

Compressed Cichlid (*Altolamprologus compressiceps*) Ecological Risk Screening Summary

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1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2013):

“Africa: Endemic to and widely distributed in Lake Tanganyika.”

Status in the United States

No records of *Altolamprologus compressiceps* in the United States were found.

Means of Introductions in the United States

No records of *Altolamprologus compressiceps* in the United States were found.

Remarks

No additional remarks.

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

From Eschmeyer et al. (2017):

“*compressiceps*, *Lamprologus* Boulenger [G. A.] 1898:494 [Proceedings of the Zoological Society of London 1898 (pt 3) [...]] Kinyamkolo, Lake Tanganyika. Syntypes: BMNH 1898.9.9.4-5 (2). Appeared first as above, then in more detail in Boulenger 1898:7 [...], Pl. 1 (fig. 3). •Valid as *Altolamprologus compressiceps* (Boulenger 1898) -- (Maréchal & Poll 1991:4 [...], Poll & Gosse 1995:233 [...], Gashagaza et al. 1995:300 [...], Konings 2015:138 [...]). **Current status:** Valid as *Altolamprologus compressiceps* (Boulenger 1898). Cichlidae: Pseudocrenilabrinae.”

From ITIS (2013):

“Kingdom Animalia
Phylum Chordata
Subphylum Vertebrata
Superclass Osteichthyes
Class Actinopterygii
Subclass Neopterygii
Infraclass Teleostei
Superorder Acanthopterygii
Order Perciformes
Suborder Labroidei
Family Cichlidae
Genus *Altolamprologus* Poll, 1986
Species *Altolamprologus compressiceps* (Coulenger, 1898)”

Size, Weight, and Age Range

From Froese and Pauly (2013):

“Max length: 12.3 cm TL male/unsexed; [Maréchal and Poll 1991]”

Environment

From Froese and Pauly (2013):

“Freshwater; benthopelagic; pH range: 6.5 - 7.5; dH range: 8 - 12. [...]; 23°C - 25°C [assumed to be recommended aquarium temperature range] [Riehl and Baensch 1991]; [...]”

From Bigirimana (2006):

“Their highest density, once adult, is found below 10 meters. Young fish though, are found in quiet covers in water about 1 m deep.”

Climate/Range

From Froese and Pauly (2013):

“Tropical; [...]; 3°S - 9°S”

Distribution Outside the United States

Native

From Froese and Pauly (2013):

“Africa: Endemic to and widely distributed in Lake Tanganyika.”

Introduced

No records of *Altolamprologus compressiceps* introductions were found.

Means of Introduction Outside the United States

No records of *Altolamprologus compressiceps* introductions were found.

Short Description

From Bigirimana (2006):

“[...] this fish has a very narrow and pointed mouth [...]”

Biology

From Froese and Pauly (2013):

“Feeds on shrimps [Kohda et al. 1996]. Zoobenthos feeder [Hori et al. 1983].”

“Reproduction: Mode: dioecism; Fertilization: external; Reproductive Guild: guarders, clutch tenders.”

From Bigirimana (2006):

“This is the one of the specialized species, being strictly specialized to a given type of rocky habitat, namely rubble with very few patches of sand. This is borne out by the fact that *Altolamprologus compressiceps* is not found on isolated rock outposts that it could have reached by crossing sand barriers that other rock-dwelling fishes could pass. This is also supported by the fact that it is often absent from areas where the rocks are smooth and support only a sparse biocover is covered by slit. In fact, *Altolamprologus* is among the first to disappear when the conditions are not up its requirements. Although common in its habitat, it is never found in large quantities, and when an area has been fished for this species it takes several months, perhaps a year, before they make their comeback. This is probably due to a low fertility rate. The spawns, very difficult to discover in the recesses, never appear to involve more than a few dozen eggs. Feeding on crustaceans hidden among the narrow cracks and tiny gullies of the rubble surface, this fish has a very narrow and pointed mouth that can be inserted between the anfractuositities of the rock walls.”

Human Uses

From Bigirimana (2006):

“[...] when an area has been fished for this species [*A. compressiceps*] [...]”

Diseases

No records of OIE reportable diseases found.

From Froese and Pauly (2013):

“White spot Disease, Parasitic infestations (protozoa, worms, etc.)
Hole-in-the-Head Disease, Parasitic infestations (protozoa, worms, etc.)
Bacterial Infections (general), Bacterial diseases”

Threat to Humans

From Froese and Pauly (2013):

“Harmless”

3 Impacts of Introductions

No records of *Altolamprologus compressiceps* introductions were found.

4 Global Distribution



Figure 1. Known global distribution of *Altolamprologus compressiceps*. Locations are in Burundi, Democratic Republic of Congo, Tanzania, and Zambia. Map from GBIF Secretariat (2017).

5 Distribution Within the United States

No records of *Altolamprologus compressiceps* in the United States were found.

6 Climate Matching

Summary of Climate Matching Analysis

The climate match for *Altolamprologus compressiceps* was low for most of the contiguous United States. The west coast and the border with Mexico (Washington State through Texas), and the extreme southern tips of Texas and Florida have small pockets of medium climate match. The Climate 6 score (Sanders et al. 2014; 16 climate variables; Euclidean distance) for the contiguous U.S. was 0.000, low, and low for all states.

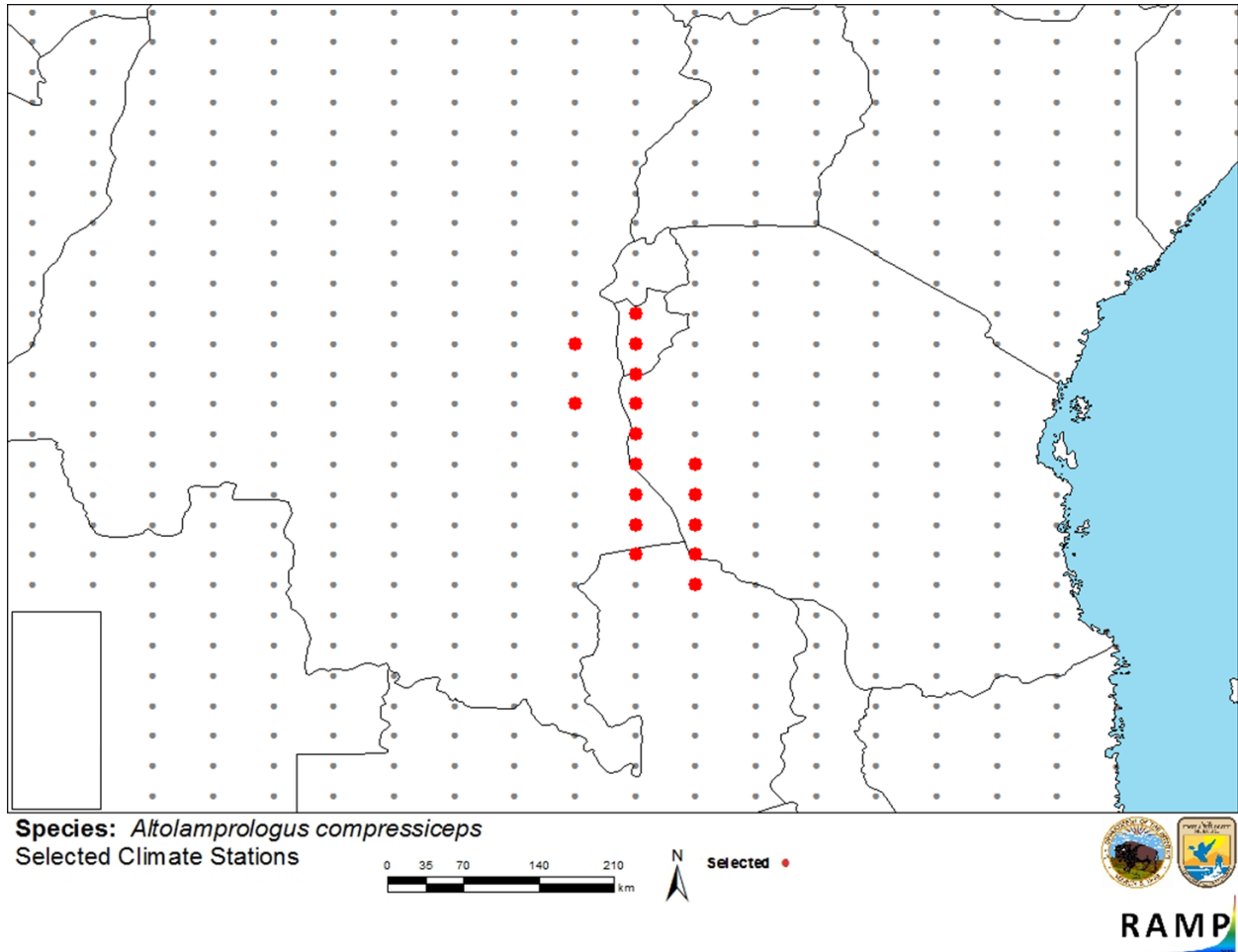


Figure 2. RAMP (Sanders et al. 2014) source map showing weather stations in Burundi, Democratic Republic of Congo, Tanzania, and Zambia selected as source locations (red) and non-source locations (gray) for *Altolamprologus compressiceps* climate matching. Source locations from GBIF Secretariat (2017).

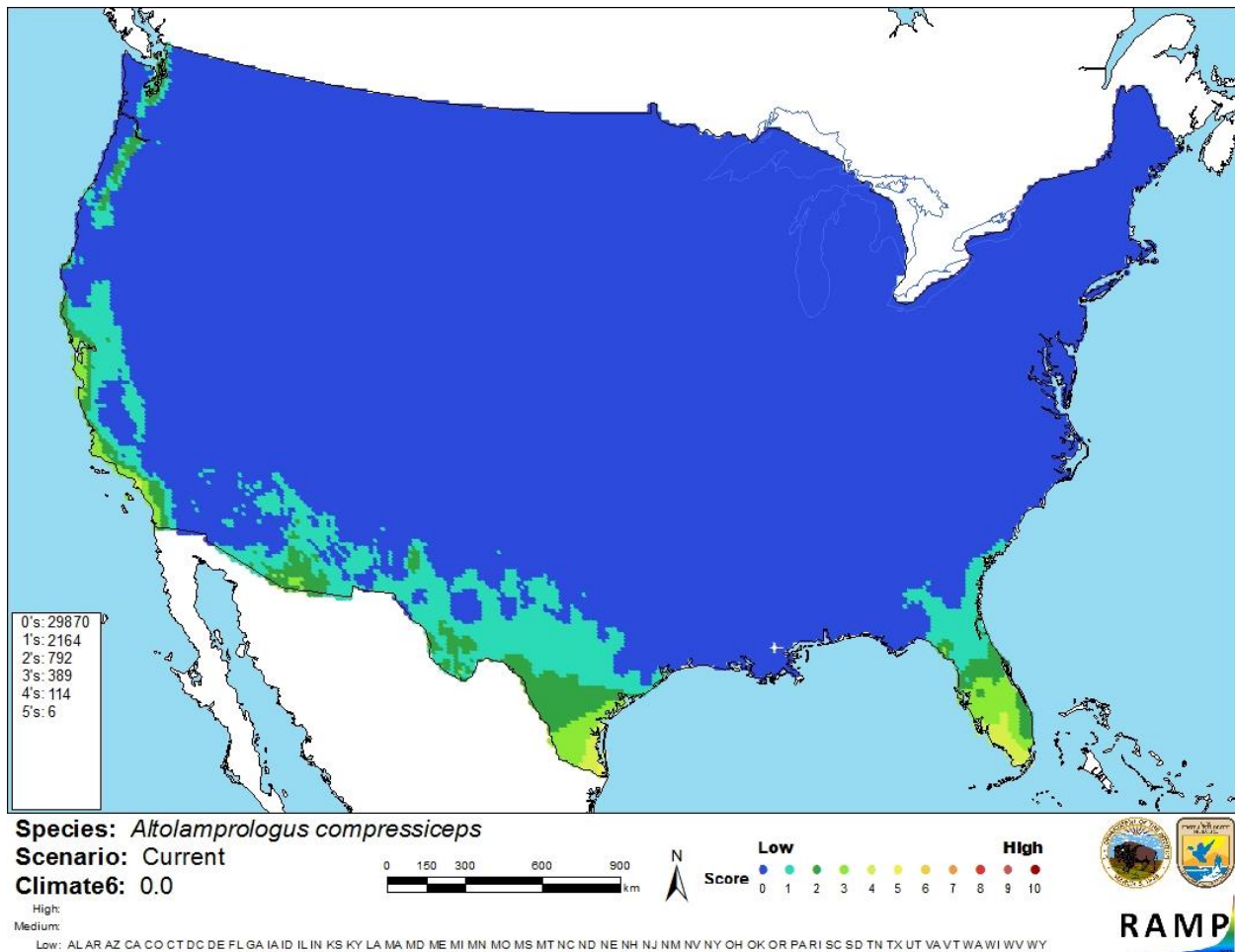


Figure 3. Map of RAMP (Sanders et al. 2014) climate matches for *Altolamprologus compressiceps* in the contiguous United States based on source locations reported by GBIF Secretariat (2017). 0 = Lowest match, 10 = Highest match.

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
$0.000 \leq X < 0.005$	Low
$0.005 < X < 0.103$	Medium
≥ 0.103	High

7 Certainty of Assessment

The certainty of this assessment is medium. There was a good amount of information available for *Altolamprologus compressiceps*. An exhaustive search found no records of introductions outside of its native range; this species is endemic to Lake Tanganyika. Within its endemic range, it seems to have even narrower habitat requirements (Bigirimana 2006).

8 Risk Assessment

Summary of Risk to the Contiguous United States

A history of invasiveness is uncertain. After a thorough search, no records of introduction were found for *Altolamprologus compressiceps*. The climate match is 0.000, low. The species is endemic to one lake in Africa with very narrow habitat requirements. It would be extremely unlikely that any introduction in the United States would result in an established population. 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): Medium**
- **Remarks/Important additional information No additional remarks.**
- **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.

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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.

- Boulenger, G. A. 1898. Report on the fishes recently obtained by Mr. J. E. S. Moore in Lake Tanganyika. *Proceedings of the Zoological Society of London* 1898(3):494–497.
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