

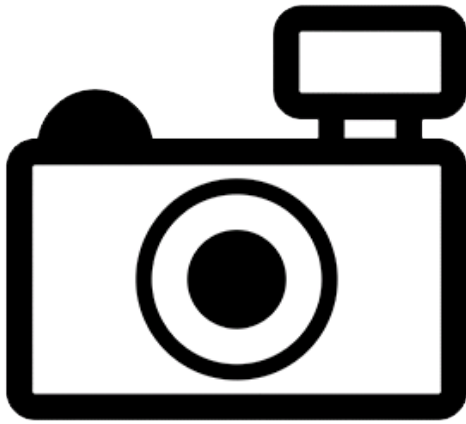
## ***Puntius layardi* (a fish, no common name)**

### **Ecological Risk Screening Summary**

U.S. Fish and Wildlife Service, December 2013

Revised, July 2018

Web Version, 6/27/2019



No Photo Available

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

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### **Native Range**

From Froese and Pauly (2018):

“Asia: Sri Lanka.”

### **Status in the United States**

This species has not been reported as introduced or established in the United States. There is no indication that this species is in trade 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

From Eschmeyer et al. (2018):

“Apparently valid as *Puntius layardi* (Günther 1868) from Sri Lanka but not seen in the wild since 1868 -- (Pethiyagoda et al. 2008[...]).”

## 2 Biology and Ecology

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### Taxonomic Hierarchy and Taxonomic Standing

From GBIF Secretariat (2018):

“Kingdom Animalia  
Phylum Chordata  
Class Actinopterygii  
Order Cypriniformes  
Family Cyprinidae  
Genus *Puntius* Hamilton, 1822  
Species *Puntius layardi* (Günther, 1868)”

From Eschmeyer et al. (2018):

“Current status: Valid as *Puntius layardi* (Günther 1868). Cyprinidae: Smiliogastrinae.”

### Size, Weight, and Age Range

From Froese and Pauly (2018):

“Max length : 11.3 cm SL male/unsexed; [Pethiyagoda et al. 2008]”

### 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):

“Asia: Sri Lanka.”

## 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 Günther (1868):

“D. 11. A. 8. L. lat. 23. L. transv.  $4\frac{1}{2}$ .”

“The osseous dorsal ray is strong, unserrated, its stiff portion being slightly longer than the head, without snout. There are two and a half longitudinal series of scales between the lateral line and the ventral fin. Body compressed, rather elevated anteriorly, with the upper profile deeply concave above the neck ; its depth is rather more than one-third of the total length (without caudal), in which the length of the head is contained thrice and one-third. Head rather depressed, longish ; snout of moderate length, much longer than the eye, which is one-fourth of the length of the head ; inter-orbital space flat, upper jaw overlapping the lower ; barbel as long as the eye. Dorsal fin considerably lower than the body ; its origin is opposite to that of the ventral, and nearer to the root of the caudal than to the end of the snout. Anal fin of moderate size. Caudal deeply forked. Blackish above, sides and belly uniform silvery.”

## Biology

No information available.

## Human Uses

No information available.

## Diseases

No information available. No OIE-reportable diseases (OIE 2019) have been documented for this species.

## Threat to Humans

From Froese and Pauly (2018):

“Harmless”

## 3 Impacts of Introductions

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

## 4 Global Distribution

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**Figure 1.** Known global distribution of *Puntius layardi* in Sri Lanka. Map from GBIF Secretariat (2018).

## 5 Distribution Within the United States

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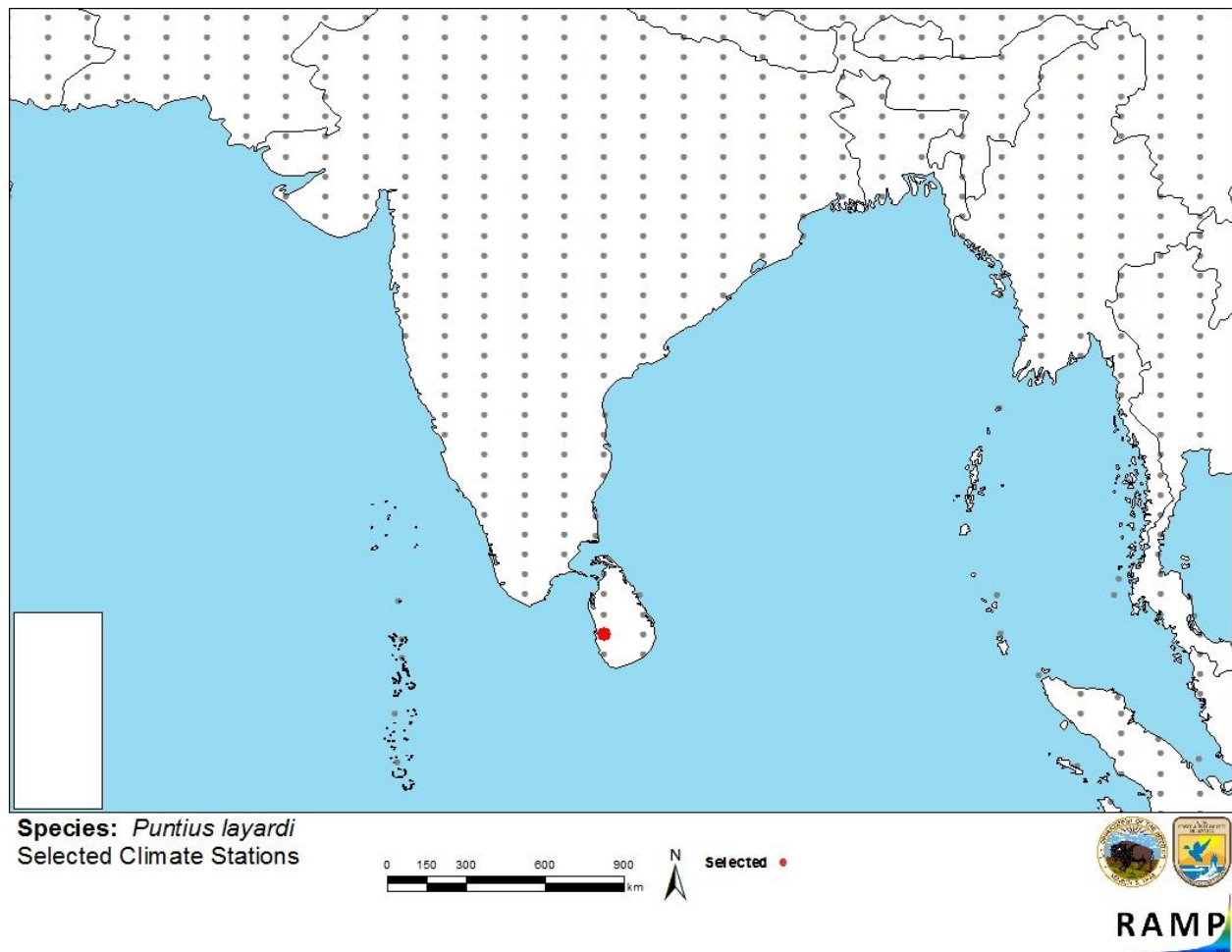
This species has not been reported as introduced or established in the United States.

## 6 Climate Matching

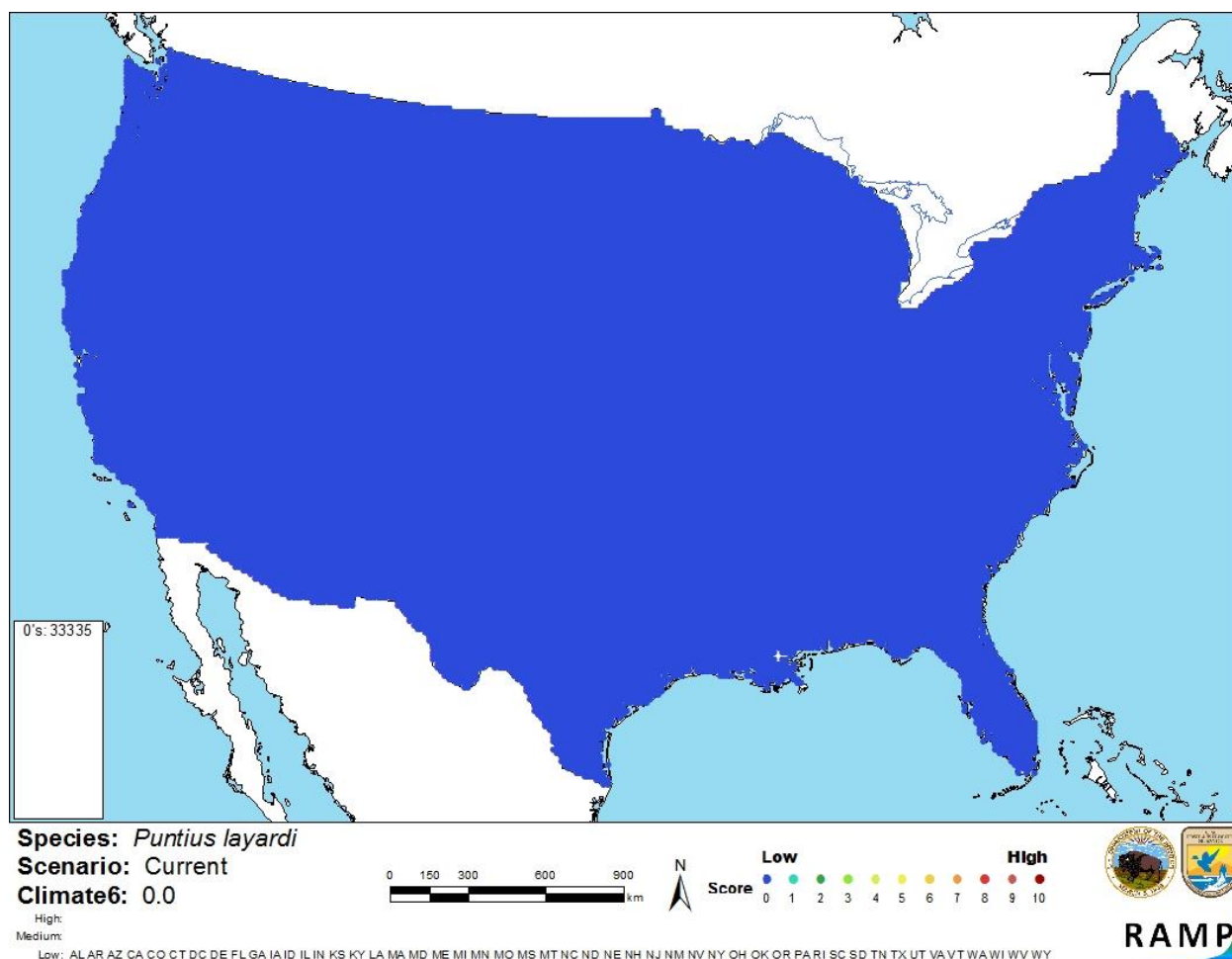
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### Summary of Climate Matching Analysis

The Climate 6 score (Sanders et al. 2014; 16 climate variables; Euclidean distance) for the contiguous United States was 0.0, which is a low climate match. The climate match was uniformly very low across the entire contiguous United States. The climate match was based on only one georeferenced occurrence; no other georeferenced occurrences were available.



**Figure 2.** RAMP (Sanders et al. 2014) source map showing weather stations selected as source locations (red; Sri Lanka) and non-source locations (gray) for *Puntius layardi* climate matching. Source location from GBIF Secretariat (2018).



**Figure 3.** Map of RAMP (Sanders et al. 2014) climate matches for *Puntius layardi* in the contiguous United States based on source locations reported by 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

There is almost no information available about *Puntius layardi*. There is no information available about the biology of this species, it is only known from one source location, and it has not been seen in the wild since 1868. There are no reported introductions. Further information is required to assess the risk this species poses to the contiguous United States. Certainty of this assessment is low.

## 8 Risk Assessment

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### Summary of Risk to the Contiguous United States

*Puntius layardi* is a small cyprinid fish native to Sri Lanka. This species is only known from one location, and it has not been documented since its description in 1868. History of invasiveness is uncertain because there have been no reported introductions. *P. layardi* has a low climate match with the contiguous United States based on its one reported location. Because of the lack of information available about this species, the certainty of this assessment is low. 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**
- **Important additional information: This fish has not been reported in the wild since its original description in 1868.**
- **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.**

- Eschmeyer, W. N., R. Fricke, and R. van der Laan, editors. 2018. Catalog of fishes: genera, species, references. Available: <http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp>. (July 2018).
- Froese, R., and D. Pauly, editors. 2018. *Puntius layardi* (Günther, 1868). FishBase. Available: <https://www.fishbase.de/summary/Puntius-layardi.html>. (July 2018).
- GBIF Secretariat. 2018. GBIF backbone taxonomy: *Puntius layardi*, Günther, 1868. Global Biodiversity Information Facility, Copenhagen. Available: <https://www.gbif.org/species/2364201>. (July 2018).
- Günther, A. C. L. G. 1868. Catalogue of the Fishes in the British Museum. Volume 7. Taylor and Francis, London.
- OIE (World Organisation for Animal Health). 2019. OIE-listed diseases, infections and infestations in force in 2019. World Organisation for Animal Health, Paris. Available: <http://www.oie.int/animal-health-in-the-world/oie-listed-diseases-2019/>.
- Sanders, S., C. Castiglione, and M. H. Hoff. 2014. Risk Assessment Mapping Program: RAMP. 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.**

Pethiyagoda, R., A. Silva, K. Maduwage, and M. Meegaskumbura. 2008. *Puntius kelumi*, a new species of cyprinid fish from Sri Lanka (Teleostei: Cyprinidae). Ichthyological Exploration of Freshwaters 19(3):201-214.