Ripsaw Catfish (*Oxydoras niger*)
Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, February 2011
Revised, March 2019
Web Version, 5/1/2020

Organism Type: Fish
Overall Risk Assessment Category: Uncertain

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1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2019):

"South America: Amazon, São Francisco and Essequibo River basins. Possibly in the Orinoco River basin. [Bolivia, Brazil, Colombia, Ecuador, Guyana, Peru, and Venezuela]."

Status in the United States

No established populations in the wild have been reported. This species is found in the aquarium trade in the United States.

From Froese and Pauly (2019):

"This species was reported from an unspecified locality in Florida, apparently prior to 1984 […]"

"probably not established, no data"

From Nico et al. (2019):

"Status: Failed in Florida."

From Arizona Aquatic Gardens (2019):

"Catfish – Ripsaw Catfish or Turushuki Blue Catfish
[…]
List: $79.00 - $109
$66.00 - $89"

Means of Introductions in the United States

From Nico et al. (2019):

"This species was probably an aquarium release, as many species of Doradidae are popular in the aquarium trade."

Remarks

No additional remarks.

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

According to Fricke et al. (2019), *Oxydoras niger* (Valenciennes 1821) is the current and valid name of this species; it was originally described as *Doras niger* Valenciennes in Humboldt and Valenciennes 1821.

From ITIS (2018):

Kingdom Animalia
  Subkingdom Bilateria
    Infrakingdom Deuterostomia
      Phylum Chordata
        Subphylum Vertebrata
          Infraphylum Gnathostomata

Superclass Actinopterygii
Class Teleostei
Superorder Ostariophysi
Order Siluriformes
Family Doradidae
Genus *Oxydoras*
Species *Oxydoras niger* (Valenciennes in Humboldt and Valenciennes, 1821)

Size, Weight, and Age Range

From Froese and Pauly (2019):

"Maturity: L_m 62.5 […]
Max length : 100.0 cm SL male/unsexed; [Sabaj and Ferraris 2003]; common length : 59.0 cm SL male/unsexed; [Le Guenec 1985]; max. published weight: 11.0 kg [IGFA 2001]; max. published weight: 11.0 kg"

From Nico et al. (2019):

"Size: 120-cm fork length and 20 kg."

Environment

From Froese and Pauly (2019):

"Freshwater; demersal; pH range: 6.0 - 7.8; dH range: ? - 25. […] 21°C - 24°C [Baensch and Riehl 1985; assumed to be recommended aquarium temperature]"

"Known from [water] temperatures ranging from 24-29.8 °C, pH range of 5-9, and an alkalinity range of 42-142."

Climate/Range

From Froese and Pauly (2019):

"Tropical; […]"

Distribution Outside the United States

Native

From Froese and Pauly (2019):

"South America: Amazon, São Francisco and Essequibo River basins. Possibly in the Orinoco River basin. [Bolivia, Brazil, Colombia, Ecuador, Guyana, Peru, and Venezuela]."

Introduced
Oxydoras niger has not been introduced outside of the United States.

Means of Introduction Outside the United States
No introductions of *Oxydoras niger* have been reported outside of the United States.

Short Description
No information on a short description of *Oxydoras niger* was found.

Biology
From Froese and Pauly (2019):

"Occurs over mud in streams and lakes. Forms schools [Goulding 1981]. Feeds on detritus, chironomid and ephemeropteran larvae, and crustaceans [Goulding 1980]."

Human Uses
From Froese and Pauly (2019):

"Fisheries: minor commercial; aquarium: commercial"

From Arizona Aquatic Gardens (2019):

"Catfish – Ripsaw Catfish or Turushuki Blue Catfish
[…]
List: $79.00 - $109
$66.00 - $89"

Diseases
No OIE-reportable diseases (OIE 2020) were found to be associated with *Oxydoras niger*.

From Silva et al. (2011):

"From a total of 27 examined fish [*Oxydoras niger*], 70.3% were parasitised by at least one parasite species as follows: *Ichthyophthirius multifiliis* (Protozoa), *Chilodonella* sp. (Protozoa), *Cosmetocleithrum gussevi*, *C. confusus*, *C. parvum* and *Costemtocleithrum* sp. (Monogenoidea), *Paracavisona impudica* (Acanthocephala), *Cucullanus gradistomis* (Nematoda), *Proteocephalus kuyukuyu* (Cestoda) and *Dadaytrema* sp. (Digenea)."

According to Poelen et al. (2014), *O. niger* also has the parasite *Cosemtocleithrum sobrinus*.

Threat to Humans

From Froese and Pauly (2019):

"Harmless"

3 Impacts of Introductions

No impacts of introduction were found. A single introduction of *Oxydoras niger* was found in Florida, but this introduction did not result in an established population.

4 History of Invasiveness

A single introduction of *Oxydoras niger* was found in Florida, but this introduction did not result in an established population; therefore, the history of invasiveness is "No Known Nonnative Population."

5 Global Distribution

Figure 1. Known global distribution of *Oxydoras niger*. Locations in Bolivia, Brazil, Colombia, Ecuador, Guyana, Peru, and Venezuela. Map from GBIF Secretariat (2019). Location in the Pacific Ocean off of Colombia was not used to select source locations for the climate match. *Oxydoras niger* is a freshwater fish and no literature supports any marine locations. The most southern location in Brazil is was not used to select source locations for the climate match because no literature supports an established population in this river basin.

6 Distribution Within the United States

No established populations have been documented in the United States. A single occurrence was documented in Florida, likely due to an aquarium release.

7 Climate Matching

Summary of Climate Matching Analysis

The climate match for the contiguous United States was generally very low throughout most of the country. Small areas of medium match were found in States along the Gulf of Mexico. The only area of high match was found in peninsular Florida. The Climate 6 score (Sanders et al. 2018; 16 climate variables; Euclidean distance) for contiguous United States was 0.009, medium (scores greater than 0.005, but less than 0.103, are classified as medium). All States received low individual climate scores, with the exception of Florida, which had a high climate score.

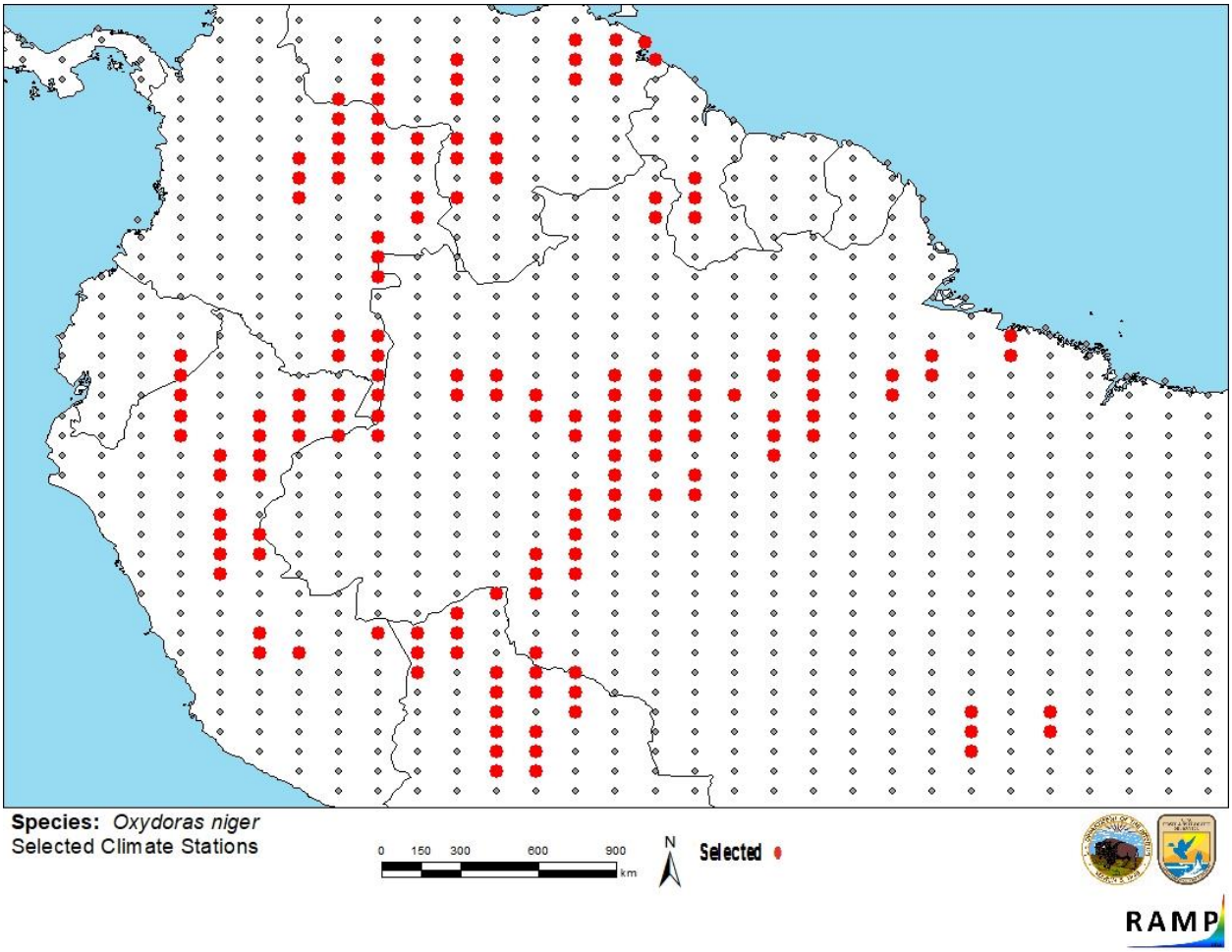

Figure 2. RAMP (Sanders et al. 2018) source map showing weather stations in South America selected as source locations (red; Bolivia, Brazil, Colombia, Ecuador, Guyana, Peru, and Venezuela) and non-source locations (gray) for *Oxydoras niger* climate matching. Source locations from GBIF Secretariat (2019). Selected source locations are within 100 km of one or

more species occurrences, and do not necessarily represent the locations of occurrences themselves.

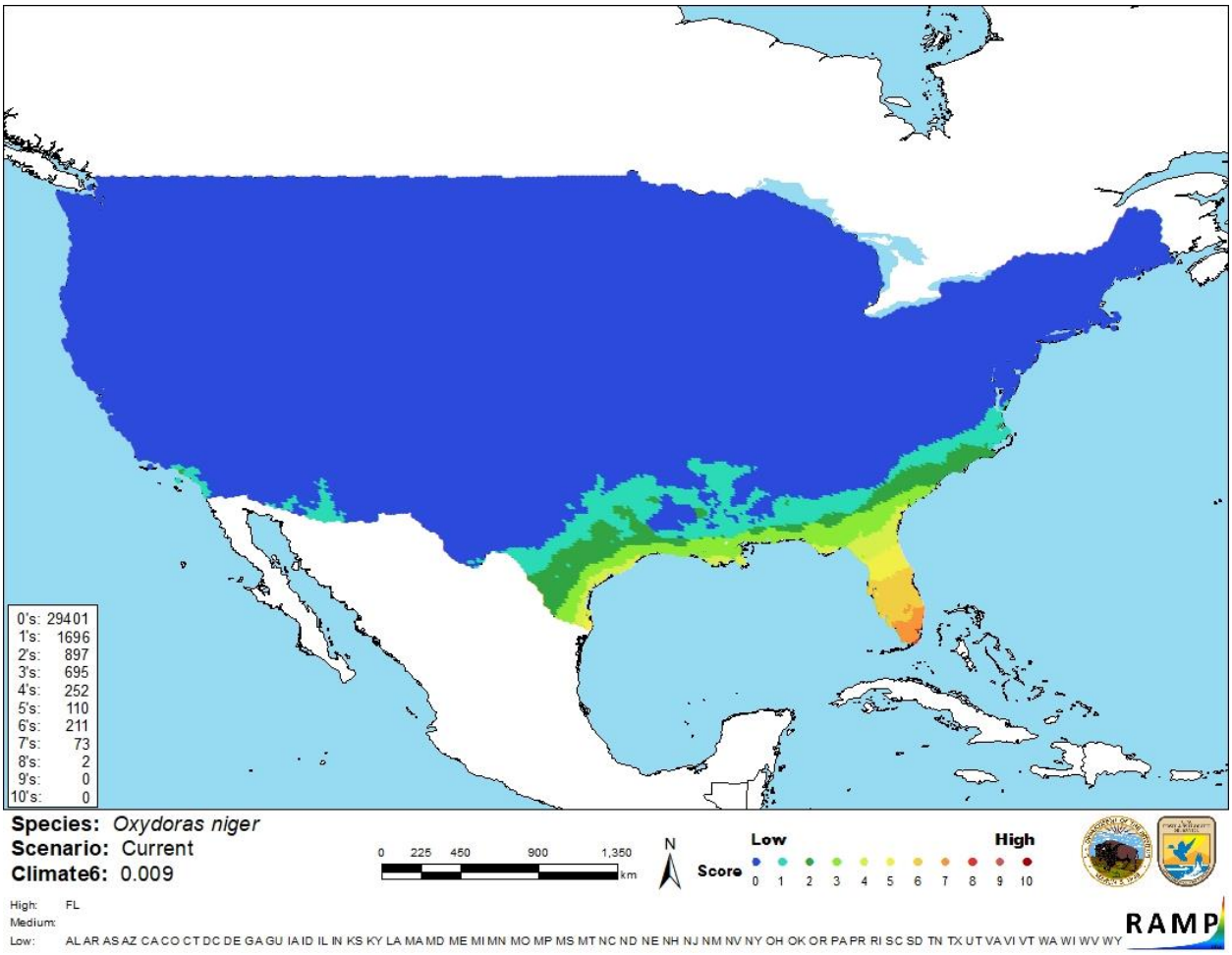

Figure 3. Map of RAMP (Sanders et al. 2018) climate matches for *Oxydoras niger* in the contiguous United States based on source locations reported by GBIF Secretariat (2019). Counts of climate match scores are tabulated on the left. 0/Blue = Lowest match, 10/Red = Highest match.

The High, Medium, and Low Climate match Categories are based on the following table:

Climate 6: (Count of target points with climate scores 6-10)/ (Count of all target points)	Overall Climate Match Category
0.000≤X≤0.005	Low
0.005<X<0.103	Medium
≥0.103	High

8 Certainty of Assessment

The certainty of assessment is low. There is minimal biological information available on *Oxydoras niger*. An adequate amount of information was available regarding the distribution of the species. No established populations have been reported anywhere outside of the native range.

9 Risk Assessment

Summary of Risk to the Contiguous United States

Ripsaw Catfish *(Oxydoras niger)* is a tropical fish found in Bolivia, Brazil, Colombia, Ecuador, Guyana, Peru, and Venezuela in the Amazon, São Francisco, Orinoco, and Essequibo River basins. *Oxydoras niger* is found in the aquarium trade. The history of invasiveness is no known nonnative population. A single introduction has been documented in Florida, but according to Froese and Pauly (2019) and Nico et al. (2019), it does not represent an established population. No impacts of introduction have been documented. The climate match for the contiguous United States is medium, with all States receiving low individual climate scores except Florida, which had a high climate score. The certainty of assessment is low. The overall risk assessment category for *Oxydoras niger* is uncertain.

Assessment Elements

- **History of Invasiveness (Sec. 4): No Known Nonnative Population**
- **Overall Climate Match Category (Sec. 7): Medium**
- **Certainty of Assessment (Sec. 8): Low**
- **Remarks/Important additional information: No additional information**
- **Overall Risk Assessment Category: Uncertain**

10 Literature Cited

Note: The following references were accessed for this ERSS. References cited within quoted text but not accessed are included below in Section 11.

Arizona Aquatic Gardens. 2019. Catfish – ripsaw catfish or turkushuki blue catfish. Available: https://www.azgardens.com/product/ripsaw-catfish-or-turushuki-blue-catfish/ (March 2019).

Fricke R, Eschmeyer WN, van der Laan R, editors. 2019. Eschmeyer's catalog of fishes: genera, species, references. California Academy of Science. Available: http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp (March 2019).

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Nico L, Neilson M, Loftus B. 2019. *Oxydoras niger* (Valenciennes 1821). Gainesville, Florida: U.S. Geological Survey, Nonindigenous Aquatic Species Database. Available: https://nas.er.usgs.gov/queries/FactSheet.aspx?speciesID=664 (March 2019).

[OIE] World Organisation for Animal Health. 2020. OIE-listed diseases, infections and infestations in force in 2020. Available: http://www.oie.int/animal-health-in-the-world/oie-listed-diseases-2020/ (April 2020).

Poelen JH, Simons JD, Mungall CJ. 2014. Global Biotic Interactions: an open infrastructure to share and analyze species-interaction datasets. Ecological Informatics 24:148–159.

Sanders S, Castiglione C, Hoff M. 2018. Risk Assessment Mapping Program: RAMP. Version 3.1. U.S. Fish and Wildlife Service.

Silva AMO, Tavares-Dias M, Jeronimo GT, Martins ML. 2011. Parasite diversity in *Oxydoras niger* (Osteichthyes: Doradidae) from the basin of Solimões River, Amazonas state, Brazil, and the relationship between monogenoidean and condition factor. Brazilian Journal of Biology 71:791–796.

11 Literature Cited in Quoted Material

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.

Baensch HA, Riehl R. 1985. Aquarien atlas. Band 2. Melle, Germany: Mergus, Verlag für Natur- und Heimtierkunde GmbH.

Goulding M. 1981. Man and fisheries on an Amazon frontier. Page 137 *in* H. J. Dumont, editor. Developments in Hydrobiology. Volume 4. The Hague, the Netherlands: W. Tunk Publishers.

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[IGFA] International Game Fish Association. 2001. Database of IGFA angling records until 2001. Fort Lauderdale, Florida: IGFA.

Le Guenec B. 1985. Claves longitud - peso de 38 especes de la region de Trinidad Bolivia. O.R.S.T.O.M.-Cordebeni-UTB (Trinidad-Bolivia), Inf. Cien. 3.

Sabaj MH, Ferraris Jr. CJ. 2003. Doradidae (thorny catfishes). Pages 456–469 *in* Reis RE, Kullander SO, Ferraris CJ, Jr., editors. Checklist of the freshwater fishes of South and Central America. Porto Alegre, Brazil: EDIPUCRS.