

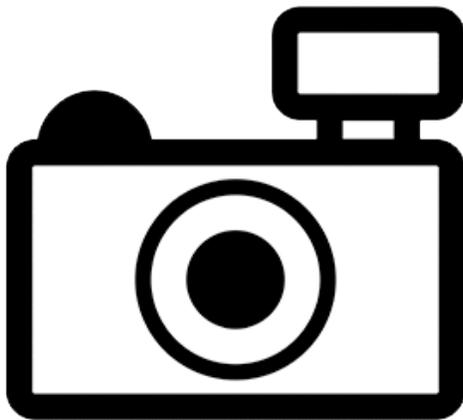
***Malapterurus punctatus* (a catfish, no common name)**

Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, March 2012

Revised, July 2018

Web Version, 8/20/2018



No Photo Available

1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2018):

“Africa: St. Paul (or Diani) River system (Sierra Leone) to the Cavally River system (Liberia/Ivory Coast) [Norris 2002, 2003]. Also reported from the Waanje River (Sierra Leone) [Norris 2002]”

Status in the United States

No indication of *Malapterurus punctatus* in the United States in the wild or in trade was found.

The Florida Fish and Wildlife Conservation Commission has listed the electric catfish *Malapterurus punctatus* 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 indication of *Malapterurus punctatus* in the United States in the wild was found.

Remarks

No additional remarks.

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

From Bailly (2017):

“Animalia (Kingdom) > Chordata (Phylum) > Vertebrata (Subphylum) > Gnathostomata (Superclass) > Pisces (Superclass) > Actinopterygii (Class) > Siluriformes (Order) > Malapteruridae (Family) > *Malapterurus* (Genus) > *Malapterurus punctatus* (Species)”

According to Eschmeyer et al. (2018), *Malapterurus punctatus* Hamilton 1822 is the currently valid and original name for this species.

Size, Weight, and Age Range

From Froese and Pauly (2018):

“Max length : 21.5 cm SL male/unsexed; [Norris 2003]”

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: St. Paul (or Diani) River system (Sierra Leone) to the Cavally River system (Liberia/Ivory Coast) [Norris 2002, 2003]. Also reported from the Waanje River (Sierra Leone) [Norris 2002]”

Introduced

No records of introductions of *Malapterurus punctatus* were found.

Means of Introduction Outside the United States

No records of introductions of *Malapterurus punctatus* were found.

Short Description

From Froese and Pauly (2018):

“Dorsal spines (total): 0; Dorsal soft rays (total): 0; Anal spines: 0; Anal soft rays: 8 - 10; Vertebrae: 38 - 39. Diagnosis: tooth patches broad; 8-10 anal-fin rays; 20 caudal-fin rays (nearly always ii-7-8-iii); 38-39 vertebrae; body and head only slightly depressed; snout and head relatively blunt (in dorsal and lateral profile); eyes more or less lateral; body colored in shades of grey; lower lip and underside of head not especially darkened or stippled; dorsum and flank finely spotted; paired fins frequently spotted in adults; caudal fin darkly pigmented with a pale distal margin, but no pale basal crescent (young up to 70mm SL have a pale spot at the base of the caudal fin but no well-developed crescent or bar) [Norris 2002].”

Biology

From Lalèyè (2010):

“This benthopelagic species occurs among rocks or roots; favours sluggish or standing water. Active at night, feeding mainly on fish stunned by electric shocks. Forms pairs and breeds in excavated cavities or holes.”

Human Uses

From Froese and Pauly (2018):

“Fisheries”

From Lalèyè (2010):

“This species is part of the aquarium trade.”

Diseases

No information on diseases of *Malapterurus punctatus* was found.

Threat to Humans

From Froese and Pauly (2018):

“Harmless”

3 Impacts of Introductions

No records of introductions of *Malapterurus punctatus* were found.

The Florida Fish and Wildlife Conservation Commission has listed the electric catfish *M. punctatus* as a prohibited species

4 Global Distribution

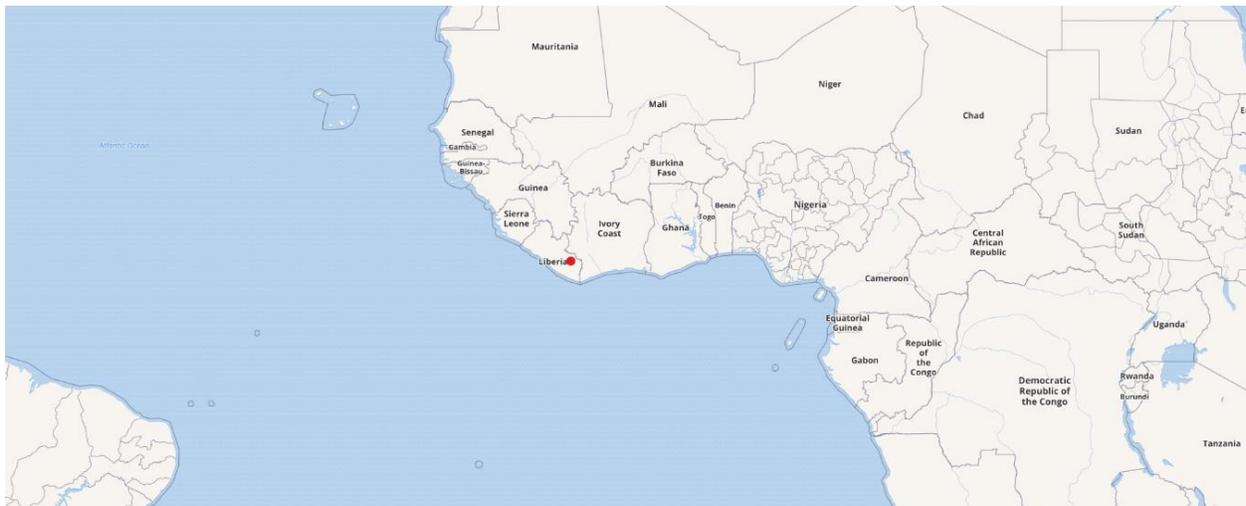


Figure 1. Known global distribution of *Malapterurus punctatus*. Location is in Liberia. Map does not include locations reported in the literature from Sierra Leone and Ivory Coast. Map adapted from GBIF Secretariat (2018).

5 Distribution Within the United States

No indication of *Malapterurus punctatus* in the United States in the wild was found.

6 Climate Matching

Summary of Climate Matching Analysis

The climate match for *Malapterurus punctatus* was low across the contiguous United States. There were no areas of medium or high matches. The Climate 6 score (Sanders et al. 2018; 16 climate variables; Euclidean distance) for the contiguous United States was 0.000, low. The range for a low climate match is from 0.0 to 0.005, inclusive. All states had low individual climate scores. The results may change if source points more representative of the species full range were available to use. However, based on the small geographic range of the species any change in the climate match results is not anticipated to alter the overall assessment.

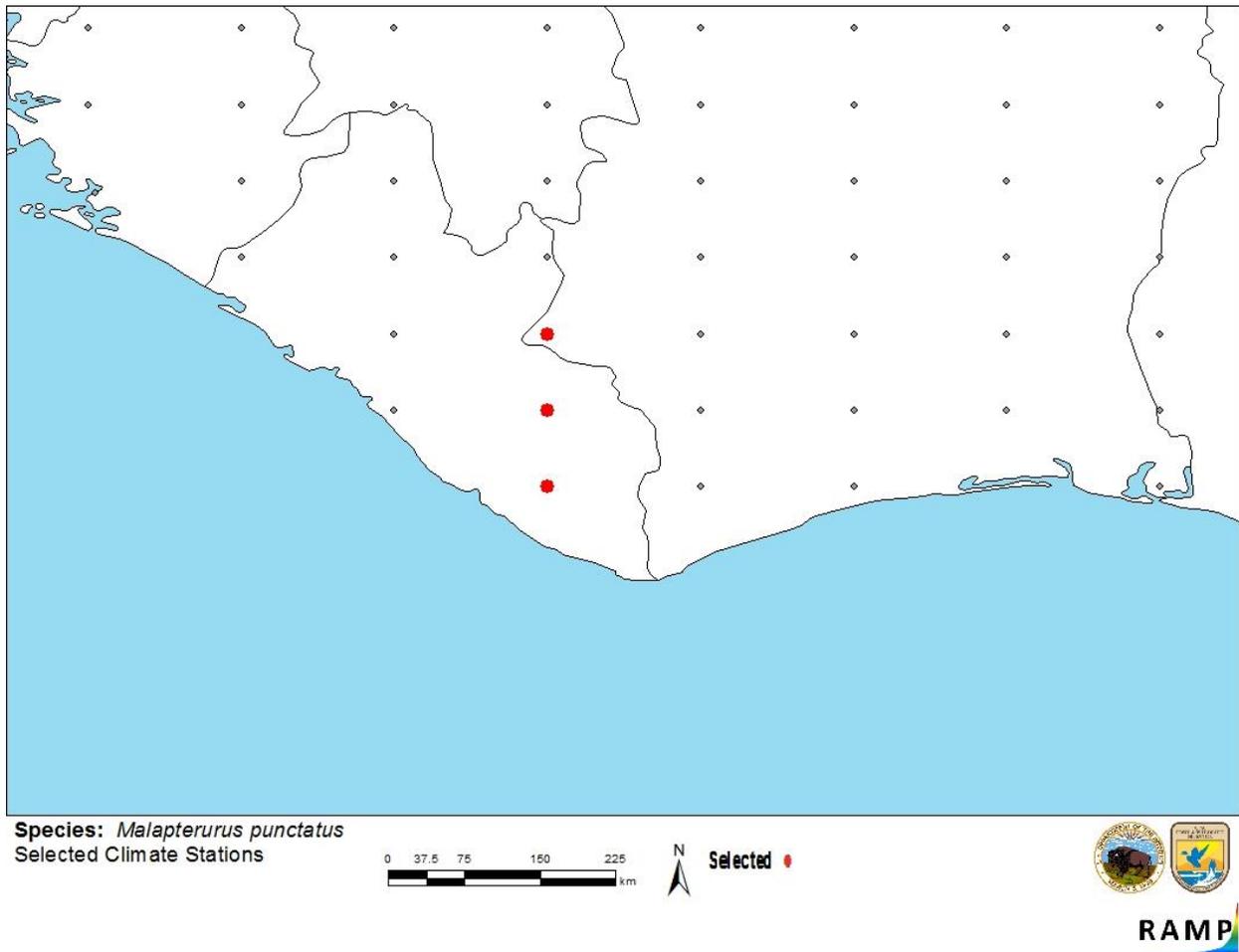


Figure 2. RAMP (Sanders et al. 2018) source map showing weather stations selected as source locations (red; Liberia, Ivory Coast) and non-source locations (gray) for *Malapterurus punctatus* climate matching. Source locations from GBIF Secretariat (2018).

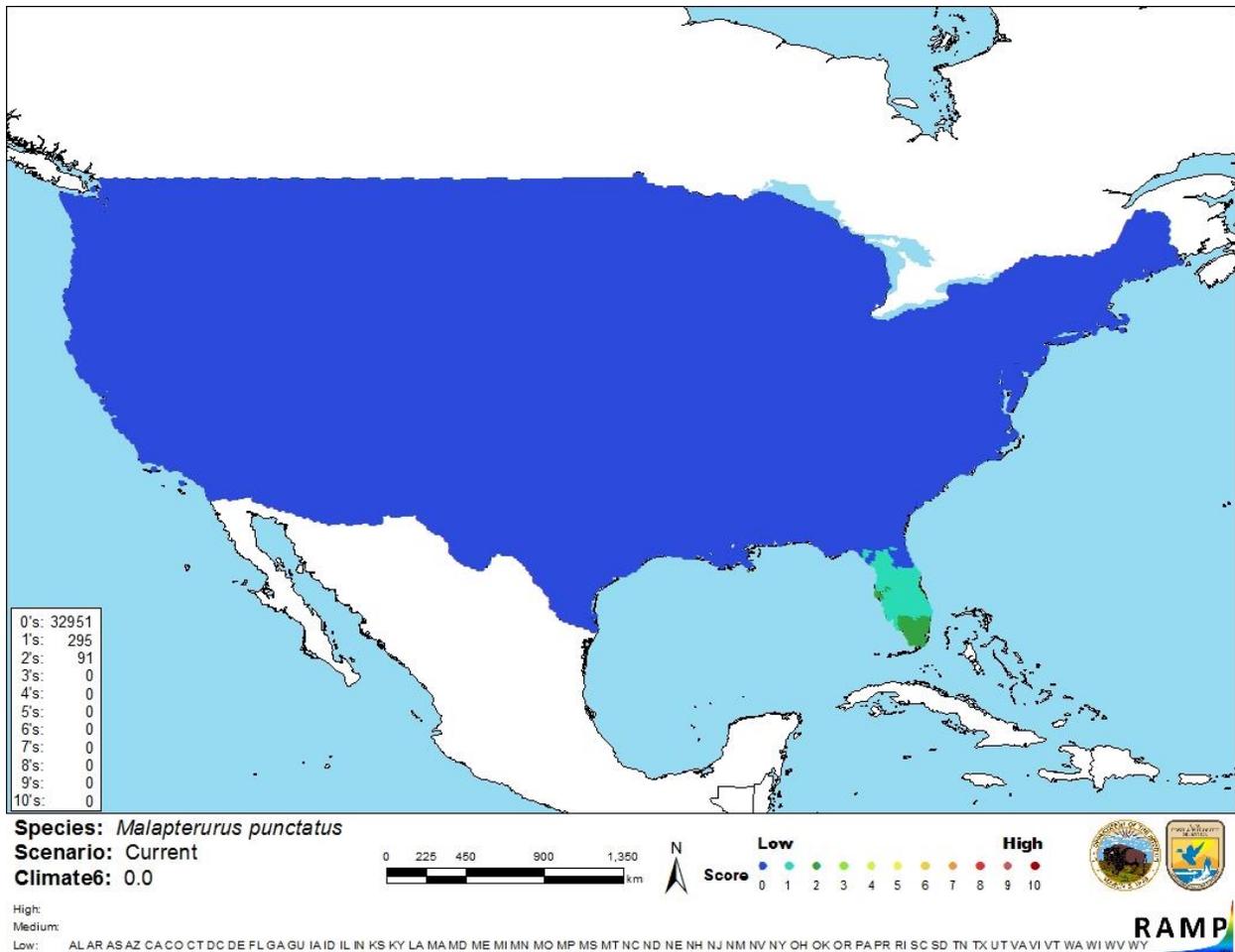


Figure 3. Map of RAMP (Sanders et al. 2018) climate matches for *Malapterurus punctatus* in the contiguous United States based on source locations reported by GBIF Secretariat (2018). 0 = Lowest match, 10 = Highest match.

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 |
|--|------------------------|
| $0.000 \leq X \leq 0.005$ | Low |
| $0.005 < X < 0.103$ | Medium |
| ≥ 0.103 | High |

7 Certainty of Assessment

The certainty of assessment for *Malapterurus punctatus* is low. There is a general lack of information for this species. No records of introductions were found, so potential impacts of introduction are unknown.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Malapterurus punctatus is an electric catfish native to rivers in Liberia, Sierra Leone and the Ivory Coast. It is used for human consumption and in the aquarium trade, although there is no indication it is in trade in the United States. The history of invasiveness for *M. punctatus* is uncertain. There were no records of introduction found. The Florida Fish and Wildlife Conservation Commission has listed the electric catfish *M. punctatus* as a prohibited species. The climate match was low and all states had low individual climate scores. The certainty of assessment is low; the overall risk assessment 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 remarks.
- **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.

- Bailly, N. 2017. *Malapterurus punctatus*. In World Register of Marine Species. Available: <http://www.marinespecies.org/aphia.php?p=taxdetails&id=1009744#sources>. (July 2018).
- 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>. (July 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/>. (July 2018).
- Froese, R., and D. Pauly, editors. 2018. *Malapterurus punctatus* Norris, 2002. FishBase. Available: <https://www.fishbase.de/summary/Malapterurus-punctatus.html>. (July 2018).
- Lalèyè, P. 2010. *Malapterurus punctatus*. The IUCN Red List of Threatened Species 2010: e.T181584A7684280. Available: <http://www.iucnredlist.org/details/181584/0>. (July 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, Musée Royal de l'Afrique Centrale, Tervuren, Série in 80, Sciences Zoologiques* 289:1–155.

Norris, S. M. 2003. Malapteruridae. Pages 174–194 *in* C. Lévêque, D. Paugy, and G. G. Teugels, editors. *Faune des poissons d'eaux douce et saumâtres de l'Afrique de l'Ouest, Tome 2. Coll. Faune et Flore tropicales 40. Musée Royal de l'Afrique Centrale, Tervuren, Belgique, Museum National d'Histoire Naturelle, Paris, France and Institut de Recherche pour le Développement, Paris.*