

# *Tilapia cessiana*

## Ecological Risk Screening Summary

U.S. Fish and Wildlife Service, June 2015

Photo not available.

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

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#### Native Range

From Froese and Pauly (2015):

“Africa: Probably endemic to the Cess (=Nipoué) River (Liberia/Côte d'Ivoire) [Teugels and Thys van den Audenaerde 2003].”

#### Status in the United States

This species has not been reported in the U.S.

#### Means of Introductions in the United States

This species has not been reported in the U.S.

#### Remarks

From Olaosebikan (2010):

“This species has a very restricted range, known only from the River Cess (Nipoué) in Liberia. The extent of occurrence and area of occupancy thresholds for Critically Endangered are met (with an EOO of less than 100 km<sup>2</sup> and an AOO of less than 10 km<sup>2</sup>). The species is endemic to Nipoué River and occurs only in one location. There are evidences of catchment degradation due to deforestation resulting into siltation. It therefore qualifies as Critically Endangered.”

### 2 Biology and Ecology

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#### Taxonomic Hierarchy and Taxonomic Standing

From ITIS (2015):

“Kingdom Animalia  
Subkingdom Bilateria  
Infrakingdom Deuterostomia  
Phylum Chordata  
Subphylum Vertebrata  
Infraphylum Gnathostomata  
Superclass Osteichthyes  
Class Actinopterygii

Subclass Neopterygii  
Infraclass Teleostei  
Superorder Acanthopterygii  
Order Perciformes  
Suborder Labroidei  
Family Cichlidae  
Genus *Tilapia*  
Species *Tilapia cessiana* Thys van den Audenaerde, 1968”

“Taxonomic Status: valid”

### **Size, Weight, and Age Range**

From Froese and Pauly (2015):

“Max length : 20.8 cm SL male/unsexed; [Teugels and Thys van den Audenaerde 1992]”

### **Environment**

From Froese and Pauly (2015):

“Freshwater; demersal.”

### **Climate/Range**

From Froese and Pauly (2015):

“Tropical; 24°C - 26°C [Baensch and Riehl 1995]; 8°N - 4°N”

### **Distribution Outside the United States**

#### **Native**

From Froese and Pauly (2015):

“Africa: Probably endemic to the Cess (=Nipoué) River (Liberia/Côte d'Ivoire) [Teugels and Thys van den Audenaerde 2003].”

#### **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 (2015):

“Dorsal spines (total): 14 - 15; Dorsal soft rays (total): 14-16; Anal spines: 3; Anal soft rays: 10 - 11. Diagnosis: lower pharyngeal bone about as long as broad, with anterior lamella shorter than toothed area; median pharyngeal teeth broadened when compared to lateral teeth; 3-4 series of scales on cheeks; 4-4.5 scales between first dorsal fin spine and upper lateral line; dark vertical bars narrower than lighter inter-spaces [Teugels and Thys van den Audenaerde 2003].”

## Biology

No information available.

## Human uses

From Olaosebikan (2010):

“This species is harvested for human consumption.”

## Diseases

No OIE-notifiable diseases have been reported for this species.

## Threat to humans

From Froese and Pauly (2015):

“Harmless”

## 3 Impacts of Introductions

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No introductions of this species have been reported.

## 4 Global Distribution

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**Figure 1.** Global distribution of *T. cessiiana*. Map from GBIF (2015). Location in Benin was not included in climate matching (Sec. 6) because of coordinate uncertainty.

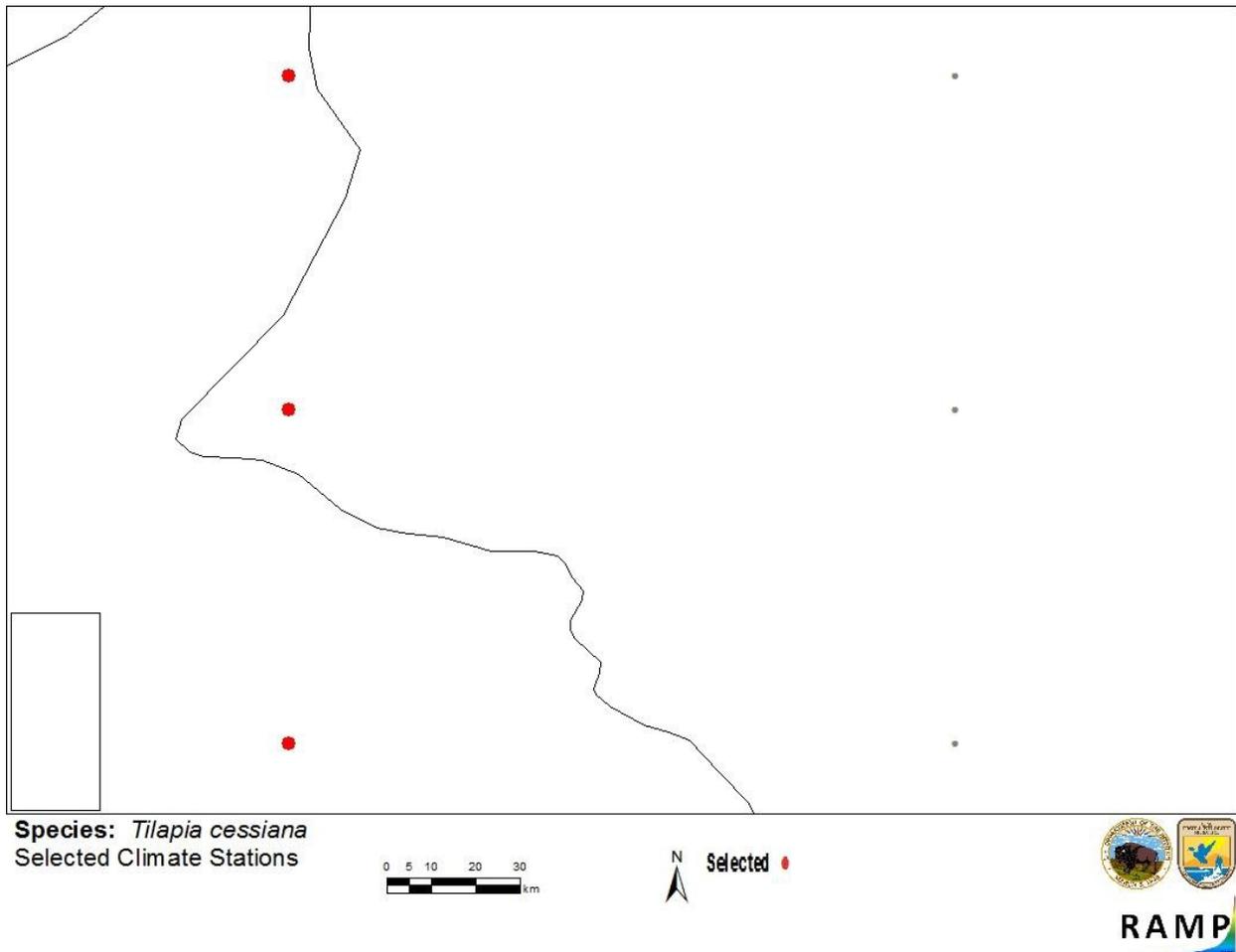
## 5 Distribution within the United States

This species has not been reported in the U.S.

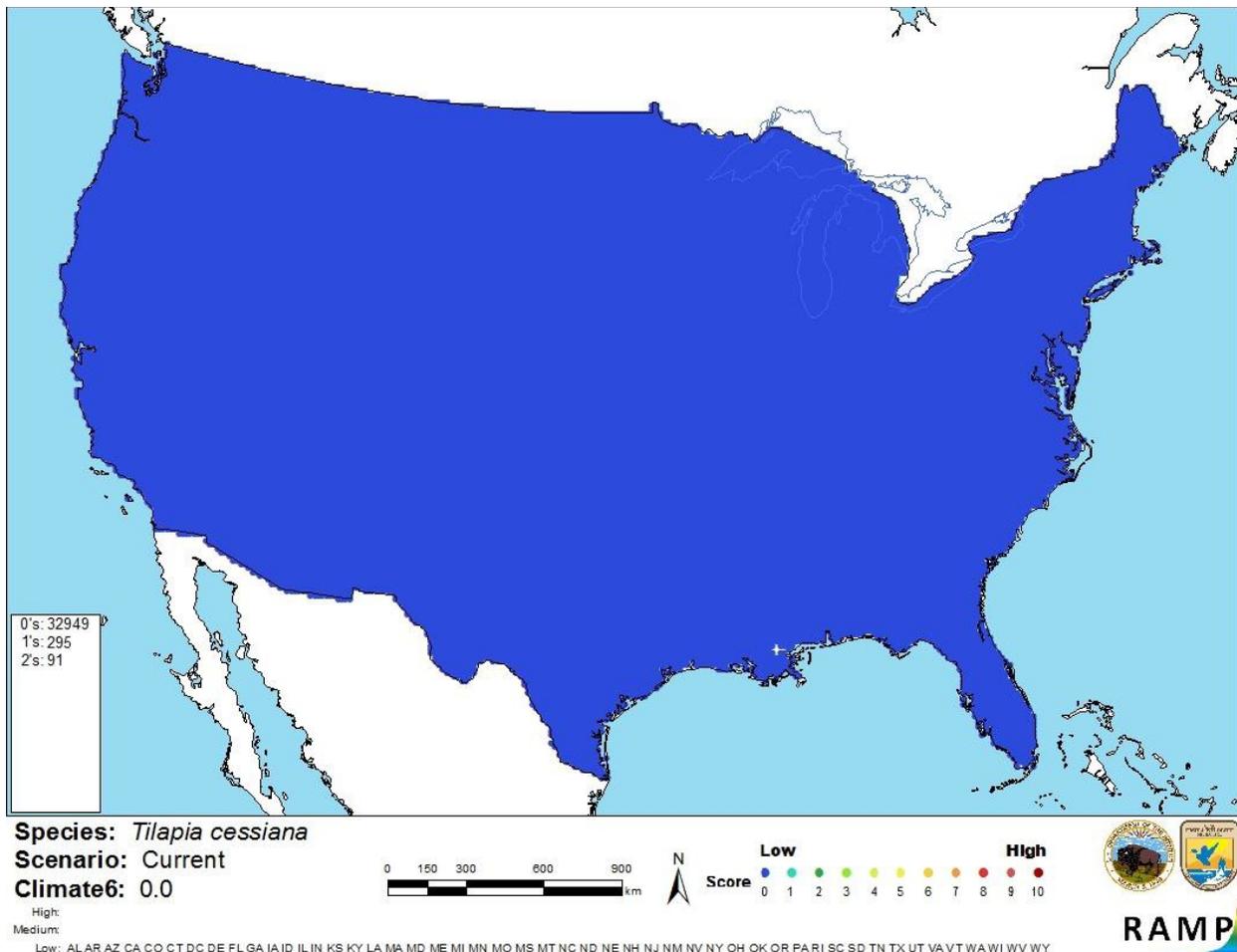
## 6 Climate Matching

### Summary of Climate Matching Analysis

The climate match (Sanders et al. 2014; 16 climate variables; Euclidean Distance) was low throughout the contiguous U.S., reflected in a Climate 6 proportion of 0.0. The range for a low climate match is 0.000 to 0.005.



**Figure 2.** RAMP (Sanders et al. 2014) source map showing weather stations selected as source locations (red) and non-source locations (gray) for *T. cessiana* climate matching. Source locations from GBIF (2015). Locations are along the border of Liberia and Côte d'Ivoire.



**Figure 3.** Map of RAMP (Sanders et al. 2014) climate matches for *T. cessiana* in the continental United States based on source locations reported by GBIF (2015). 0= Lowest match, 10=Highest match. Counts of climate match scores are tabulated on the left.

## 7 Certainty of Assessment

Little information is available on the biology of *T. cessiana* and it has not become established outside its native range. The certainty of this assessment is high because the lack of information about this species precludes any assessment other than “uncertain” risk.

## 8 Risk Assessment

### Summary of Risk to the Continental United States

*Tilapia cessiana* is a demersal cichlid native to West Africa. It has a very limited range and is classified as critically endangered by the IUCN. It has not been reported as established outside its native range. Because *T. cessiana* has no history of invasiveness, it is currently impossible to know what impacts *T. cessiana* might have if introduced to the U.S. Climate match to the contiguous U.S. is low. Overall risk is uncertain.

## **Assessment Elements**

- History of Invasiveness (Sec. 3):** Uncertain
- Climate Match (Sec.6):** Low
- Certainty of Assessment (Sec. 7):** High
- Overall Risk Assessment Category:** **Uncertain**

## 9 References

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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 10.**

Froese, R., and D. Pauly, editors. 2015. *Tilapia cessiana* Thys van den Audenaerde, 1968. FishBase. Available: <http://www.fishbase.org/summary/2485>. (June 2015).

Global Biodiversity Information Facility (GBIF). 2015. GBIF backbone taxonomy: *Tilapia cessiana* Thys van den Audenaerde, 1968. Global Biodiversity Information Facility, Copenhagen. Available: <http://www.gbif.org/species/2370673>. (June 2015).

Integrated Taxonomic Information System (ITIS). 2015. *Tilapia cessiana* Thys van den Audenaerde, 1968. Integrated Taxonomic Information System, Reston, Virginia. Available: [http://www.itis.gov/servlet/SingleRpt/SingleRpt?search\\_topic=TSN&search\\_value=648961](http://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=648961). (June 2015).

Olaosebikan, B. D. 2010. *Tilapia cessiana*. The IUCN Red List of Threatened Species, version 2015.2. Available: <http://www.iucnredlist.org/details/182784/0>. (June 2015).

Sanders, S., C. Castiglione, and M. Hoff. 2014. Risk Assessment Mapping Program: RAMP. US Fish and Wildlife Service.

## 10 References Quoted But Not Accessed

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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, H. A., and R. Riehl. 1995. Aquarien atlas, volume 4. Mergus Verlag GmbH, Verlag für Natur-und Heimtierkunde, Melle, Germany.

Teugels, G. G., and D. F. E. Thys van den Audenaerde. 1992. Cichlidae. Pages 714-779 in C. Levêque, D. Paugy, and G. G. Teugels, editors. Faune des poissons d'eaux douces et saumâtres d'Afrique de l'Ouest, volume 2. Coll. Faune Tropicale n° 28. Musée Royal de l'Afrique Centrale, Tervuren, Belgium, and O.R.S.T.O.M., Paris.

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