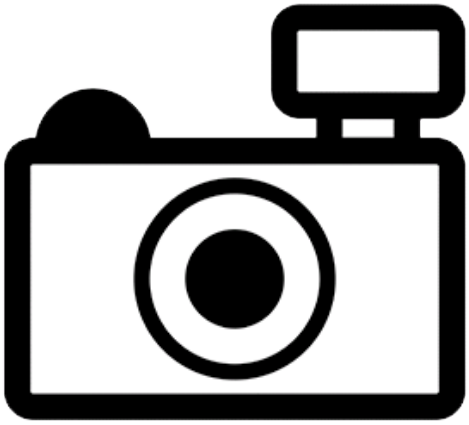
Malapterurus oguensis (a catfish, no common name)

Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, February 2012
Revised, August 2018
Web Version, 9/11/2018



1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2018):

"Africa: Ogôoué basin, Nyanga River and Kouilou-Niari system (Cameroon to Gabon) [Norris 2002, 2007]."

Status in the United States

This species has not been reported in the United States. No information on trade of this species in the United States was found.

The Florida Fish and Wildlife Conservation Commission has listed the family of electric catfishes, including the genus and species *Malapterurus oguensis*, 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
This species has not been reported in the United States.

Remarks
No additional remarks.

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing
According to Eschmeyer et al. (2018), *Malapterurus oguensis* (Sauvage 1879) is the valid name for this species. *Malapterurus oguensis* was originally described as *Malapterurus electricus oguensis* (Sauvage 1879).

From ITIS (2018):

"Kingdom Animalia
Subkingdom Bilateria
Infrakingdom Deuterostomia
Phylum Chordata
Subphylum Vertebrata
Infraphylum Gnathostomata
Superclass Actinopterygii
Class Teleostei
Superorder Ostariophysi
Order Siluriforms
Family Malapteruridae
Genus *Malapterurus*
Species *Malapterurus oguensis* Sauvage, 1879"

Size, Weight, and Age Range
From Froese and Pauly (2018):

"Max length : 21.5 cm SL male/unsexed; [Norris 2002]; 20 cm SL (female)"

Environment
From Froese and Pauly (2018):

"Freshwater; benthopelagic."

Climate/Range
From Froese and Pauly (2018):

"Tropical"

Distribution Outside the United States

Native

From Froese and Pauly (2018):

"Africa: Ogôoué basin, Nyanga River and Kouilou-Niari system (Cameroon to Gabon) [Norris 2002, 2007]."

Introduced

Not introduced outside of its native range.

Means of Introduction Outside the United States

Not introduced outside of its native range.

Short Description

From Froese and Pauly (2018):

"Dorsal spines (total): 0; Anal spines: 0; Anal soft rays: 8 - 10; Vertebrae: 38 - 40. Diagnosis: tooth patches narrow; vertically based pectoral fin positioned near body mid-depth; 6-7 branched caudal-fin rays; 8 (rarely 7 or 9) pectoral-fin rays; 3 ventral unbranched caudal-fin rays [Norris 2002]. Dorsum, flank and head unspotted; caudal saddle and bar pattern intensely expressed with wide, dark and well defined saddle that extends onto the anal fin, with no interruption between saddle and anal-fin pigment fields [Norris 2002, 2007] (in all other species with a caudal saddle there is a clear break in pigment between the saddle and the anal fin pigmentation) [Norris 2002]. Venter unpigmented; 38-40 vertebrae [Norris 2002, 2007]. 4-14 gill-rakers [Norris 2002]."

Biology

From Froese and Pauly (2018):

"An upland species, generally not found in lowland habitats, where it appears to be replaced by *M. beninensis* [Norris 2007]"

Human Uses

No information available.

Diseases

No information on diseases of *Malapterurus oguensis* was found. No records of OIE-reportable diseases were found for *M. oguensis.*

Threat to Humans

From Froese and Pauly (2018):

"Harmless"

Although Froese and Pauly (2018) list *Malapterurus oguensis* as harmless, some species in this genus are able to produce electric discharges in the range of hundreds of volts (Alves-Gomes 2001), which have the potential to inflict harm.

3 Impacts of Introductions

No records of introductions were found, therefore there was no information on impacts of introductions.

Members of the genus *Malapterurus* use electric discharges to stun prey and for defense (Alves-Gomes 2001). It is unknown how that would impact native fish.

4 Global Distribution

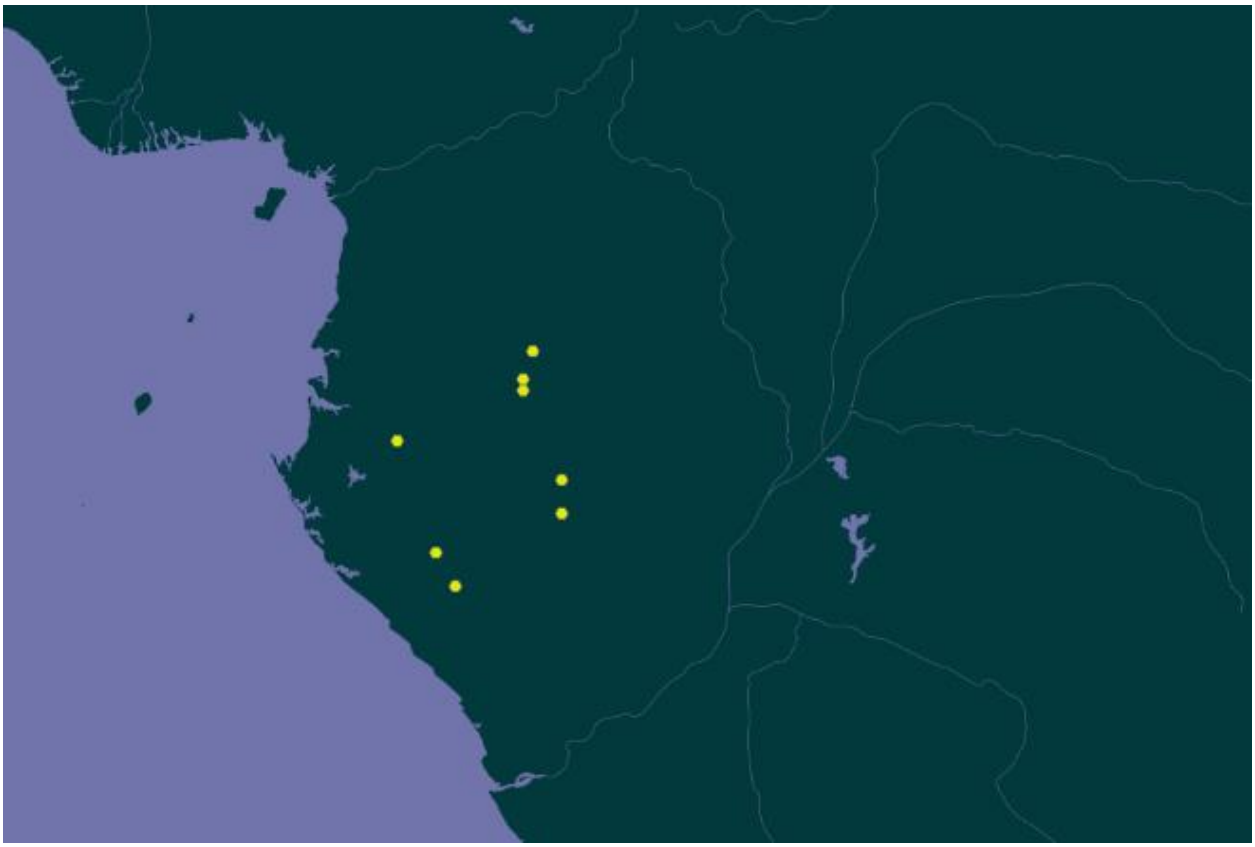


Figure 1. Known global distribution of *Malapterurus oguensis*. Locations are all within Gabon. Map from GBIF Secretariat (2018).

5 Distribution Within the United States

No records of *Malapterusus oguensis* in the wild in the United States were found.

6 Climate Matching

Summary of Climate Matching Analysis

The climate match for *Malapterurus oguensis* was low for most of the contiguous United States. Most of Florida had a medium match, with a small region of high match in the southern point. The Climate 6 score (Sanders et al. 2018; 16 climate variables; Euclidean distance) for the contiguous United States was 0.003, low. Florida had a high individual climate score.

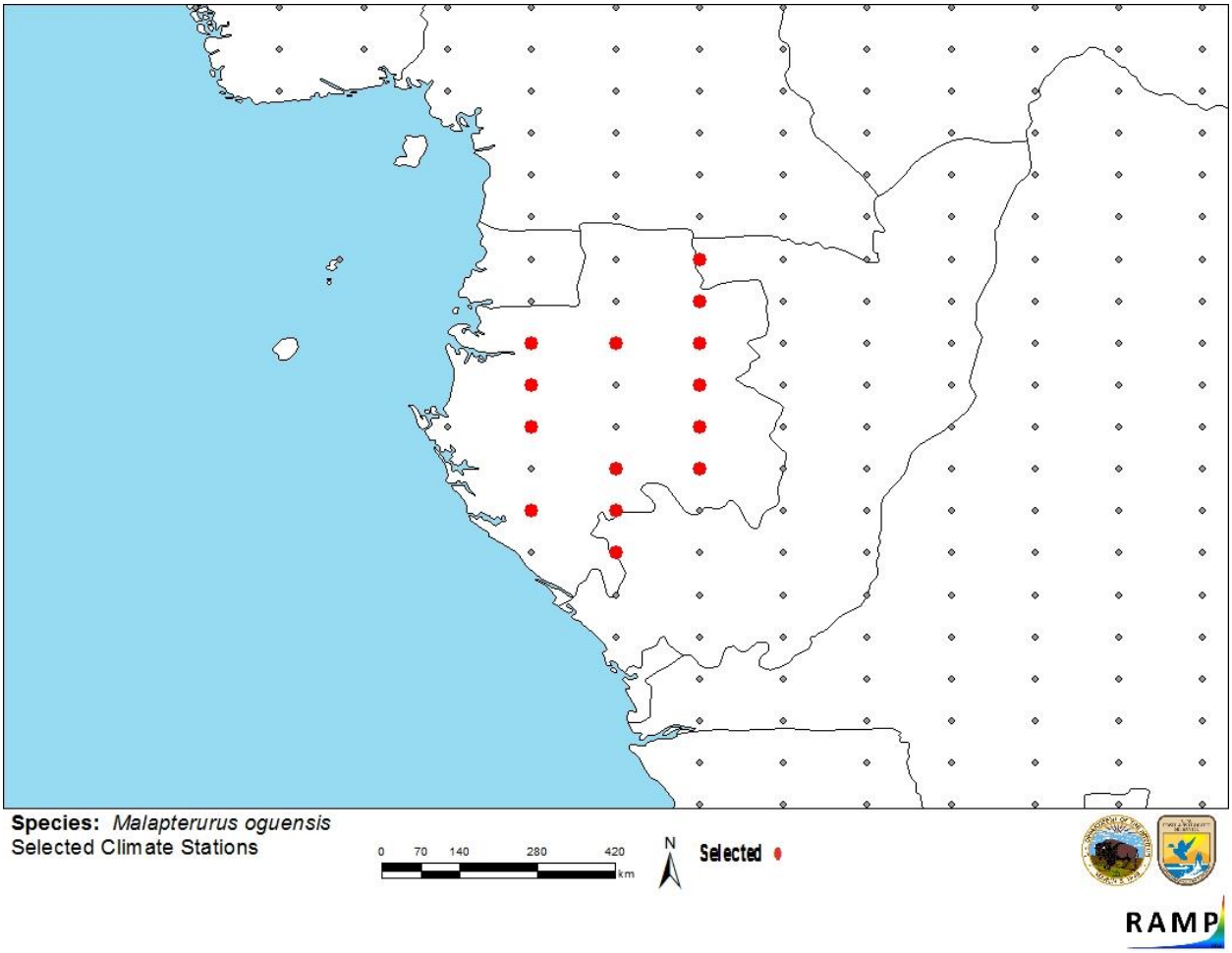


Figure 2. RAMP (Sanders et al. 2018) source map showing weather stations in Africa selected as source locations (red; Gabon, Republic of the Congo) and non-source locations (gray) for *Malapterurus oguensis* climate matching. Source locations from GBIF Secretariat (2018).

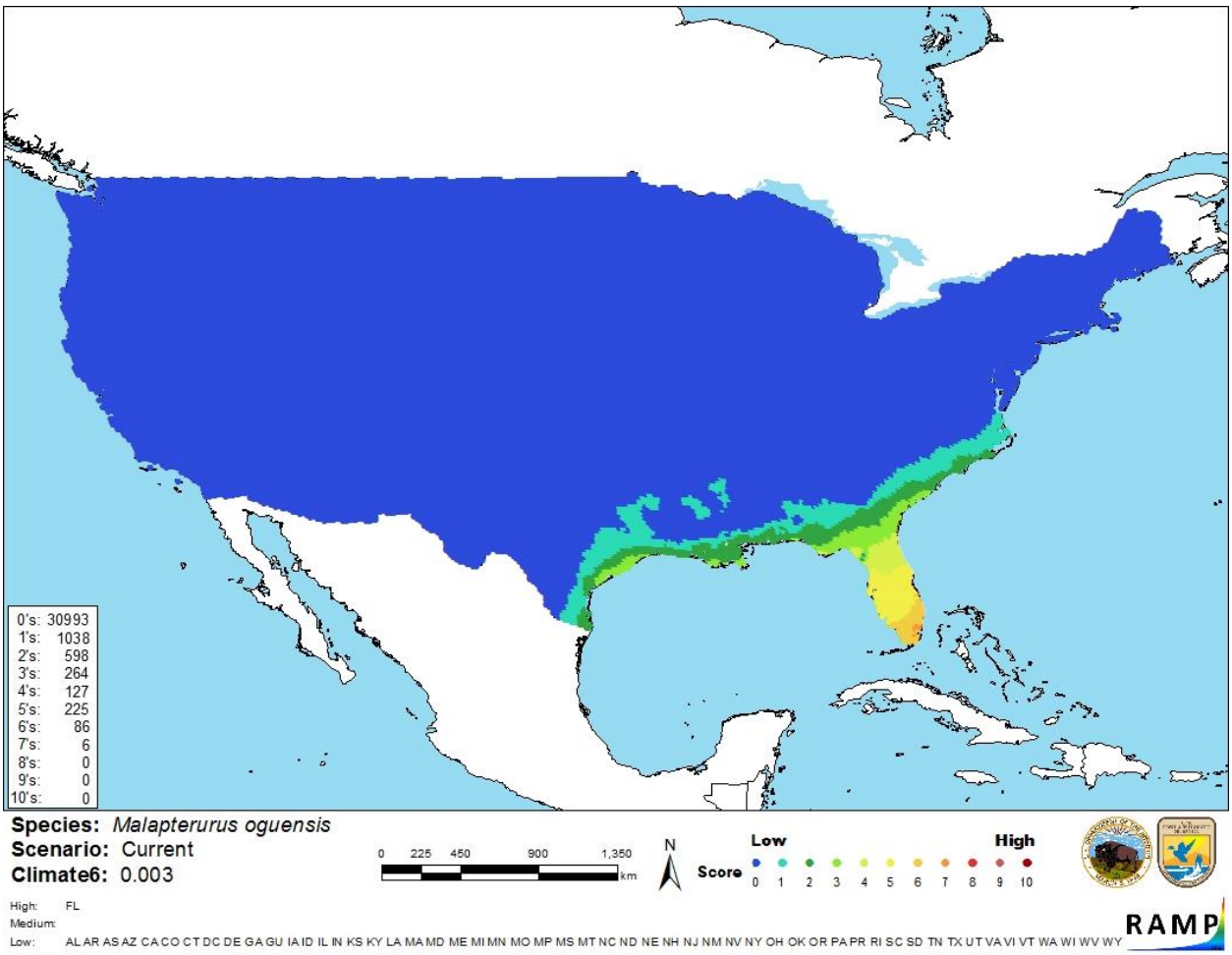


Figure 3. Map of RAMP (Sanders et al. 2018) climate matches for *Malapterurus oguensis* in the contiguous United States based on source locations reported by GBIF Secretariat (2018). 0 = Lowest match, 10 = Highest match.

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≤X≤0.005	Low
0.005<X<0.103	Medium
≥0.103	High

7 Certainty of Assessment

The certainty of assessment for *Malapterurus oguensis* is low. There is limited available information on *M. oguensis* and a lack of peer-reviewed literature. More research is needed to properly assess the risk this species poses.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Malapterurus oguensis is an electric catfish native to western Africa. The Florida Fish and Wildlife Conservation Commission has listed this species as prohibited. Limited information is available for this species. Some species in this genus are able to produce electric discharges in the range of hundreds of volts to stun prey and for defense. The history of invasiveness is uncertain, no records of introductions were found. The climate match is low. However, Florida did have a high individual climate score. 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:** No additional information.
- **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.

Alves-Gomes, J. A. 2001. The evolution of electroreception and bioelectrogenesis in teleost fish: a phylogenetic perspective. Journal of Fish Biology 58:1489–1511.

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. (August 2018).

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).

Froese, R. and D. Pauly. Editors. 2018. *Malapterurus oguensis* Sauvage, 1879. FishBase. Available: http://www.fishbase.org/summary/Malapterurus-beninensis.html. (August 2018).

GBIF Secretariat. 2018. GBIF backbone taxonomy: *Malapterurus oguensis* Sauvage, 1879. Global Biodiversity Information Facility, Copenhagen. Available: https://www.gbif.org/species/2342040. (July 2018).

ITIS (Integrated Taxonomic Information System). 2018. *Malapterurus oguensis* Sauvage, 1879. Integrated Taxonomic Information System, Reston, Virginia. Available:

https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=681506#null. (August 2018).

Sanders, S., C. Castiglione, and M. Hoff. 2018. Risk assessment mapping program: RAMP, version 3.1. U.S. Fish and Wildlife Service.

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.

Norris, S. M. 2002. A revision of the African electric catfishes, family Malapteruridae (Teleostei, Siluriformes), with erection of a new genus and descriptions of fourteen new species, and an annotated bibliography. Annales du Musée Royal de l'Afrique Centrale: Sciences Zoologiques 289:1–155.

Norris, S. M. 2007. Malapteruridae. *In* M. L. J. Stiassny, G. G. Teugels, and C. D. Hopkins, editors. The fresh and brackish water fishes of Lower Guinea, West-Central Africa. Volume I. Collection Faune et Flore tropicales 42. Institut de Recherche pour le Développement, Paris, France, Muséum National d'Histoire Naturelle, Paris, France, and Musée Royal de l'Afrique Centrale, Tervuren, Belgium.

Sauvage, H.-E. 1879. Notice sur la faune ichthyologique de l'Ogôoué. Bulletin de la Société philomathique de Paris (7th Série) 3:90–103.