

# *Tilapia bakossiorum*

## 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: endemic to Lake Bermin, Cameroon [Stiassny et al. 2008].”

### 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 Moelants (2010):

“Red List Category & Criteria: Critically Endangered B1ab(iii)+2ab(iii) ... The species is currently major threat is from oil plantations and slash and burn agriculture leading to sedimentation and pollution in the lake (one location). There is also a potential threat from the lake 'burping' - CO<sub>2</sub> (as in Lake Nyos and Lake Barombi-Mbo). In addition deforestation of the surroundings of the crater may cause more wind which could lead to the lake 'turning', as the lake is stratified, lower layer being very low in oxygen and high in organic matter. Higher winds may cause currents in the lake which could cause this lower layer to mix with the upper layer where the fish live. This would cause a massive decrease in oxygen in the water and kills the fish.”

## 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 bakossiorum* Stiassny, Schlieffen and Dominey,  
1992”

“Taxonomic Status: valid”

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

From Froese and Pauly (2015):

“Max length : 7.0 cm SL male/unsexed; [Stiassny et al. 2008]”

### **Environment**

From Froese and Pauly (2015):

“Freshwater; benthopelagic.”

### **Climate/Range**

From Froese and Pauly (2015):

“Tropical”

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

Native

From Moelants (2010):

“Cameroon”

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): 15 - 16; Dorsal soft rays (total): 10; Anal spines: 3; Anal soft rays: 7 - 8. Diagnosis: lower pharyngeal jaw robust, with a large, non-heart-shaped dentigerous plate, covered with stout, sparsely arrayed teeth; oral dentition coarse [Stiassny et al. 2008]. 10-15 [Stiassny et al. 1992] stout bicuspid oral teeth in outer row [Stiassny et al. 1992, 2008]. Anterior rakers not markedly reduced in size; snout small and projecting [Stiassny et al. 2008]. Lips hypertrophied; ventral margin of lower lip folded and fringed [Stiassny et al. 1992, 2008]. Breeding coloration: base body color pale yellow on dorsum and bright reddish-pink along venter and snout, cheek, chin, chest and operculum a brighter red [Stiassny et al. 1992].”

## Biology

From Froese and Pauly (2015):

“Substrate brooder [Stiassny et al. 2008].”

## Human uses

No information available.

## Diseases

There are no known OIE-reportable diseases 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.** Distribution of *T. bakossiorum* (GBIF 2013, in Discover Life 2015).

## 5 Distribution within the United States

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

## 6 Climate Matching

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Insufficient data available for climate matching. RAMP (Sanders et al. 2014) was unable to perform climate matching because no georeferenced locations were available for this species in GBIF (2015). Added locational data would allow climate matching to be completed in the future.

## 7 Certainty of Assessment

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Little information is available on the biology of *T. bakossiorum* 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

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### Summary of Risk to the Continental United States

*Tilapia bakossiorum* is endemic to Lake Bermin in Cameroon, and has not been reported as introduced outside of this location. The species is, in fact, critically endangered in its native range due to deforestation and agriculture. Because *T. bakossiorum* has no history of invasiveness, it is currently impossible to know what impacts *T. bakossiorum* might have if introduced to the US. Climate match is unknown. Overall risk of this species is uncertain.

### Assessment Elements

- ☐ **History of Invasiveness (Sec. 3):** Uncertain
- ☐ **Climate Match (Sec.6):** Uncertain
- ☐ **Certainty of Assessment (Sec. 7):** Low
- ☐ **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.**

- Discover Life. 2015. *Tilapia bakossiorum* Stiassny, Schliewen and Dominey, 1992. Available: <http://www.discoverlife.org/mp/20q?search=Tilapia+bakossiorum>. (June 2015).
- Froese, R., and D. Pauly, editors. 2015. *Tilapia bakossiorum* Stiassny, Schliewen & Dominey, 1992. FishBase. Available: <http://www.fishbase.org/summary/Tilapia-bakossiorum.html>. (June 2015).
- Global Biodiversity Information Facility (GBIF). 2015. GBIF backbone taxonomy: *Tilapia bakossiorum* Stiassny, Schliewen & Dominey, 1992. Global Biodiversity Information Facility, Copenhagen. Available: <http://www.gbif.org/species/2370720>. (June 2015).
- Integrated Taxonomic Information System (ITIS). 2015. *Tilapia bakossiorum* Stiassny, Schliewen & Dominey, 1992. Integrated Taxonomic Information System, Reston, Virginia. Available: [http://www.itis.gov/servlet/SingleRpt/SingleRpt?search\\_topic=TSN&search\\_value=648950](http://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=648950). (June 2015).
- Moelants, T. 2010. *Tilapia bakossiorum*. The IUCN Red List of Threatened Species, version 2015.2. Available: <http://www.iucnredlist.org/details/21888/0>. (June 2015).
- 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

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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.**

- Global Biodiversity Information Facility (GBIF). 2013. Global Biodiversity Information Facility. Available: <http://www.gbif.org/>.
- Stiassny, M. L. J., A. Lamboj, D. De Weirtdt and G. G. Teugels. 2008. Cichlidae. Pages 269-403 in M. L. J. Stiassny, G. G. Teugels, and C. D. Hopkins, editors. The fresh and brackish water fishes of Lower Guinea, West-Central Africa, volume 2. Coll. faune et flore tropicales 42. Institut de recherche de développement, Paris, France, Muséum national d'histoire naturelle, Paris, France and Musée royal de l'Afrique Central, Tervuren, Belgium.

Stiassny, M. L. J., U. K. Schliewen, and W. J. Dominey. 1992. A new species flock of cichlid fishes from Lake Bermin, Cameroon with a description of eight new species of *Tilapia* (Labroidei: Cichlidae). *Ichthyological Exploration of Freshwaters* 3(4):311-346.