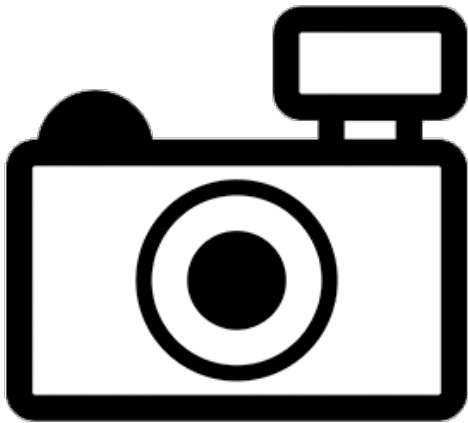


# ***Sarotherodon tounieri* (a tilapia, no common name)**

## **Ecological Risk Screening Summary**

U.S. Fish & Wildlife Service, May 2012  
Revised, September 2018  
Web Version, 2/22/2021

Organism Type: Fish  
Overall Risk Assessment Category: Uncertain



No Photo Available

## **1 Native Range and Status in the United States**

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### **Native Range**

From Froese and Pauly (2018):

“Africa: Cavally River in Ivory Coast and River Cess (or Nuon) and Saint John in Liberia.”

### **Status in the United States**

No records of *Sarotherodon tounieri* in the wild or in trade in the United States were found.

The Florida Fish and Wildlife Conservation Commission has listed the tilapia *Sarotherodon tounieri* 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.”

From Louisiana State Legislature (2019):

“No person, firm, or corporation shall at any time possess, sell, or cause to be transported into this state by any other person, firm, or corporation, without first obtaining the written permission of the secretary of the Department of Wildlife and Fisheries, any of the following species of fish: freshwater electric eel (*Electrophorus* sp.); rudd (*Scardinius erythrophthalmus*); all members of the families *Synbranchidae* (Asian swamp eels); *Channidae* (snakeheads); *Clariidae* (walking catfishes); *Trichomycteridae* (pencil catfishes); all species of tilapia [*Sarotherodon tournieri* is a species of tilapia], [...]”

*Sarotherodon tournieri* falls within Group IV of New Mexico’s Department of Game and Fish Director’s Species Importation List (New Mexico Department of Game and Fish 2010). “The importation of these species [Group IV] are prohibited for the general public but may be allowed for, scientific study, department approved restoration and recovery plans, zoological display, temporary events/entertainment, use as service animal or by a qualified expert.”

From State of Nevada (2018):

“Except as otherwise provided in this section and NAC 504.486, the importation, transportation or possession of the following species of live wildlife or hybrids thereof, including viable embryos or gametes, is prohibited: [...] All species in the genera *Tilapia* and *Sarotherodon*”

Tilapia species are prohibited to be sold and used as bait or stocked in heated-water reservoirs in the State of Oklahoma (Oklahoma Secretary of State 2019).

All species in the genus *Sarotherodon* are listed as prohibited in Texas (Texas Parks and Wildlife 2020).

From Utah Office of Administrative Rules (2019):

“All species of fish listed in Subsections (2) through (30) are classified as prohibited for collection, importation and possession, [...] (30) *Tilapia*, (*Tilapia* and *Sarotherodon*) (All species) family *Cichlidae*.”

A permit is required to import, possess, or sell any species of tilapia in Virginia (Virginia Department of Game and Inland Fisheries 2020).

All species in the genus *Sarotherodon* are considered regulated Type A species in Washington. Regulated Type A species (Washington State Senate 2019) are “nonnative aquatic animal species that pose a low to moderate invasive risk that can be managed based on intended use or geographic scope of introduction, have a beneficial use, and are a priority for department-led or department-approved management of the species' beneficial use and invasive risks.”

## **Means of Introductions in the United States**

No records of *Sarotherodon tournieri* in the wild in the United States were found.

## Remarks

No additional remarks.

## 2 Biology and Ecology

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### Taxonomic Hierarchy and Taxonomic Standing

According to Fricke et al. (2018), *Sarotherodon tournieri* (Daget 1965) is the current valid name for this species. This species was formally known as *Tilapia tournieri*.

From ITIS (2018):

Kingdom Animalia

Phylum Chordata

Subphylum Vertebrata

Superclass Osteichthyes

Class Actinopterygii

Subclass Neopterygii

Infraclass Teleostei

Superorder Acanthopterygii

Order Perciformes

Suborder Labroidei

Family Cichlidae

Genus *Sarotherodon*

Species *Sarotherodon tournieri* (Daget 1965)

### Size, Weight, and Age Range

From Froese and Pauly (2018):

“Max length : 17.9 cm SL male/unsexed; [Trewavas and Teugels 1991]”

### Environment

From Froese and Pauly (2018):

“Freshwater; demersal [...]; 24°C - 26°C [assumed to be recommended aquarium temperature] [Baensch and Riehl 1995]; [...]”

### Climate

From Froese and Pauly (2018):

“Tropical; [...]; 6°N - 5°N”

## Distribution Outside the United States

### Native

From Froese and Pauly (2018):

“Africa: Cavally River in Ivory Coast and River Cess (or Nuon) and Saint John in Liberia.”

### Introduced

No records of introductions of *Sarotherodon tournieri* were found.

## Means of Introduction Outside the United States

No records of introductions of *Sarotherodon tournieri* were found.

## Short Description

From Froese and Pauly (2018):

“Dorsal spines (total): 15 - 16; Dorsal soft rays (total): 13-15; Anal spines: 3; Anal soft rays: 10 - 11; Vertebrae: 28. Diagnosis: body depth 44.9-54.1% SL; caudal peduncle short and deep, its length 0.5-0.6 times in its depth [Teugels and Thys van den Audenaerde 2003]. 3 scale rows on cheek [Trewavas 1983]. No black spots [Teugels and Thys van den Audenaerde 2003]. 8-9 faint vertical bars behind dark nape on body [Trewavas 1983; Teugels and Thys van den Audenaerde 2003]. Dorsal fin with grey lappets and large, round, clear spots in dark reticulum; anal fin similarly marked; caudal fin with small, dark rectangular spots, either irregularly arranged or in curved rows [Trewavas 1983].”

## Biology

No information on the biology of *Sarotherodon tournieri* was found.

## Human Uses

No information on human uses of *Sarotherodon tournieri* was found.

## Diseases

No records of diseases of *Sarotherodon tournieri* were found. **No records of OIE-reportable diseases (OIE 2021) were found for *S. tournieri*.**

## Threat to Humans

From Froese and Pauly (2018):

“Harmless”

## 3 Impacts of Introductions

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No records of introductions of *Sarotherodon tournieri* were found; therefore, there is no information on impacts of introductions to evaluate.

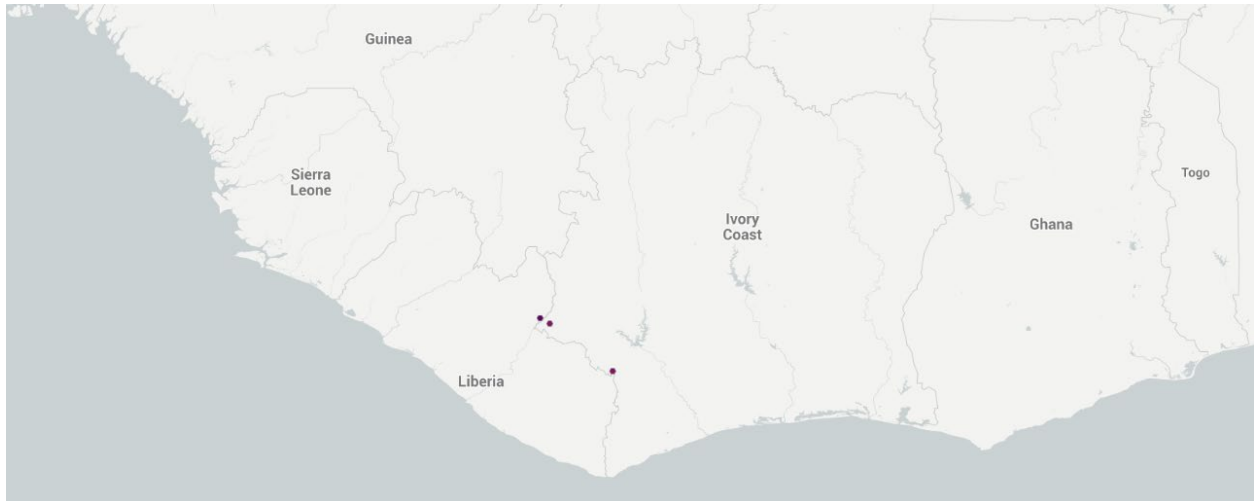
## 4 History of Invasiveness

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No records of introductions of *Sarotherodon tournieri* were found; therefore, the history on invasiveness is no known nonnative population.

## 5 Global Distribution

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**Figure 1.** Map of West Africa showing locations in Liberia and Ivory Coast where *Sarotherodon tournieri* has been reported. Map from GBIF Secretariat (2018).

## 6 Distribution Within the United States

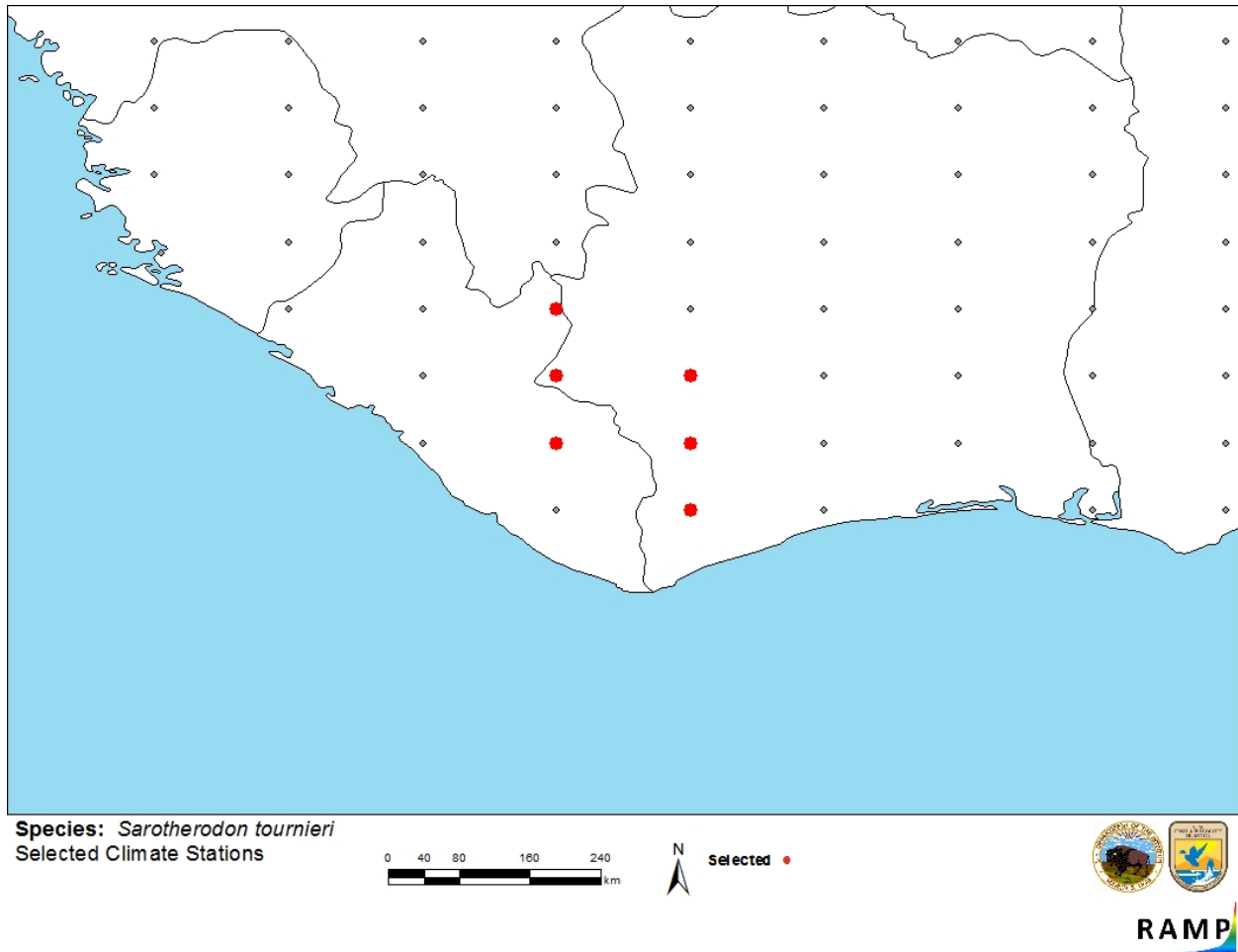
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No records of *Sarotherodon tournieri* in the wild in the United States were found.

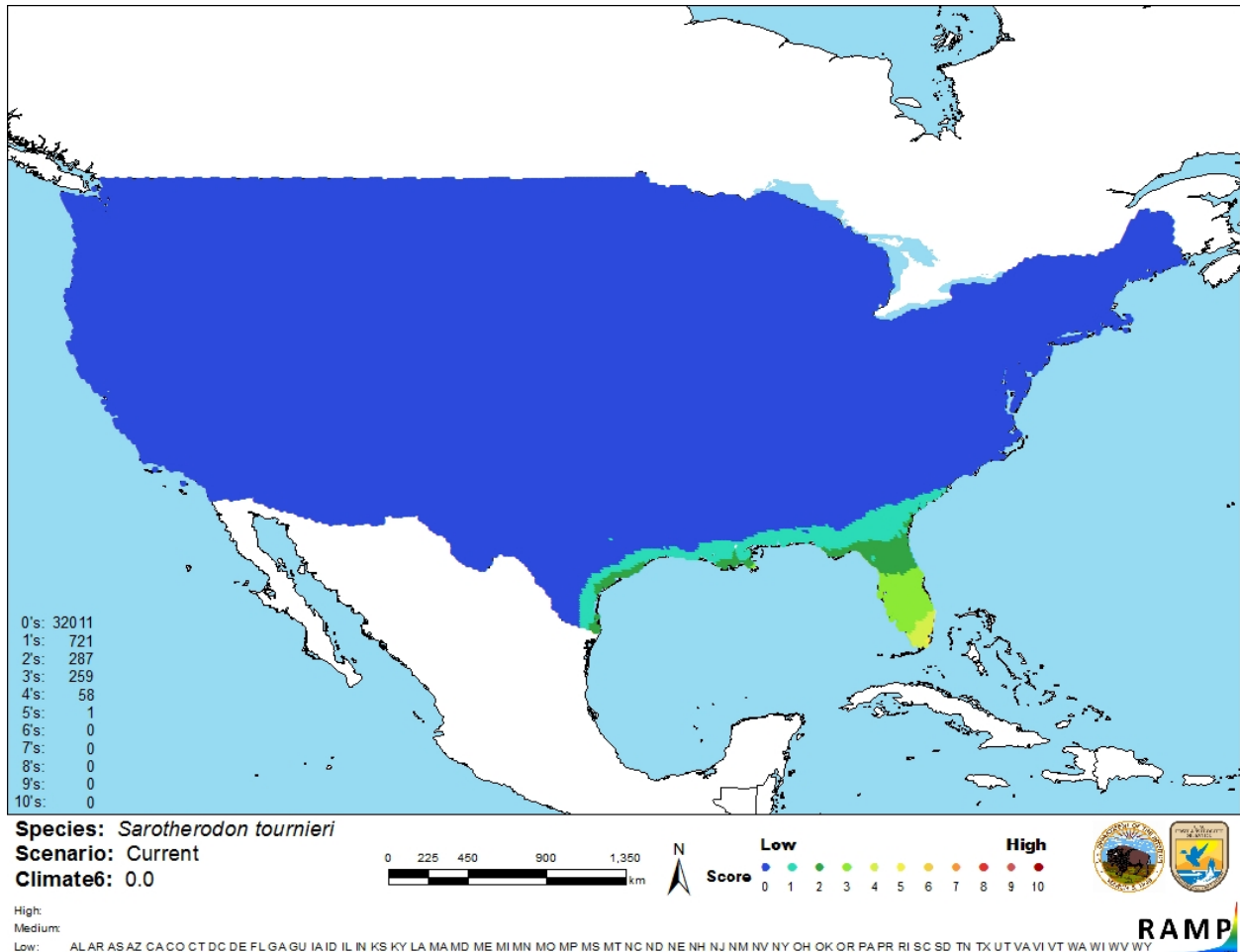
# 7 Climate Matching

## Summary of Climate Matching Analysis

The climate match for *Sarotherodon tournieri* was low across most of the contiguous United States. Some areas of medium matches occurred in southern Florida. The Climate 6 score (Sanders et al. 2018; 16 climate variables; Euclidean distance) for the contiguous United States was 0.000, low (scores from 0.000 to 0.005, inclusive, are classified as low). All States had low individual climate scores.



**Figure 2.** RAMP (Sanders et al. 2018) source map showing weather stations in Liberia and Ivory Coast selected as source locations (red) and non-source locations (gray) for *Sarotherodon tournieri* 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 *Sarotherodon tounieri* in the contiguous United States based on source locations reported from 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
$\geq 0.103$	High

## 8 Certainty of Assessment

The certainty of assessment is low. There was little general information about the species available from peer-reviewed sources. There were no records of introductions found, and therefore there is no information no impacts available to evaluate.

## 9 Risk Assessment

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### Summary of Risk to the Contiguous United States

*Sarotherodon tounieri* is a tilapia native to Liberia and Ivory Coast. The history of invasiveness is no known nonnative population. There were no records of introductions to the wild found and, therefore, no information on impacts of introduction. The species is not found in trade. The climate match for most of the contiguous United States was low. Southern Florida had a few areas of medium climate match but the climate match for the State as a whole was low. The certainty of assessment is low. The overall risk assessment is uncertain.

### Assessment Elements

- **History of Invasiveness (Sec. 3): No Known Nonnative Population**
- **Climate Match (Sec. 6): Low**
- **Certainty of Assessment (Sec. 7): Low**
- **Remarks/Important additional information:** This species is regulated in multiple States.
- **Overall Risk Assessment Category: Uncertain**

## 10 Literature Cited

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

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GBIF Secretariat. 2018. GBIF backbone taxonomy: *Sarotherodon tounieri* (Daget, 1965). Copenhagen: Global Biodiversity Information Facility. Available: <https://www.gbif.org/species/4285707> (September 2018).

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- Washington State Senate. 2019. Invasive/nonnative species. Washington Administrative Code, Chapter 220-640.

## 11 Literature Cited in Quoted Material

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**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.**

- Baensch HA, Riehl R. 1995. Aquarien atlas. Band 4. Melle, Germany: Mergus Verlag GmbH, Verlag für Natur-und Heimtierkunde.

Teugels GG, Thys van den Audenaerde DFE. 2003. Cichlidae. Pages 521–600 In Paugy D, Lévêque C, Teugels GG, editors. The fresh and brackish water fishes of West Africa volume 2. Coll. faune et flore tropicales 40. Paris: Institut de recherche de développement and Muséum national d'histoire naturelle; Tervuren, Belgium: Musée royal de l'Afrique Central.

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