

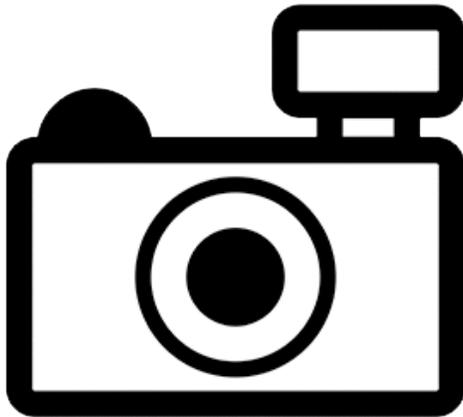
***Erythrinus kessleri* (a fish, no common name)**

Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, August 2011

Revised, December 2018

Web Version, 4/4/2019



No Photo Available

1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2018):

“South America: Brazil [Bahia State].”

Status in the United States

No records of *Erythrinus kessleri* in the wild or in trade in the United States were found.

Means of Introductions in the United States

No records of *Erythrinus kessleri* in the wild in the United States were found.

Remarks

No additional remarks.

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

According to Fricke et al. (2018), *Erythrinus kessleri* (Steindachner, 1877) is the current valid and original name of this species.

From ITIS (2018):

“Kingdom Animalia
Subkingdom Bilateria
Infrakingdom Deuterostomia
Phylum Chordata
Subphylum Vertebrata
Infraphylum Gnathostomata
Superclass Actinopterygii
Class Teleostei
Superorder Ostariophysi
Order Characiformes
Family Erythrinidae
Genus *Erythrinus*
Species *Erythrinus kessleri* Steindachner, 1877”

Size, Weight, and Age Range

From Froese and Pauly (2018):

“Max length : 19.0 cm SL male/unsexed; [Oyakawa 2003]”

Environment

From Froese and Pauly (2018):

“Freshwater; benthopelagic.”

Climate/Range

From Froese and Pauly (2018):

“Tropical”

Distribution Outside the United States

Native

From Froese and Pauly (2018):

“South America: Brazil [Bahia State].”

Introduced

No records of introductions of *Erythrinus kessleri* were found.

Means of Introduction Outside the United States

No records of introductions of *Erythrinus kessleri* were found.

Short Description

No information on a short description of *Erythrinus kessleri* was found.

Biology

No information on the biology of *Erythrinus kessleri* was found.

Human Uses

No information on human uses of *Erythrinus kessleri* was found.

Diseases

No information on diseases of *Erythrinus kessleri* was found. **No records of OIE-reportable diseases were found for *E. kessleri*.**

Threat to Humans

From Froese and Pauly (2018):

“Harmless”

3 Impacts of Introductions

No records of introductions of *Erythrinus kessleri* were found.

4 Global Distribution



Figure 1. Known global distribution of *Erythrinus kessleri*. Locations are in Guyana and Brazil. Map from GBIF Secretariat (2018).

The location in Guyana (Figure 1) was not used to selected source points in the climate match. There is no support in the literature for the presence of *Erythrinus kessleri* in Guyana. The record in displayed in Figure 1 was a single collection in 1908 (GBIF Secretariat 2019); there are no subsequent collections that would suggest the presence of a population. Most likely this is a misidentification of a related species.

5 Distribution Within the United States

No records of *Erythrinus kessleri* in the wild in the United States were found.

6 Climate Matching

Summary of Climate Matching Analysis

The climate match for *Erythrinus kessleri* was low for the majority of the contiguous United States with small patches of medium match in southern Florida and southern Louisiana. The Climate 6 score (Sanders et al. 2018; 16 climate variables; Euclidean distance) for the contiguous United States was 0.000, low. All States having an individually low climate score. The range for a low climate score is from 0.000 to 0.005, inclusive. Only one georeferenced location was available for use in climate matching.

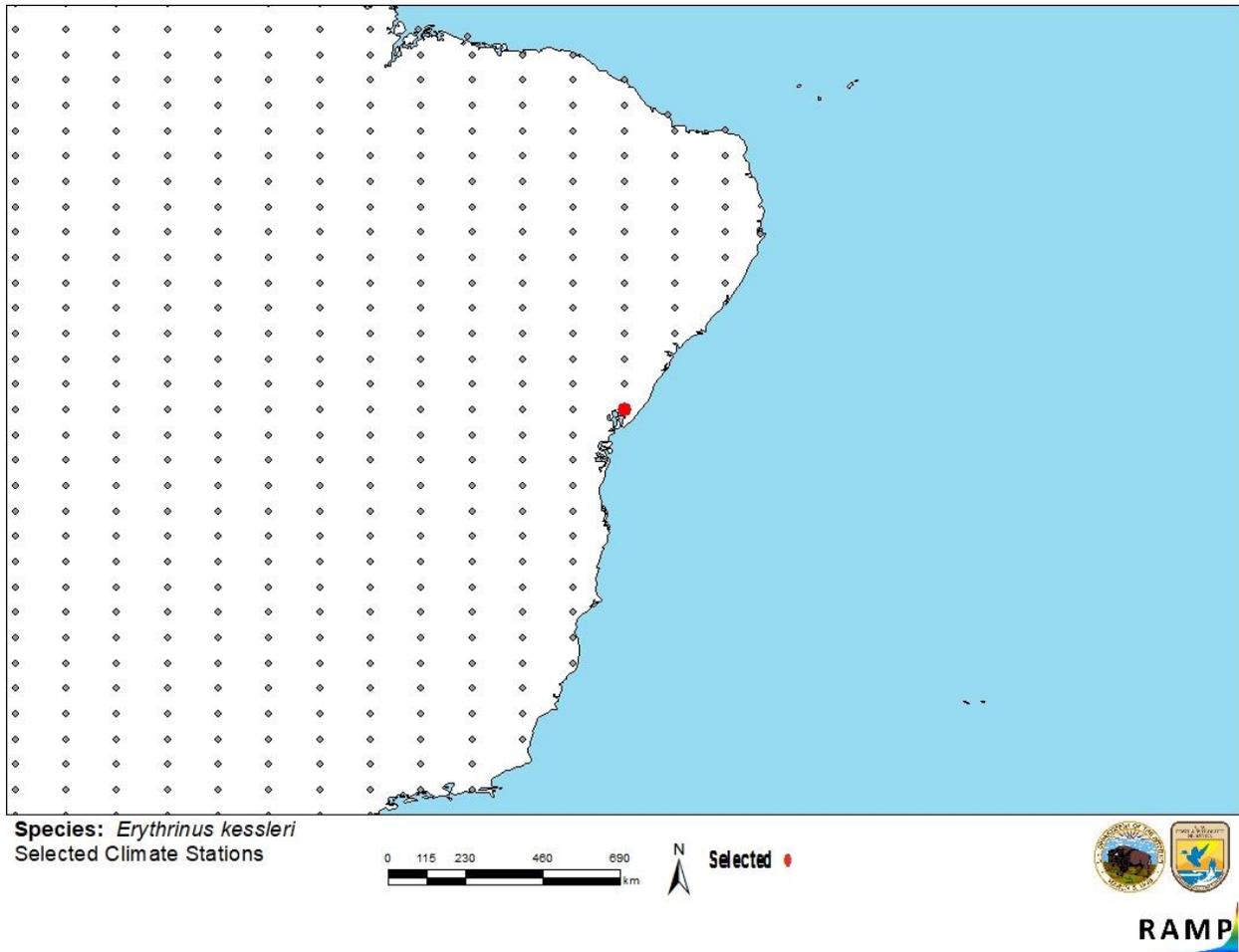


Figure 2. RAMP (Sanders et al. 2018) source map showing weather stations in South America selected as source locations (red; Brazil) and non-source locations (gray) for *Erythrinus kessleri* climate matching. Source locations from GBIF Secretariat (2018).

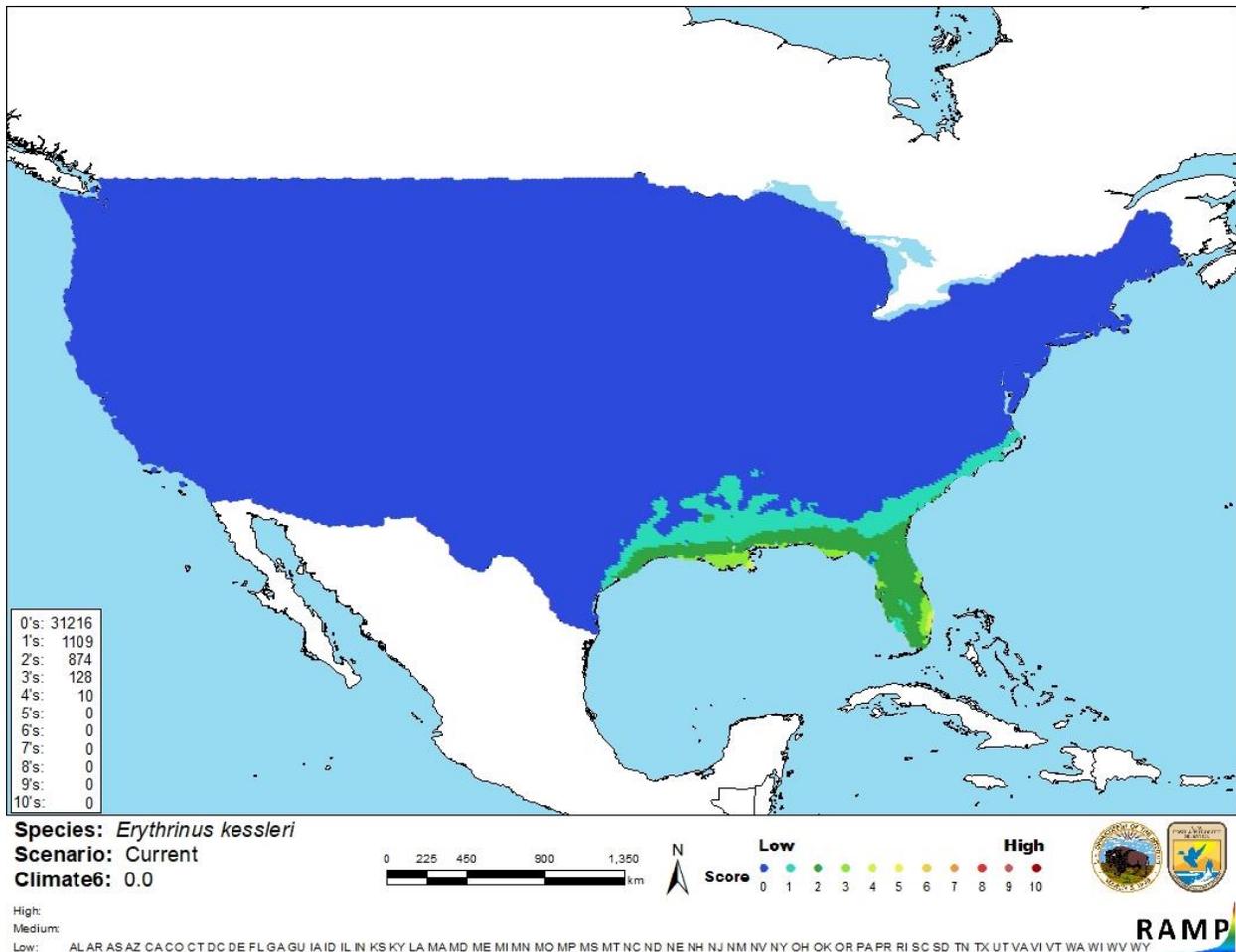


Figure 3. Map of RAMP (Sanders et al. 2018) climate matches for *Erythrinus kessleri* in the contiguous United States based on source locations reported from GBIF Secretariat (2018). 0 = Lowest match, 10 = Highest match.

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

The certainty of assessment for *Erythrinus kessleri* is low. There is minimal information available for this species. No information on introductions *Erythrinus kessleri* was found. Only one georeferenced location was available to use in selecting source points for the climate matching.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Erythrinus kessleri is a South American fish native to Brazil. The history of invasiveness is uncertain. It has not been reported as introduced or established anywhere in the world outside of its native range. There was no information available on the biology, human uses, or diseases of this fish. The climate match for the contiguous United States was low; all States had a low individual climate score. However, only one georeferenced location was available for the climate match. The certainty of assessment is low. The overall risk assessment category for *Erythrinus kessleri* 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. *Erythrinus kessleri* Steindachner, 1877. FishBase. Available: <https://www.fishbase.de/summary/Erythrinus-kessleri.html>. (December 2018).

GBIF Secretariat. 2018. GBIF backbone taxonomy: *Erythrinus kessleri* (Steindachner, 1877). Global Biodiversity Information Facility, Copenhagen. Available: <https://www.gbif.org/species/2352212>. (December 2018).

ITIS (Integrated Taxonomic Information System). 2018. *Erythrinus kessleri* (Steindachner, 1877). Integrated Taxonomic Information System, Reston, Virginia. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=640979#null. (December 2018).

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.

Oyakawa, O. T. 2003. Erythrinidae (trahiras). Pages 238–240 *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.

Steindachner, F. 1877. Die Süßwasserfische des südöstlichen Brasilien (III). Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften. Mathematisch-Naturwissenschaftliche Classe 74(1):559–694.