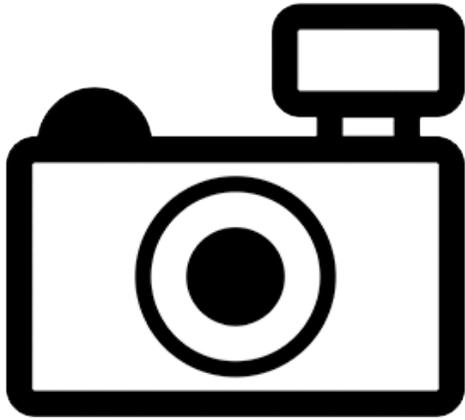


***Malapterurus tanoensis* (a catfish, no common name)**

Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, February 2012
Revised, July 2018, August 2018
Web Version, 2/1/2019



No Photo Available

1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2018):

“Africa: only found in the rivers Ofin (Prah drainage) and Tano in Ghana [Roberts 2000; Norris 2002, 2003; Seegers 2008].”

Status in the United States

No records of *Malapterurus tanoensis* in trade or in the wild in the United States were found.

The Florida Fish and Wildlife Conservation Commission has listed the family of electric catfishes, including the genus and species *Malapterurus tanoensis*, 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 *Malapterurus tanoensis* in the wild in the United States were found.

Remarks

No additional remarks.

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

According to Eschmeyer et al. (2018), *Malapterurus tanoensis* (Robert 2000) is the valid name for this species, it is also the original name.

From ITIS (2018):

“Kingdom Animalia
Subkingdom Bilateria
Infrakingdom Deuterostomia
Phylum Chordata
Subphylum Vertebrata
Infraphylum Gnathostomata
Superclass Actinopterygii
Class Teleostei
Superorder Ostariophysi
Order Siluriformes
Family Malapteruridae Bleeker, 1858
Genus *Malapterurus* Lacepède, 1803
Species *Malapterurus tanoensis* Roberts, 2000”

Size, Weight, and Age Range

From Froese and Pauly (2018):

“Max length : 26.0 cm SL male/unsexed; [Roberts 2000]; 20.4 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: only found in the rivers Ofin (Prah drainage) and Tano in Ghana [Roberts 2000; Norris 2002, 2003; Seegers 2008].”

Introduced

No records of introduction were found for *Malapterurus tanoensis*.

Means of Introduction Outside the United States

No records of introduction were found for *Malapterurus tanoensis*.

Short Description

From Froese and Pauly (2018):

“Dorsal spines (total): 0; Dorsal soft rays (total): 0; Anal spines: 0; Anal soft rays: 9 - 11; Vertebrae: 37 - 43. Diagnosis: tooth patches broad; pectoral fin placed ventrally; 9-11 anal-fin rays; 19 caudal-fin rays (ii-7-8-ii; rarely i-7-8-ii, total 18); 3-4 gill-rakers on upper part of first arch; dorsum and flank marked by large blotches (up to 5-6 times an eye diameter); caudal saddle and bar pattern well-developed; 20-22 caudal vertebrae [Norris 2002]. 41-43 [Norris 2002] or 37-39 [Norris 2002] total vertebrae. Differs from *M. minjiriya* in having fewer vertebrae and a much narrower head and mouth, and smaller oral tooth bands; differs from *M. cavalliensis* in having more vertebrae and much smaller tooth bands [Roberts 2000].”

Biology

From Froese and Pauly (2018):

“Female reaches up to 20.4 SL; nothing reported on the biology or natural history of this species [Norris 2002].”

Human Uses

From Froese and Pauly (2018):

“Fisheries:”

Diseases

No records of OIE-reportable diseases were found for *Malapterurus tanoensis*.

Threat to Humans

From Froese and Pauly (2018):

“Harmless”

Some species of the genus *Malapterurus* use electric discharges to stun prey and for defense (Alves-Gomes 2001), but it is unknown if this species does or if those discharges would be harmful to humans.

3 Impacts of Introductions

No records of introduction were found for *Malapterurus tanoensis*.

Some species of the genus *Malapterurus* use electric discharges to stun prey and for defense (Alves-Gomes 2001), but it is unknown if this species does or how that would affect native species.

4 Global Distribution

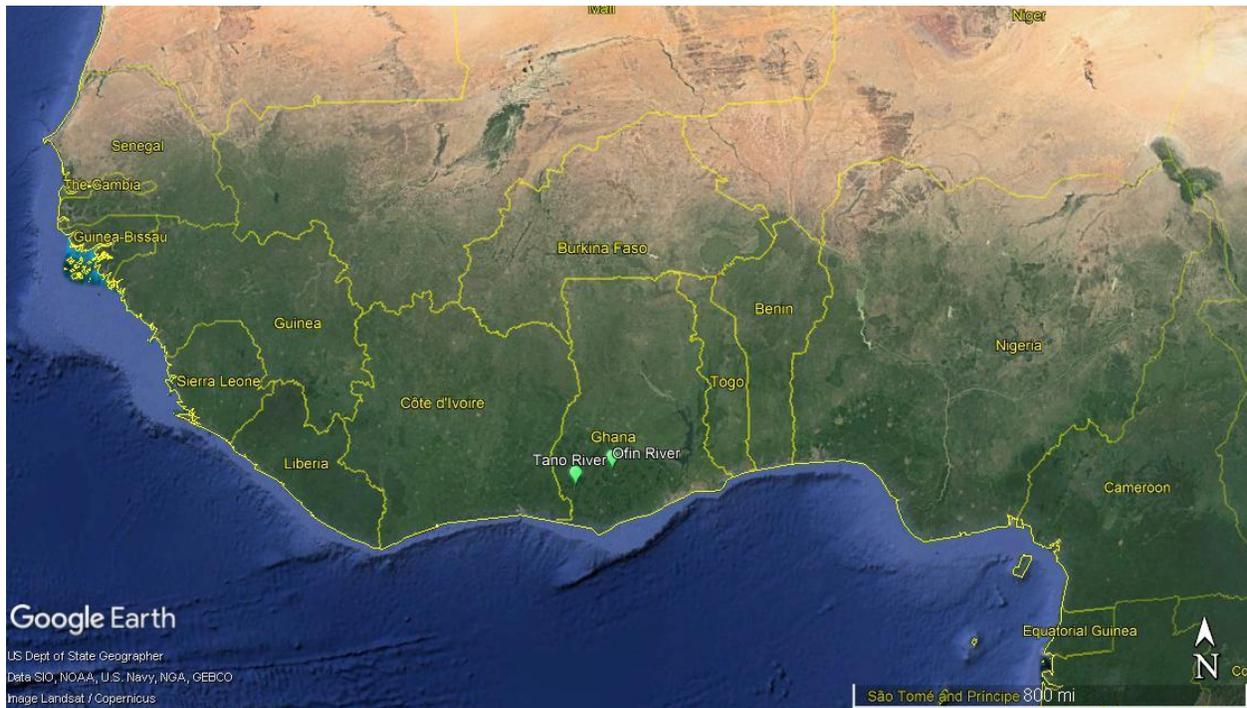


Figure 1. Known global distribution of *Malapterurus tanoensis*. Map from Google Earth Pro (2018). *M. tanoensis* range description given by Froese and Pauly (2018); locations are in Ghana.

5 Distribution Within the United States

No records of *Malapterurus tanoensis* in the wild in the United States were found.

6 Climate Matching

Summary of Climate Matching Analysis

The climate match for *Malapterurus tanoensis* was low for most of the contiguous United States with small patches of medium match in southern Florida. The Climate 6 score (Sanders et al. 2018; 16 climate variables; Euclidean distance) for the contiguous United States was 0.000, low. All States had a low individual climate score. Source points were chosen based on the description of the native range given in Froese and Pauly (2018); no georeferenced observations were available to use.

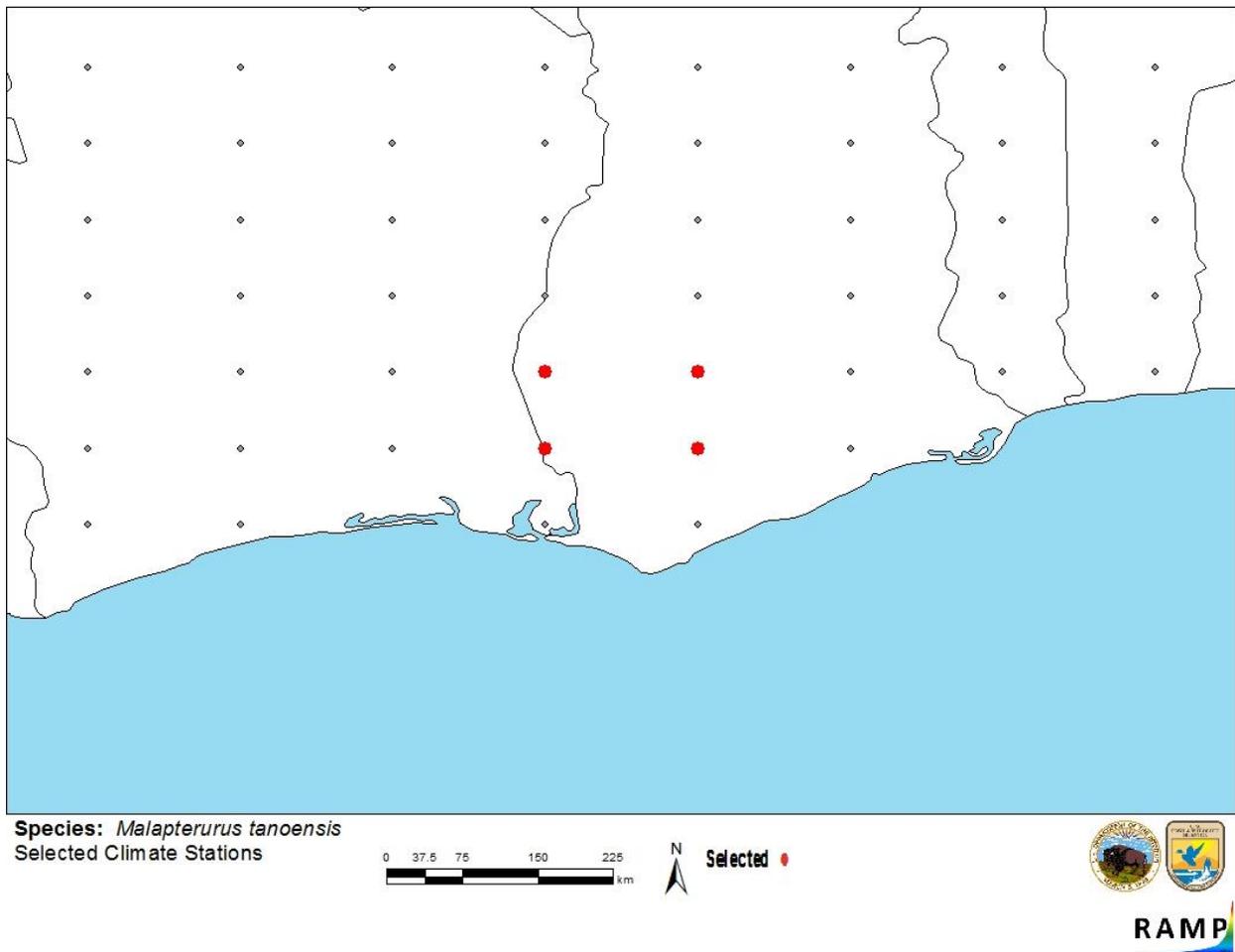


Figure 2. RAMP (Sanders et al. 2018) source map showing weather stations in Ghana selected as source locations (red) and non-source locations (gray) for *Malapterurus tanoensis* climate matching. Source locations description from Froese and Pauly (2018).

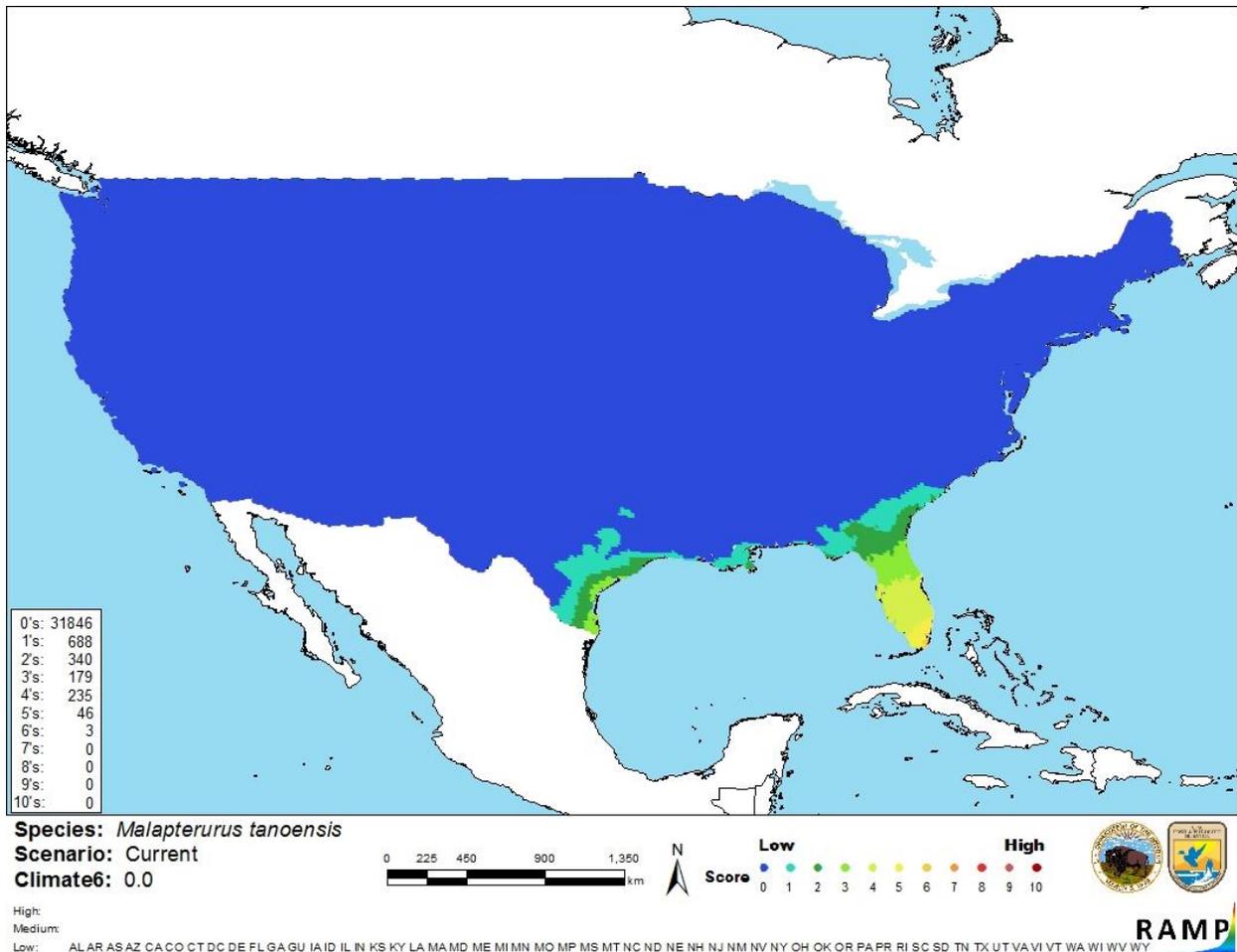


Figure 3. Map of RAMP (Sanders et al. 2018) climate matches for *Malapterurus tanoensis* in the contiguous United States based on source locations reported by Froese and Pauly (2018). 0 = Lowest match, 10 = Highest match.

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 this assessment is low. There is minimal information for *Malapterurus tanoensis* and a lack of peer-reviewed literature with no records of introductions found.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Malapterurus tanoensis is catfish native to Ghana in western Africa. There is little information available for this species. Some species in this genus can produce electric discharges to stun prey and for defense, but it is unknown if this is one. The history of invasiveness is uncertain. It has not been reported as introduced or established outside of its native range. There is no information on the trade of *M. tanoensis*. The climate match analysis resulted in a low match for the contiguous United States. Source points were chosen based on the description of the native range given in Froese and Pauly (2018); no georeferenced observations were available to use. The certainty of this 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 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.

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>. (July 2018).

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Froese, R., and D. Pauly, editors. 2018. *Malapterurus tanoensis* Roberts, 2000. FishBase. Available: <http://www.fishbase.se/summary/Malapterurus-tanoensis.html>. (July 2018).

Google. 2018. Google Earth Pro. Google, Inc.

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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. 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.

Roberts, T. R. 2000. A review of the African electric catfish family Malapteruridae, with descriptions of new species. *Occasional Papers in Ichthyology* 1:1–15.

Seegers, L. 2008. *The catfishes of Africa: a handbook for identification and maintenance*. Aqualog Verlag A. C. S. GmbH, Germany.