

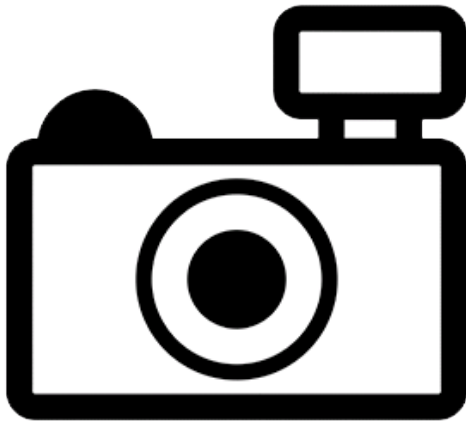
***Dawkinsia rohani* (a barb, no common name)**

Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, February 2013

Revised, February 2019

Web Version, 10/10/2019



No Photo Available

1 Native Range and Status in the United States

Native Range

From Devi et al. (2010):

“*Puntius rohani* sp. nov. is at present known only from the hill streams of Kanyakumari District, Tamil Nadu, India, draining into the Arabian Sea [...]”

Status in the United States

No records of *Dawkinsia rohani* in the wild or in trade in the United States were found.

Means of Introductions in the United States

No records of *Dawkinsia rohani* in the wild in the United States were found.

Remarks

Dawkinsia rohani was previously known as *Puntius rohani*, both names were searched during this assessment. According to Dahanukar (2015), *D. rohani* is listed as a vulnerable species.

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

From Fricke et al. (2019):

“**Current status:** Valid as *Dawkinsia rohani* (Rema Devi, Indra & Knight 2010).”

From Froese and Pauly (2019b):

“Biota > Animalia (Kingdom) > Chordata (Phylum) > Vertebrata (Subphylum) > Gnathostomata (Superclass) > [...] Actinopterygii (Class) > Cypriniformes (Order) > Cyprinidae (Family) > Barbinae (Subfamily) > *Dawkinsia* (Genus) > *Dawkinsia rohani* (Species)”

Size, Weight, and Age Range

From Froese and Pauly (2019a):

“Max length : 9.5 cm SL male/unsexed; [Devi et al. 2010].”

Environment

From Froese and Pauly (2019a):

“Freshwater; benthopelagic.”

Climate/Range

From Froese and Pauly (2019a):

“Tropical”

Distribution Outside the United States

Native

From Devi et al. (2010):

“*Puntius rohani* sp. nov. is at present known only from the hill streams of Kanyakumari District, Tamil Nadu, India, draining into the Arabian Sea [...].”

Introduced

No records of introductions of *Dawkinsia rohani* were found.

Means of Introduction Outside the United States

No records of introductions of *Dawkinsia rohani* were found.

Short Description

From Devi et al. (2010):

“This species can be distinguished from the other members of the *Puntius filamentosus* Group by the combination of the following characters: the absence of vertical black bands near the tips of the caudal fin; the presence of an elongate black club-shaped blotch 1.5 scales high extending from the 12-13th lateral-line scales to the caudal-fin base; and possessing 2-3+6-9 gill rakers on the first gill arch, 21-23 lateral-line scales, seven predorsal scales, $\frac{1}{2}$ 4+1+3-3 $\frac{1}{2}$ scales in transverse line from the dorsal-fin origin to the mid-ventral scale row, and 2-2 $\frac{1}{2}$ scales between the lateral line and the pelvic-fin origin.”

From Moncey (2013):

“In some freshwater fishes of southern India and Srilanka such [...] *P. rohani*, [...] males are known to bear elongated filamentous rays in the dorsal fin during reproductive season, in addition to various hues of different colours [Pethiyagoda and Kottelat, 2005b; Devi et al., 2010].”

“Similarly, [...] *P. rohani*, [...] show a red stripe arranged obliquely with a black stripe on both upper and lower lobes of their caudal fin.”

Biology

No information on the biology of *Dawkinsia rohani* was found.

Human Uses

Dahanukar (2015) states that *Dawkinsia rohani* is harvested locally for food in the Pechiparai Reservoir.

Diseases

No information on diseases of *Dawkinsia rohani* was found. **No records of OIE-reportable diseases (OIE 2019) were found for *D. rohani*.**

Threat to Humans

From Froese and Pauly (2019):

“Harmless”

3 Impacts of Introductions

No records of introductions of *Dawkinsia rohani* were found.

4 Global Distribution



Figure 1. Known global distribution of *Dawkinsia rohani*. Locations are in Tamil Nadu, India. Map from Devi et al. (2010).

No georeferenced observations were available for *Dawkinsia rohani*.

5 Distribution Within the United States

No records of *Dawkinsia rohani* in the wild in the United States were found.

6 Climate Matching

Summary of Climate Matching Analysis

The climate match for *Dawkinsia rohani* was low for the vast majority of the contiguous United States. There were no areas of high climate match. Southern Florida and southeastern Texas were the only areas with a medium climate 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.

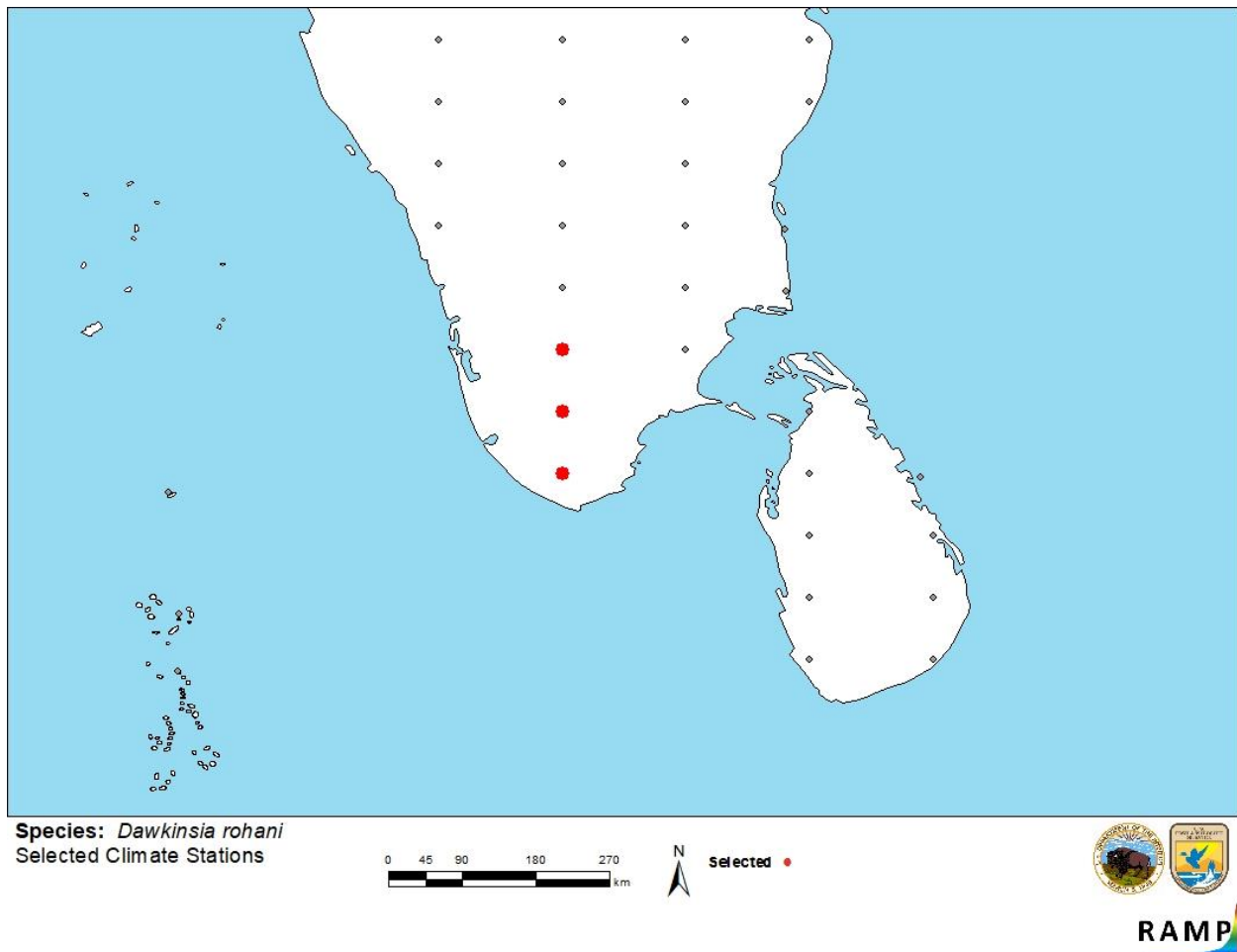


Figure 2. RAMP (Sanders et al. 2018) source map showing weather stations in Tamil Nadu, India selected as source locations (red) and non-source locations (gray) for *Dawkinsia rohani* climate matching. Source locations from Devi et al. (2010). Selected source locations are within 100 km of one or more species occurrences, and do not necessarily represent the locations of occurrences themselves.

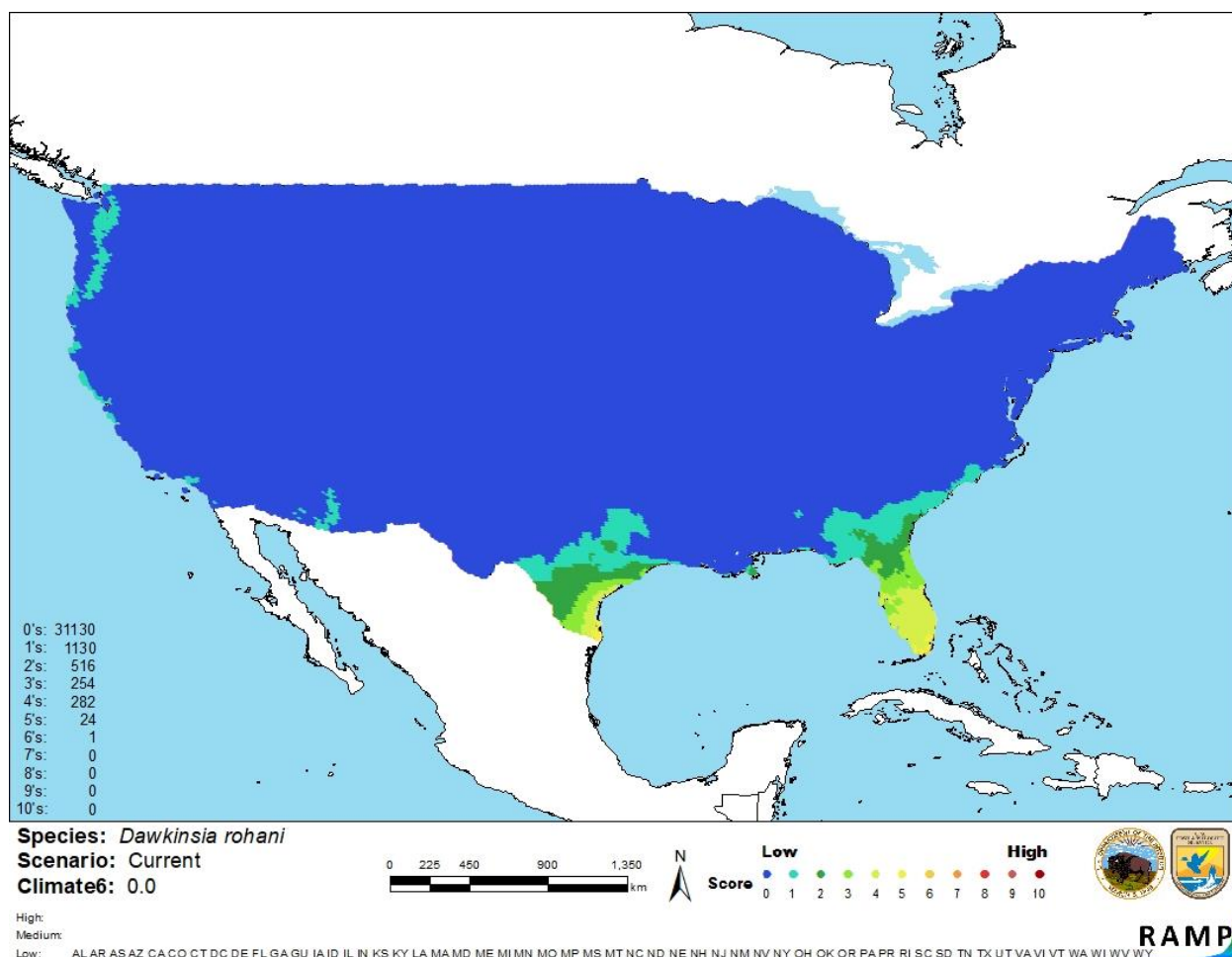


Figure 3. Map of RAMP (Sanders et al. 2018) climate matches for *Dawkinsia rohani* in the contiguous United States based on source locations reported by Devi et al. (2010). 0 = Lowest match, 10 = Highest match.

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 *Dawkinsia rohani* is low. There is minimal information available for this species. No reports of introductions of *Dawkinsia rohani* were found, so impacts of introduction are unknown.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Dawkinsia rohani is a fish native to Tamil Nadu, India. According to Dahanukar (2015), this species is listed as Vulnerable on the IUCN Red List because populations are fragmented and continue to decline. This history of invasiveness is uncertain. It has not been reported as introduced or established anywhere in the world outside of the native range. This species is harvested locally for human consumption but not found in the aquarium trade. The climate match for the contiguous United States was low, with only small areas in southern Florida and south eastern Texas having a medium climate match. Each state had an individually low climate score. The certainty of assessment is low due to lack of information. The overall risk category for *Dawkinsia rohani* 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:** This species is listed as Vulnerable on the IUCN Red List.
- **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.

- Dahanukar, N. 2015. *Dawkinsia rohani*. The IUCN Red List of Threatened Species 2015: e.T188749A70367702. Available: <https://www.iucnredlist.org/species/188749/70367702>. (February 2019).
- Devi, K. R., T. J. Indra, and J. D. M. Knight. 2010. *Puntius rohani* (Teleostei: Cyprinidae), a new species of barb in the *Puntius filamentosus* group from the southern Western Ghats of India. *Journal of Threatened Taxa* 2(9):1121–1129.
- 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. 2019a. *Dawkinsia rohani* (Devi, Indra and Knight, 2010). FishBase. Available: <https://www.fishbase.de/summary/Dawkinsia-rohani.html>. (February 2019).

Froese, R. and D. Pauly, editors. 2019b. *Dawkinsia rohani* (Devi, Indra and Knight, 2010). In World Register of Marine Species. Available: <http://www.marinespecies.org/aphia.php?p=taxdetails&id=1008151>. (February 2019).

Moncey, V. 2013. Visual and olfactory perception in the reproduction of a cyprinid fish, *Puntius parrah*. Doctoral dissertation. University of Calicut, Kerala, India.

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.

Pethiyagoda, R., and M. Kottelat. 2005. A review of the barbs of the *Puntius filamentosus* group (Teleostei: Cyprinidae) of southern India and Srilanka. The Raffles Bulletin of Zoology 12:127–144.