless be referred as strictly psammophilous [living or growing in sand]. Four species of the crenuchid *Characidium* (*C. pellucidum*, *C. pteroides*, *C. steindachneri*, plus one undescribed – Buckup, 1993a); two species of the trichomycterid *Ammoglanis* Costa (*A. diaphanus* Costa and *A. pulex*), [...]”

Human Uses

Information regarding any human uses of *Ammoglanis pulex* was not found.

The Florida Fish and Wildlife Conservation Commission has listed the parasitic catfish *A. pulex* as a prohibited species. Prohibited nonnative species (FFWCC 2018), “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.”

Diseases

Information about disease and parasites of *Ammoglanis pulex* was not found.

Threat to Humans

From Froese and Pauly (2015):

“Harmless”

3 Impacts of Introductions

No records of *Ammoglanis pulex* introductions were found.

4 Global Distribution



Figure 1. Known global distribution of *Ammoglanis pulex* in Venezuela. Map from GBIF Secretariat (2015).

5 Distribution Within the United States

No records of *Ammoglanis pulex* in the United States were found.

6 Climate Matching

Summary of Climate Matching Analysis

The climate match for *Ammoglanis pulex* was low across the entire contiguous United States. The Climate 6 score (Sanders et al. 2014; 16 climate variables; Euclidean distance) for the contiguous United States was 0.000, low, with all States having low individual climate scores.

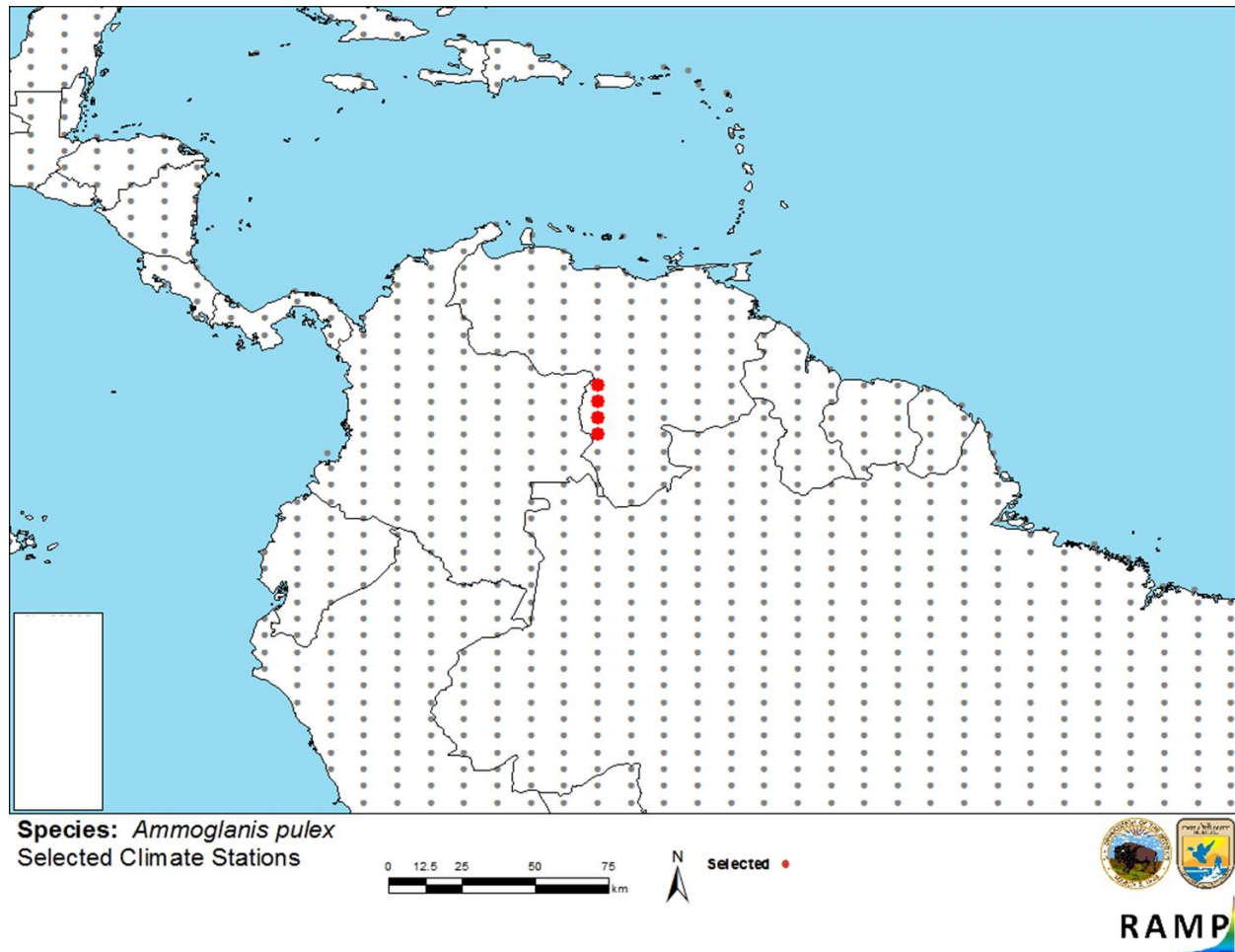


Figure 2. RAMP (Sanders et al. 2014) source map of northern South America showing weather stations selected as source locations (red; Venezuela) and non-source locations (grey) for *Ammoglanis pulex* climate matching. Source locations from GBIF Secretariat (2015).

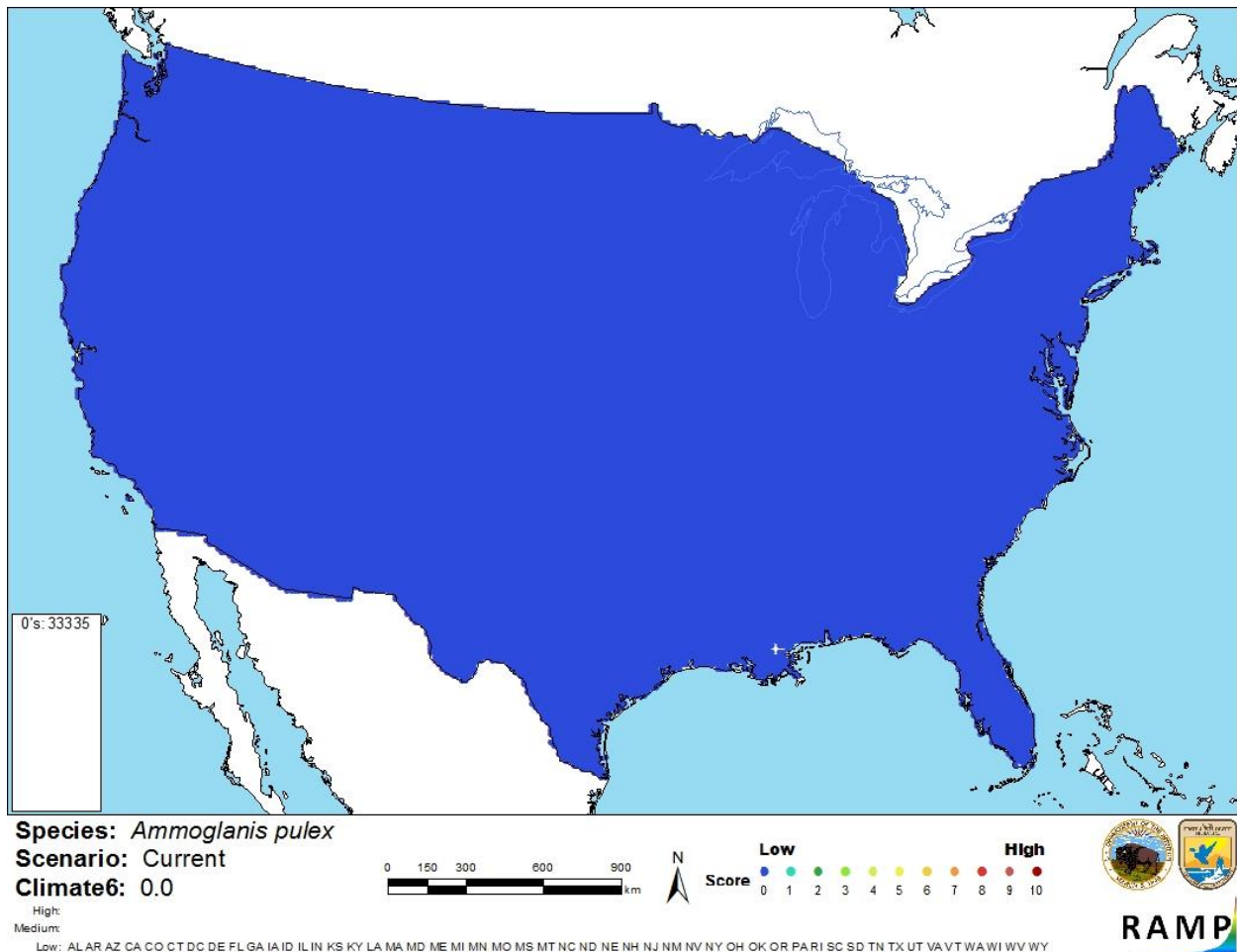


Figure 3. Map from RAMP (Sanders et al. 2014) of a current climate match for *Ammoglanis pulex* in the contiguous United States based on source locations reported by GBIF Secretariat (2015). 0 = Lowest match, 10 = Highest match.

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

The certainty of this assessment is low. The information available was limited. No records of introduction of *Ammoglanis pulex* were found.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Ammoglanis pulex is a species of parasitic catfish native to Venezuela. The history of invasiveness for *A. pulex* is uncertain. No records of introduction were found. However, this species is on the Florida Fish and Wildlife Conservation Commission's Prohibited Species List. The climate match is low; the Climate 6 score was 0.000. The certainty of assessment is low. The overall risk assessment category is uncertain.

Assessment Elements

- **History of Invasiveness (Sec. 3): Uncertain**
- **Climate Match (Sec. 6): Low**
- **Certainty of Assessment (Sec. 7): Low**
- **Remarks/Important additional information** *Ammoglanis pulex* is on the Florida Fish and Wildlife Conservation Commission's Prohibited Species List (FWC 2018).
- **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.

- de Pinna, M. C. C., and K. O. Winemiller. 2000. A new species of *Ammoglanis* (Siluriformes: Trichomycteridae) from Venezuela. *Ichthyological Explorations of Freshwaters* 11(3):255–264.
- Eschmeyer, W. N., R. Fricke, and R. van der Laan, editors. 2017. *Catalog of fishes: genera, species, references*. Available: <http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp>. (September 2017).
- FFWCC (Florida Fish and Wildlife Conservation Commission). 2018. Prohibited species list. Florida Fish and Wildlife Conservation Commission, Tallahassee, Florida. Available: <http://myfwc.com/wildlifehabitats/nonnatives/regulations/prohibited/>. (August 2018).
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- GBIF Secretariat. 2015. GBIF backbone taxonomy: *Ammoglanis pulex* de Pinna & Winemiller 2000. Global Biodiversity Information Facility, Copenhagen. Available: <http://www.gbif.org/species/2343348>. (March 2015).

ITIS (Integrated Taxonomic Information System). 2015. *Ammoglanis pulex* de Pinna & Winemiller 2000. Integrated Taxonomic Information System, Reston, Virginia. Available:
http://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=682096. (March 2015).

Sanders, S., C. Castiglione, and M. Hoff. 2014. Risk assessment mapping program: RAMP. U.S. Fish and Wildlife Service.

Zuanon, J., F. A. Bockman, and I. Sazima. 2006. A remarkable sand-dwelling fish assemblage from central Amazonia, with comments on the evolution of psammohily in South American freshwater fishes. *Neotropical Ichthyology* 4(1):107–118.

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 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.