

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

Ecological Risk Screening Summary

U.S. Fish and Wildlife Service, February 2012

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1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2018):

“Africa: lower and middle Congo River [Tshibwabwa 1997] and Wagenia Falls [Moelants 2015] in Democratic Republic of the Congo; mainly found in rapids [Tshibwabwa 1997].”

From Moelants (2010):

“*Labeo sorex* has an apparently disjunct distribution and is known from the Lower Congo, and the central reaches (Kisangani) of the Congo River. Possibly, it also occurs in the rapids of the Central Congo area (Reid, Mc. G., pers. comm.) [Democratic Republic of the Congo].”

Status 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.

Means of Introduction into the United States

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

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

From Froese and Pauly (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 sorex* Nichols and Griscom, 1917”

“Current Standing: valid”

Size, Weight, and Age Range

From Froese and Pauly (2018):

“Max length : 35.2 cm SL male/unsexed; [Lévêque and Daget 1984]”

Environment

From Froese and Pauly (2018):

“Freshwater; benthopelagic.”

From Pwema Kiamfu et al. (2011):

“Three species: *Labeo sorex*, *L. nasus* and *L. macrostomus* prefer deep, rocky sites with fast current and high dissolved oxygen concentration. These species are thus considered as rheophilic.”

Climate/Range

From Froese and Pauly (2018):

“Tropical; 5°N - 10°S”

Distribution Outside the United States

Native

From Froese and Pauly (2018):

“Africa: lower and middle Congo River [Tshibwabwa 1997] and Wagenia Falls [Moelants 2015] in Democratic Republic of the Congo; mainly found in rapids [Tshibwabwa 1997].”

From Moelants (2010):

“*Labeo sorex* has an apparently disjunct distribution and is known from the Lower Congo, and the central reaches (Kisangani) of the Congo River. Possibly, it also occurs in the rapids of the Central Congo area (Reid, Mc. G., pers. comm.) [Democratic Republic of the Congo].”

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 (2018):

“Dorsal soft rays (total): 9-10; Vertebrae: 34 - 36. Lips with transverse plicae on inner surface; snout very prominent, ending in a big fleshy upwards turned transverse appendix; eyes extremely small, generally in dorsal position. Can be distinguished from *L. nasus* by its smaller eyes and higher vertebral and scale counts [Tshibwabwa and Teugels 1995].”

From Roberts and Stewart (1976):

“*Labeo sorex*, *Bagrus caeruleus*, *Chrysichthys* sp., *Chiloglanis carnosus*, and *Synodontis acanthomias* all have eyes smaller than any or almost any other species in their respective genus. The reduction is particularly striking in *Labeo sorex*. Although the eyes of the rheophilic species

listed here are very small, they are always superficial in position, never partially or completely covered by skin and other tissues, and never entirely absent.”

“uniformly dusky grey or bluish grey”

Biology

From Froese and Pauly (2018):

“Known only from the rapids of the Congo River where it appears most adapted. Among its adaptations are the reduce [sic] diameter of the eyes; the dorso-laterally flattened shape of the head, the very large lips which are apparently adapted for suction; the latero-ventral arrangement and form of the paired fins which is largely extended and compressed ; [sic] and the blue or bluish coloration [Tshibwabwa 1997].”

Human Uses

From Moelants (2010):

“This species is harvested for human consumption.”

Diseases

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

Threat to Humans

From Froese and Pauly (2018):

“Harmless”

3 Impacts of Introductions

No information available. No introductions of this species have been reported.

4 Global Distribution



Figure 1. Known global distribution of *Labeo sorex*, reported from the Democratic Republic of the Congo. Map from GBIF Secretariat (2017).

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. 2018; 16 climate variables; Euclidean Distance) for *Labeo sorex* was low throughout the contiguous United States except for medium matches in southern coastal Florida and southern coastal Louisiana. Climate 6 score indicated that the contiguous United States has a low climate match overall. Scores of 0.005 and below are classified as low match; Climate 6 score for *L. sorex* was 0.000.

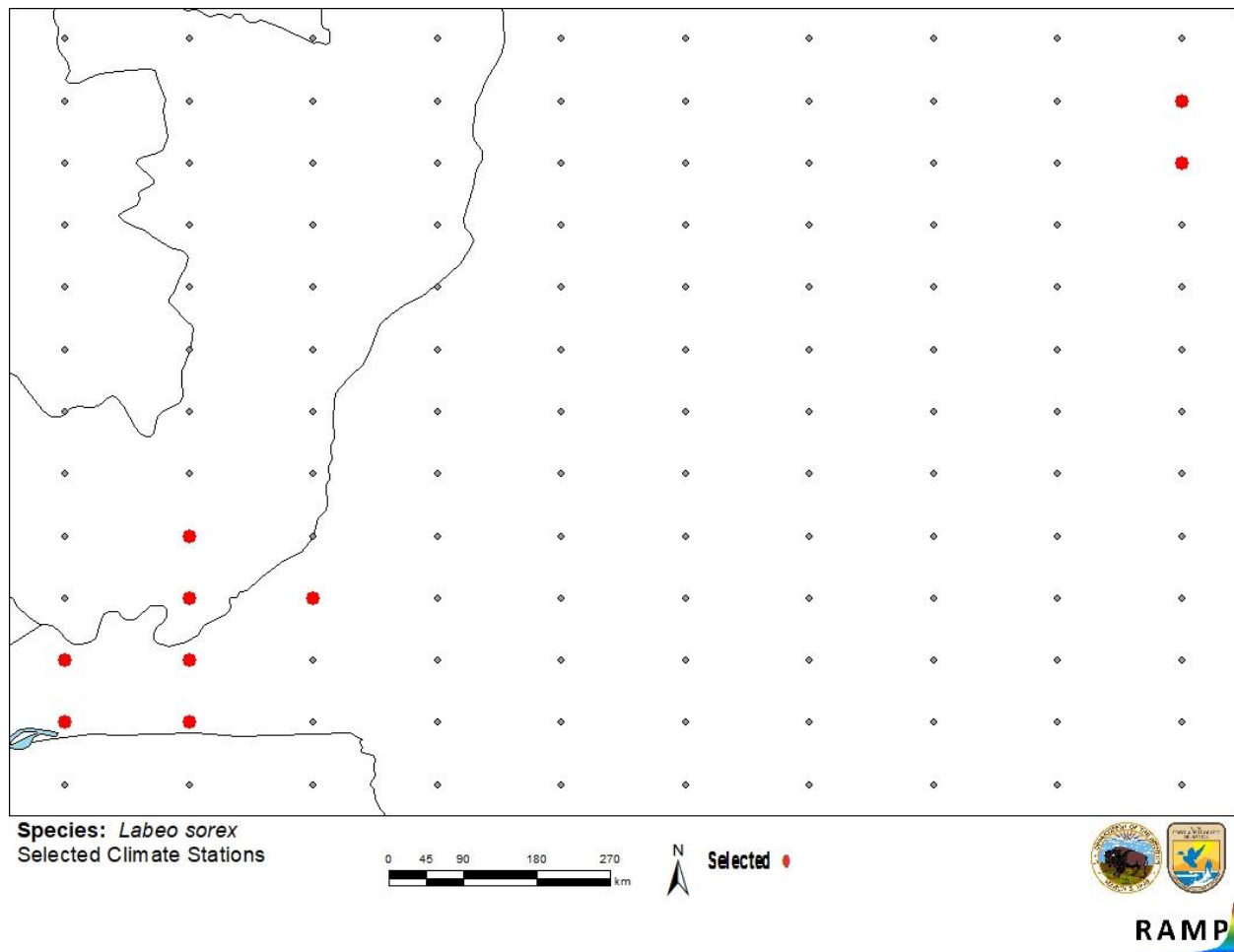


Figure 2. RAMP (Sanders et al. 2018) source map showing weather stations in the Congo River basin, Africa, selected as source locations (red; Democratic Republic of the Congo, Republic of the Congo) and non-source locations (gray) for *L. sorex* climate matching. Source locations from GBIF Secretariat (2017). Selected weather stations are located within 100 km of a species occurrence and do not represent the exact locations of species occurrences.

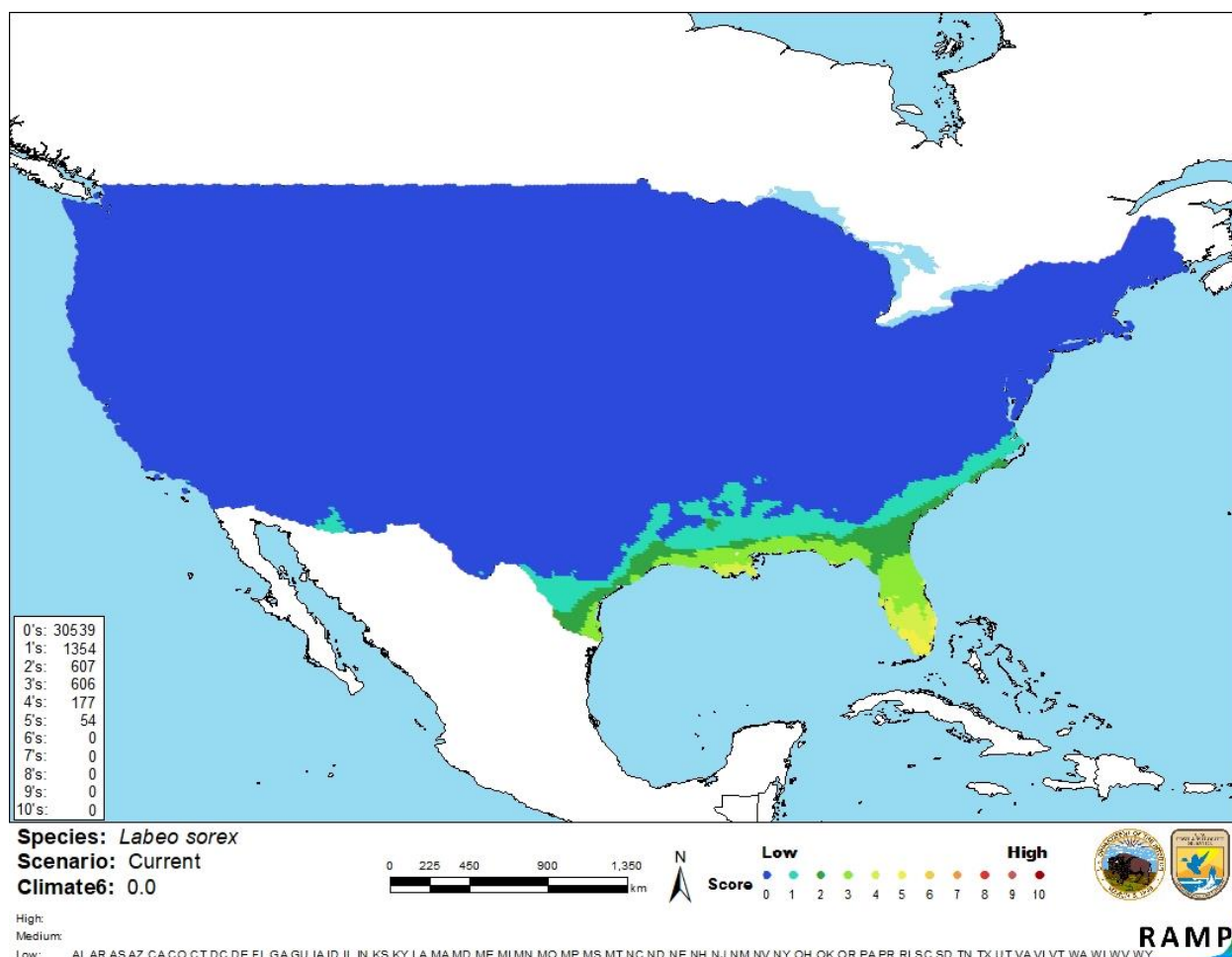


Figure 3. Map of RAMP (Sanders et al. 2018) climate matches for *L. sorex* in the contiguous United States based on source locations reported by GBIF Secretariat (2017). 0=Lowest match, 10=Highest match.

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

Limited information is available on the biology, ecology, and distribution of *Labeo sorex*. No introductions of this species have been reported, so no information on impacts of introduction is available. Without further information, certainty of this assessment is low.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Labeo sorex is a species of carp native to the lower and middle Congo River basin in the Democratic Republic of the Congo. There are no records of introductions of *L. sorex* outside the native range. Therefore, any negative impacts of introduction remain unknown. Certainty of assessment is low. Climate match to the contiguous United States is low overall, with medium matches in southern Florida and southern Louisiana. With no introduction history and low climate match, overall risk posed by *L. sorex* 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. 2018. *Labeo sorex* Nichols & Griscom, 1917. FishBase. Available: <http://www.fishbase.se/summary/Labeo-sorex.html>. (July 2018).

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ITIS (Integrated Taxonomic Information System). 2018. *Labeo sorex* Nichols and Griscom, 1917. Integrated Taxonomic Information System, Reston, Virginia. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=689344#null. (July 2018).

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Pwema Kiamfu, V., N. Mbomba Bekeli, L.-M. Pigneur, Takoy Lomema, and J.-C. Micha. 2011. Environmental variables structuring *Labeo* species (Pisces, Cyprinidae) in Malebo Pool, Congo River. International Journal of Biological and Chemical Sciences 5(2):507-514.

Roberts, T. R., and D. J. Stewart. 1976. An ecological and systematic survey of fishes in the rapids of the lower Zaïre or Congo River. Bulletin of the Museum of Comparative Zoology 147(6):237-317.

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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.

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

Tshibwabwa, S. M., and G. G. Teugels. 1995 Contribution to the systematic revision of the African cyprinid fish genus *Labeo*: species from the Lower Zaire river system. Journal of Natural History 29:1543-1579.