

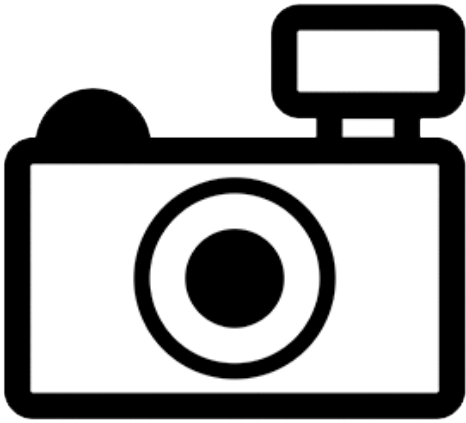
## ***Puntius waageni* (a fish, no common name)**

### **Ecological Risk Screening Summary**

U.S. Fish & Wildlife Service, February 2013

Revised, November 2018

Web Version, 8/30/2019



No Photo Available

## **1 Native Range and Status in the United States**

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### **Native Range**

From Fricke et al. (2019):

“Distribution: Pakistan and northern India.”

From Froese and Pauly (2018):

“Known from Choa Saiden Shah, Punjab [Pakistan] (Ref. 52665).”

From Mirza (1975):

“All these species are widely distributed in South Asia, except *P. waageni*, which is endemic to the Salt Range of the Punjab [Pakistan and India].”

From Chandra (2007):

“Distribution: India: Madhya Pradesh (Jabalpur, Mandla districts), Shimla. Elsewhere: Pakistan.”

## Status in the United States

No records of *Puntius waageni* in the wild or in trade in the United States were found.

## Means of Introductions in the United States

No records of *Puntius waageni* in the wild in the United States were found.

## Remarks

No additional remarks.

## 2 Biology and Ecology

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### Taxonomic Hierarchy and Taxonomic Standing

From Fricke et al. (2019):

“**Current status:** Valid as *Puntius waageni* (Day 1872).”

From Froese and Pauly (2018):

“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 *Puntius* Hamilton, 1822  
Species *Puntius waageni* (Day, 1872)”

### Size, Weight, and Age Range

From Chandra (2007):

“Head length 4.00 and body depth 3.00 to 3.34 in total length, Eye diameter 3.75 to 4.00 in head length.”

### Environment

From Froese and Pauly (2018):

“Freshwater; benthopelagic.”

## **Climate/Range**

From Froes and Pauly (2018):

“Subtropical”

## **Distribution Outside the United States**

Native

From Froese and Pauly (2018):

“Asia: endemic to Pakistan.”

Froese and Pauly (2018) states that it is questionable that *Puntius waageni* is in India.

From Mirza (1975):

“All these species are widely distributed in South Asia, except *P. waageni*, which is endemic to the Salt Range of the Punjab.”

From Chandra (2007):

“Distribution: India: Madhya Pradesh (Jabalpur, Mandla districts), Shimla.

Elsewhere: Pakistan.”

Introduced

No records of introductions of *Puntius waageni* were found.

## **Means of Introduction Outside the United States**

No records of introductions of *Puntius waageni* were found.

## **Short Description**

From Chandra (2007):

“No tubercles on snout and lips. Barbels absent. Dorsal fin inserted nearer to base of caudal fin than to tip of snout. Last unbranched dorsal fin ray weak, non-osseous and articulated. Pectoral fin extending to pelvic fin, as long as head without snout. Lateral line incomplete, ceasing after 7 or 8 scales. 4Y2 rows of scales between lateral line and base of pelvic fin. Predorsal scales 8-10. Body silvery, darkest superiorly. A dark blotch on the side of the tail on about 17th or 18th row of scale.”

## **Biology**

No information on the biology of *Puntius waageni* was found.

## Human Uses

From Froese and Pauly (2018):

“Fisheries: of no interest”

## Diseases

No information on diseases of *Puntius waageni* was found. **No records of OIE-reportable diseases (OIE 2019) were found for *P. waageni*.**

## Threat to Humans

From Froese and Pauly (2018):

“Harmless”

## 3 Impacts of Introductions

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No records of introductions of *Puntius waageni* were found.

## 4 Global Distribution

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**Figure 1.** Map of southern Asia showing a location where *Puntius waageni* has been reported. Location is in India. Map from GBIF Secretariat (2019).

No georeferenced observations in Pakistan were available to use as source points for the climate match.

## 5 Distribution Within the United States

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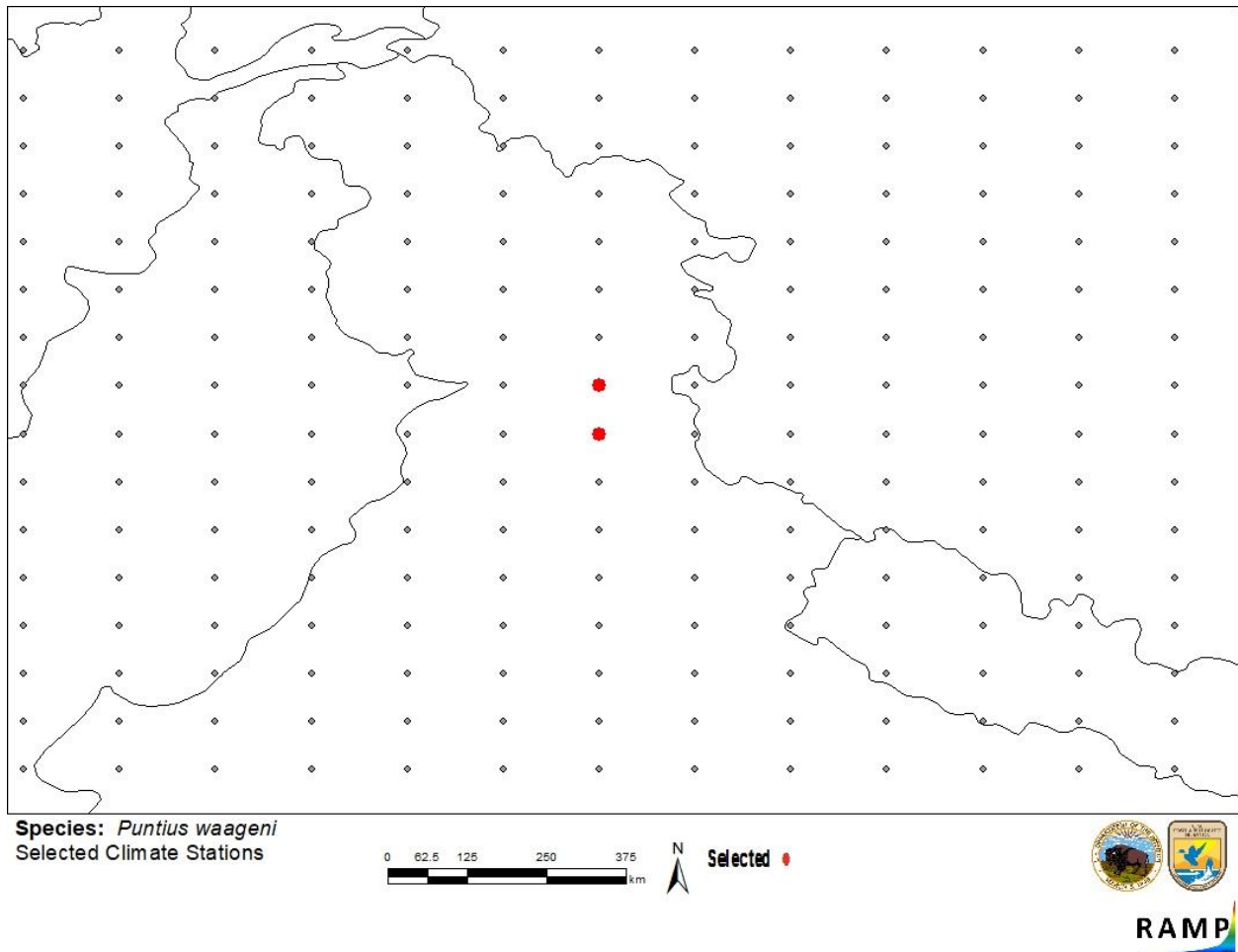
No records of *Puntius waageni* in the wild in the United States were found.

## 6 Climate Matching

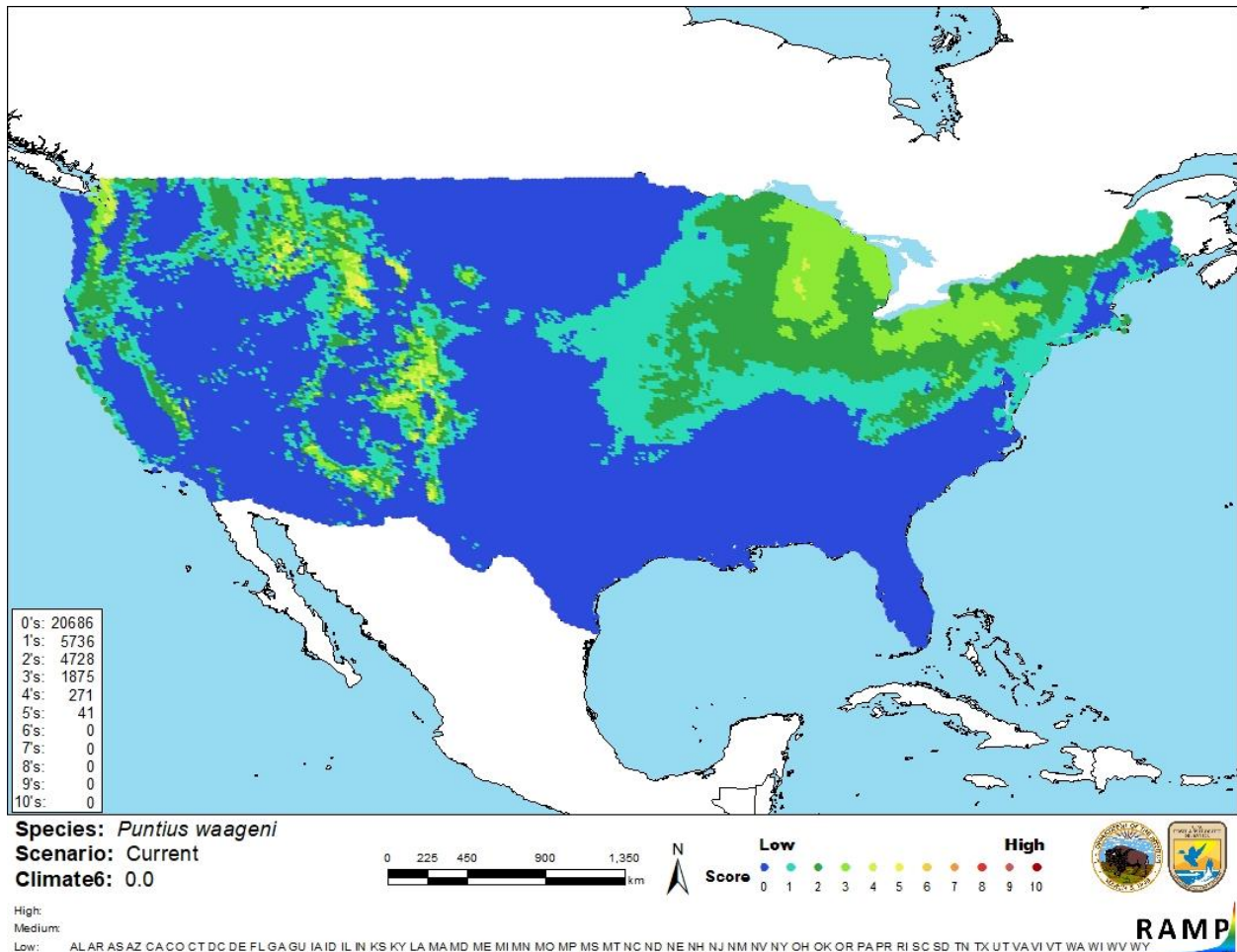
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### Summary of Climate Matching Analysis

The climate match for *Puntius waageni* was low for the majority of the contiguous United States with small patches of medium match in the northern Midwest, Wisconsin, Rocky Mountains, and Olympic Northwest. The Climate 6 score (Sanders et al. 2014; 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. The uncertainty of the model is increased since only one georeferenced point in India was available instead of georeferenced points across the species' entire range.



**Figure 2.** RAMP (Sanders et al. 2018) source map showing weather stations in Asia selected as source locations (red; India) and non-source locations (gray) for *Puntius waageni* 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 *Puntius waageni* 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<br>(Sum of Climate Scores 6-10) / (Sum of total Climate Scores) | Climate Match<br>Category |
|--|---------------------------|
| $0.000 \leq X \leq 0.005$  | Low                       |
| $0.005 < X < 0.103$  | Medium                    |
| $\geq 0.103$   | High                      |

## 7 Certainty of Assessment

The certainty of assessment for *Puntius waageni* is low. There is minimal information available for this species. No information on introductions of *Puntius waageni* was found. The described range of the species spans northern India and western Pakistan but only one georeferenced point in northern India was available to use in selecting source points for the climate match. This lowers the certainty in the results of the climate match.

## 8 Risk Assessment

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### Summary of Risk to the Contiguous United States

*Puntius waageni* is a freshwater fish native to India and Pakistan. The history of invasiveness is uncertain. It has not been reported as introduced or established anywhere in the world. The climate match for the contiguous United States was low with all states having a low individual climate scores. The entire native range of the species was not represented in the source points used in the climate match as only one georeferenced observation of the species was available to use in selecting source points. The certainty of assessment is low due to lack of information. The overall risk assessment category 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

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**Note: The following references were accessed for this ERSS. References cited within quoted text but not accessed are included below in Section 10.**

- Chandra, K. 2007. Fauna of Madhya Pradesh (including Chhattisgarh). State Fauna Series 15:1–564.
- 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>. (August 2019).
- Froese, R., and D. Pauly, editors. 2018. *Puntius waageni* (Day, 1872). FishBase. Available: <http://www.fishbase.se/summary/Puntius-waageni.html>. (November 2018).
- GBIF Secretariat. 2019. GBIF backbone taxonomy: *Puntius waageni* (Day, 1872). Global Biodiversity Information Facility, Copenhagen. Available: <https://www.gbif.org/species/2364259>. (August 2019).
- ITIS (Integrated Taxonomic Information System). 2018. *Puntius waageni* (Day, 1872). Integrated Taxonomic Information System, Reston, Virginia. Available: [https://www.itis.gov/servlet/SingleRpt/SingleRpt?search\\_topic=TSN&search\\_value=689864#null](https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=689864#null). (November 2018).
- Mirza, M. R. 1975. Freshwater fishes and zoogeography of Pakistan. *Bijdragen tot de dierkunde* 45(2):143–180.



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).

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**

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**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.**

Day, F. 1872. Monograph of Indian Cyprinidae. Parts 4–6. *Journal of the Asiatic Society of Bengal* 41(2):1–29.