

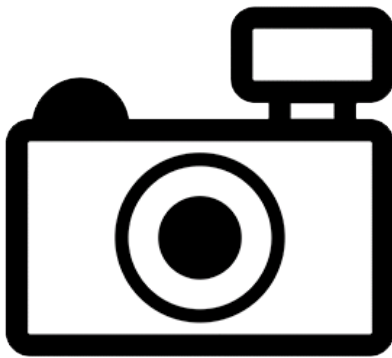
***Labeo alluaudi* (a carp, no common name)**

Ecological Risk Screening Summary

U.S. Fish and Wildlife Service, January 2012

Revised, January 2018

Web Version, 5/30/2018



No Photo Available

1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2017):

“Africa: present within the drainage basins of the Cavally and Nipoué (Cess) rivers [Lévêque and Daget 1984; Lévêque 1990, 2003; Paugy et al. 1994] in Côte d’Ivoire and Liberia [Lévêque 1990]. Reported from Sewa River in Sierra Leone [Paugy et al. 1994] and Via River in Liberia [Stiassny 1991]. Also [Reid 1985].”

Status in the United States

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

Means of Introduction into the United States

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

Remarks

From Bousso and Lalèyè (2010):

“[...] it is impacted by agriculture, mining, deforestation, pollution and urbanisation. The species EOO [extent of occurrence] is less than 5,000 km², and the AOO [area of occupancy] is less than 500 km², and it therefore qualifies as Endangered.”

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 Ostariophysi
Order Cypriniformes
Superfamily Cyprinoidea
Family Cyprinidae
Genus *Labeo*
Species *Labeo alluaudi* Pellegrin, 1933”

“Current Standing: valid”

Size, Weight, and Age Range

From Froese and Pauly (2017):

“Max length : 13.5 cm SL male/unsexed; [Lévêque and Daget 1984]”

“Maximum TL was recorded at 16.5 cm [Lévêque and Daget 1984].”

Environment

From Froese and Pauly (2017):

“Freshwater; benthopelagic.”

From Pezold et al. (2016):

“*Labeo alluaudi* [...] are associated with second or third order streams and higher.”

Climate/Range

From Froese and Pauly (2017):

“Tropical”

Distribution Outside the United States

Native

From Froese and Pauly (2017):

“Africa: present within the drainage basins of the Cavally and Nipoué (Cess) rivers [Lévêque and Daget 1984; Lévêque 1990, 2003; Paugy et al. 1994] in Côte d'Ivoire and Liberia [Lévêque 1990]. Reported from Sewa River in Sierra Leone [Paugy et al. 1994] and Via River in Liberia [Stiassny 1991]. Also [Reid 1985].”

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 (2017):

“Dorsal soft rays (total): 12-14; Anal soft rays: 7. Diagnosis: body very elongate; back nearly straight from head to caudal fin, a feature unique for this species; body depth 1.8-2.0x SL; depth of caudal peduncle 0.8-1.1x its length; 42 (50-150mm) gill rakers; scale formula 4.5-5/34-36/5.5-6; 2.5-3 scales between lateral line and pelvic-fin base; 16 scales around caudal peduncle; 9-10 dorsal fin branched rays; known from Eastern Liberia and Western Côte d'Ivoire [Lévêque 1990, 2003].

Biology

From Stiassny (1991):

“Nine specimen [sic] [...] were seined from a small pool (ca. 1.5 m deep) immediately below the waterfall. The pool had a coarse, sandy bottom with scattered boulders exposed (C. B. Schmitt, personal commun.).”

Human Uses

From Bousso and Lalèyè (2010):

“This species is harvested for human consumption.”

Diseases

From Guégan et al. (1992):

“Species of currents, such as *Labeo alluaudi* and *Garra ornata* show also little or no infestation by monogenean species.”

From Guegan and Lambert (1991):

“Dactylogyrids from *Labeo parvus* Boulenger, 1902, *L. alluaudi* Pellegrin, 1933, and *L. rouaneti*, Daget, 1962, were studied in Atlantic coastal basins in West Africa. Nine species (6 new) of Dactylogyridae were found: [including] *Dactylogyrus longiphalloides* sp. n. and *Dogielius kabaensis* sp. n. from *L. alluaudi* in the river Bagbwe in Sierra Leone [...] *Labeo alluaudi* from the rivers Cavally and Nipoue in Cote d'Ivoire and Liberia were not parasitized.”

Threat to Humans

From Froese and Pauly (2017):

“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 *L. alluaudi*. Map from GBIF Secretariat (2017).

5 Distribution within the United States

L. alluaudi has not been reported within 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 southern Florida and in scattered locations along the Gulf Coast of Texas. All other areas of the contiguous U.S. showed low climate match. Climate6 score indicated that the contiguous U.S. has a low climate match overall. The range of scores indicating a low match are those 0.005 and below; Climate6 score for *Labeo alluaudi* was 0.000.

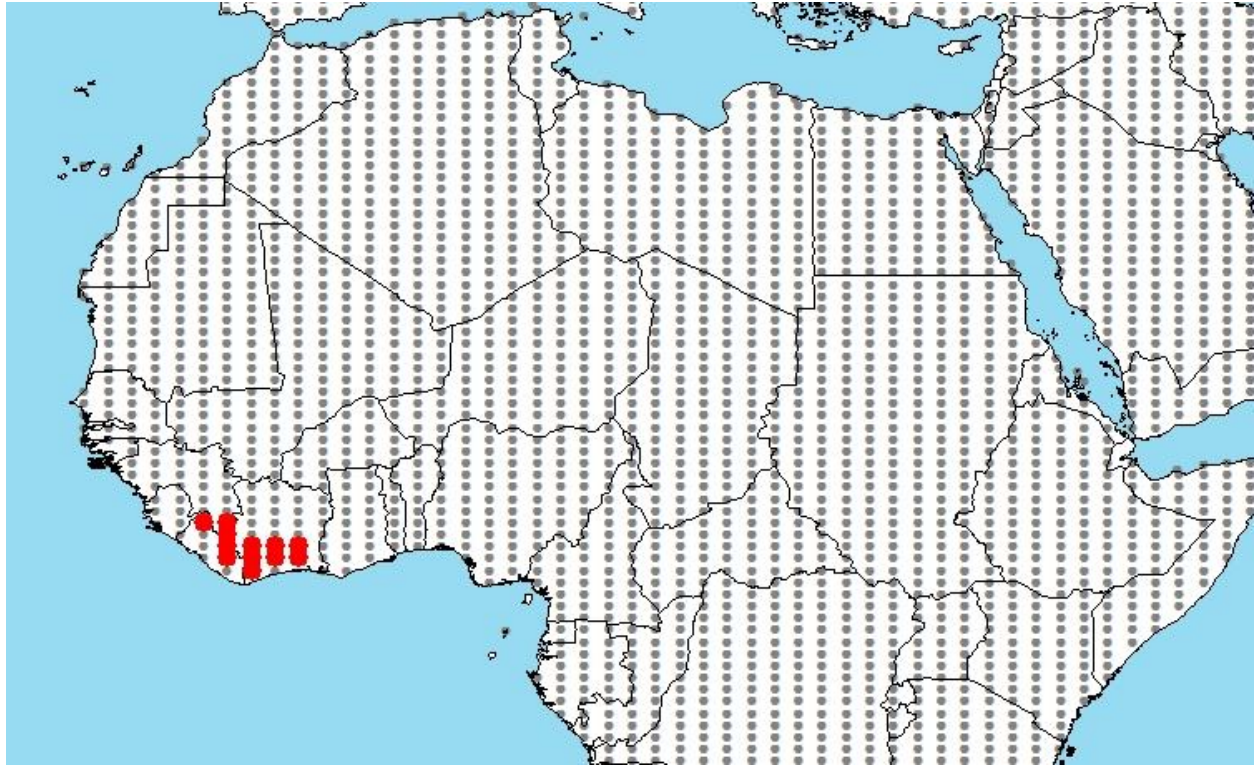


Figure 2. RAMP (Sanders et al. 2014) source map showing weather stations selected as source locations (red; Liberia and Ivory Coast) and non-source locations (gray) for *L. alluaudi* climate matching. Source locations from GBIF Secretariat (2017).

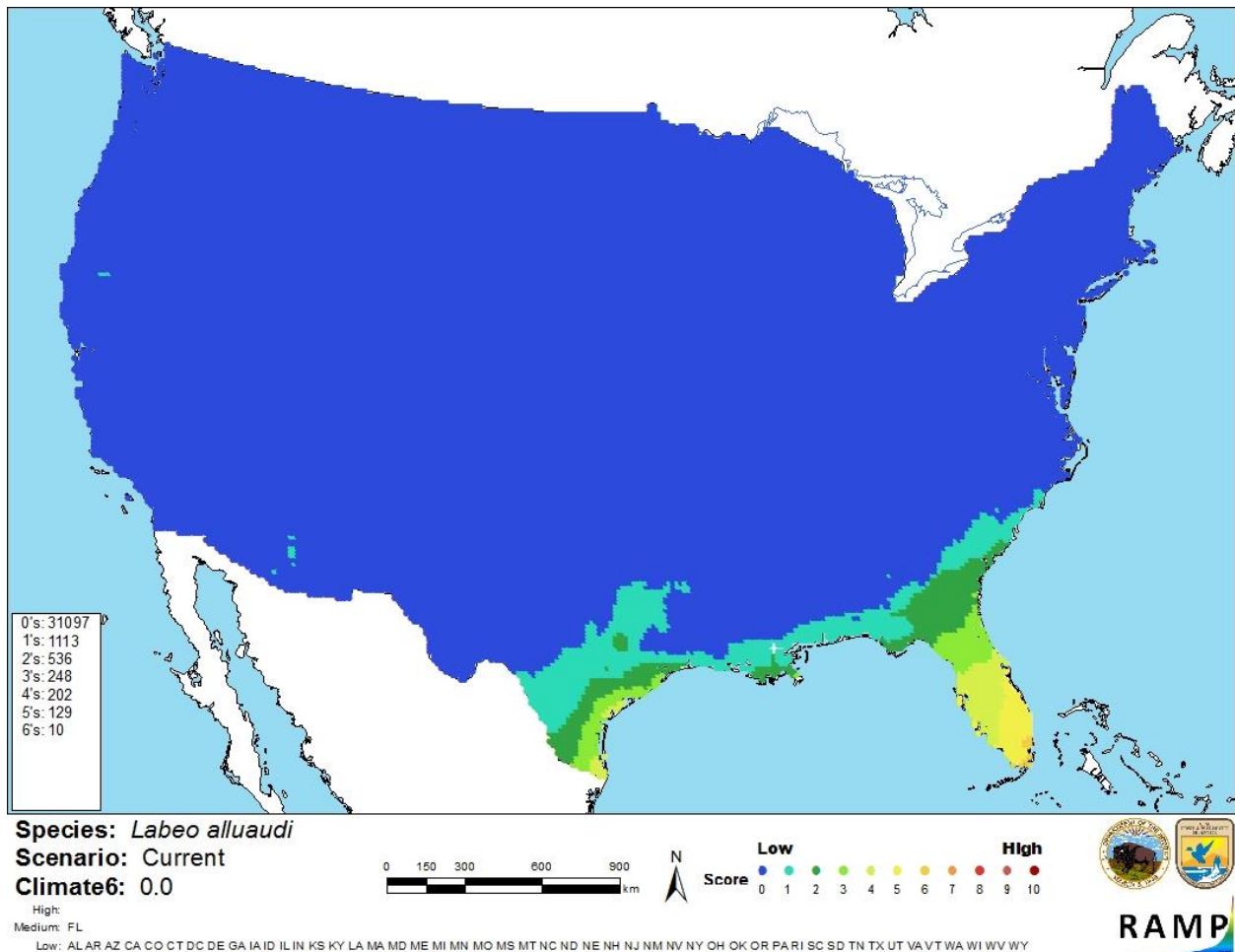


Figure 3. Map of RAMP (Sanders et al. 2014) climate matches for *L. alluaudi* in the contiguous United States based on source locations reported by GBIF Secretariat (2017). 0=Lowest match, 10=Highest match.

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
$0.000 < X \leq 0.005$	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 alluaudi*. The species has not been reported as introduced outside its native range, so any impacts of introduction remain unknown. Certainty of this assessment is low.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Labeo alluaudi is a carp native to the West African countries of Sierra Leone, Liberia, and Ivory Coast (Côte d'Ivoire). The species is designated as endangered on the IUCN Red List. No introductions of *L. alluaudi* have been reported, so any impacts of introduction remain unknown. Climate match to the contiguous U.S. is low overall, with areas of medium match in Florida and Texas. The overall risk assessment category for *L. alluaudi* is uncertain because of the lack of information about this species and its potential invasiveness.

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.

Bousso, T., and P. Lalèyè. 2010. *Labeo alluaudi*. The IUCN Red List of Threatened Species 2010: e.T182874A7991551. Available: <http://www.iucnredlist.org/details/full/182874/0>. (January 2018).

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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.

Lévêque, C. 1990. Cyprinidae. Pages 269-361 in C. Lévêque, D. Paugy, and G.G. Teugels, editors. *Faune des poissons d'eaux douces et saumâtres d'Afrique de l'Ouest*, volume 1. Collection Faune Tropicale number XXVIII. Musée Royal de l'Afrique Centrale, Tervuren, Belgium, and O.R.S.T.O.M., Paris.

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Paugy, D., K. Traoré, and P. S. Diouf. 1994. Faune ichtyologique des eaux douces d'Afrique de l'Ouest. Pages 35-66 in G. G. Teugels, J. F. Guégan, and J. J. Albaret, editors. *Biological diversity of African fresh- and brackish water fishes. Geographical overviews presented at the PARADI Symposium, Senegal, 15-20 November 1993. Annales du Musée Royal de l'Afrique Centrale, Sciences Zoologiques* 275.

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