

Tilapia tholloni

Ecological Risk Screening Summary

U.S. Fish and Wildlife Service, May 2012

Revised, June 2015

Photo not available.

1 Native Range, and Status in the United States

Native Range

From Froese and Pauly (2012):

“Africa: from the Ogooué River in Gabon [Stiassny et al. 2008] to the lower Congo River in Democratic Republic of the Congo [Thys van den Audenaerde 1963; Thys van den Audenaerde 1964], including the Nyanza in Gabon, Kouilou-Niari in Republic of Congo, and the Chiloango in Angola and Democratic Republic of the Congo [Stiassny et al. 2008]. Specimens from Pool Malebo are either this species or *T. congica* [Thys van den Audenaerde 1963; Thys van den Audenaerde 1964].”

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.

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

From ITIS (2012):

“Kingdom Animalia
Phylum Chordata
Subphylum Vertebrata
Superclass Osteichthyes
Class Actinopterygii
Subclass Neopterygii
Infraclass Teleostei
Superorder Acanthopterygii
Order Perciformes
Superfamily Labroidei
Family Cichlidae

Genus Tilapia- Smith, 1840
Species *Tilapia tholloni*- Sauvage, 1884”

“Taxonomic status: valid”

Size, Weight, and Age Range

From Froese and Pauly (2012):

“Max length : 22.0 cm TL male/unsexed; [Teugels and Thys van den Audenaerde 1991].”

Environment

From Froese and Pauly (2012):

“Freshwater; benthopelagic”

Climate/Range

From Froese and Pauly (2012):

“Tropical; 24°C - 26°C [Baensch and Riehl 1995].”

Distribution Outside the United States

Native

From Moelants (2010):

“Congo; Congo, The Democratic Republic of the; Gabon”

Introduced

No known introductions outside of native range.

Short description

From Froese and Pauly (2012):

“Dorsal spines (total): 15 - 16; Dorsal soft rays (total): 9-11; Anal spines: 3; Anal soft rays: 7 - 9. Diagnosis: 10 or fewer rakers on lower limb of first arch; unpaired fins not predominantly red-brown; mouth terminal; caudal fin densely covered with scales and with network of clear spots and lines; at least 1 row (sometimes 2) of dark spots in the middle of the body; a black sickle-shaped spot at the base of each flank scale; dorsal fin with 15-16 spines and 9-11 soft rays (total rays 24-26); anal fin with 3 spines and 7-9 soft rays; 27-29 scales in lateral line; outer row teeth relatively fine [Stiassny et al. 2008].”

Biology

From Hartman and McMahon (2004):

“*Tilapia tholloni*, a substrate brooder, lays 500-3000 eggs, depending on its size.”

From Lowe-McConnell (1991):

“herbivorous”

Human uses

From Moelants (2010):

“This species is harvested for human consumption.”

Diseases

There are no OIE-notifiable diseases reported for this species.

Threat to humans

From Froese and Pauly (2012):

“Harmless.”

3 Impacts of Introductions

No established populations are known outside of the native range of *T. tholloni*.

4 Global Distribution



Figure 1. Known global distribution of *T. tholloni*. Map from GBIF (2015).

5 Distribution within the United States

No currently known distribution within the United States.

6 CLIMATCH

Summary of Climate Matching Analysis

The climate match (Australian Bureau of Rural Sciences 2010; 16 climate variables; Euclidean Distance) was low throughout much of the United States with only southern Florida exhibiting a medium match.

Climate 6 match indicated that the Continental U.S. has a low climate match.

The range for a low climate match is 0.000 to 0.005. The climate match of *T. tholloni* is 0.003.

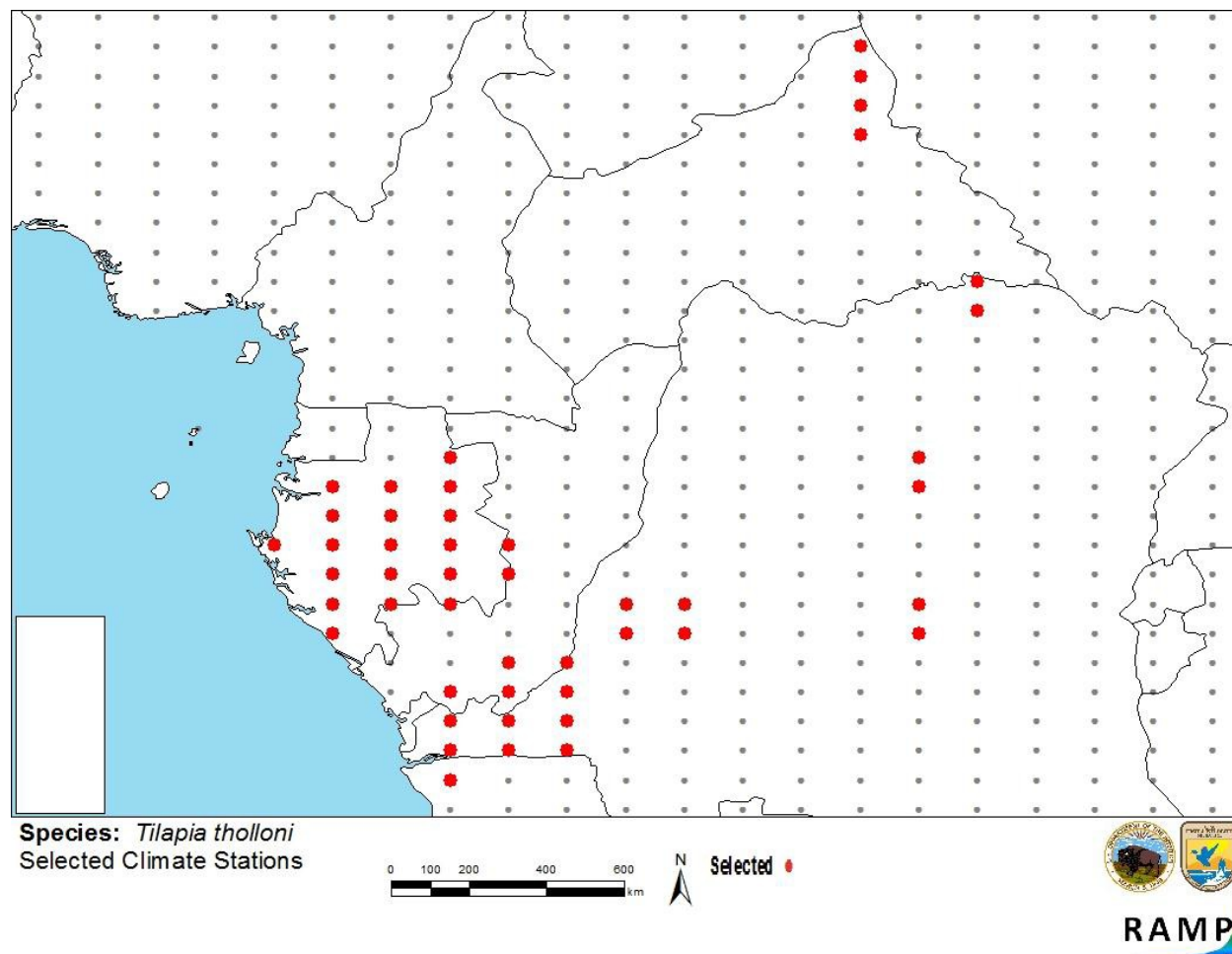


Figure 2. RAMP (Sanders et al. 2014) source map showing weather stations selected as source locations (red) and non-source locations (gray) for *T. tholloni* climate matching. Source locations from GBIF (2015).

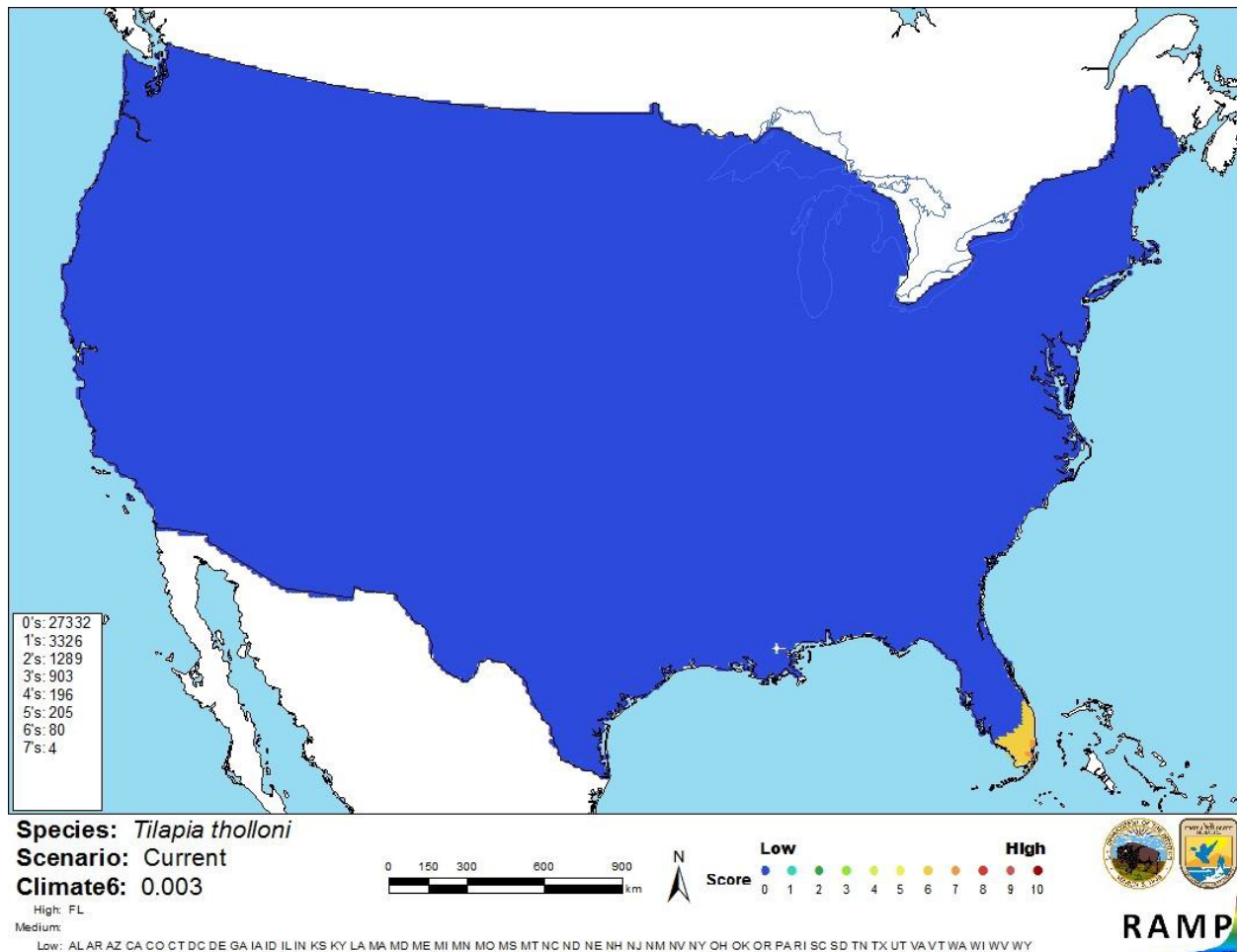


Figure 3. Map of RAMP (Sanders et al. 2014) climate matches for *T. tholloni* in the continental United States based on source locations reported in GBIF (2015). 0= Lowest match, 10=Highest match. Counts of climate match scores are tabulated on the left.

7 Certainty of Assessment

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

T. tholloni is a benthopelagic cichlid fish native to Central Africa. It has not been documented outside its native range. The species has a low climate match in the continental United States. Because *T. tholloni* has no history of invasiveness, it is currently impossible to know what impacts *T. tholloni* might have if introduced to the US. Overall risk of this species is uncertain.

Assessment Elements

- ☐ **History of Invasiveness:** Uncertain
- ☐ **Climate Match:** Low
- ☐ **Certainty of Assessment:** High
- ☐ **Overall Risk Assessment Category:** Uncertain

9 References

Note: The following references were accessed for this ERSS. References cited within quoted text but not accessed are included below in Section 10.

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Moelants, T. 2010. *Tilapia tholloni*. The IUCN Red List of Threatened Species, version 2015.2. Available: <http://www.iucnredlist.org/details/182501/0>. (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

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.

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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

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Teugels, G. G., and D. F. E. Thys van den Audenaerde. 1991. *Tilapia*. Pages 482-508 in J. Daget, J.-P. Gosse, G. G. Teugels, and D. F. E. Thys van den Audenaerde, editors. Check-list of the freshwater fishes of Africa (CLOFFA), volume 4. ISNB, Brussels; MRAC, Tervuren; and ORSTOM, Paris.

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Thys van den Audenaerde, D. F. E. 1964. Révision systématique des espèces congolaises du genre *Tilapia* (Pisces, Cichlidae). Annales Musée Royal de l'Afrique Central sér. in-8°. Sciences Zoologiques 124.