

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

Ecological Risk Screening Summary

U.S. Fish and Wildlife Service, May 2012

Revised, March 2018

Web Version, 6/5/2018

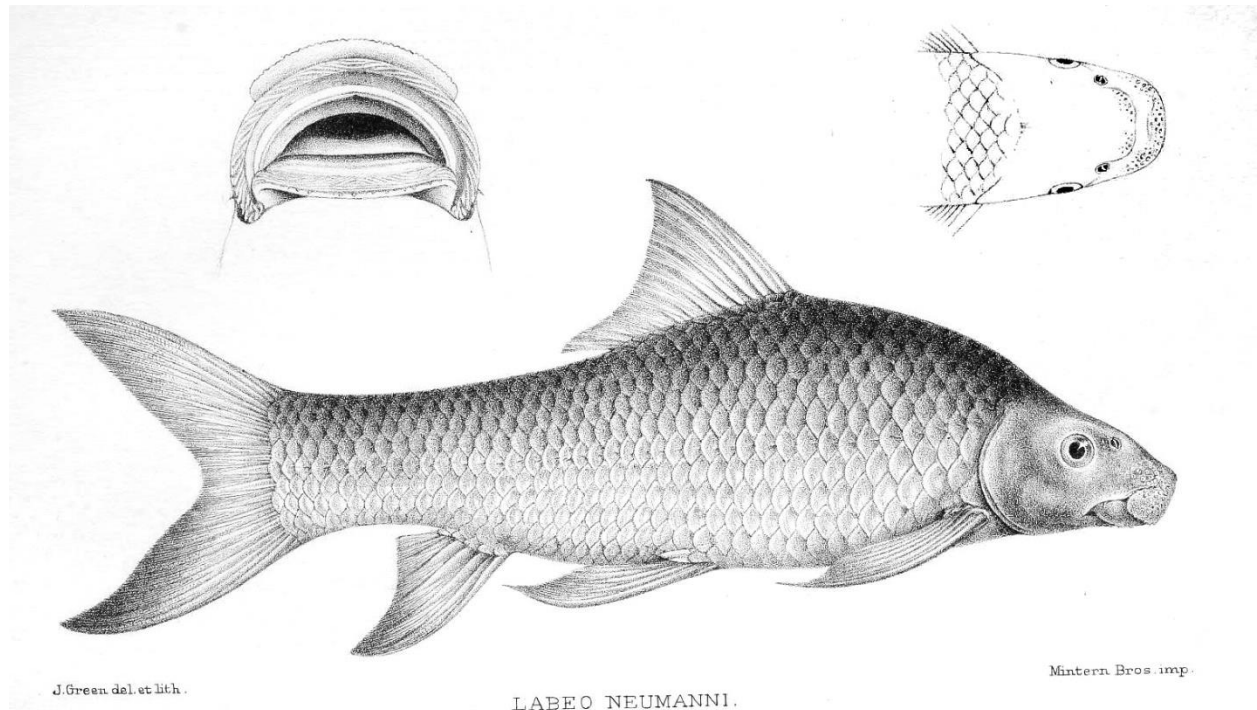


Photo: J. Green. Public domain. Available:

https://commons.wikimedia.org/wiki/File:Labeo_bottegi_Green.jpg. (March 2018).

1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2017):

“Africa: Known only from two river systems, the Juba/Webbi Shebeili (coastal system) [Ethiopia, Somalia, Kenya] and the Uaso Nyro (isolated inland) [Kenya].”

From Getahun (2010):

“This species is known from the Baro [Ethiopia] and Wabishebelle [Ethiopia and Somalia] basins, but has also been recorded from the Uaso Nyiro in Kenya close to Lake Baringo.”

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 U.S.

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

From ITIS (2018):

“Kingdom Animalia
Subkingdom Bilateria
Infrakingdom Deuterostomia
Phylum Chordata
Subphylum Vertebrata
Infraphylum Gnathostomata
Superclass Actinopterygii
Class Teleostei
Superorder Ostariophysii
Order Cypriniformes
Superfamily Cyprinoidea
Family Cyprinidae
Genus *Labeo*
Species *Labeo bottegi* Vinciguerra, 1897”

From Eschmeyer et al. (2018):

“Current status: Valid as *Labeo bottegi* Vinciguerra 1897. Cyprinidae: Labeoninae.”

From GBIF Secretariat (2018):

“Synonyms
Labeo bottegoi Vinciguerra, 1897
Labeo brunellii Parenzan, 1939
Labeo carnigliae Zolezzi, 1939
Labeo neumanni Boulenger, 1904
Labeo stictolepis Vinciguerra, 1913”

Size, Weight, and Age Range

From Froese and Pauly (2017):

“Max length : 79.0 cm TL male/unsexed; [Lévêque and Daget 1984]; max. published weight: 5.0 kg [Lévêque and Daget 1984]”

Environment

From Froese and Pauly (2017):

“Freshwater; benthopelagic.”

Climate/Range

From Froese and Pauly (2017):

“Tropical”

Distribution Outside the United States

Native

From Froese and Pauly (2017):

“Africa: Known only from two river systems, the Juba/Webbi Shebeili (coastal system) [Ethiopia, Somalia, Kenya] and the Uaso Nyro (isolated inland) [Kenya].”

From Getahun (2010):

“This species is known from the Baro [Ethiopia] and Wabishebelle [Ethiopia and Somalia] basins, but has also been recorded from the Uaso Nyiro in Kenya close to Lake Baringo.”

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 Boulenger (1909):

“Body strongly compressed, $3 \frac{1}{4}$ to $3 \frac{3}{4}$ times in total length. Head $4 \frac{1}{3}$ to $4 \frac{3}{4}$ times in total length, $1 \frac{1}{4}$ to $1 \frac{1}{3}$ times as long as broad; snout rounded; its length $\frac{2}{5}$ to a little less than $\frac{1}{2}$ that of head; eye perfectly lateral, $4 \frac{1}{3}$ to $5 \frac{1}{2}$ times in length of head; interorbital width $\frac{1}{2}$ length of head; width of mouth, with lips, $\frac{2}{5}$ to $\frac{1}{2}$ length of head; lips with small papillae forming transverse plicae; lower lip with a fringe of conical papillae; rostral flap large, with denticulate edge; a minute barbel in the corner of the mouth, hidden under folds of skin. [...] Olive above, whitish beneath; fins greyish.”

Biology

No information available.

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 (2017):

“Harmless”

3 Impacts of Introductions

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

4 Global Distribution



Figure 1. Known global distribution of *Labeo bottegi*, reported from Ethiopia. Map from GBIF Secretariat (2018). No georeferenced occurrences were available to represent the species distribution in Kenya or Somalia.

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 U.S. was 0.001, which is a low climate match. The climate match was low across the entire contiguous U.S. in general, with only small areas of medium match in the Southwest and southern Texas and Florida. The only State with a medium climate match was Texas.

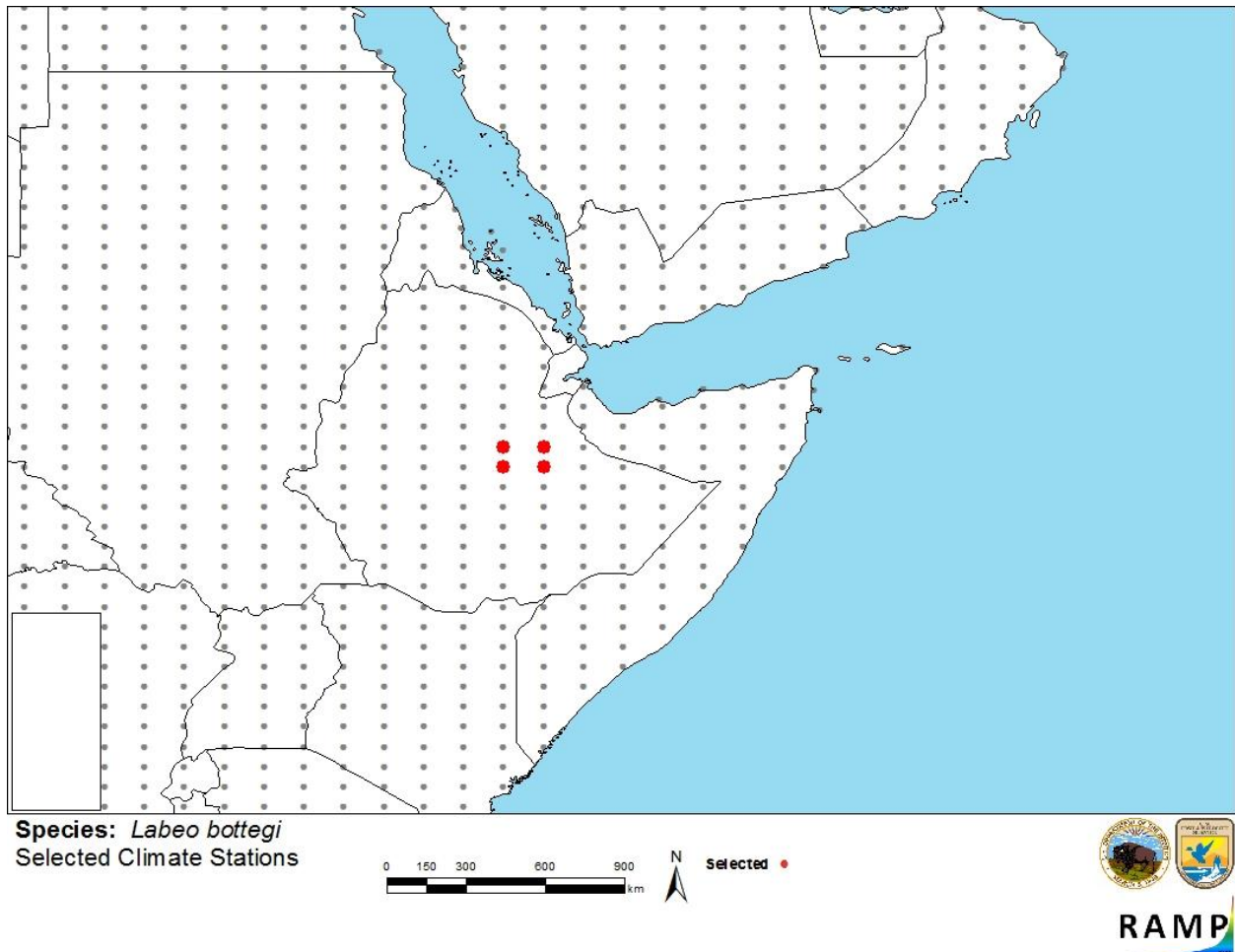


Figure 2. RAMP (Sanders et al. 2014) source map showing weather stations in East Africa selected as source locations (red; Ethiopia) and non-source locations (gray) for *Labeo bottegi* climate matching. Source locations from GBIF Secretariat (2018). No georeferenced occurrences were available in Somalia or Kenya to inform climate station selection, so these parts of the native range were not represented in climate matching source locations.

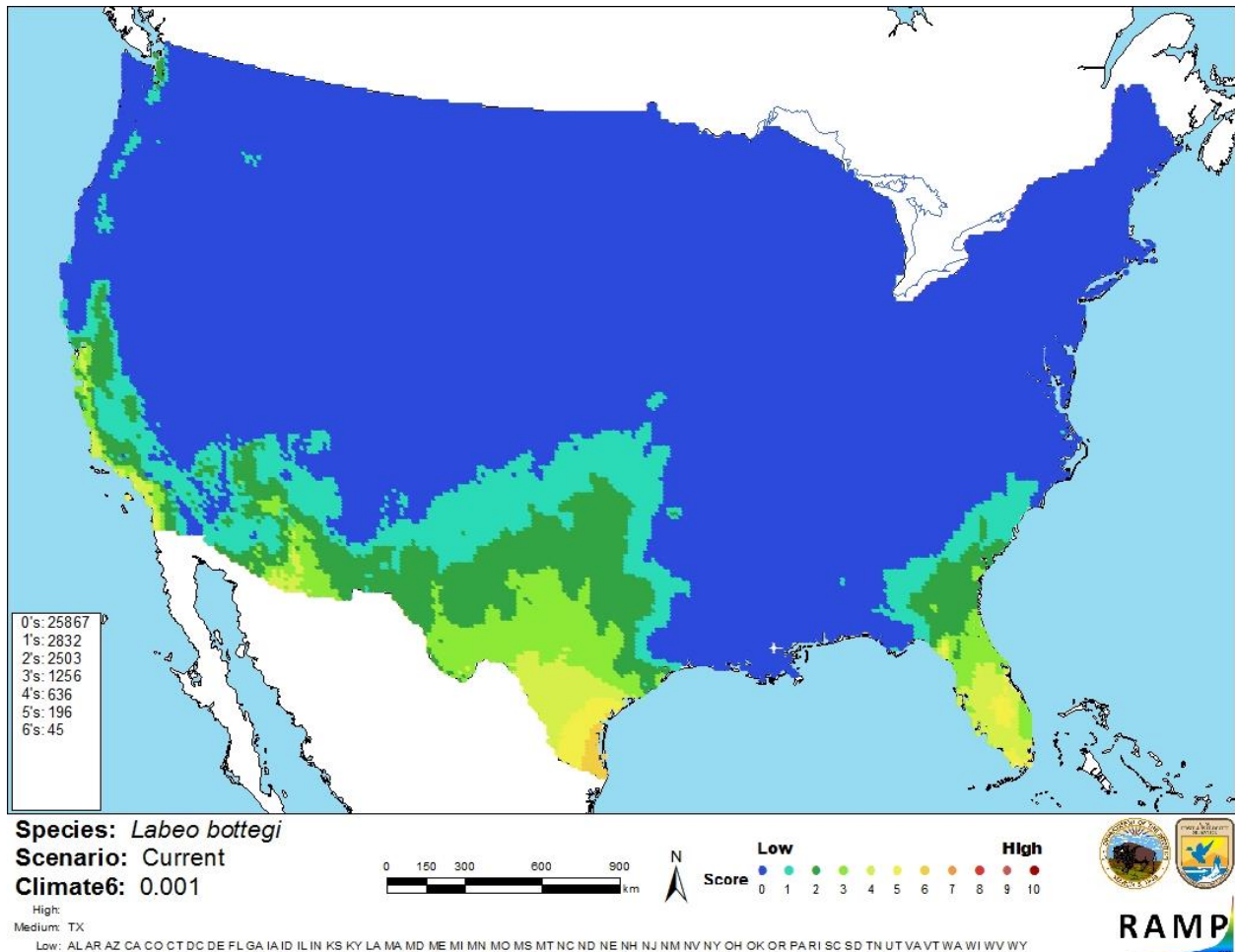


Figure 3. Map of RAMP (Sanders et al. 2014) climate matches for *Labeo bottegi* in the contiguous United States based on source locations reported by GBIF Secretariat (2018). 0=Lowest match, 10=Highest match.

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

There is very little information available about *Labeo bottegi*. Georeferenced occurrences were unavailable for substantial parts of the species native range, lending some uncertainty to the climate matching analysis. No introductions of this species outside of its native range have been documented. Because of this, no impacts of introductions have been documented, so the certainty of this assessment is low.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Labeo bottegi is a carp native to Ethiopia, Somalia, and Kenya. This species has never been reported as introduced outside of its native range. *L. bottegi* has a low climate match with the contiguous United States. Because of a lack of information from which to base an assessment of invasive potential, 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**
- **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.

Boulenger, G. A. 1909. Catalogue of the fresh-water fishes of Africa in the British Museum (Natural History). Volume 1. London.

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>. (March 2018).

Froese, R., and D. Pauly, editors. 2017. *Labeo bottegi* (Vinciguerra, 1897). FishBase. Available: <http://www.fishbase.org/summary/Labeo-bottegi.html>. (March 2018).

GBIF Secretariat. 2018. GBIF backbone taxonomy: *Labeo bottegi*, Vinciguerra, 1897. Global Biodiversity Information Facility, Copenhagen. Available: <https://www.gbif.org/species/5206051>. (March 2018).

Getahun, A. 2010. *Labeo bottegi*. The IUCN Red List of Threatened Species 2010: e.T181638A7694801. Available: <http://www.iucnredlist.org/details/181638/0>. (March 2018).

ITIS (Integrated Taxonomic Information System). 2018. *Labeo bottegi* (Vinciguerra, 1897). Integrated Taxonomic Information System, Reston, Virginia. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=689271#null. (March 2018).

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

Lévêque, C., and J. Daget. 1984. Cyprinidae. Pages 217-342 *in* J. Daget, J.-P. Gosse and D. F. E. Thys van den Audenaerde, editors. Check-list of the freshwater fishes of Africa (CLOFFA) volume 1. ORSTOM, Paris and MRAC, Tervuren, Belgium.