

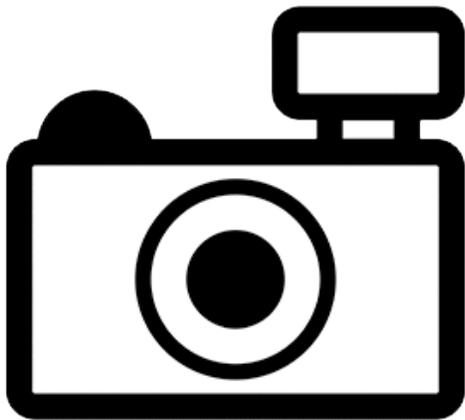
## *Puntius snyderi* (a fish, no common name)

### Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, February 2013

Revised, February 2019

Web Version, 8/8/2019



No Photo Available

## 1 Native Range and Status in the United States

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### Native Range

From Chang et al. (2006):

“*Puntius snyderi* is a freshwater cyprinid fish discovered by Oshima when he collected the freshwater fishes in Taiwan in 1915-1917. It was mainly distributed in northern and central Taiwan [Oshima 1919] [...]”

From Chang et al. (2009):

“A similar inference was also proposed for *Puntius snyderi* and *P. semifasciolatus* in which *P. snyderi* is a species endemic to Taiwan and *P. semifasciolatus* is distributed in both China and Taiwan (Chang et al. 2006). These 2 species were proposed to have differentiated in China. After *P. snyderi* and *P. semifasciolatus* dispersed to Taiwan, *P. snyderi* became extinct in China (Chang et al. 2006).”

Chen et al. (2013) list *Puntius snyderi* as previously present on Kinmen Island, Taiwan but that it is currently locally extinct there.

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

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

### **Means of Introductions in the United States**

No records of *Puntius snyderi* 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**

According to Fricke et al. (2019), *Puntius snyderi* (Oshima 1919) is the current valid and original name of this species.

From Bailly (2017):

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

Some sources refer to this species by a synonym, *Barboides snyderi* (Forese and Pauly 2019).

### **Size, Weight, and Age Range**

No records of size, weight or age range for *Puntius snyderi* were found.

### **Environment**

From Froese and Pauly (2019):

“Freshwater; benthopelagic.”

### **Climate/Range**

From Froese and Pauly (2019):

“Subtropical”

## Distribution Outside the United States

### Native

From Chang et al. (2006):

“*Puntius snyderi* is a freshwater cyprinid fish discovered by Oshima when he collected the freshwater fishes in Taiwan in 1915-1917. It was mainly distributed in northern and central Taiwan [Oshima 1919] [...]”

From Chang et al. (2009):

“A similar inference was also proposed for *Puntius snyderi* and *P. semifasciolatus* in which *P. snyderi* is a species endemic to Taiwan and *P. semifasciolatus* is distributed in both China and Taiwan (Chang et al. 2006). These 2 species were proposed to have differentiated in China. After *P. snyderi* and *P. semifasciolatus* dispersed to Taiwan, *P. snyderi* became extinct in China (Chang et al. 2006).”

Chen et al. (2013) list *Puntius snyderi* as previously present on Kinmen Island, Taiwan but that it is currently locally extinct there.

### Introduced

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

## Means of Introduction Outside the United States

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

## Short Description

From Chang et al. (2006):

“The major morphological difference between these two fishes is the presence of a pair of maxillary barbels in *P. semifasciolatus* but their absence in *P. snyderi*.”

## Biology

No records of the biology of *Puntius snyderi* were found.

## Human Uses

No records of the human uses of *Puntius snyderi* were found.

## Diseases

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

## Threat to Humans

From Froese and Pauly (2019):

“Harmless”

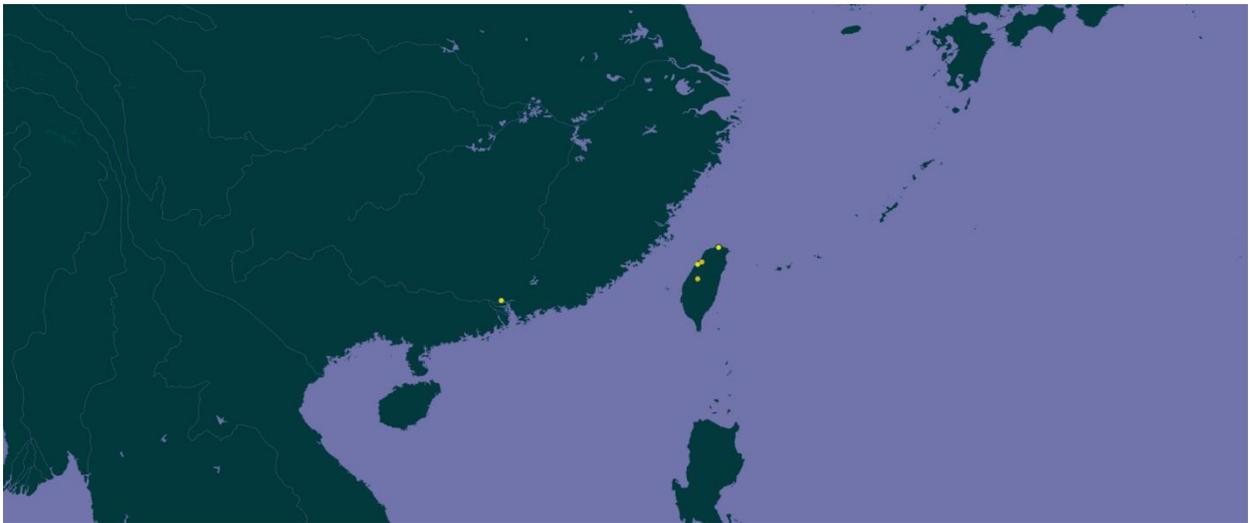
## 3 Impacts of Introductions

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

## 4 Global Distribution

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**Figure 1.** Map of eastern Asia showing locations where *Puntius snyderi* has been reported. Locations are in China and Taiwan. Map from GBIF Secretariat (2019). The locations in China were not used to select source points for the climate match, *P. snyderi* is not currently extant in China (Chang et al. 2009).

## 5 Distribution Within the United States

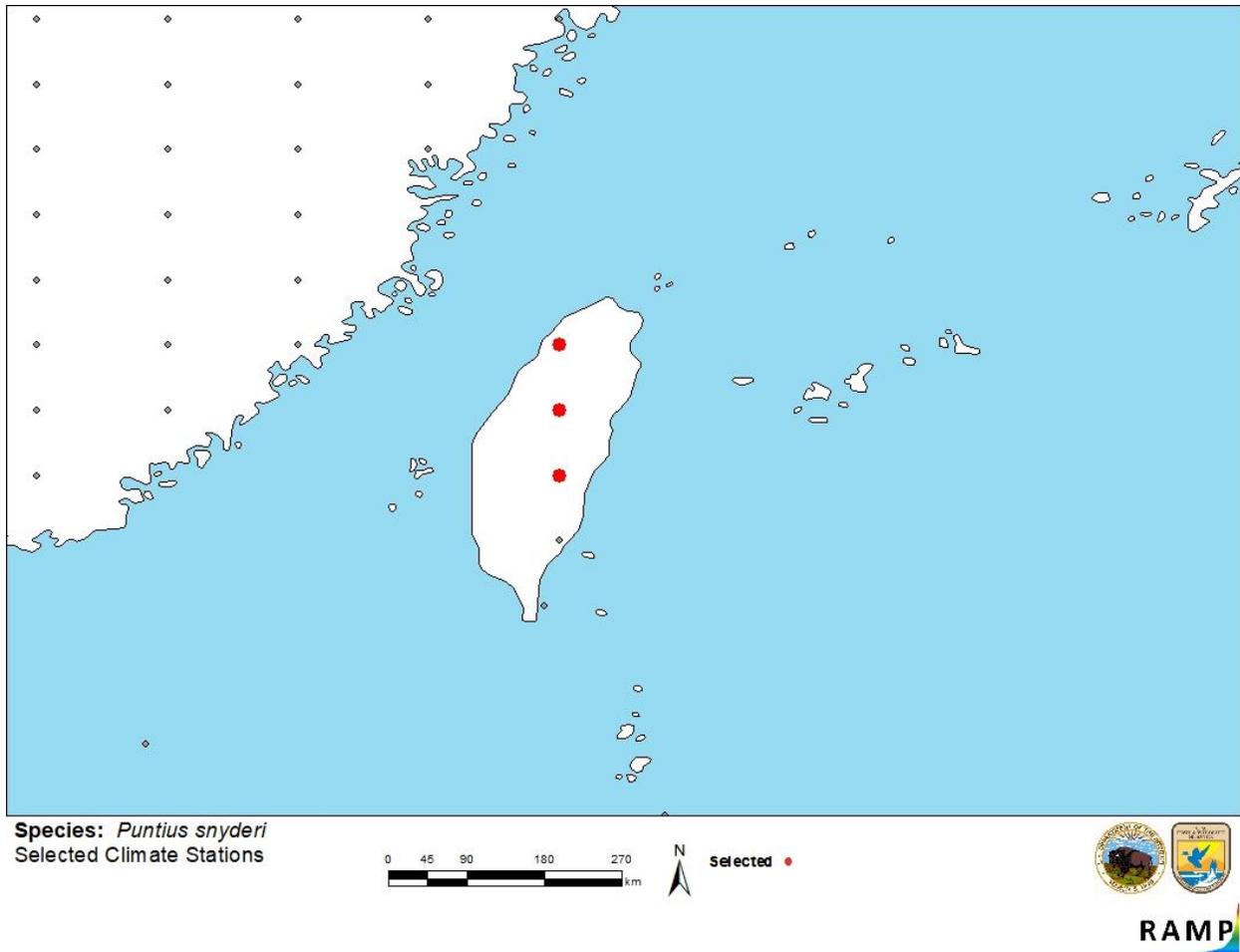
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No records of *Puntius snyderi* in the wild in the United States were found.

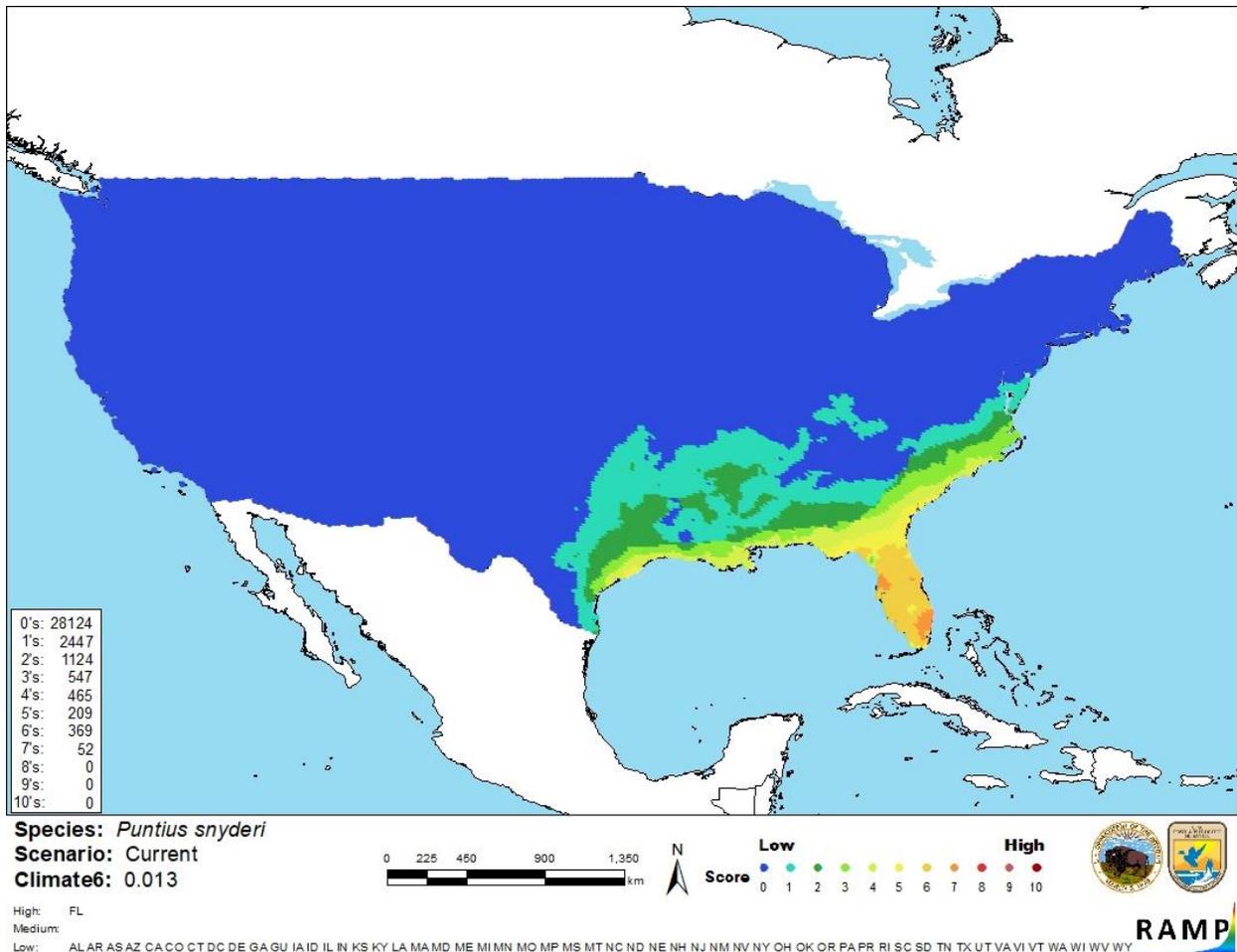
## 6 Climate Matching

### Summary of Climate Matching Analysis

The climate match for *Puntius snyderi* was low for the majority of the contiguous United States, with the southeastern and Gulf coasts having medium to high climate matches. The Climate 6 score (Sanders et al. 2018; 16 climate variables; Euclidean distance) for the contiguous United States was 0.013, medium (scores between 0.005 and 0.103 are classified as medium). All States had low individual climate 6 scores with the exception of Florida, which had a high score.



**Figure 2.** RAMP (Sanders et al. 2018) source map showing weather stations in southeastern Asia selected as source locations (red; Taiwan) and non-source locations (gray) for *Puntius snyderi* 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 *Puntius snyderi* in the contiguous United States based on source locations reported from 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
$\geq 0.103$	High

## 7 Certainty of Assessment

The certainty of assessment for *Puntius snyderi* is low. There is minimal information available for this species. No information on introductions of *Puntius snyderi* was found.

## 8 Risk Assessment

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### Summary of Risk to the Contiguous United States

*Puntius snyderi* is a barb native to Taiwan. The history of invasiveness is uncertain. It has not been reported as introduced or established anywhere in the world outside of the native range. The climate match for the contiguous United States was medium. The area of highest match in the contiguous United States was found in along the southeast and Gulf coasts. The certainty of assessment is low. The overall risk assessment category for *Puntius snyderi* is uncertain.

### Assessment Elements

- **History of Invasiveness (Sec. 3): Uncertain**
- **Climate Match (Sec. 6): Medium**
- **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.**

- Bailly, N. 2017. *Puntius snyderi*. In World Register of Marine Species. Available: <http://www.marinespecies.org/aphia.php?p=taxdetails&id=1016991>. (February 2019).
- Chang, C-H., Y-T. Shao, and H-W. Kao. 2006. Molecular identification of two sibling species of *Puntius* in Taiwan. *Zoological Studies* 45(2):149–156.
- Chang, C.-H., W.-W. Lin, Y.-T. Shao, R. Arai, T. Ishinabe, T. Ueda, M. Matsuda, H. Kubota, F.-Y. Wang, N.-H. Jang-Liaw, and H.-W. Kao. 2009. Molecular phylogeny and genetic differentiation of the *Tanakia himantegus* complex (Teleostei: Cyprinidae) in Taiwan and China. *Zoological Studies* 48(6):823–834.
- Chen, I.-S., C.-J. Weng, Y.-R. Chen, S.-P. Huang, Z.-H. Wan, N.-H. Jang-Liaw, and T.-H. Tsai. 2013. The checklist of inland-water and mangrove fish fauna of Kinmen Island, Fujian Province, Taiwan with comments on ecological conservation of native fishes. *Journal of Marine Science and Technology* 21(Supplement):316–319.
- 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. *Barbodes snyderi* Oshima, 1919. FishBase. Available: <https://www.fishbase.de/summary/Barbodes-snyderi.html>. (February 2019).

GBIF Secretariat. 2019. GBIF backbone taxonomy: *Puntius snyderi* (Oshima, 1919). Global Biodiversity Information Facility, Copenhagen. Available: <https://www.gbif.org/species/2363996>. (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/>. (February 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.**

Oshima, M. 1919. Contributions to the study of the freshwater fishes of the island of Formosa. *Annals of the Carnegie Museum* 12:169–328.