

## ***Labeo kirkii* (a carp, no common name)**

### **Ecological Risk Screening Summary**

U.S. Fish and Wildlife Service, April 2012

Revised, April 2018

Web Version, 5/16/2018

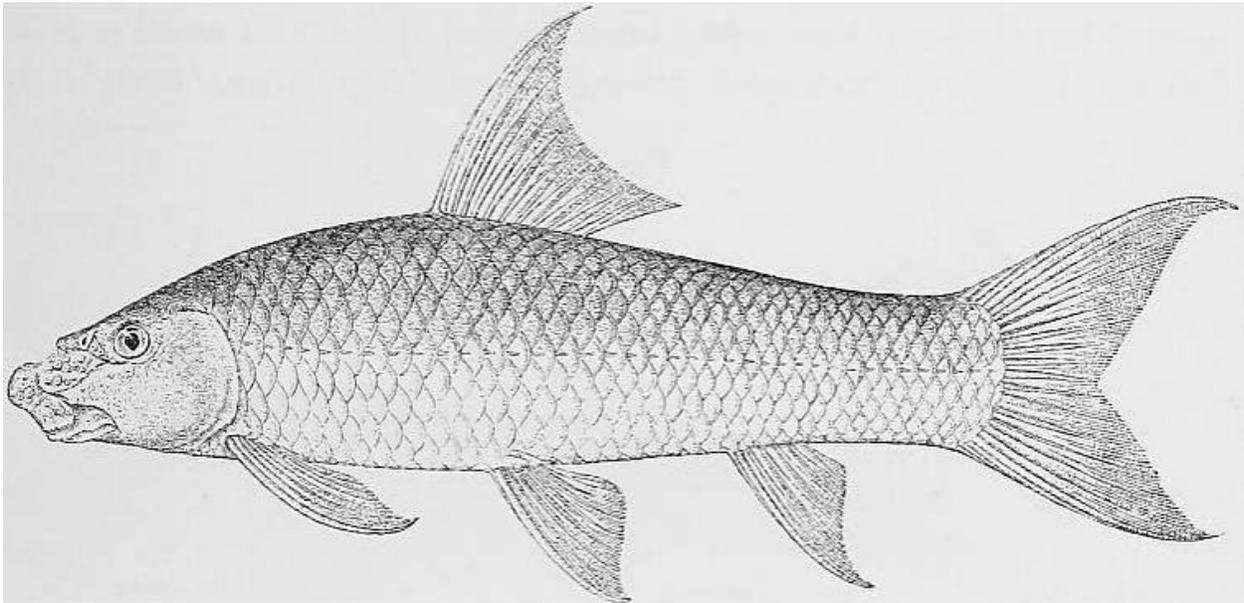


Image: G. A. Boulenger. Public domain. Available:  
<https://www.biodiversitylibrary.org/page/37889908#page/347/mode/1up>. (April 2018).

## **1 Native Range and Status in the United States**

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### **Native Range**

From Froese and Pauly (2018):

“Africa: Congo River basin in Democratic Republic of the Congo, and the Rovuma River (Tanzania-Mozambique border) [Tshibwabwa 1997].”

### **Status in the United States**

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

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### 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 Ostariophysi  
Order Cypriniformes  
Superfamily Cyprinoidea  
Family Cyprinidae  
Genus *Labeo*  
Species *Labeo kirkii* Boulenger, 1903”

From Eschmeyer et al. (2018):

“Current status: Valid as *Labeo kirkii* Boulenger 1903. Cyprinidae: Labeoninae.”

### Size, Weight, and Age Range

From Froese and Pauly (2018):

“Max length : 24.0 cm TL male/unsexed; [Lévêque and Daget 1984]”

### Environment

From Froese and Pauly (2018):

“Freshwater; benthopelagic.”

### Climate/Range

From Froese and Pauly (2018):

“Tropical; 3°N - 17°S”

## **Distribution Outside the United States**

### **Native**

From Froese and Pauly (2018):

“Africa: Congo River basin in Democratic Republic of the Congo, and the Rovuma River (Tanzania-Mozambique border) [Tshibwabwa 1997].”

### **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 moderately compressed, its depth equal to length of head and 4 times in total length. Head  $\frac{2}{3}$  as broad as long; snout obtusely pointed, strongly projecting, with a strong curved transverse groove above, its length  $\frac{1}{2}$  that of head; eye supero-lateral, 6 times in length of head,  $2\frac{1}{2}$  times in interorbital width; width of mouth, with lips,  $\frac{3}{5}$  length of head; lips strongly developed, upper straight-edged, lower expanded and bordered in front by a fringe of papillae, the posterior border festooned; inner surface of lips with small papillae forming numerous transverse plicae; rostral flap large, with denticulate edge; snout with crater-like scars of large tubercles. Dorsal III 10, equally distant from nostrils and from caudal, upper edge concave, longest ray a little longer than head. Anal III 5, nearly reaching root of caudal. Pectoral as long as head, not reaching ventral, the first ray of which falls below 4th branched ray of dorsal. Caudal deeply emarginated. Caudal peduncle a little longer than deep. Scales  $39\frac{6\frac{1}{2}}{7\frac{1}{2}}$ , 4 between lateral line and root of ventral, 22 round caudal peduncle. Dark brown above, lighter beneath.”

## **Biology**

From Moelants (2010):

“It is known to occur in rapid waters and swampy areas (Tshibwabwa 1997).”

## **Human Uses**

From Moelants (2010):

“This species is harvested for human consumption.”

## **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

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

## 4 Global Distribution

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**Figure 1.** Known global distribution of *Labeo kirkii*, reported from the Democratic Republic of the Congo. Map from GBIF Secretariat (2018).

## 5 Distribution Within the United States

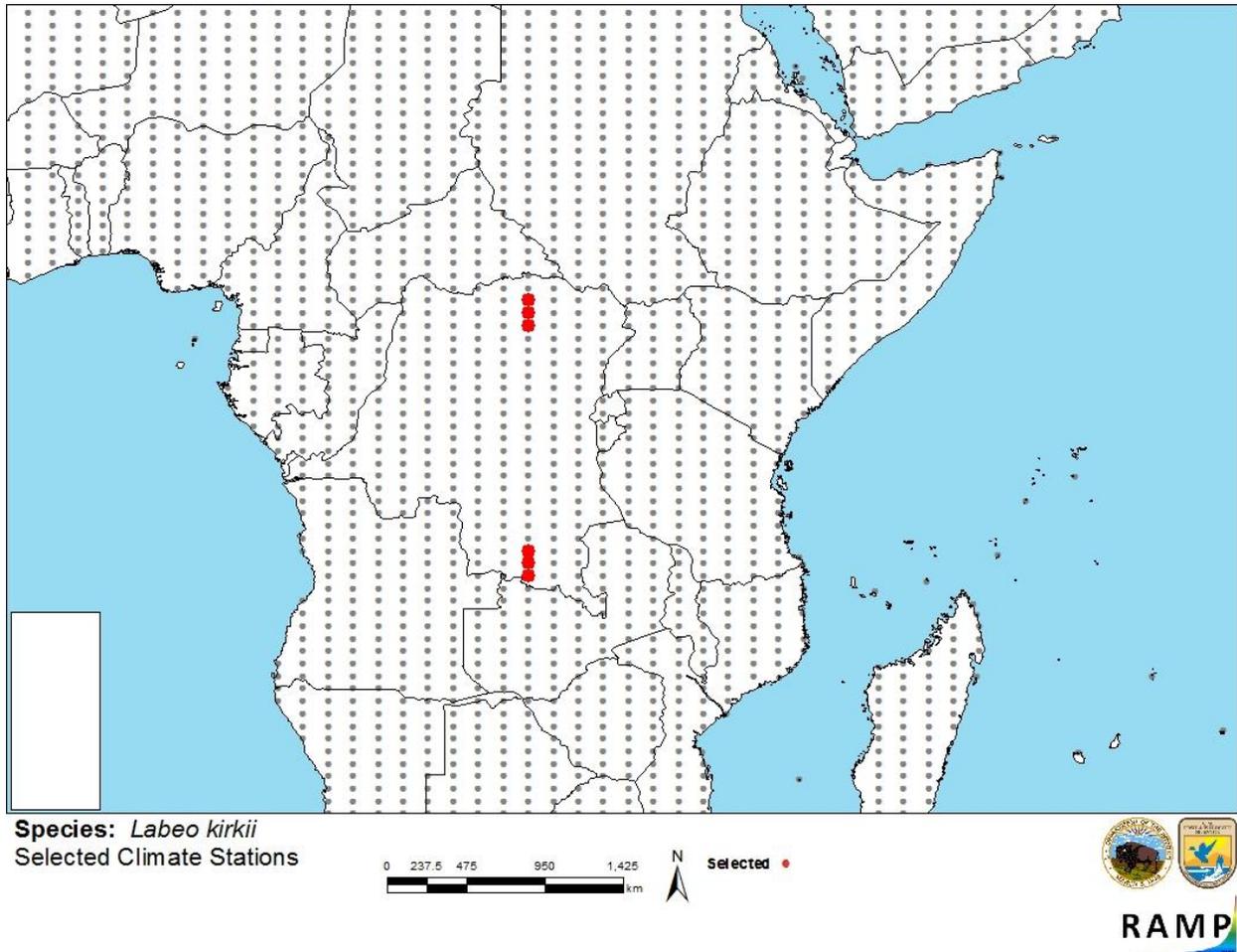
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This species has not been reported as introduced or established in the U.S.

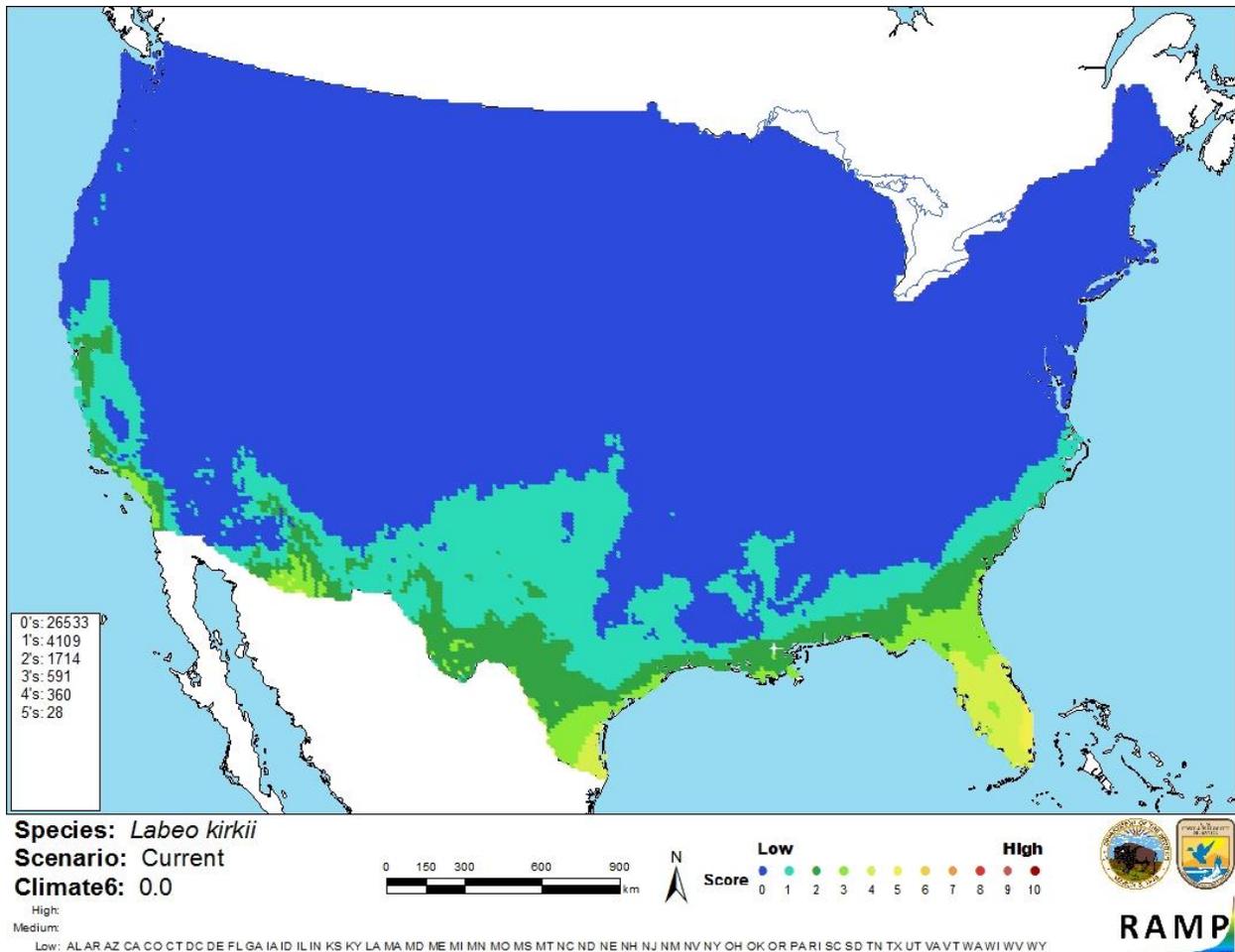
## 6 Climate Matching

### Summary of Climate Matching Analysis

The Climate 6 score (Sanders et al. 2014; 16 climate variables; Euclidean distance) for the contiguous U.S. was 0.0, which is a low climate match. The climate match was very low across most of the contiguous U.S. The far southern U.S. had a slightly higher climate match, and there was a small area of medium climate match located in Florida.



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



**Figure 3.** Map of RAMP (Sanders et al. 2014) climate matches for *Labeo kirkii* in the contiguous United States based on source locations reported by GBIF Secretariat (2018). 0=Lowest match, 10=Highest match. Counts of 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
$0.000 < X < 0.005$	Low
$0.005 < X < 0.103$	Medium
$\geq 0.103$	High

## 7 Certainty of Assessment

There is almost no information available about *Labeo kirkii*. There have been no documented introductions of this species outside of its native range. Because no introductions of this species have been documented, there is no information from which to base a risk assessment, so the certainty of this assessment is low.

## 8 Risk Assessment

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### Summary of Risk to the Contiguous United States

*Labeo kirkii* is a freshwater cyprinid fish native to central Africa. *L. kirkii* is used as a food fish. This species has never been documented as introduced or established outside of its native range. *L. kirkii* has a low climate match with the contiguous U.S. Further information is needed to adequately assess the risk this species poses, so 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**
- **Overall Risk Assessment Category: Uncertain**

## 9 References

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**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). Taylor and Francis, 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>. (April 2018).

Froese, R., and D. Pauly, editors. 2018. *Labeo kirkii* (Boulenger, 1903). FishBase. Available: <http://www.fishbase.org/summary/Labeo-kirkii.html>. (April 2018).

GBIF Secretariat. 2018. GBIF backbone taxonomy: *Labeo kirkii*, Boulenger, 1903. Global Biodiversity Information Facility, Copenhagen. Available: <https://www.gbif.org/species/5206212>. (April 2018).

ITIS (Integrated Taxonomic Information System). 2018. *Labeo kirkii* (Boulenger, 1903). Integrated Taxonomic Information System, Reston, Virginia. Available: [https://www.itis.gov/servlet/SingleRpt/SingleRpt?search\\_topic=TSN&search\\_value=689303#null](https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=689303#null). (April 2018).

Moelants, T. 2010. *Labeo kirkii*. The IUCN Red List of Threatened Species 2010: e.T183018A8029324. Available: <http://www.iucnredlist.org/details/183018/0>. (April 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**

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**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). ORSTOM, Paris and MRAC, Tervuren, Belgium.

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