

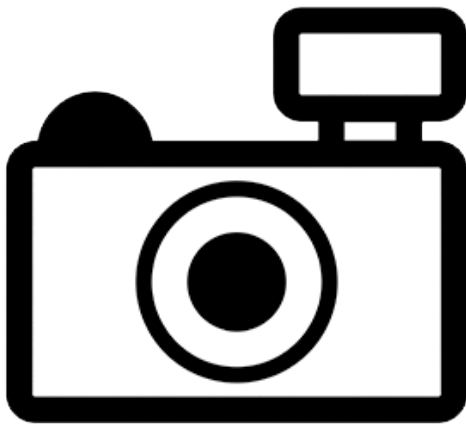
***Malapterurus cavalliensis* (a catfish, no common name)**

Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, February 2012

Revised, June 2018

Web Version, 8/6/2018



No Photo Available

1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2018):

“Africa: Cavally River, where it forms the border between Côte d'Ivoire and Liberia; may occur further west in Liberian rivers [Roberts 2000].”

Status in the United States

No records of *Malapterurus cavalliensis* in the United States were found. No information on trade of *M. cavalliensis* in the United States was found.

The Florida Fish and Wildlife Conservation Commission has listed the electric catfish *M. cavalliensis* 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 cavalliensis* 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 cavalliensis* Roberts 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 Ostariophysi
Class Teleostei
Superorder Ostariophysi
Order Siluriformes
Family Malapteruridae
Genus *Malapterurus*
Species *Malapterurus cavalliensis* Roberts, 2000”

Size, Weight, and Age Range

From Froese and Pauly (2018):

“Max length : 12.1 cm SL male/unsexed; [Roberts 2000]”

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: Cavally River, where it forms the border between Côte d'Ivoire and Liberia; may occur further west in Liberian rivers [Roberts 2000].”

Introduced

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

Means of Introduction Outside the United States

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

Short Description

From Froese and Pauly (2018):

“Vertebrae: 41. Diagnosis: low counts of vertebrae and of gill rakers; exceptionally large oral tooth bands; premaxillary tooth band is laterally fairly broad and longitudinally broader than any other species in West African coastal streams; most distinctively colored species of *Malapterurus* [Roberts 2000].”

“[...]; pectoral fin rays 8-9; pelvic rays 6 [Roberts 2000].”

“Coloration: nearly entire body covered with numerous small spots; expect [*sic*] for its pale margin, the entire caudal fin is black; narrow pale area on caudal peduncle partially invaded by spots; black bar from anterior of adipose fin base to anal fin base; posterior to this bar a very pale area; anal fin and almost entire adipose fin are pale [Roberts 2000]. Caudal peduncle whitish in juveniles [Seegers 2008].”

Biology

From Froese and Pauly (2018):

“Nothing is known about its biology [Seegers 2008].”

Human Uses

No information on human uses of *Malapterurus cavalliensis* was found.

Diseases

No information on parasites or pathogens of *Malapterurus cavalliensis* was found.

Threat to Humans

From Froese and Pauly (2018):

“Harmless”

3 Impacts of Introductions

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

The Florida Fish and Wildlife Conservation Commission (2018) has listed the electric catfish *M. cavalliensis* as a prohibited species

4 Global Distribution

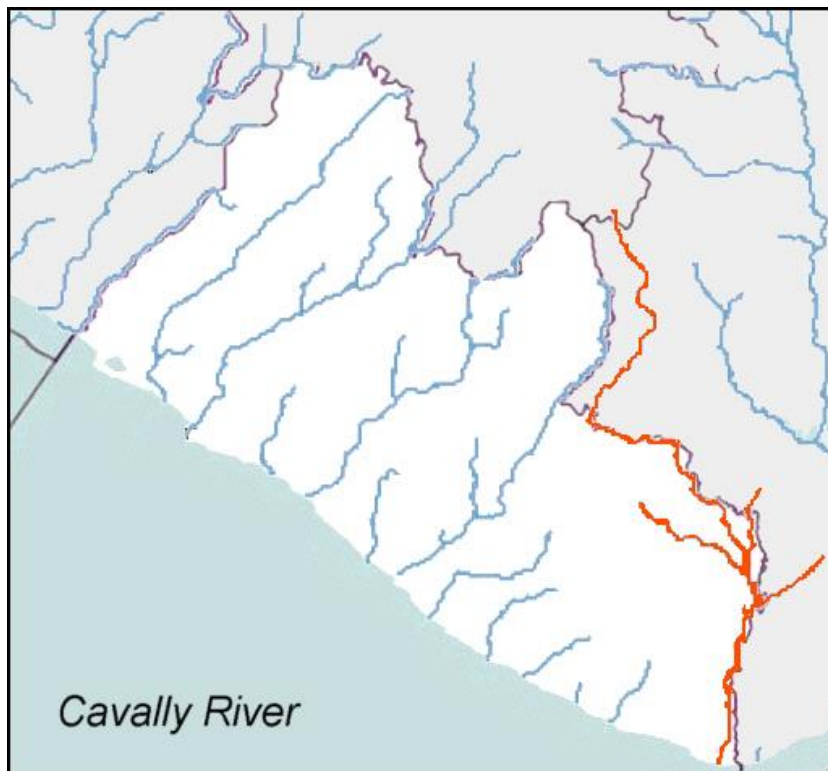


Figure 1. Location of the Cavally River along the border of Côte d'Ivoire and Liberia; the native range of *Malapterurus cavalliensis* according to Froese and Pauly (2018). Map from Metilsteiner, available: https://commons.wikimedia.org/wiki/File:Liberia_Cavally_River.png.

5 Distribution Within the United States

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

6 Climate Matching

Summary of Climate Matching Analysis

The climate match for *Malapterurus cavalliensis* was low for most of the contiguous United States with only a small area 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. The range for a low climate match is from 0.0 to 0.005, inclusive. All states had low individual climate scores. The confidence in the results of this climate match is lowered due to the lack of georeferenced locations of established populations to use in selecting the source locations for the match.

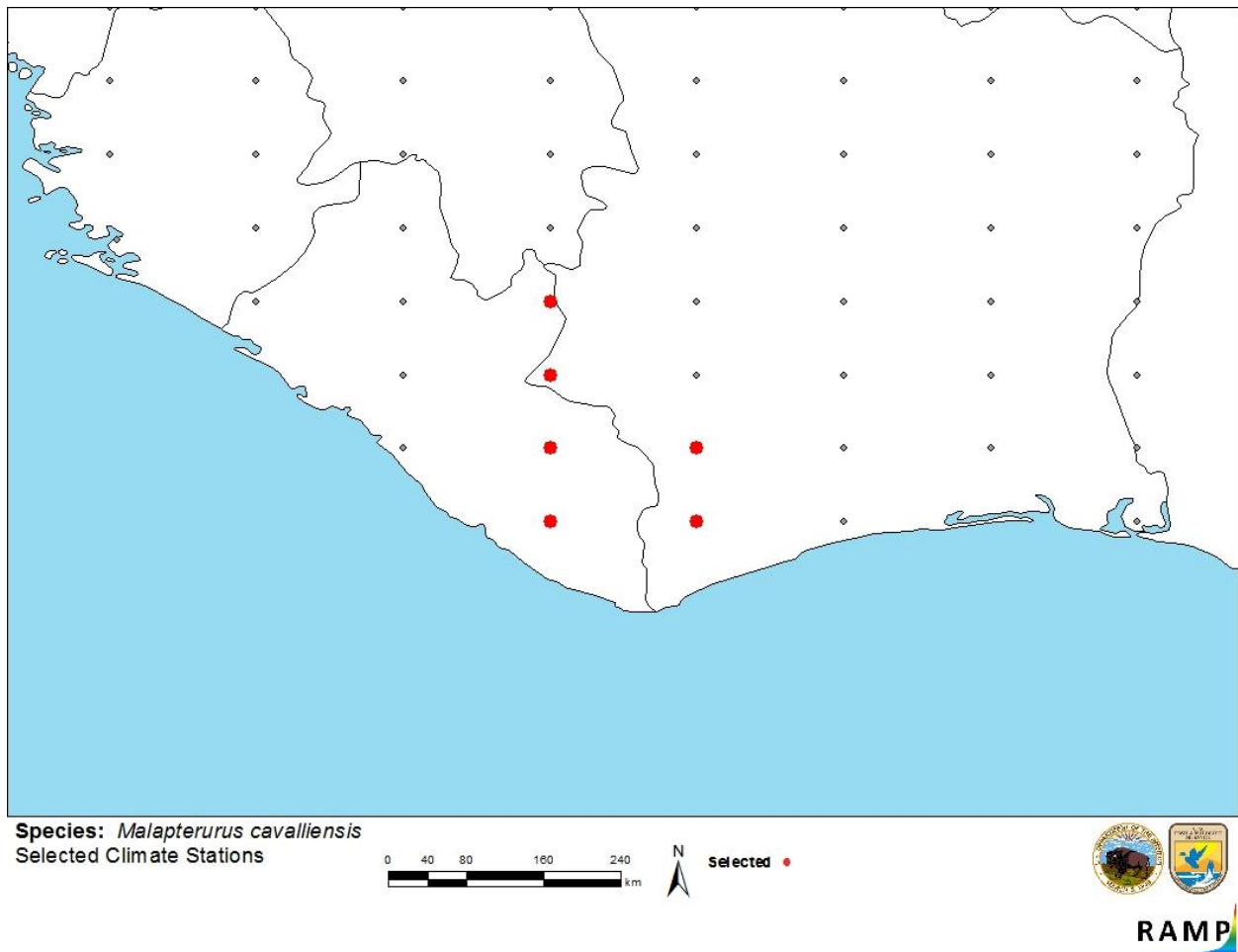


Figure 2. RAMP (Sanders et al. 2018) source map showing weather stations selected as source locations (red; Côte d'Ivoire, Liberia) and non-source locations (gray) for *Malapterurus cavalliensis* climate matching. Source locations from Froese and Pauly (2018).

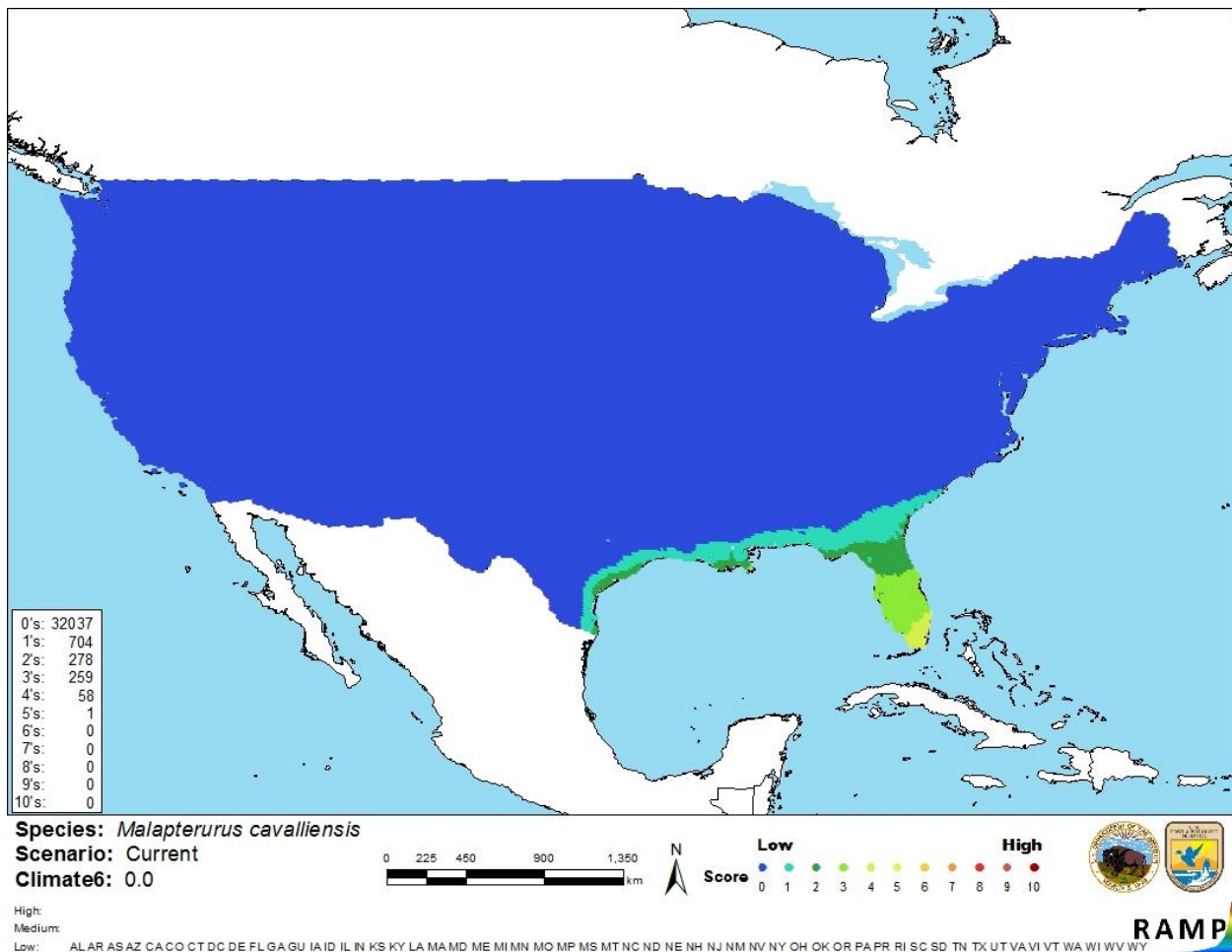


Figure 3. Map of RAMP (Sanders et al. 2018) climate matches for *Malapterurus cavalliensis* in the contiguous United States based on source locations reported by Froese and Pauly (2018). 0 = Lowest match, 10 = Highest match.

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 assessment for *Malapterurus cavalliensis* is low. There is a general lack of information for this species. There were no georeferenced locations to use as source points for the climate match. Source locations were chosen based on a generalized description of the native range. No records of introduction were found, so impacts of introduction are unknown.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Malapterurus cavalliensis is an electric catfish native to a coastal river along central Africa's Atlantic coast. Not much is known about this species. The history of invasiveness is uncertain; no records of introduction were found. The Florida Fish and Wildlife Conservation Commission (2018) has listed the electric catfish *M. cavalliensis* as a prohibited species. The climate match is low, however there was a small area of medium match in south Florida. There is lowered confidence in the result of the climate match due to a lack of georeferenced locations to use as source points. 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.

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>. (June 2018).

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

ITIS (Integrated Taxonomic Information System). 2018. *Malapterurus cavalliensis* Roberts, 2000. Integrated Taxonomic Information System, Reston, Virginia. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=681500. (June 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.

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.