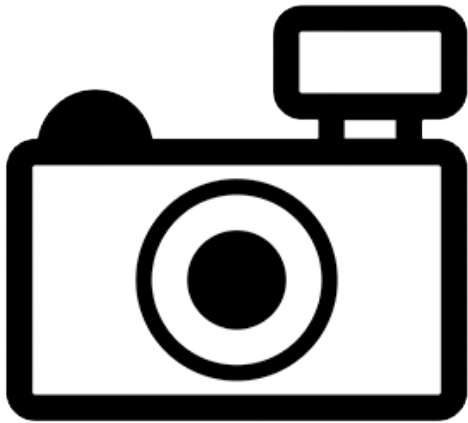


Tanzanian Tigerfish (*Hydrocynus tanzaniae*)

Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, August 2011
Revised, December 2018, February 2019
Web Version, 10/10/2019



No Photo Available

1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2018):

“Africa: Tanzania.”

From Hassens et al. (2010):

“This species is known only from the Wami, Ruaha and Rufiji Rivers [Tanzania] [Brewster 1986].”

Status in the United States

Hydrocynus tanzaniae has not been reported as introduced or established anywhere in the United States. No records of *H. tanzaniae* in trade in the United States were found.

Means of Introductions in the United States

No introductions in the United States were found.

Remarks

No additional remarks.

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

From Fricke et al. (2018):

“**Current status:** Valid as *Hydrocynus tanzaniae* Brewster 1986.”

From ITIS (2018):

“Kingdom Animalia

Subkingdom Bilateria

Infrakingdom Deuterostomia

Phylum Chordata

Subphylum Vertebrata

Infraphylum Gnathostomata

Superclass Actinopterygii

Class Teleostei

Superorder Ostariophysi

Order Characiformes

Family Alestiidae

Genus *Hydrocynus*

Species *Hydrocynus tanzaniae* Brewster, 1986”

Size, Weight, and Age Range

From Froese and Pauly (2018):

“Max length : 24.7 cm SL (female)”

Environment

From Froese and Pauly (2018):

“Freshwater; pelagic.”

Climate/Range

From Froese and Pauly (2018):

“Tropical”

Distribution Outside the United States

Native

From Froese and Pauly (2018):

“Africa: Tanzania.”

From Hassens et al. (2010):

“This species is known only from the Wami, Ruaha and Rufiji Rivers [Tanzania] [Brewster 1986].”

Introduced

Hydrocynus tanzaniae has not been reported as introduced or established anywhere in the world outside of its native range.

Means of Introduction Outside the United States

Hydrocynus tanzaniae has not been reported as introduced or established anywhere in the world outside of its native range.

Short Description

From Gagiano (1997):

“The lateral stripes of *H. tanzaniae* are distinct and differs from all other *Hydrocynus* species in the presence of elongated 3rd and 4th dorsal and anal fin rays [Brewster 1986].”

Biology

From Hassens et al. (2010):

“This is a riverine species.”

Human Uses

From Hassens et al. (2010):

“This species is fished for human consumption, and sport.”

Diseases

No information on diseases was found. **No OIE-reportable diseases (OIE 2019) were found to be associated with *Hydrocynus tanzaniae*.**

Threat to Humans

From Froese and Pauly (2018):

“Harmless”

3 Impacts of Introductions

Hydrocynus tanzaniae has not been reported as introduced or established anywhere in the world outside of its native range. Therefore, there is no information on impacts of introduction.

4 Global Distribution



Figure 1. Known global distribution of *Hydrocynus tanzaniae*. Locations are in Tanzania. Map from GBIF Secretariat (2018).

5 Distribution Within the United States

No distributions were found in the United States.

6 Climate Matching

Summary of Climate Matching Analysis

There is one small area of medium match in southern Florida, but most of the contiguous United States has a low match. The Climate 6 score (Sanders et al. 2018; 16 climate variables; Euclidean distance) for the contiguous United States was 0.000, low (scores between 0.000 and 0.005, inclusive, are classified as low). All States had low individual climate scores.

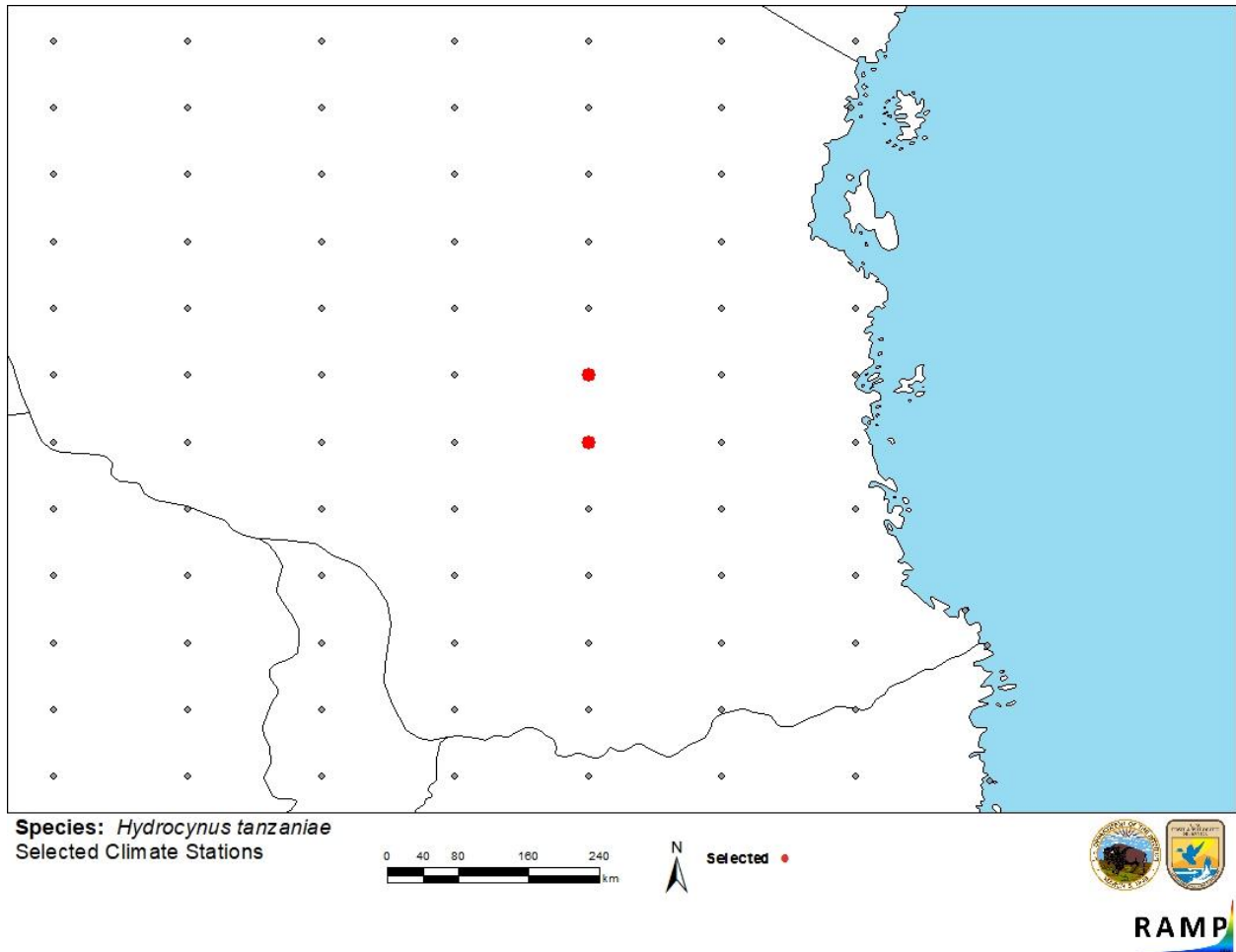


Figure 2. RAMP (Sanders et al. 2018) source map showing weather stations in Tanzania selected as source locations (red) and non-source locations (gray) for *Hydrocynus tanzaniae* climate matching. Source locations from GBIF Secretariat (2018). Selected source locations are within 100 km of one or more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

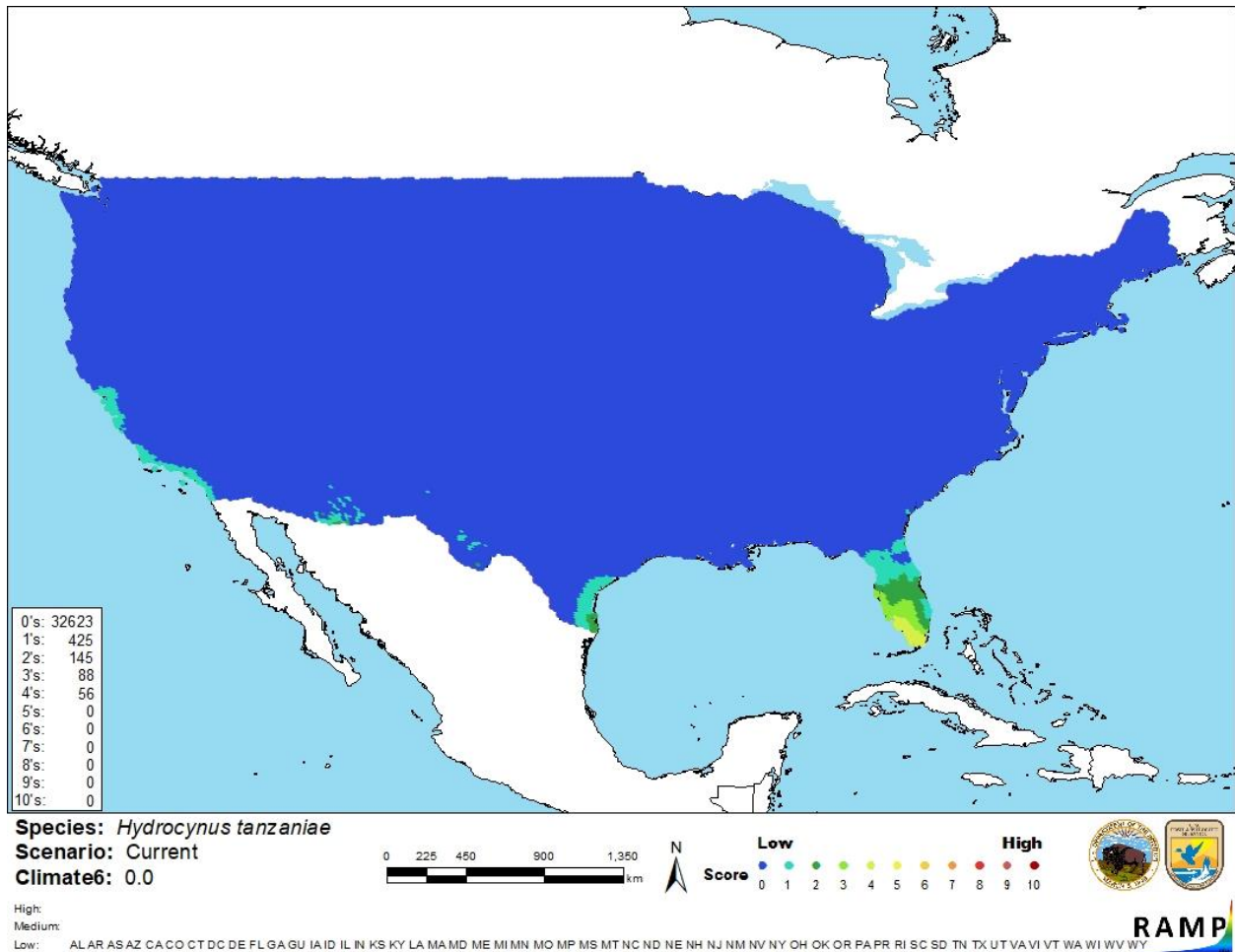


Figure 3. Map of RAMP (Sanders et al. 2018) climate matches for *Hydrocynus tanzaniae* in the contiguous United States based on source locations reported by GBIF Secretariat (2018). 0 = Lowest match, 10 = Highest match.

The High, Medium, and Low Climate match Categories are based on the following table:

Climate 6: Proportion of (Sum of Climate Scores 6-10) / (Sum of total Climate Scores)	Climate Match Category
$0.000 \leq X \leq 0.005$	Low
$0.005 < X < 0.103$	Medium
≥ 0.103	High

7 Certainty of Assessment

Limited information is available on *Hydrocynus tanzaniae*. No introductions have been recorded anywhere outside of the native range. The certainty of assessment is low.

8 Risk Assessment

Summary of Risk to the Contiguous United States

The Tanzanian tigerfish (*Hydrocynus tanzaniae*) is a freshwater fish endemic to Tanzania. *H. tanzaniae* can be found in the Wami, Ruaha and Rufiji Rivers. *H. tanzaniae* has not been reported anywhere outside of its native range, thus the history of invasiveness is uncertain. The climate match for the contiguous United States was low. There was one small area of medium match in southern Florida. The certainty of assessment is low due to limited information. The overall risk assessment category for *H. tanzaniae* is uncertain.

Assessment Elements

- **History of Invasiveness (Sec. 3): Uncertain**
- **Climate Match (Sec. 6): Low**
- **Certainty of Assessment (Sec. 7): Low**
- **Remarks/Important additional information: No additional information**
- **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.

- Fricke, R., W. N. Eschmeyer, and R. van der Laan, editors. 2018. Catalog of fishes: genera, species, references. Available: <http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp>. (December 2018).
- Froese, R., and D. Pauly, editors. 2018. *Hydrocynus tanzaniae* Brewster, 1986. FishBase. Available: <https://www.fishbase.de/summary/Hydrocynus-tanzaniae.html>. (December 2018).
- Gagiano, C. L. 1997. An ecological study on the tigerfish *Hydrocynus vittatus* in the Olifants and Letaba rivers with special reference to artificial reproduction. Master's thesis. Rand Afrikaans University, Johannesburg, South Africa.
- GBIF Secretariat. 2018. GBIF backbone taxonomy: *Hydrocynus tanzaniae* Brewster, 1986. Global Biodiversity Information Facility, Copenhagen. Available: <https://www.gbif.org/species/2356175>. (December 2018).
- Hanssens, M., and J. Snoeks. 2010. *Hydrocynus tanzaniae*. The IUCN Red List of Threatened Species 2010: e.T182547A7910342. Available: <http://dx.doi.org/10.2305/IUCN.UK.2010-3.RLTS.T182547A7910342.en>. (December 2018).

ITIS (Integrated Taxonomic Information System). 2018. *Hydrocynus tanzaniae* Brewster, 1986. Integrated Taxonomic Information System, Reston, Virginia. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=641103#null. (December 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/>. (October 2019).

Sanders, S., C. Castiglione, and M. Hoff. 2018. Risk assessment mapping program: RAMP, version 3.1. 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.

Brewster, B. 1986. A review of the genus *Hydrocynus* Cuvier 1819 (Teleostei: Characiformes). Bulletin of the British Museum (Natural History). Zoology 50(3):163–206.