

***Oreochromis salinicola* (a tilapia, no common name)**

Ecological Risk Screening Summary

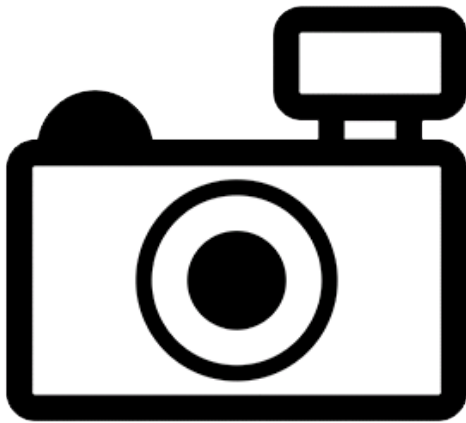
U.S. Fish & Wildlife Service, March 2012

Revised, June 2018

Web Version, 5/1/2020

Organism Type: Fish

Overall Risk Assessment Category: Uncertain



No Photo Available

1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2018):

“Africa: known only from Mwashia (also spelt Moa Chia, Mwashya), a region of saline springs near the Lufira River below the barrage lake at Mwadingusha (upper Congo River basin), Democratic Republic of the Congo [Trewavas 1993].”

Status in the United States

No records of *Oreochromis salinicola* occurrences in the United States were found. No information on trade of *O. salinicola* in the United States was found.

The Florida Fish and Wildlife Conservation Commission has listed the tilapia, *O. salinicola* as a prohibited species. Prohibited nonnative species (FFWCC 2020), "are considered to be

dangerous to the ecology and/or the health and welfare of the people of Florida. These species are not allowed to be personally possessed or used for commercial activities."

Means of Introductions in the United States

No records of *Oreochromis salinicola* occurrences in the United States were found.

Remarks

No additional remarks.

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

According to Eschmeyer et al. (2018), *Oreochromis salinicola* (Poll 1948) is the current valid name of this species.

From ITIS (2018):

Kingdom Animalia
Subkingdom Bilateria
Infrakingdom Deuterostomia
Phylum Chordata
Subphylum Vertebrata
Infraphylum Gnathostomata
Superclass Actinopterygii
Class Teleostei
Superorder Acanthopterygii
Order Perciformes
Suborder Labroidei
Family Cichlidae
Genus *Oreochromis*
Species *Oreochromis salinicola* (Poll, 1948)

Size, Weight, and Age Range

From Froese and Pauly (2018):

"Max length : 9.6 cm TL male/unsexed; [Trewavas 1993]"

Environment

From Froese and Pauly (2018):

"Freshwater; benthopelagic."

From Moelants (2010):

"*Oreochromis salinicola* is a benthopelagic species that only lives in a region of saline springs."

Climate

From Froese and Pauly (2018):

“Tropical”

Distribution Outside the United States

Native

From Froese and Pauly (2018):

“Africa: known only from Mwashia (also spelt Moa Chia, Mwashya), a region of saline springs near the Lufira River below the barrage lake at Mwadingusha (upper Congo River basin), Democratic Republic of the Congo [Trewavas 1993].”

Introduced

No records of *Oreochromis salinicola* introductions were found.

Means of Introduction Outside the United States

No records of *Oreochromis salinicola* introductions were found.

Short Description

From Froese and Pauly (2018):

“Dorsal spines (total): 15 - 17; Dorsal soft rays (total): 11-13; Anal spines: 3; Anal soft rays: 8 - 9; Vertebrae: 30. Body depth not more than 38.5 % SL; interorbital region narrower and the lower jaw longer than in *O. macrochir*. Length of pharyngeal bone 35.8% head length in a fish of SL 59 mm. 8-10 dark vertical bars on upper flank; 3 mid-lateral blotches and, in some, 1 at the end of the caudal peduncle. Outer edge of pelvic fin dark. Scales on cheek in 2 rows.”

Biology

No information on the biology of *Oreochromis salinicola* was found.

Human Uses

From Moelants (2010):

“This species is harvested for human consumption.”

Diseases

No information on parasites or pathogens of *Oreochromis salinicola* was found. **No records of OIE-reportable diseases (OIE 2020) were found for this species.**

Threat to Humans

From Froese and Pauly (2018):

“Harmless”

3 Impacts of Introductions

No records of *Oreochromis salinicola* introductions were found.

O. salinicola is listed as a prohibited species in Florida (FFWCC 2020).

4 History of Invasiveness

No records of *Oreochromis salinicola* introductions were found, therefore the history of invasiveness is “no known nonnative populations”.

5 Global Distribution

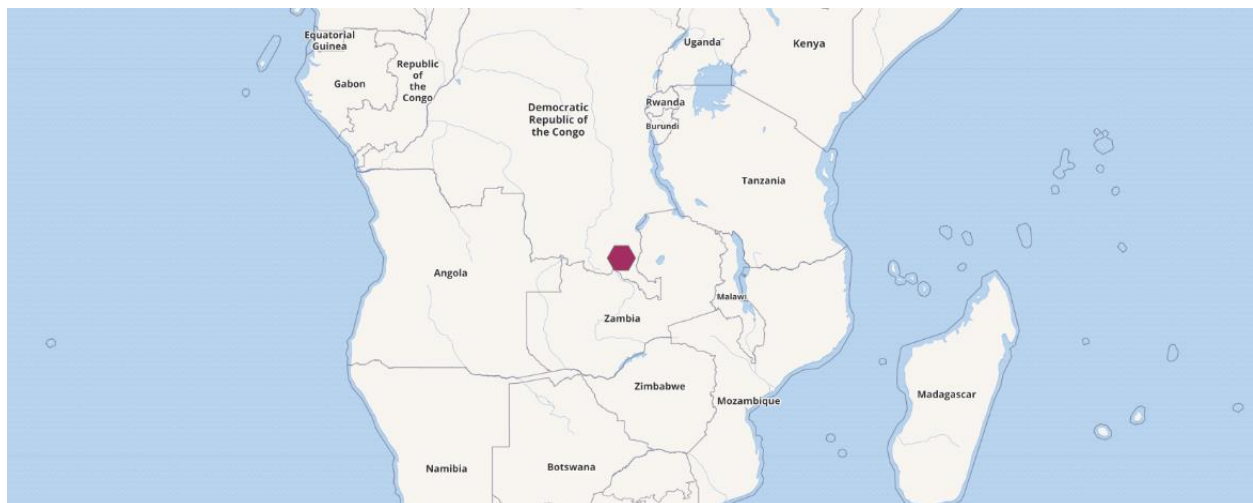


Figure 1. Known global distribution of *Oreochromis salinicola*. Location is in the Democratic Republic of the Congo. Map from GBIF Secretariat (2018).

6 Distribution Within the United States

No records of *Oreochromis salinicola* occurrences in the United States were found.

7 Climate Matching

Summary of Climate Matching Analysis

The climate match for *Oreochromis salinicola* was low for most of the contiguous United States with small patches of medium match in southern Florida, Texas, and New Mexico. The Climate 6 score (Sanders et al. 2018; 16 climate variables; Euclidean distance) for the contiguous United States was 0.000, low (scores between 0.000 and 0.005, inclusive, are classified as low). All States had a low individual climate score.

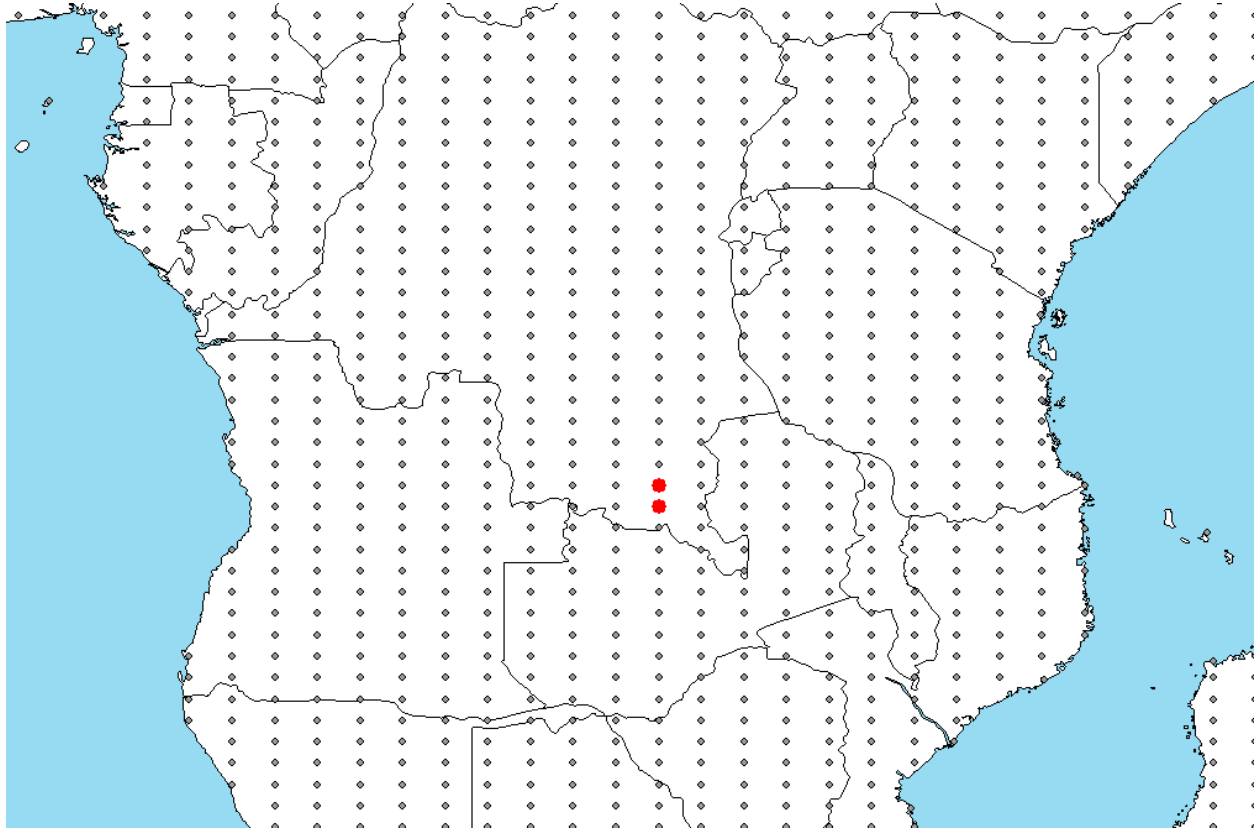


Figure 2. RAMP (Sanders et al. 2018) source map showing weather stations in Democratic Republic of the Congo selected as source locations (red) and non-source locations (gray) for *Oreochromis salinicola* climate matching. Source locations from GBIF Secretariat (2018). Selected source locations are within 100 km of one or more species occurrences, and do not necessarily represent the locations of occurrences themselves.

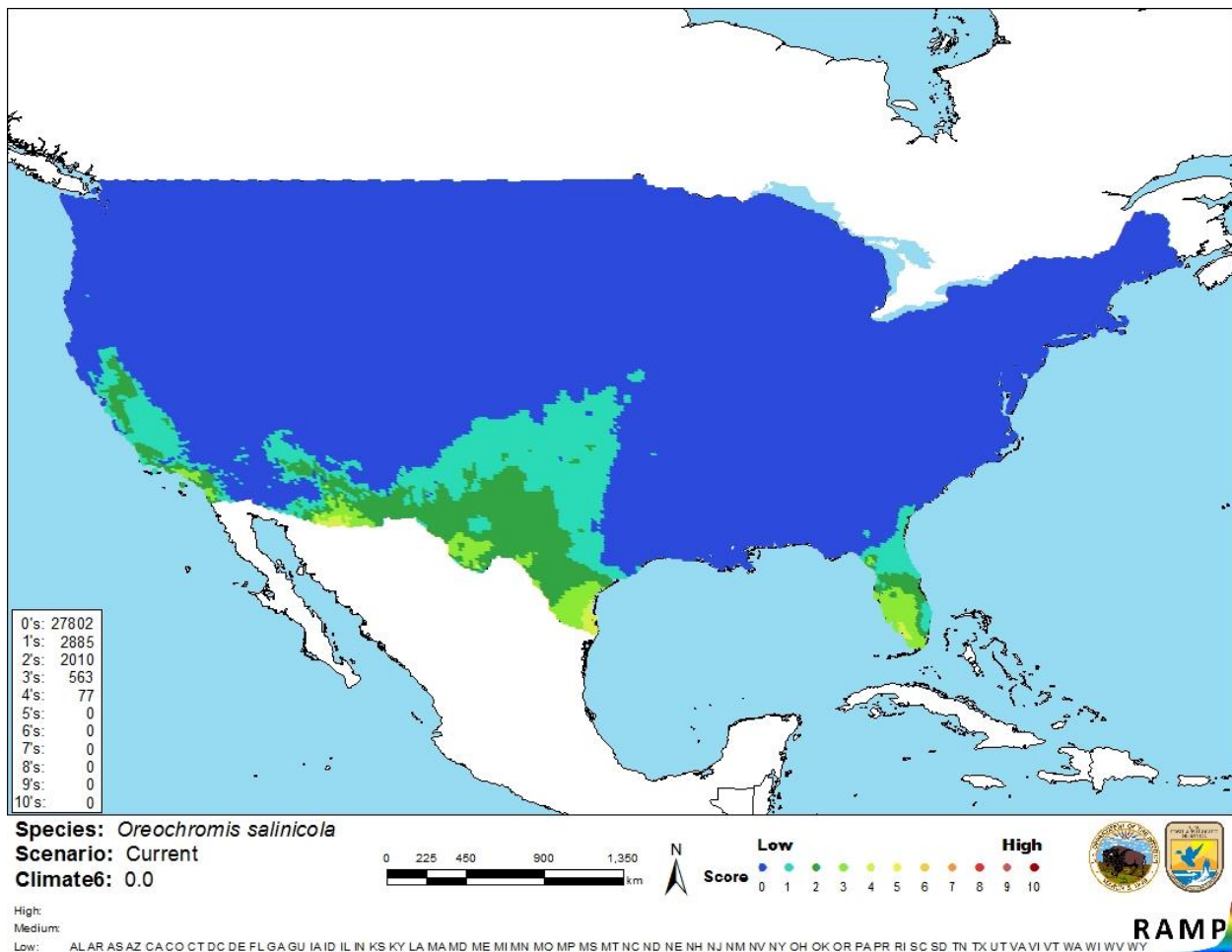


Figure 3. Map of RAMP (Sanders et al. 2018) climate matches for *Oreochromis salinicola* in the contiguous United States based on source locations reported by GBIF Secretariat (2018). Counts of climate match scores are tabulated on the left. 0/Blue = Lowest match, 10/Red = Highest match.

The High, Medium, and Low Climate match Categories are based on the following table:

Climate 6: (Count of target points with climate scores 6-10)/ (Count of all target points)	Overall Climate Match Category
$0.000 \leq X \leq 0.005$	Low
$0.005 < X < 0.103$	Medium
≥ 0.103	High

8 Certainty of Assessment

The certainty of this assessment is low. There is basic biological and ecological information for this species. The distribution of the species is documented. No records of introductions were found, and therefore there is no information on impacts of introduction.

9 Risk Assessment

Summary of Risk to the Contiguous United States

Oreochromis salinicola is a tilapia found only in the Mwashia Region, a region of saline springs, of the Democratic Republic of the Congo, Africa where it is harvested for human consumption. The history of invasiveness is no known nonnative population. It has not been reported as introduced or established outside of its native range. *O. salinicola* is listed as a prohibited species in Florida. The climate match analysis resulted in a low match for the contiguous United States. There were very small areas of medium match in southern Florida, Texas, and New Mexico. The certainty of this assessment is low due to lack of information. The overall risk assessment category is uncertain.

Assessment Elements

- **History of Invasiveness (Sec. 4): No Known Nonnative Population**
- **Overall Climate Match Category (Sec. 7): Low**
- **Certainty of Assessment (Sec. 8): Low**
- **Remarks/Important additional information:** No additional remarks.
- **Overall Risk Assessment Category: Uncertain**

10 Literature Cited

Note: The following references were accessed for this ERSS. References cited within quoted text but not accessed are included below in Section 11.

Eschmeyer WN, Fricke R, van der Laan R, editors. 2018. Catalog of fishes: genera, species, references. California Academy of Science. Available: <http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp> (June 2018).

[FFWCC] Florida Fish and Wildlife Conservation Commission. 2020. Prohibited species list. Tallahassee, Florida: Florida Fish and Wildlife Conservation Commission. Available: <https://myfwc.com/wildlifehabitats/nonnatives/prohibited-species-list/> (May 2020).

GBIF Secretariat. 2018. GBIF backbone taxonomy: *Oreochromis salinicola* (Poll, 1948). Copenhagen: Global Biodiversity Information Facility. Available: <https://www.gbif.org/species/2372423> (June 2018).

[ITIS] Integrated Taxonomic Information System. 2018. *Oreochromis salinicola* (Poll, 1948). Reston, Virginia: Integrated Taxonomic Information System. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=648855 (June 2018).

Moelants T. 2010. *Oreochromis salinicola*. The IUCN Red List of Threatened Species 2010: e.T181563A7679402. Available: <http://www.iucnredlist.org/details/181563/0> (June 2018).

[OIE] World Organisation for Animal Health. 2020. OIE-listed diseases, infections and infestations in force in 2020. Available: <http://www.oie.int/animal-health-in-the-world/oie-listed-diseases-2020/> (May 2020).

Sanders S, Castiglione C, Hoff M. 2018. Risk Assessment Mapping Program: RAMP. Version 3.1. U.S. Fish and Wildlife Service.

11 Literature Cited in Quoted Material

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.

Poll M. 1948. Poissons recueillis au Katanga par H. J. Bredo. Bulletin du Musée Royal d'Histoire Naturelle de Belgique 24(21):1–24.

Trewavas E. 1983. Tilapiine fishes of the genera *Sarotherodon*, *Oreochromis* and *Danakilia*. London: British Museum of Natural History.