

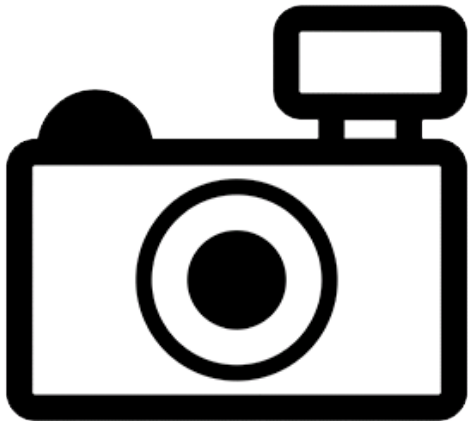
***Typhlobelus ternetzi* (a catfish, no common name)**

Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, December 2016

Revised, June 2018

Web Version, 8/30/2019



No Photo Available

1 Native Range, and Status in the United States

Native Range

From Froese and Pauly (2018):

“South America: Upper Negro River basin in Brazil.”

Status in the United States

Typhlobelus ternetzi has not been reported as introduced or established in the United States. No information was found on trade of *T. ternetzi* in the United States.

Means of Introductions in the United States

This species has not been reported as introduced or established in the United States.

Remarks

No additional remarks.

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

From Eschmeyer et al. (2018):

“**Current status:** Valid as *Typhlobelus ternetzi* Myers 1944.”

From ITIS (2018):

“Kingdom Animali
Subkingdom Bilateria
Infrakingdom Deuterostomia
Phylum Chordata
Subphylum Vertebrata
Infraphylum Gnathostomata
Superclass Osteichthyes
Class Actinopterygii
Subclass Neopterygii
Infraclass Teleostei
Superorder Ostariophysi
Order Siluriformes
Family Trichomycteridae
Subfamily Glanapteryginae
Genus *Typhlobelus*
Species *Typhlobelus ternetzi* Myers, 1944”

Size, Weight, and Age Range

From Froese and Pauly (2016):

“Max length: 3.3 cm SL male/unsexed; [de Pínna and Wosiacki 2003]”

Environment

From Froese and Pauly (2018):

“Freshwater; benthopelagic.”

From Myers (1944):

“[...] from rock pools below Sao Gabriel Rapids, Rio Negro, Brazil [...]”

From Schaefer et al. (2005):

“A psammophilic habit [loose sand] for *Glanapteryx*, *Pygidianops*, and *Typhlobelus* has been presumed on the basis of anecdotal locality information and the extremely reduced morphologies of these species.”

“[...] species of *Pygidianops* and *Typhlobelus* are entirely disassociated from leaf litter, and occupy exclusively clear loose sand.”

Climate/Range

From Froese and Pauly (2018):

“Tropical”

Distribution Outside the United States

Native

From Froese and Pauly (2018):

“South America: Upper Negro River basin in Brazil.”

Introduced

This species has not been reported as introduced or established outside of its native range.

Means of Introduction Outside the United States

This species has not been reported as introduced or established outside of its native range.

Short description

From Myers (1944):

“Anal fin 5. Myomeres 38 to origin of anal fin, number uncertain posteriorly, the total number probably about 50. Caudal fin rounded. Depth 12 to 13 in standard length. Body less compressed than in *Pygidianops*, subterete in cross- section. Head 8.8. Distance from anal origin to caudal base 3.3 in standard length. The barbels are stiff, but less so than in *Pygidianops*; their structure is similar. A rayless membrane along dorsum, and another from behind anal, to caudal. As in *Pygidianops* there is a band of reticulate tissue from pectoral region to above anal fin, set lower than in the other genus, and another at the base of the dorsal membrane for its entire length. A series of thin bones beneath the integument in the opercular region, perhaps branchiostegals.”

“White, colorless. A slight dark shade on top of head. Eye black.”

From Schaefer et al. (2005):

“The genera *Pygidianops* and *Typhlobelus* are the most highly modified glanapterygines, and species of both genera share extreme reduction of pigmentation, loss of dorsal fin, loss or extreme reduction of pectoral fins, reduced laterosensory canal, and complete loss of eyes in some species. Both genera are markedly miniaturized, yet retain a relatively well-ossified skeleton comparable in both bone differentiation and degree of calcification to that observed in larger trichomycterids”

“*Typhlobelus* has a long duck-billed rostrum that protrudes anteriorly well beyond the bases of the maxillary barbels. This is associated with the markedly elongated mesethmoid shaft, which extends anteriorly well beyond the premaxillae and palatines.”

Biology

No information was found regarding the biology of *Typhlobelus ternetzi*.

Human uses

No information available.

Diseases

No information on parasites or pathogens of *Typhlobelus ternetzi* was found. **No OIE-reportable diseases (OIE 2019) have been documented for this species.**

Threat to humans

From Froese and Pauly (2016):

“Harmless”

3 Impacts of Introductions

This species has not been reported as introduced or established outside of its native range, so no impacts of introductions are known.

4 Global Distribution



Figure 1. Known global distribution of *Typhlobelus ternetzi*. Location is in Brazil. Map from GBIF Secretariat (2018).

5 Distribution within the United States

This species has not been reported as introduced or established in the United States.

6 Climate Matching

Summary of Climate Matching Analysis

The climate match (Sanders et al. 2014; 16 climate variables; Euclidean Distance) was low for the entire contiguous United States. There were no areas of high or medium match. The Climate 6 score 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.

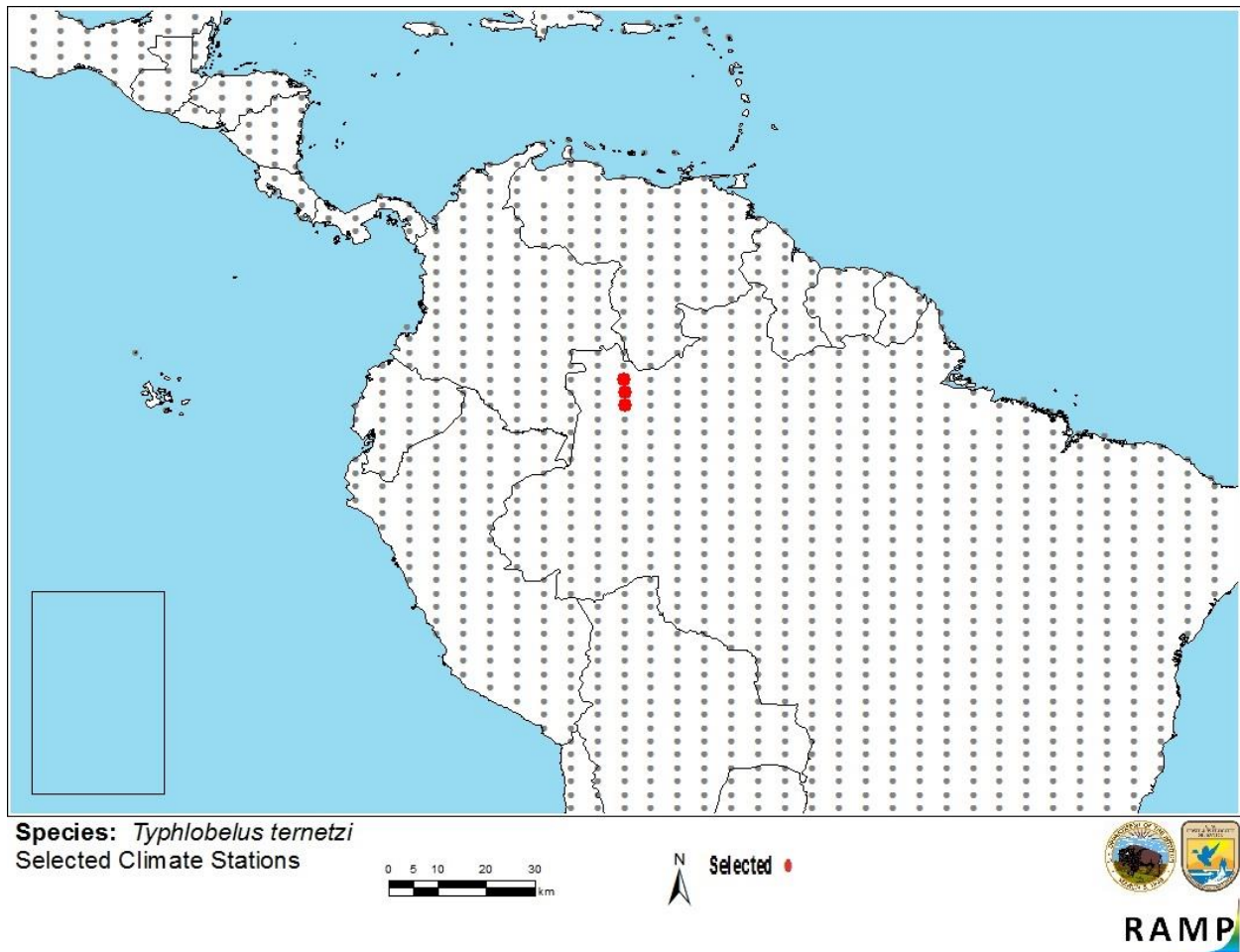


Figure 2. RAMP (Sanders et al. 2014) source map showing weather stations selected as source locations (red; Brazil) and non-source locations (gray) for *Typhlobelus ternetzi* climate matching. Source locations from GBIF Secretariat (2018). Selected source locations are within 100 km of one or more species occurrences, and do not necessarily represent the locations of occurrences themselves.

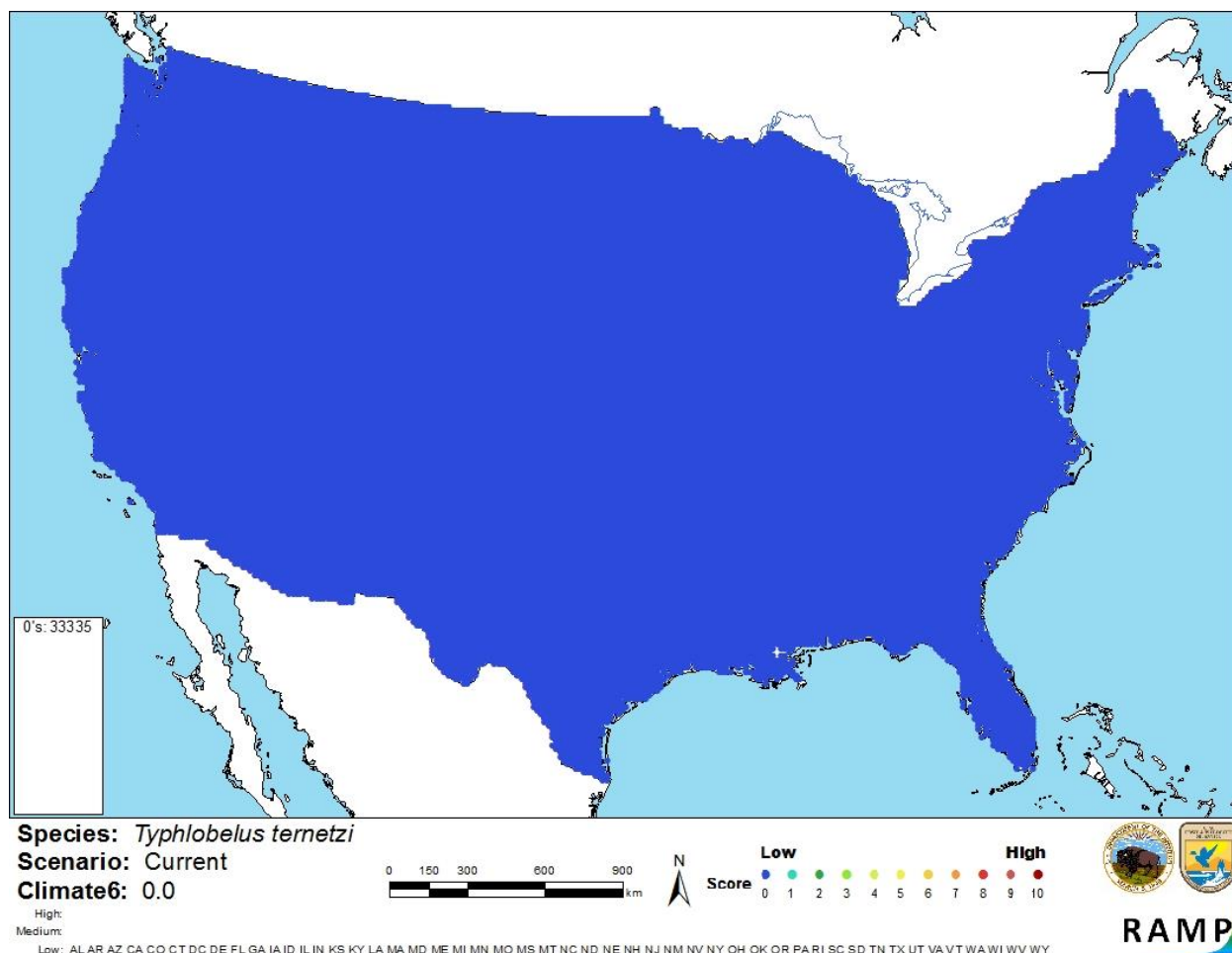


Figure 3. Map of RAMP (Sanders et al. 2014) climate matches for *Typhlobelus ternetzi* in the contiguous United States based on source locations reported by GBIF Secretariat (2018). 0 = Lowest match, 10=Highest match. Counts of climate match scores are tabulated on the left.

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

There is very little information available for the biology and ecology of *Typhlobelus ternetzi*. There are no records showing introductions of this species outside of its native range. Due to lack of information, the certainty of this assessment is low.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Typhlobelus ternetzi is native to South America and has been found in the Upper Negro River basin in Brazil. Fish belonging to the genus *Typhlobelus* are generally psammophilic (loose sand) in preference for habitat. There is no information or documentation on introductions outside of its native range; therefore, the history of invasiveness is uncertain. *T. ternetzi* has a low climate match within the contiguous United States. Due to lack of information the certainty of assessment is low. The overall risk assessment category for this species 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 remarks.
- **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.

Eschmeyer, W. N., R. Fricke, and R. van der Laan, editors. 2018. Catalog of fishes: genera, species, references. Available:
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<http://www.fishbase.org/summary/48803>. (June 2018).

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Myers, G. S. 1944. Two extraordinary new blind nematognath fishes from the Rio Negro, representing a new subfamily of Pygidiidae, with a rearrangement of the genera of the family and illustrations of some previously described genera and species from Venezuela and Brazil. *Proceedings of the California Academy of Sciences* 23:591–602.

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/>. (August 2019).

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Schaefer, S. A., F. Provenzano, M. de Pinna, J. N. Baskin. 2005. New and Noteworthy Venezuelan Glanapterygine Catfishes (Siluriformes, Trichomycteridae), with Discussion of their Biogeography and Psammophily. *American Museum Novitates*. 2496: 1–27.

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.

de Pinna, M. C. C., and W. Wosiacki. 2003. Trichomycteridae (pencil or parasitic catfishes). Pages 270–290 in R. E. Reis, S. O. Kullander, and C. J. Ferraris, Jr., editors. *Checklist of the freshwater fishes of South and Central America*. EDIPUCRS, Porto Alegre, Brazil.