

Scissortail Rasbora (*Rasbora trilineata*)

Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, May 2011
Revised, February 2019
Web Version, 9/11/2019



Photo: Lerdsuwa. Licensed under CC BY-SA 3.0 Unported. Available:
https://commons.wikimedia.org/wiki/File:Rasbora_trilineata.jpg. (February 2019).

1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2019):

“Asia: Mekong [Cambodia, Laos, Thailand] and Chao Phraya [Thailand] basins; Malay Peninsula, Sumatra, Borneo [Indonesia, Malaysia].”

From Vidthayanon (2012):

“Cambodia; Indonesia (Kalimantan, Sumatera); Lao People's Democratic Republic; Malaysia (Peninsular Malaysia, Sarawak); Thailand; Viet Nam”

Status in the United States

There are no records of *Rasbora trilineata* in the wild in the United States. *R. trilineata* is found in trade in the United States.

From That Pet Place (2019):

“Scissortail Rasbora - *Rasbora trilineata*
[...]
\$1.99
Item: 208458
Out of Stock”

Means of Introductions in the United States

There are no records of *Rasbora trilineata* in the wild in the United States.

Remarks

Rasbora stigmatura is a synonym of *Rasbora trilineata* and therefore a search was conducted using both names.

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

From Fricke et al. (2019):

“**Current status:** Valid as *Rasbora trilineata* Steindachner 1870.”

From ITIS (2019):

“Kingdom Animalia
Subkingdom Bilateria
Infrakingdom Deuterostomia
Phylum Chordata
Subphylum Vertebrata
Infraphylum Gnathostomata
Superclass Actinopterygii
Class Teleostei
Superorder Ostariophysi
Order Cypriniformes
Superfamily Cyprinoidea
Family Cyprinidae

Genus *Rasbora*
Species *Rasbora trilineata* Steindachner, 1870”

Size, Weight, and Age Range

From Froese and Pauly (2019):

“Max length : 13.0 cm TL male/unsexed; [Taki 1974]”

Environment

From Froese and Pauly (2019):

“Freshwater; benthopelagic; pH range: 6.0 - 8.0; dH range: 5 - 12. [...] 23°C - 25°C [Riehl and Baensch 1991; assumed to be recommended aquarium temperature]”

Climate/Range

From Froese and Pauly (2019):

“Tropical;”

Distribution Outside the United States

Native

From Froese and Pauly (2019):

“Asia: Mekong and Chao Phraya basins; Malay Peninsula, Sumatra, Borneo.”

From Vidthayanon (2012):

“Cambodia; Indonesia (Kalimantan, Sumatera); Lao People's Democratic Republic; Malaysia (Peninsular Malaysia, Sarawak); Thailand; Viet Nam”

Introduced

According to Froese and Pauly (2019) *Rasbora trilineata* has been introduced the Philippines and established in Singapore.

From Froese and Pauly (2019):

“Species widespread in fish rearing facilities and has presumably escaped into local waters [in Colombia]. Established in the Magdalena watershed [Colombia].”

Means of Introduction Outside the United States

From Froese and Pauly (2019):

“Species widespread in fish rearing facilities and has presumably escaped into local waters. Established in the Magdalena watershed [Colombia].”

Short Description

From Froese and Pauly (2019):

“Dorsal soft rays (total): 9; Anal soft rays: 8. A short blackish line present on each side along the base of anal fin, the line on both sides uniting behind anal fin and extending to base of caudal fin along the lower edge of caudal peduncle [Taki 1974]; narrow dark mid-lateral stripe on side; black stripe along middle of back [Kottelat 2001]; 13 predorsal scale rows; no red in caudal fin [Rainboth 1996].”

Biology

From Froese and Pauly (2019):

“Found in lakes, swamps, slow flowing areas of rivers, usually in open areas [Kottelat 1998; Vidthayanon 2002]. Seems to prefer habitats in forest [Kottelat and Widjanarti 2005]. A common resident of surface waters in streams, canals, ditches and occasionally of reservoirs in lowland areas [Rainboth 1996]. Inhabits medium to large rivers, flooded fields and brooks of the middle Mekong [Taki 1978]. Feeds mostly on exogenous insects [Rainboth 1996], also takes worms and crustaceans [Mills and Vevers 1989].”

“Provisionally considered a brood hider. In captivity, this species spawns only in darkened aquaria and deposits adhesive eggs under an object on the bottom.”

Human Uses

From Froese and Pauly (2019):

“Not seen in markets, but popular in aquarium trade [Rainboth 1996; Vidthayanon 2002]”

“Aquarium: commercial”

That Pet Place (2019):

“Scissortail Rasbora - *Rasbora trilineata*

[...]

\$1.99

Item: 208458

Out of Stock”

Diseases

No records of OIE reportable diseases (OIE 2019) were found for *Rasbora trilineata*.

According to Froese and Pauly (2019) *Rasbora trilineata* is host to nematode infections and bacterial infections.

Threat to Humans

From Froese and Pauly (2019):

“Harmless”

3 Impacts of Introductions

Although this species is recorded as introduced in three countries and established in at least one, no information on impacts of introduction could be found.

4 Global Distribution



Figure 1. Known global distribution of *Rasbora trilineata*. Locations in Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Thailand, Vietnam, and Singapore. Map from GBIF Secretariat (2019).

Rasbora trilineata is established in Colombia (Froese and Pauly 2019) but no georeferenced observations were available.

5 Distribution Within the United States

There are no records of *Rasbora trilineata* in the wild in the United States.

6 Climate Matching

Summary of Climate Matching Analysis

Rasbora trilineata had a low climate match throughout most of the contiguous United States. There was an area of medium match in peninsular Florida and the southern portion of Texas. There were no areas of high 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 6 scores.

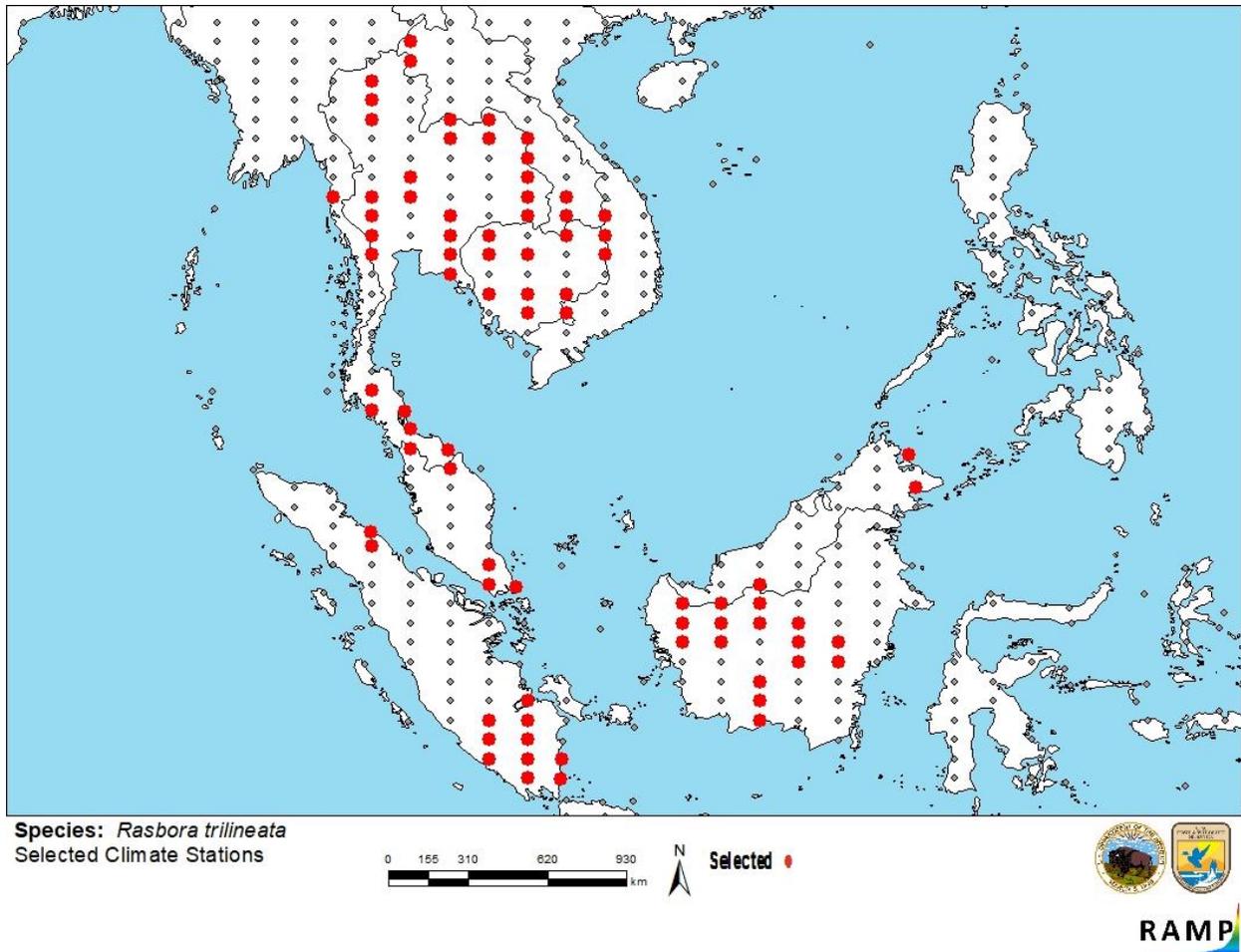


Figure 2. RAMP (Sanders et al. 2018) source map showing weather stations selected as source locations (red; Myanmar, Thailand, Laos, Cambodia, Vietnam, Malaysia, Indonesia) and non-source locations (gray) for *Rasbora trilineata* climate matching. Source locations from GBIF Secretariat (2019). Selected source locations are within 100 km of one or more species occurrences, and do not necessarily represent the locations of occurrences themselves.

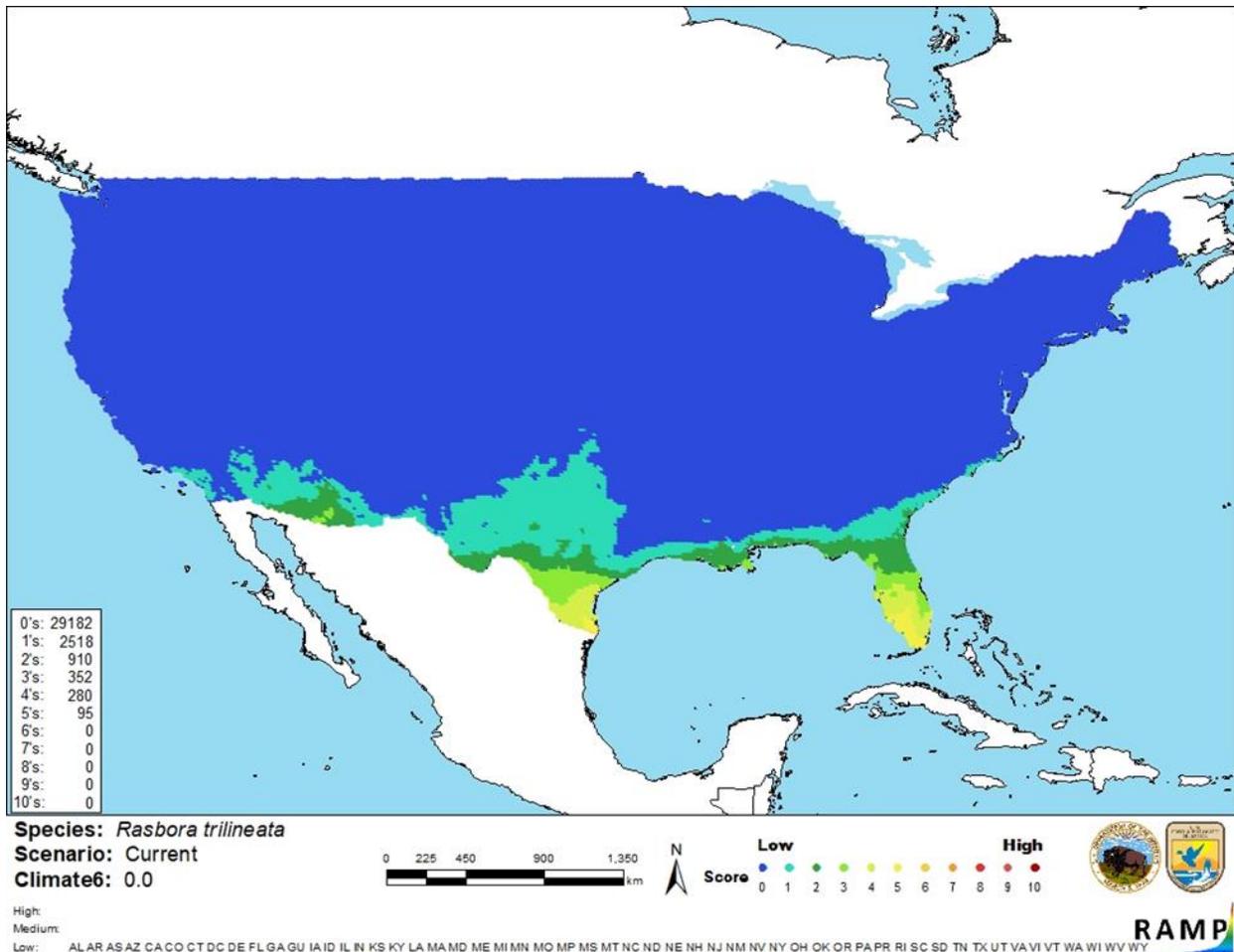


Figure 3. Map of RAMP (Sanders et al. 2018) climate matches for *Rasbora trilineata* in the contiguous United States based on source locations reported by GBIF Secretariat (2019). 0 = Lowest match, 10 = Highest match.

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

Certainty of assessment for *Rasbora trilineata* is low. There is biological and ecological information available. Records of introduction and establishment were found but there was no information found regarding impacts of introduction.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Scissortail Rasbora (*Rasbora trilineata*), is a freshwater fish native to Southeast Asia. *R. trilineata* is native to Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Thailand, and Viet Nam. This species is popular in the aquarium trade. There are records of introductions in Colombia and Singapore which resulted in established populations, and an introduction to the Philippines but it is unknown if it became established. History of invasiveness is None Documented. The climate match for the contiguous United States is low. However, there were areas of medium match in southern Florida and southern Texas but no areas of high match. The certainty of assessment is low due to lack of information about impacts of introductions. The overall risk assessment for *Rasbora trilineata* is uncertain.

Assessment Elements

- **History of Invasiveness (Sec. 3): None Documented**
- **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.

Fricke, R., W. N. Eschmeyer, and R. van der Laan, editors. 2019. Eschmeyer's catalog of fishes: genera, species, references. Available: <http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp>. (February 2019).

Froese, R., and D. Pauly, editors. 2019. *Rasbora trilineata* Steindachner, 1870. FishBase. Available: <https://www.fishbase.de/summary/Rasbora-trilineata.html>. (February 2019).

GBIF Secretariat. 2019. GBIF backbone taxonomy: *Rasbora trilineata* Steindachner, 1870. Global Biodiversity Information Facility, Copenhagen. Available: <https://www.gbif.org/species/2359627>. (February 2019).

ITIS (Integrated Taxonomic Information System). 2019. *Rasbora trilineata* Steindachner, 1870. Integrated Taxonomic Information System, Reston, Virginia. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=163758#null. (February 2019).

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/>. (September 2019).

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

That Pet Place. 2019. Scissortail Rasbora - *Rasbora trilineata*. Available: <https://www.thatpetplace.com/Rasbora-trilineata-scissortail-208458>. (February 2019).

Vidthayanon, C. 2012. *Rasbora trilineata*. The IUCN Red List of Threatened Species 2012: e.T166864A1144318. Available: <https://www.iucnredlist.org/species/166864/1144318>. (February 2019).

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.

Kottelat, M. 1998. Fishes of the Nam Theun and Xe Bangfai basins, Laos, with diagnoses of twenty-two new species (Teleostei: Cyprinidae, Balitoridae, Cobitidae, Coiidae and Odontobutidae). *Ichthyological Explorations of Freshwaters* 9(1):1–128.

Kottelat, M. 2001. *Fishes of Laos*. WHT Publications, Colombo 5, Sri Lanka.

Kottelat, M., and E. Widjanarti. 2005. The fishes of Danau Sentarum National Park and the Kapuas Lakes area, Kalimantan Barat, Indonesia. *Raffles Bulletin of Zoology Supplement* 13:139–173.

Mills, D., and G. Vevers. 1989. *The Tetra encyclopedia of freshwater tropical aquarium fishes*. Tetra Press, New Jersey.

Rainboth, W. J. 1996. *Fishes of the Cambodian Mekong*. FAO species identification field guide for fishery purposes. FAO, Rome.

Riehl, R., and H. A. Baensch. 1991. *Aquarien atlas*. Band. 1. Melle: Mergus, Verlag für Natur- und Heimtierkunde, Germany.

Taki, Y. 1974. *Fishes of the Lao Mekong Basin*. United States Agency for International Development, Mission to Laos Agriculture Division.

Taki, Y. 1978. An analytical study of the fish fauna of the Mekong basin as a biological production system in nature. Page 77 *in* Research Institute of Evolutionary Biology Special Publications 1. Tokyo, Japan.

Vidthayanon, C. 2002. *Peat swamp fishes of Thailand*. Office of Environmental Policy and Planning, Bangkok, Thailand.