

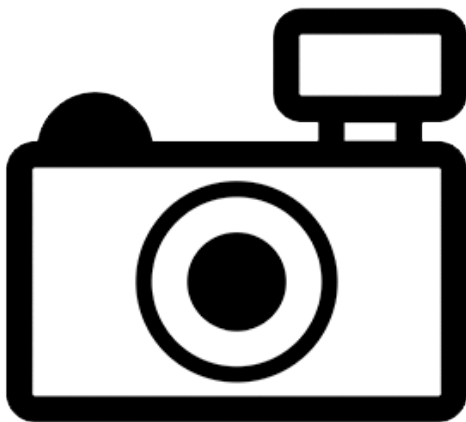
***Labeo meroensis* (a carp, no common name)**

Ecological Risk Screening Summary

U.S. Fish and Wildlife Service, April 2012

Revised, May 2018

Web Version, 6/15/2018



No Photo Available

1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2018):

“Africa: Nile River in Sudan [Moritz 2007].”

Status in the United States

This species has not been reported as introduced or established in the U.S.

Means of Introductions in the United States

This species has not been reported as introduced or established in the United States. There is no indication that this species is in trade in the United States.

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

From GBIF Secretariat (2018):

“Kingdom Animalia
Phylum Chordata
Class Actinopterygii
Order Cypriniformes
Family Cyprinidae
Genus *Labeo* Cuvier, 1816
Species *Labeo meroensis* Moritz, 2007”

From Eschmeyer et al. (2018):

“Current status: Valid as *Labeo meroensis* Moritz 2007. Cyprinidae: Labeoninae.”

Size, Weight, and Age Range

From Froese and Pauly (2018):

“Max length : 5.3 cm SL male/unsexed; [Moritz 2007]”

Environment

From Froese and Pauly (2018):

“Freshwater; benthopelagic; pH range: 8.2 - 8.3. [...] 21°C - 23°C [Moritz 2007; assumed to be water temperatures in nature]”

From EOL (2018):

“Water parameters for Shendi [northern Sudan] were 158 µS, 23.2 °C, pH 8.23 at the 12.01.06 and for Atbara 168 µS, 20.5 °C, pH 8.30 at the 14.01.06.”

Climate/Range

From Froese and Pauly (2018):

“Tropical;”

Distribution Outside the United States

Native

From Froese and Pauly (2018):

“Africa: Nile River in Sudan [Moritz 2007].”

From EOL (2018):

“The species is so far only known from the two collecting sites [in Sudan] listed in this study [...]: the river Nile between the 6th and 5th cataract at Shendi [...] and Atbara (city, not river).”

Introduced

This species has not been reported as introduced or established outside of its native range.

Means of Introduction Outside the United States

This species has not been reported as introduced or established outside of its native range.

Short Description

From Froese and Pauly (2018):

“Dorsal soft rays (total): 14; Anal soft rays: 7 - 8; Vertebrae: 38. Diagnosed from all other Nilotic *Labeo* species by having only 5.5 scale rows between lateral line and mid-dorsal line (vs. 6.5 or more). Distinguished from all other African congeners except *Labeo djourae* and *Labeo nunensis* by the combination of the following characters: cylindric body, transverse plicae on the inner surface of the lips, 5.5 scale rows between lateral line and mid-dorsal line, 39 to 41 scales in lateral line and 16 scales around the caudal peduncle. Differs from *Labeo djourae* from the Chad and Benue systems and *Labeo nunensis* from the Sanaga river in Cameroon by having a larger eye diameter (21.5-27.4% of head length vs. 14.5-20.8% in *Labeo djourae* and 14.0% in the type material of *Labeo nunensis*); from *Labeo nunensis* by the absence of anterior filament on dorsal fin (vs. presence); from *Labeo djourae* in having shorter snout (32.2-41.4 of HL vs. 46.7-55.9), smaller interorbital width (30.5-38.5 vs. 35.0-50.0% of head length); and absence of emargination in the dorsal snout region (vs. prominence or presence) [Moritz 2007].”

From EOL (2018):

“Live specimens with dark-olive back with silvery reflection [...]. Towards to [sic] horizontal septum the coloration becomes more greenish. A narrow, almost golden reflecting band about one scale row above the horizontal septum. Along flank a broad grey band continuing on to the head. Belly clear white; some melanophores only on ventral side of snout. Fins transparent; only some melanophores in dorsal fin and along upper and lower border of caudal fin. Upper half of eye conspicuously orange [...]. Fixed specimens with brown back without reflections; belly pale. Grey band along flank hardly visible and completely absent from head. Fins less transparent and orange tint of eye absent.”

Biology

From Froese and Pauly (2018):

“This species was found in flowing shallow water over sand, and submerged shore vegetation [Moritz 2007].”

Human Uses

No information available.

Diseases

No information available. No OIE-reportable diseases have been documented for this species.

Threat to Humans

From Froese and Pauly (2018):

“Harmless”

3 Impacts of Introductions

This species has not been documented as introduced or established outside of its native range.

4 Global Distribution



Figure 1. Known global distribution in Sudan of *Labeo meroensis*. Map from GBIF Secretariat (2018).

5 Distribution Within the United States

This species has not been reported as introduced or established in the U.S.

6 Climate Matching

Summary of Climate Matching Analysis

The Climate 6 score (Sanders et al. 2014; 16 climate variables; Euclidean distance) for the contiguous United States was 0.0, which is a low climate match. The range for a low climate match is from 0.0 to 0.005, inclusive. The climate match was very low across the entire contiguous U.S. There were small areas of slightly higher climate match in the Southwest, including Texas.

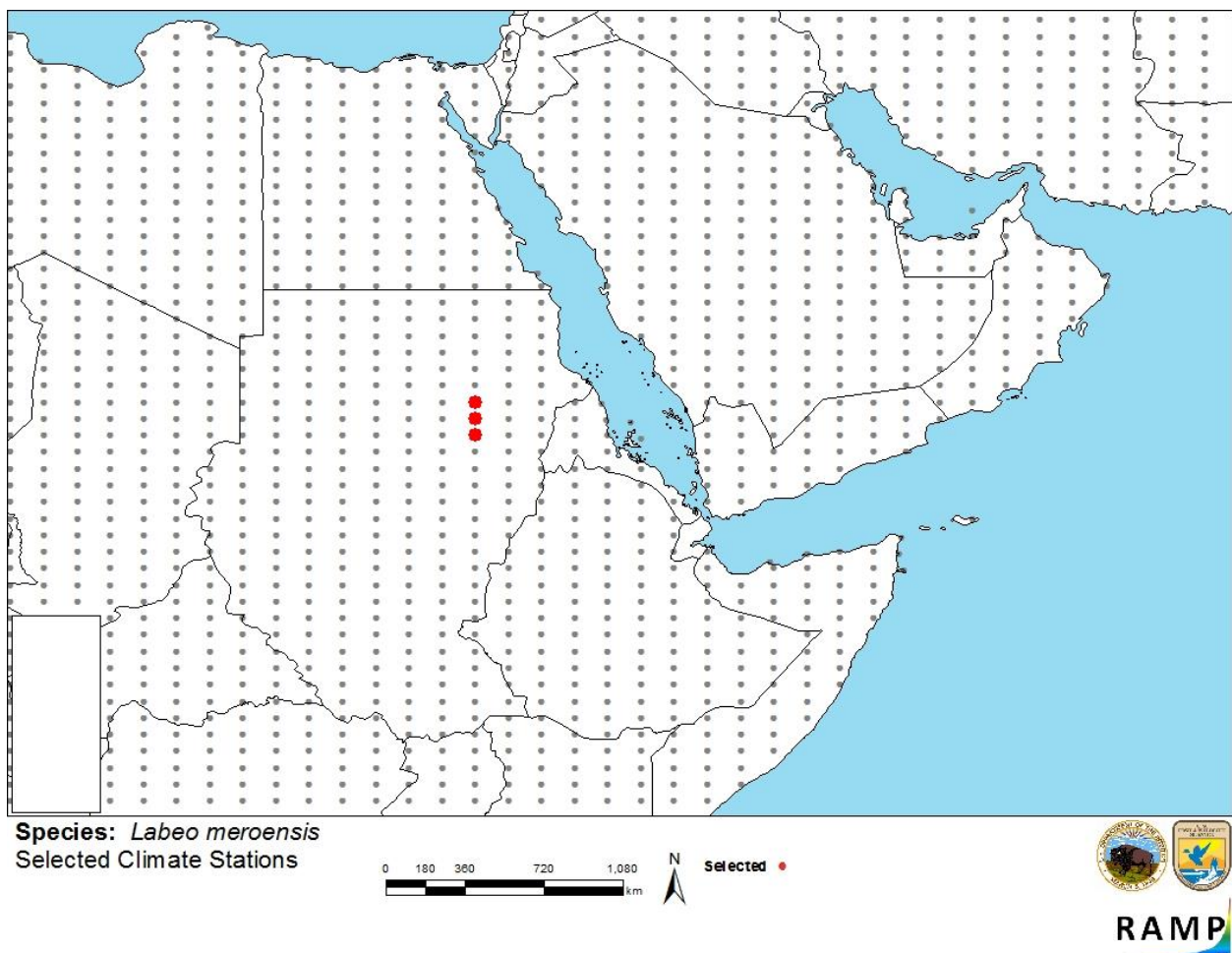


Figure 2. RAMP (Sanders et al. 2014) source map of northeast Africa showing weather stations selected as source locations (red; Sudan) and non-source locations (gray) for *Labeo meroensis* climate matching. Source locations from GBIF Secretariat (2018).

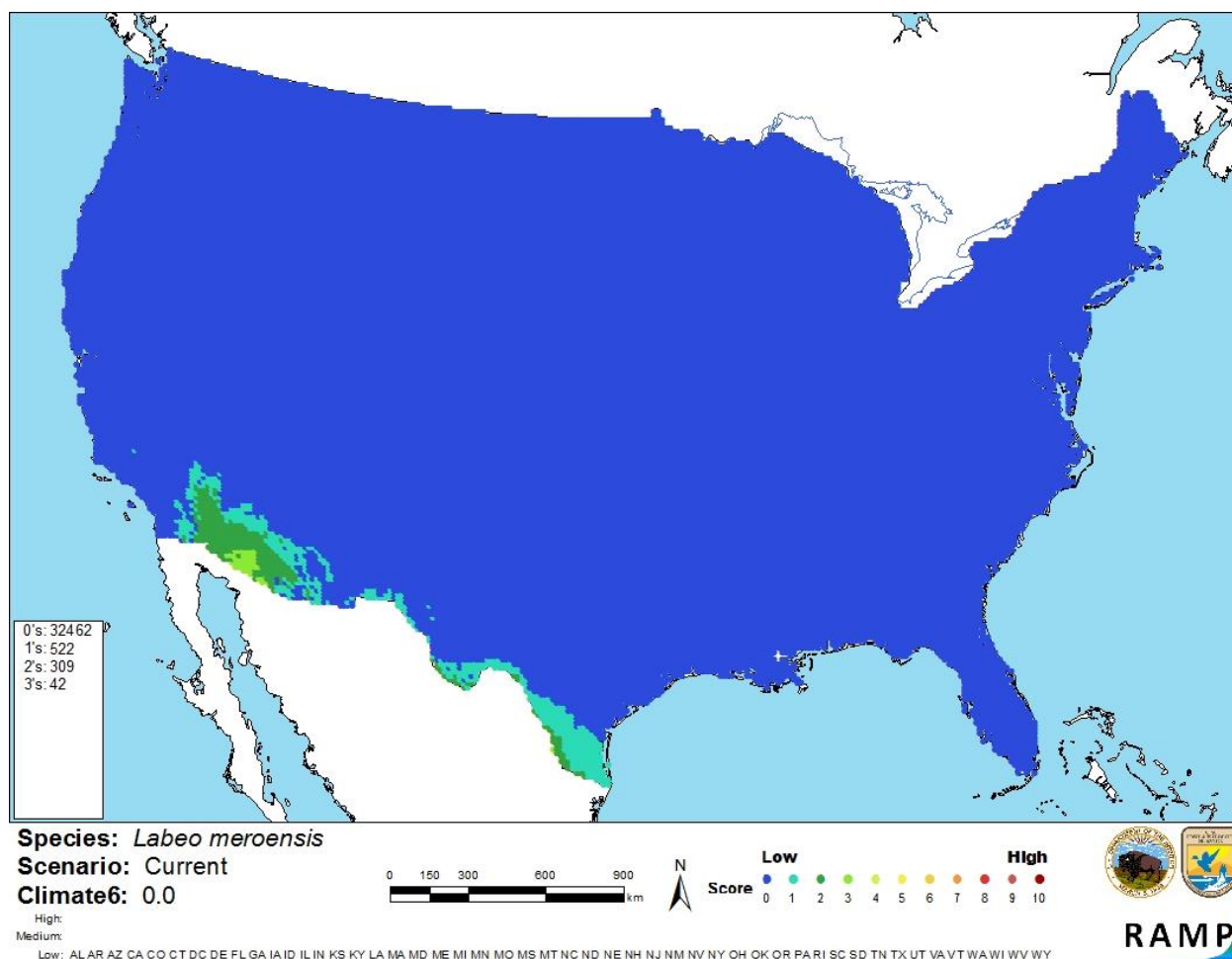


Figure 3. Map of RAMP (Sanders et al. 2014) climate matches for *Labeo meroensis* in the contiguous United States based on source locations reported by GBIF Secretariat (2018). 0=Lowest match, 10=Highest match.

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

7 Certainty of Assessment

There is little information available about *Labeo meroensis*. All of the information available about this species is from the original description of *L. meroensis* by Mortiz (2007).

L. meroensis has never been reported as introduced outside of its native range, so there is no information available on impacts of introductions of this species from which to base an assessment of risk. Further information is needed to adequately assess the risk this species poses to the contiguous United States. Certainty of this assessment is low.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Labeo meroensis is a cyprinid fish native to the Nile River in Sudan. History of invasiveness of this species is uncertain; it has never been reported as introduced or established outside of its native range. *L. meroensis* has a low climate match with the entire contiguous United States. Because of a lack of information from which to base a risk assessment, the certainty of assessment is low for this species. 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**
- **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.

EOL (Encyclopedia of Life). 2018. *Labeo meroensis*. Available:
<https://eol.org/pages/7183398/overview>. (May 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>. (May 2018).

Froese, R., and D. Pauly, editors. 2018. *Labeo meroensis* (Moritz, 2007). FishBase. Available:
<https://www.fishbase.de/summary/Labeo-meroensis.html>. (May 2018).

GBIF Secretariat. 2018. GBIF backbone taxonomy: *Labeo meroensis*, Moritz, 2007. Global Biodiversity Information Facility, Copenhagen. Available:
<https://www.gbif.org/species/5206107>. (May 2018).

Sanders, S., C. Castiglione, and M. H. Hoff. 2014. Risk Assessment Mapping Program: RAMP. 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.

Moritz, T. 2007. Description of a new cyprinid species, *Labeo meroensis* n. sp. (Teleostei: Cyprinidae), from the River Nile. Zootaxa 1612:55-62.