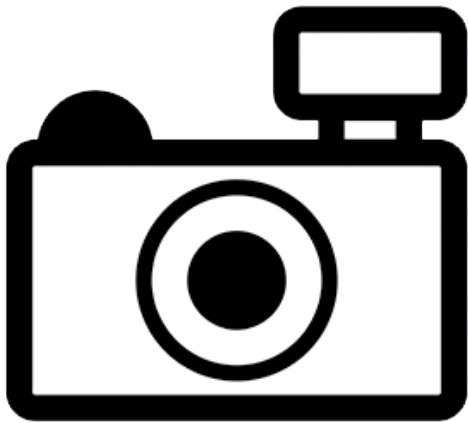


***Oreochromis ismailiaensis* (a tilapia, no common name)**

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: Ismailia Canal, Egypt [Mekkawy 1995].”

Status in the United States

No records of *Oreochromis ismailiaensis* in wild or in trade in the United States were found.

The Florida Fish and Wildlife Conservation Commission has listed the tilapia *Oreochromis ismailiaensis* as a prohibited species. Prohibited nonnative species (FFWCC 2016), "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 ismailiaensis* in the United States were found.

Remarks

From Azeroual (2010):

“It is only known from the type specimen from Ismailia Channel, Egypt [sic]. More information is needed on the species distribution and status in order to carry out a full assessment. There is also confusion over the relationship of this species with *Tilapia ismailaensis*, which needs to be reviewed.”

Eschmeyer et al. (2018) lists *Oreochromis ismailiaensis* as a valid species; it also lists *Tilapia ismailaensis* as a separate species but currently valid under the name *Coptodon ismailiaensis*. This assessment considered information that only pertains to *O. ismailiaensis* and not *C. ismailiaensis*.

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

According to Eschmeyer et al. (2018), *Oreochromis ismailiaensis* Mekkawy 1995 is the valid name for this species; it is also the original name.

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 ismailiaensis* Mekkawy, 1995

Size, Weight, and Age Range

From Froese and Pauly (2018):

“Max length : 19.1 cm TL male/unsexed; [Mekkawy 1995]”

Environment

From Froese and Pauly (2018):

“Brackish; benthopelagic.”

Climate

From Froese and Pauly (2018):

“Temperate”

Distribution Outside the United States

Native

From Froese and Pauly (2018):

“Africa: Ismailia Canal, Egypt [Mekkawy 1995].”

Introduced

No records of introductions of *Oreochromis ismailiaensis* were found.

Means of Introduction Outside the United States

No records of introductions of *Oreochromis ismailiaensis* were found.

Short Description

From Froese and Pauly (2018):

“Dorsal spines (total): 15 - 17; Dorsal soft rays (total): 11-14; Anal spines: 3; Anal soft rays: 8 - 11; Vertebrae: 27 - 32. Head with straight profile; mouth terminal, oblique, moderately large; maxillary extending to below the anterior border of the orbit [Mekkawy 1995]. Ventral fin reaching the vent; the pectoral fin reaching beyond the origin of anal fin; caudal fin truncate, more or less oblique in some cases; the last dorsal soft fin ray extending to the dorsal origin of caudal fin [Mekkawy 1995]. Caudal peduncle as long as deep or a little deeper than long; ventral outline straight or slightly rounded [Mekkawy 1995]. Scales not denticulate; two lateral lines present; the majority of scales of the dorsal one pored [Mekkawy 1995]. General body colour pale grey-silver, darker below the dorsal fin and on the dorsal side of the head; belly being usually white; 8 black vertical bars on the body, the first one partly developed; a black dorsal opercular spot present [Mekkawy 1995]. Dorsal fin with oblique black striations on their posterior soft rays, no tilapia mark on the dorsal fin; caudal fin dark red without vertical stripes; a black pyramid present, its base at the caudal fin base, its top extending to fin margin; anal fin reddish with a black anterior base [Mekkawy 1995]. Eye with black iris, with a red circle around the pupil [Mekkawy 1995].”

Biology

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

Human Uses

No information on human uses of *Oreochromis ismailiaensis* was found.

Diseases

No information on pathogens or parasites of *Oreochromis ismailiaensis* was found. **No records of OIE-reportable diseases (OIE 2019) were found for *O. ismailiaensis*.**

Threat to Humans

From Froese and Pauly (2018):

“Harmless”

3 Impacts of Introductions

No records of introductions of *Oreochromis ismailiaensis* were found; therefore there is no information on impacts of introductions.

O. ismailiaensis is a prohibited species in Florida (FFWCC 2016).

4 History of Invasiveness

The history of invasiveness for *Oreochromis ismailiaensis* is No Known Nonnative Population. No records of introduction were found for this species. Therefore there were no records found of established populations or impacts from introductions.

5 Global Distribution



Figure 1. Known global distribution of *Oreochromis ismailiaensis*. Observation is reported from Egypt. Map from GBIF Secretariat (2018).

6 Distribution Within the United States

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

7 Climate Matching

Summary of Climate Matching Analysis

The climate match for *Oreochromis ismailiaensis* was low for most of the contiguous United States. There were some areas of medium match in the Pacific Southwest and along the border with Mexico. The Climate 6 score (Sanders et al. 2018; 16 climate variables; Euclidean distance) for the contiguous United States was 0.004, low (scores between 0.000 and 0.005, inclusive, are classified as low). All States had low individual Climate 6 scores except for Arizona and California, which had medium individual scores.

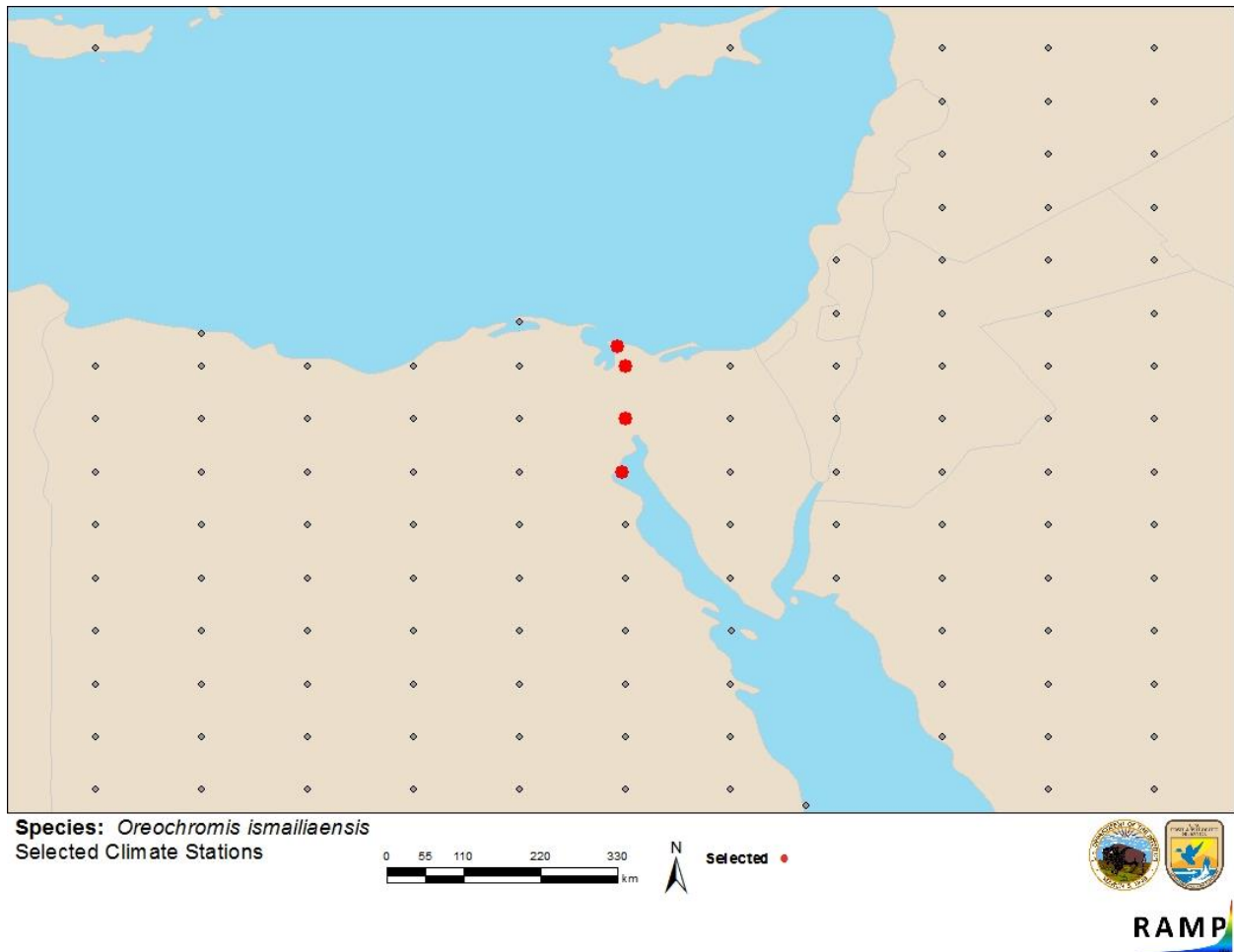


Figure 2. RAMP (Sanders et al. 2018) source map showing weather stations in Egypt selected as source locations (red) and non-source locations (gray) for *Oreochromis ismailiaensis* climate matching. Source locations from GBIF Secretariat (2018). Selected source locations are within 100 km of one or more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

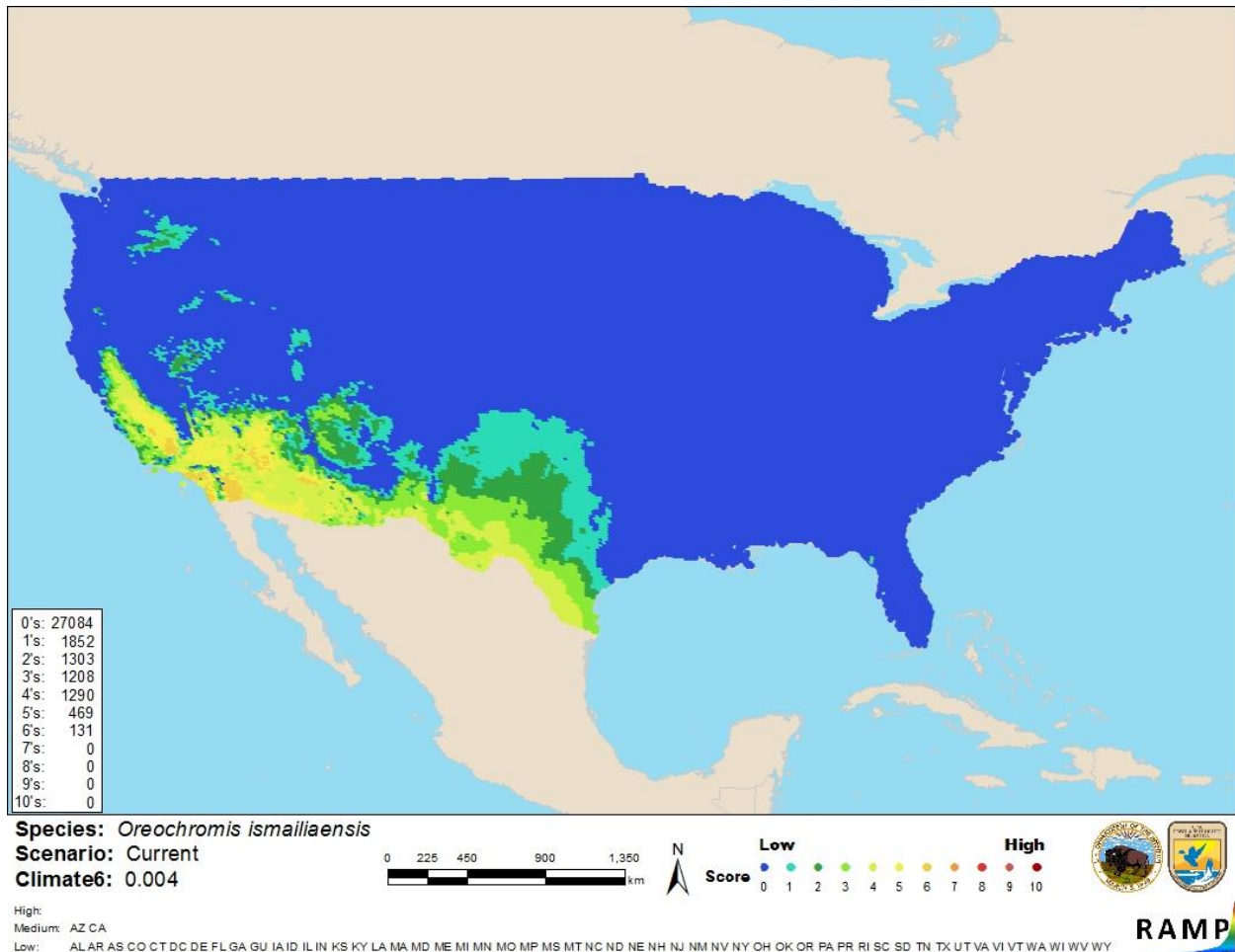


Figure 3. Map of RAMP (Sanders et al. 2018) climate matches for *Oreochromis ismailiaensis* in the contiguous United States based on source locations reported by GBIF Secretariat (2018). Counts of climate match scores are tabulated on the left. 0/Blue = Lowest match, 10/Red = Highest match.

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 assessment for *Oreochromis ismailiaensis* is low. There is a general lack of information about this species.

9 Risk Assessment

Summary of Risk to the Contiguous United States

Oreochromis ismailiaensis is a species of tilapia known only from one specimen caught in the Ismailia Canal, Egypt. *O. ismailiaensis* has a low overall climate match with the contiguous United States. There were areas of medium match in the Pacific Southwest. *O. ismailiaensis* is a prohibited species in Florida. The history of invasiveness is No Known Nonnative Population. There were no records of introductions found. The certainty of assessment is low due to a 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: Species is described and known from only a single specimen.**
- **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.

Azeroual A. 2010. *Oreochromis ismailiaensis*. The IUCN Red List of Threatened Species 2010: e.T181859A7751340. Available: <http://www.iucnredlist.org/details/full/181859/0> (June 2018).

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[FFWCC] Florida Fish and Wildlife Conservation Commission. 2016. Prohibited species list. Tallahassee, Florida: Florida Fish and Wildlife Conservation Commission. Available: <http://myfwc.com/wildlifehabitats/nonnatives/regulations/prohibited/> (June 2018).

Froese R, Pauly D, editors. 2018. *Oreochromis ismailiaensis* Mekkawy, 1995. FishBase. Available: <http://www.fishbase.org/summary/Oreochromis-ismailiaensis.html> (June 2018).

GBIF Secretariat. 2018. GBIF backbone taxonomy: *Oreochromis ismailiaensis* Mekkawy, 1995. Copenhagen: Global Biodiversity Information Facility. Available: <https://www.gbif.org/species/2372418> (June 2018).

[ITIS] Integrated Taxonomic Information System. 2018. *Oreochromis ismailiaensis* Mekkawy, 1995. Reston, Virginia: Integrated Taxonomic Information System. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=648862 (June 2018).

[OIE] World Organisation for Animal Health. 2019. OIE-listed diseases, infections and infestations in force in 2019. Available: <http://www.oie.int/animal-health-in-the-world/oie-listed-diseases-2019/> (June 2019).

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.

Mekkawy IAA. 1995. Description of *Oreochromis ismailiaensis* sp. n., and its hybrid with *Oreochromis niloticus* (Linnaeus, 1758) (Perciformes; Cichlidae) from Egypt. Bulletin of the Faculty of Science, Assiut University 24(2-E):1–27.