

***Labeo annectens* (a fish, no common name)**

Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, May 2012

Revised, March 2017

Web Version, 2/9/2018

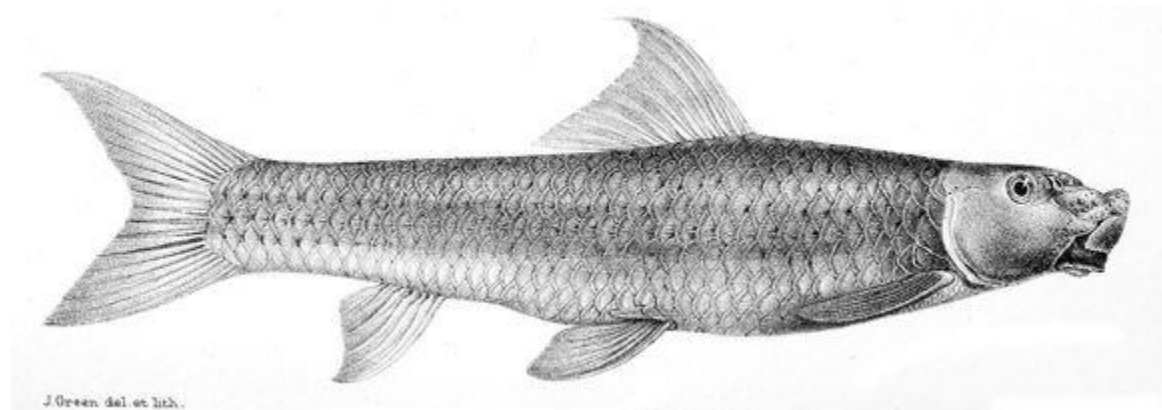


Image: J. Green. Public domain. Available: http://eol.org/data_objects/27304390. (March 2017).

1 Native Range and Status in the United States

Native Range

From Moelants (2010):

“*Labeo annectens* is known from throughout the Congo River basin. It is also known from the Lower Guinea region where it is widely distributed in most basins.”

“Angola; Cameroon; Congo; Congo, The Democratic Republic of the; Gabon; Zambia”

Status in the United States

This species has not been reported as introduced or established in the United States.

Means of Introductions in the United States

This species has not been reported as introduced or established in the United States.

Remarks

From GBIF (2016):

“SYNONYMS

Labeo annectans Boulenger, 1903

Labeo cylindricus subsp. *annectans* Boulenger, 1903”

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

From ITIS (2017):

“Kingdom Animalia

Subkingdom Bilateria

Infrakingdom Deuterostomia

Phylum Chordata

Subphylum Vertebrata

Infraphylum Gnathostomata

Superclass Osteichthyes

Class Actinopterygii

Subclass Neopterygii

Infraclass Teleostei

Superorder Ostariophysi

Order Cypriniformes

Superfamily Cyprinoidea

Family Cyprinidae

Genus *Labeo* Cuvier, 1816

Species *Labeo annectans* Boulenger, 1903”

“Current Standing: valid”

Size, Weight, and Age Range

From Froese and Pauly (2016):

“Max length : 17.5 cm SL male/unsexed; [De Weirdt et al. 2007]”

“Maximum TL recorded: 48.5 cm [Lévêque and Daget 1984].”

Environment

From Froese and Pauly (2016):

“Freshwater; benthopelagic.”

“Occurs in flowing rivers [...]”

Climate/Range

From Froese and Pauly (2016):

“Tropical, preferred ?; 10°N - 15°S”

Distribution Outside the United States

Native Range

From Moelants (2010):

“*Labeo annectens* is known from throughout the Congo River basin. It is also known from the Lower Guinea region where it is widely distributed in most basins.”

“Angola; Cameroon; Congo; Congo, The Democratic Republic of the; Gabon; Zambia”

Introduced

No introductions of this species have been reported.

Means of Introduction Outside the United States

No introductions of this species have been reported.

Short Description

From Froese and Pauly (2016):

“Dorsal spines (total): 0; Dorsal soft rays (total): 9-10; Vertebrae: 31 - 33. Diagnosis: snout rounded and prominent, usually with deep transverse furrow and very well-developed fleshy appendage at its anterior end [Tshibwabwa 1997; De Weirdt et al. 2007]. Scale formula: 38-39 (38 commonly observed); 4.5-5.5 (5.5 commonly observed); 3.0-3.5 (3.0 commonly observed); 14-16 (16 commonly observed); dorsal fin with 9-10 (10 commonly observed) branched rays [De Weirdt et al. 2007]. Upper edge of dorsal fin always concave [Tshibwabwa 1997; De Weirdt et al. 2007]. 31-33 (33 commonly observed) vertebrae; ventral fin origin located under the 4th branched dorsal ray; genital opening distal from anal fin origin; dark brown longitudinal band on flanks, not flared over scaled base of caudal fin [De Weirdt et al. 2007].”

Biology

From Ibanez et al. (2009):

“Trophic code [...]

HER [herbivore/detritivore]”

Human Uses

From Moelants (2010):

“This species is harvested for human consumption.”

Diseases

No information available.

Threat to Humans

From Froese and Pauly (2016):

“Harmless”

3 Impacts of Introductions

No introductions of this species have been reported.

4 Global Distribution

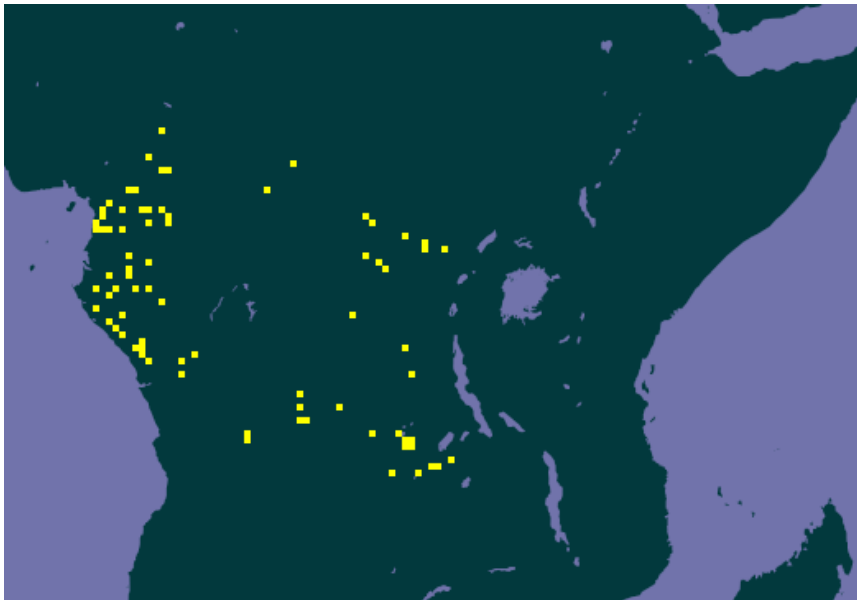


Figure 1. Known global established locations of *Labeo annectens*. Map from GBIF (2016). Points in West Africa were excluded from climate matching because these locations are outside the described range of *Labeo annectens* (see Distribution Outside of the United States).

5 Distribution Within the United States

This species has not been reported as introduced or established in the United States.

6 Climate Matching

Summary of Climate Matching Analysis

The climate match (Sanders et al. 2014; 16 climate variables; Euclidean Distance) was medium in peninsular Florida, along the Gulf Coast, and in small areas of the Southwest and southern California. All other areas of the contiguous U.S. showed low climate matches. Climate 6

proportion indicated that the contiguous U.S. has a low climate match overall. Proportions in the range 0.000-0.005 indicate a low climate match; Climate 6 proportion of *L. annectens* is 0.003.

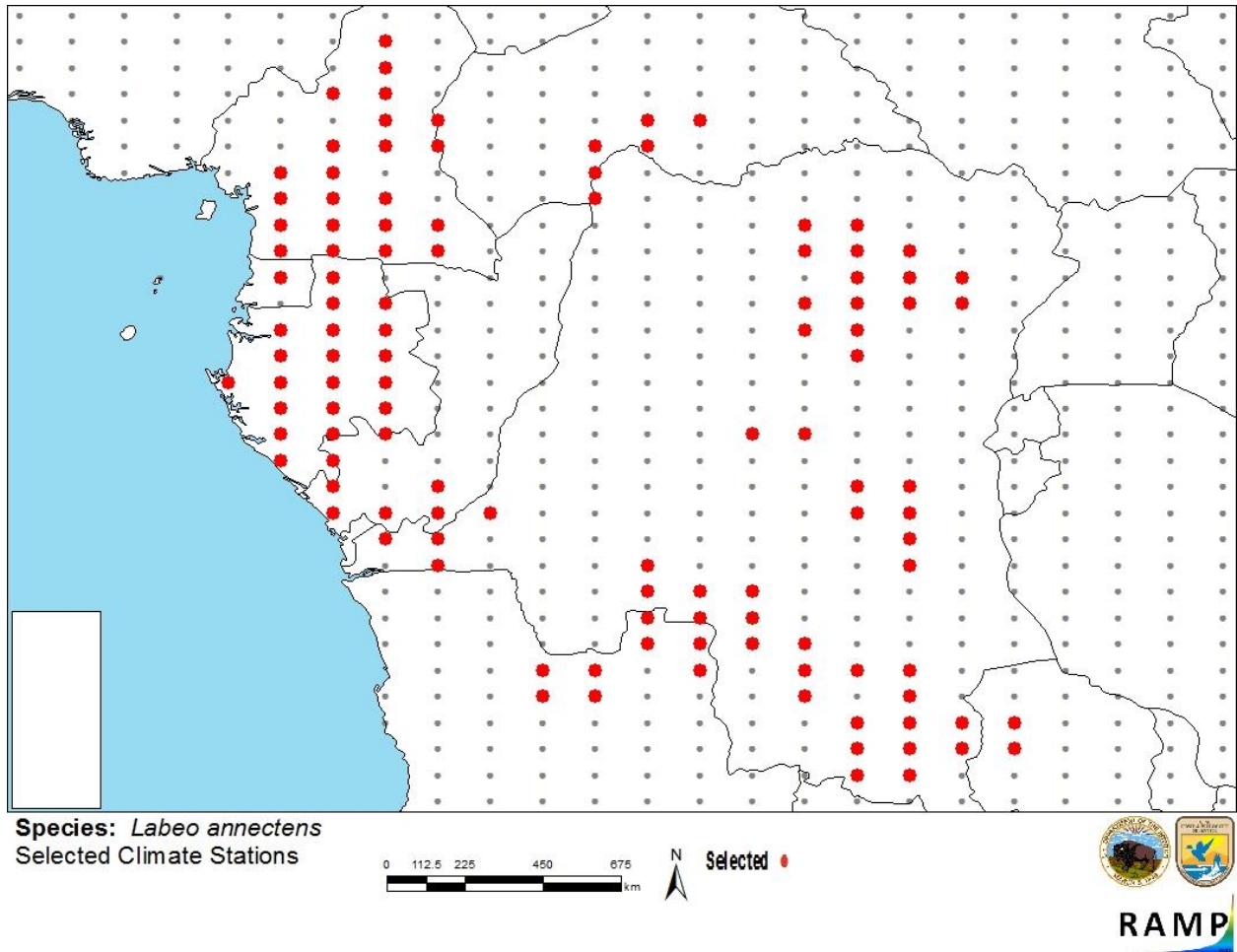


Figure 2. RAMP (Sanders et al. 2014) source map showing weather stations selected as source locations (red) and non-source locations (gray) for *Labeo annectens* climate matching. Source locations from GBIF (2016).

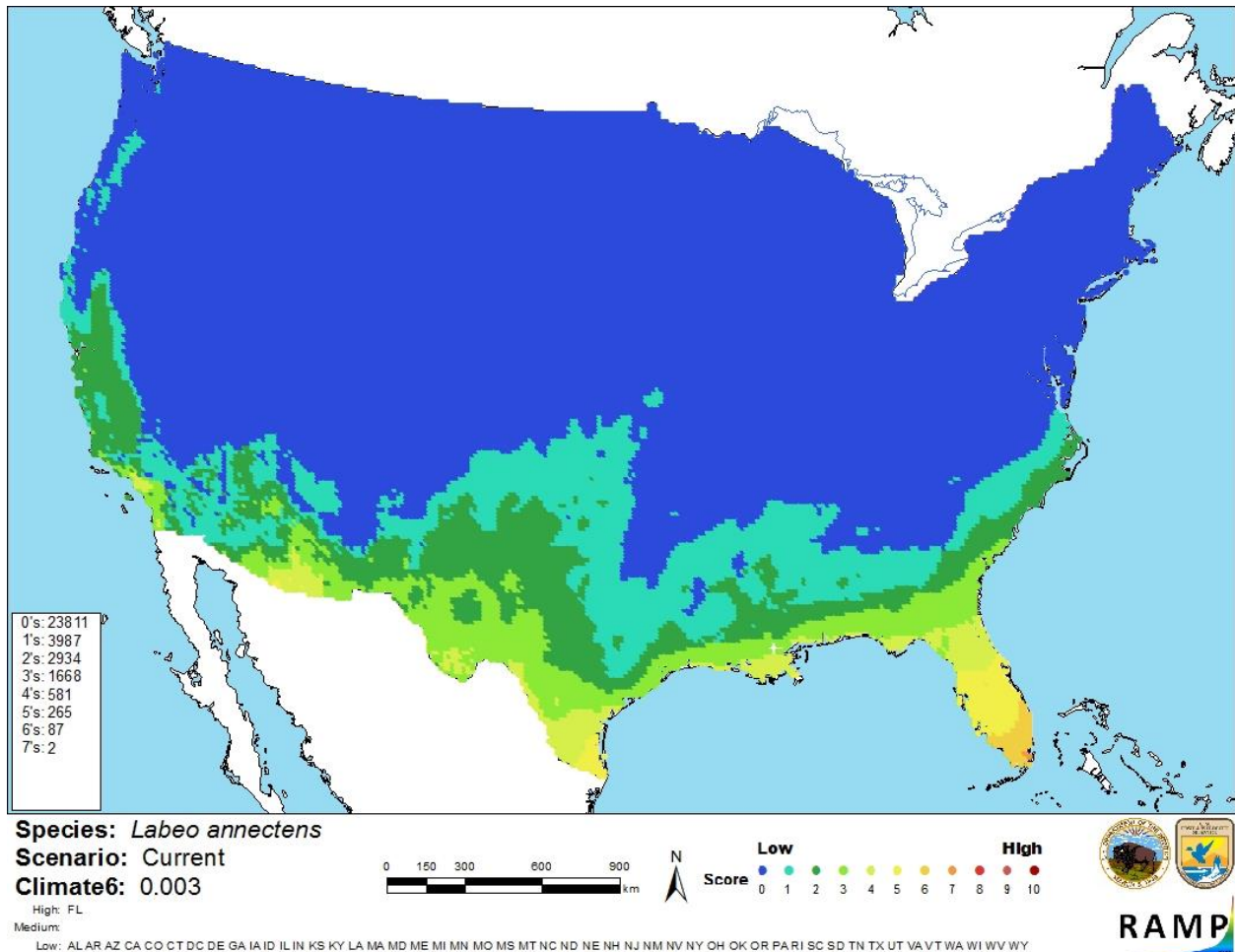


Figure 3. Map of RAMP (Sanders et al. 2014) climate matches for *Labeo annectens* in the contiguous United States based on source locations reported by GBIF (2016). 0=Lowest match, 10=Highest match. Climate match scores are tabulated on the left.

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

There is little information available on the biology and ecology of *L. annectens*. No introductions of this species have been reported, so impacts of introductions remain unknown. Certainty of this assessment is low.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Labeo annectens is a cyprinid fish native to central Africa, where it is harvested for human consumption. There is no documented history of introduction for this species, so potential impacts of introduction are unknown. Climate match to the contiguous U.S. is low, with highest matches occurring in Florida. Overall risk posed by *L. annectens* is uncertain.

Assessment Elements

- **History of Invasiveness: Uncertain**
- **Climate Match: Low**
- **Certainty of Assessment: 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.

Froese, R., and D. Pauly, editors. 2016. *Labeo annectens* Boulenger, 1903. FishBase. Available: <http://fishbase.org/summary/Labeo-annectens.html>. (March 2017).

GBIF (Global Biodiversity Information Facility). 2016. GBIF backbone taxonomy: *Labeo annectens* Boulenger, 1903. Global Biodiversity Information Facility, Copenhagen. Available: <http://www.gbif.org/species/5206160>. (March 2017).

Ibañez, C., J. Belliard, R. M. Hughes, P. Irz, A. Kamdem-Toham, N. Lamouroux, P. A. Tedesco, and T. Oberdorff. 2009. Convergence of temperate and tropical stream fish assemblages. *Ecography* 32:658-670.

ITIS (Integrated Taxonomic Information System). 2017. *Labeo annectens* Boulenger, 1903. Integrated Taxonomic Information System, Reston, Virginia. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=689263#null. (March 2017).

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Sanders, S., C. Castiglione, and M. 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.

De Weirdt, D., A. Getahun, S. Tshibwabwa, and G. G. Teugels. 2007. Cyprinidae. Pages 466-572 in M. L. J. Stiassny, G. G. Teugels, and C. D. Hopkins, editors. The fresh and brackish water fishes of Lower Guinea, West-Central Africa, volume I. Collection Faune et Flore tropicales 42. Institut de Recherche pour le Développement, Paris, Muséum National d'Histoire Naturelle, Paris, and Musée Royal de l'Afrique Centrale, Tervuren, Belgium.

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.

Tshibwabwa, S. M. 1997. Systématique des espèces africaines du genre *Labeo* (Teleostei, Cyprinidae) dans les régions ichthyogéographiques de Basse-Guinée et du Congo II. PhD dissertation. Presses Universitaires de Namur, Namur, Belgium.