

***Acanthogobius lactipes* (a goby, no common name)**

Ecological Risk Screening Summary

U.S. Fish and Wildlife Service, March 2014

Revised, January 2018

Web Version, 5/23/2018

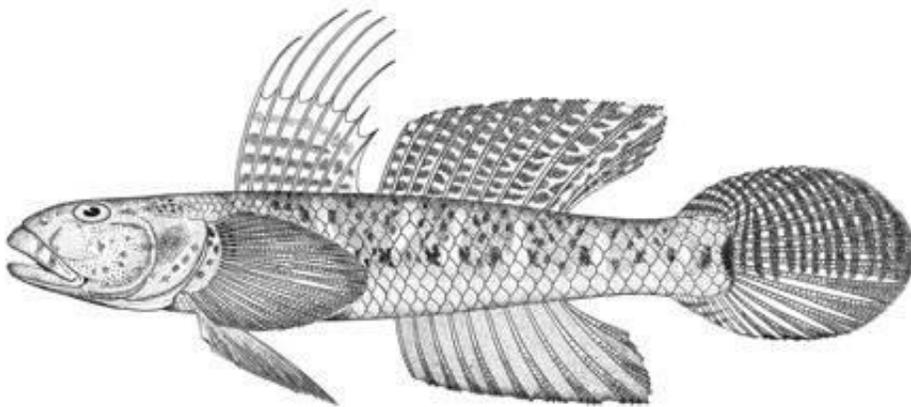


Image: Albertus Baldwin. Licensed under Creative Commons (CC BY-NC). Available: <https://www.gbif.org/occurrence/1317246359>. (January 2018).

1 Native Range, and Status in the United States

Native Range

From Froese and Pauly (2018):

“East Asia: Russian Far East from Amur to Peter the Great Gulf, Korean Peninsula, Bohai Sea, Yellow Sea and East China Sea of China, and Hokkaido to Kyushu of Japan.”

Status in the United States

This species has not been reported 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 in the United States.

Remarks

Froese and Pauly (2018) list *Aboma lactipes* (Hilgendorf, 1879) and *Gobius lactipes* (Hilgendorf, 1879) as synonyms of *Acanthogobius lactipes*.

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

From ITIS (2018):

“Kingdom Animalia
Subkingdom Bilateria
Infrakingdom Deuterostomia
Phylum Chordata
Subphylum Vertebrata
Infraphylum Gnathostomata
Superclass Osteichthyes
Class Actinopterygii
Subclass Neopterygii
Infraclass Teleostei
Superorde Acanthopterygii
Order Perciformes
Suborder Gobioidi
Family Gobiidae
Genus *Acanthogobius*
Species *Acanthogobius lactipes*”

“Taxonomic Status: valid”

Size, Weight, and Age Range

From Froese and Pauly (2018):

“Max length : 9.4 cm TL male/unsexed; [Berg 1965]”

Environment

From Froese and Pauly (2018):

“Marine; freshwater; brackish; demersal; amphidromous [McDowall 1997].”

Climate/Range

From Froese and Pauly (2018):

“Temperate; 53°N - 34°N, 116°E - 143°E”

Distribution Outside the United States

Native

From Froese and Pauly (2018):

“East Asia: Russian Far East from Amur to Peter the Great Gulf, Korean Peninsula, Bohai Sea, Yellow Sea and East China Sea of China, and Hokkaido to Kyushu of Japan.”

Introduced

No introductions of this species have been reported.

Means of Introduction Outside the United States

No introductions of this species have been reported.

Short Description

No information available for this species.

Biology

From Froese and Pauly (2018):

“Euryhaline [Pietsch et al. 2000]. May remain in freshwater throughout its life.”

Human Uses

From Froese and Pauly (2018):

“Fisheries: commercial”

Diseases

No information available. No OIE reportable diseases have been documented for this species.

Threat to Humans

From Froese and Pauly (2018):

“Harmless.”

3 Impacts of Introductions

No introductions of this species have been reported.

4 Global Distribution



Figure 1. Map of known global distribution of *Acanthogobius lactipes* in Japan, Russia, South Korea, and the East China Sea. Map from GBIF Secretariat (2017). Marine occurrences were not used for the climate matching analysis because the analysis is based on data from terrestrial climate stations only.

5 Distribution Within the United States

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

6 Climate Matching

Summary of Climate Matching Analysis

The climate match (Sanders et al. 2014; 16 climate variables; Euclidean distance) was medium throughout most of the east. The highest matches occurred in the upper Great Lakes, northeastern New England, and along the coast of North Carolina. The western United States was a low climate match. The Climate 6 score indicated that the contiguous U.S. has a high climate match.

The range for a high climate match is 0.103 and greater; the Climate 6 score of *Acanthogobius lactipes* is 0.123.

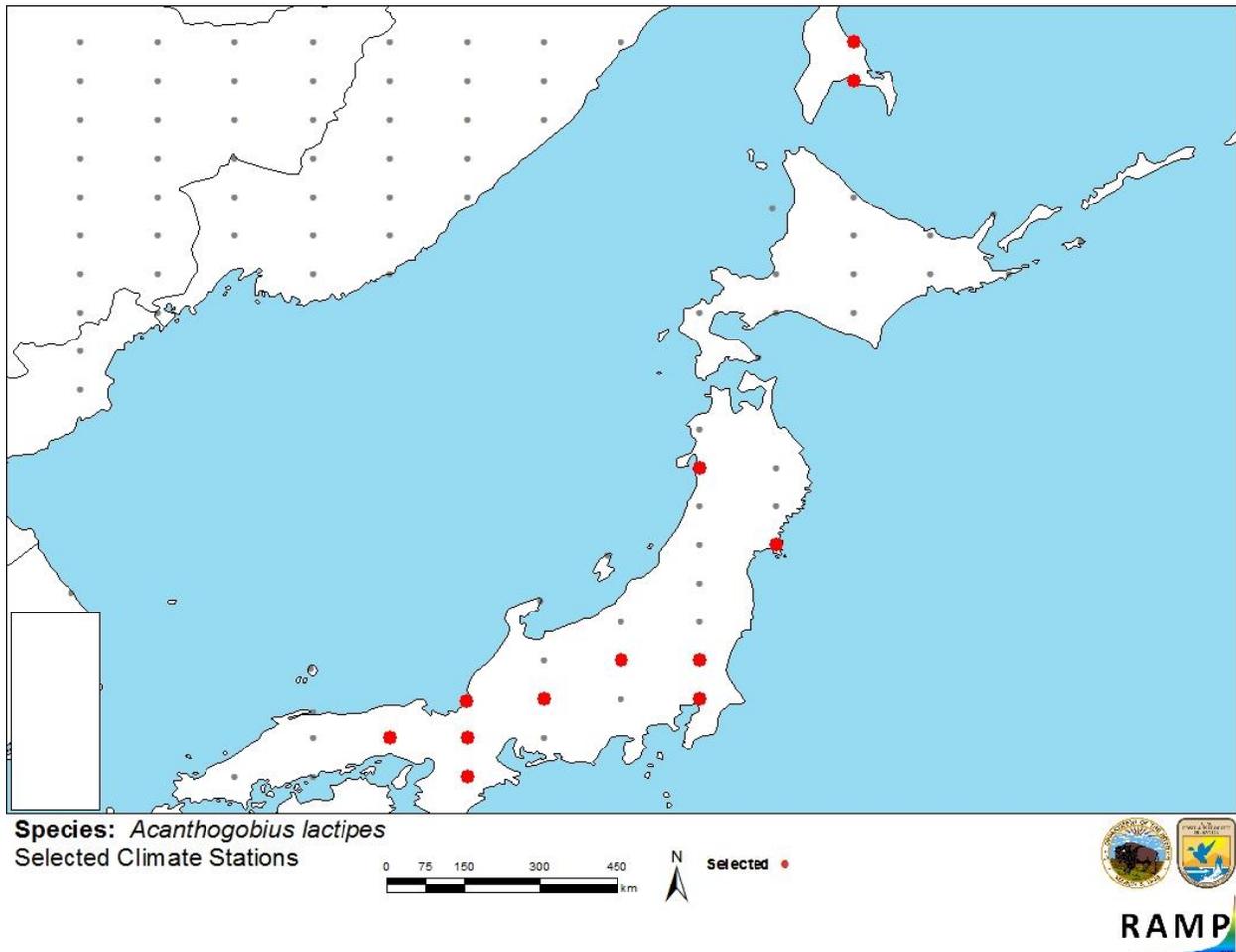


Figure 2. RAMP (Sanders et al. 2014) source map showing weather stations in Japan and surrounding countries selected as source locations (red; Japan, Russia) and non-source locations (gray) for *Acanthogobius lactipes* climate matching. Source locations from GBIF Secretariat (2017).

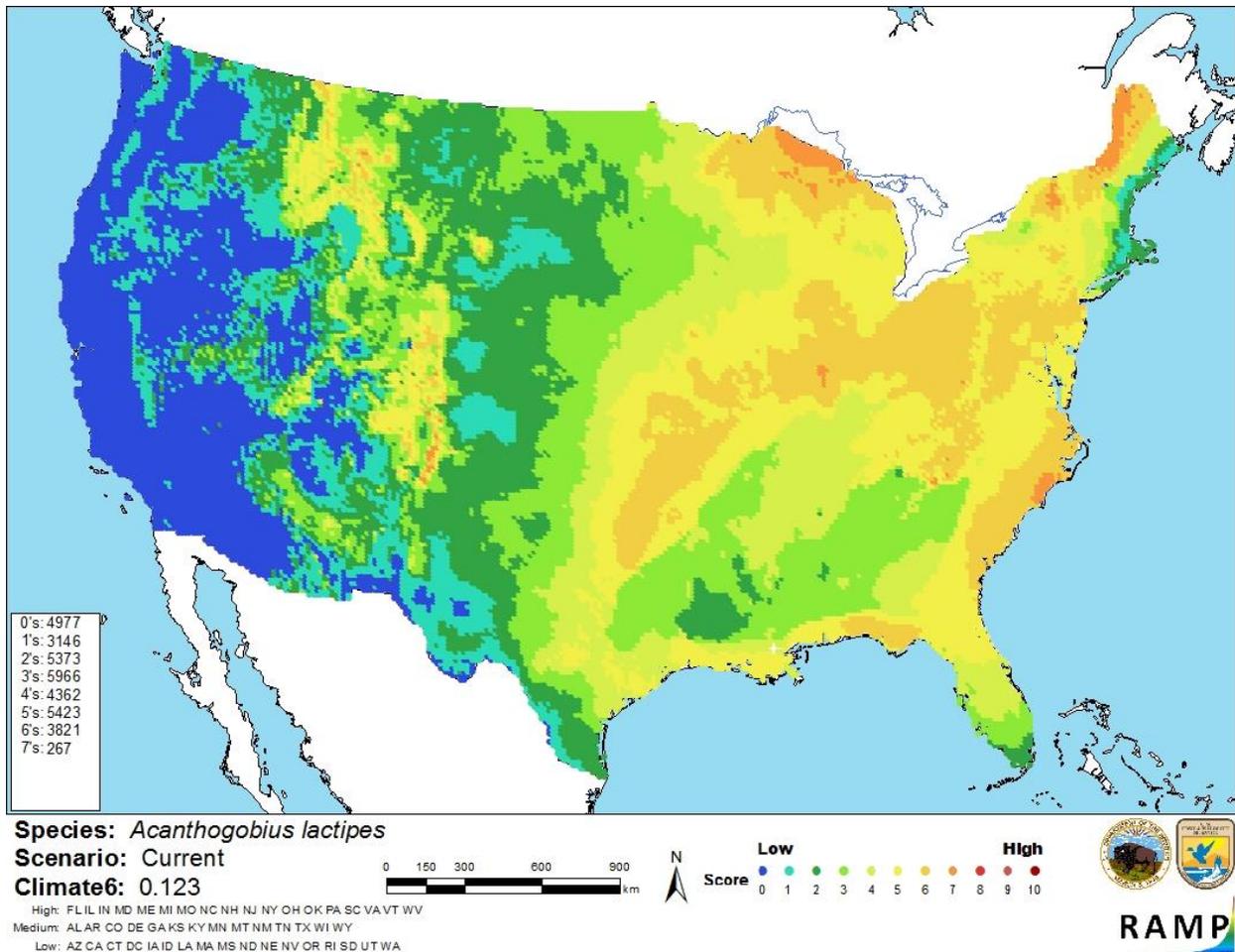


Figure 3. Map of RAMP (Sanders et al. 2014) climate matches for *Acanthogobius lactipes* in the contiguous United States based on source locations reported by GBIF Secretariat (2017). 0=Lowest match, 10=Highest match. Counts of climate match scores are tabulated on the left.

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
$0.000 < X < 0.005$	Low
$0.005 < X < 0.103$	Medium
≥ 0.103	High

7 Certainty of Assessment

Information on *Acanthogobius lactipes* is not widely available and scientific information on the impacts of introductions is lacking. Absence of this research makes the certainty of this assessment low.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Acanthogobius lactipes is a demersal fish native to East Asia. *A. lactipes* is commercially harvested. No introductions have been reported for the species. Therefore, there is no information on impacts of introductions on which to base an assessment of invasiveness. Absence of this information makes the certainty of this assessment low. Climate match with the contiguous United States is high. Overall risk posed by this species is uncertain.

Assessment Elements

- **History of Invasiveness (Sec. 3): Uncertain**
- **Climate Match (Sec.6): High**
- **Certainty of Assessment (Sec. 7): Low**
- **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.

Froese, R., and D. Pauly, editors. 2018. *Acanthogobius lactipes* (Hilgendorf, 1879). FishBase. Available: <http://www.fishbase.org/summary/23696>. (January 2018).

GBIF Secretariat. 2017. GBIF backbone taxonomy: *Acanthogobius lactipes* (Hilgendorf, 1879). Global Biodiversity Information Facility, Copenhagen. Available: <https://www.gbif.org/species/2375970>. (January 2018).

ITIS (Integrated Taxonomic Information System). 2018. *Acanthogobius lactipes* (Hilgendorf, 1879). Integrated Taxonomic Information System, Reston, Virginia. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=636887#null (January 2018).

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

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.

Berg, L. S. 1965. Freshwater fishes of the U.S.S.R. and adjacent countries, 3rd and 4th editions. Israel Program for Scientific Translations Ltd, Jerusalem. (Russian version published 1949).

McDowall, R. M. 1997. The evolution of diadromy in fishes (revisited) and its place in phylogenetic analysis. *Reviews in Fish Biology and Fisheries* 7(4):443-462.

Pietsch, T. W., K. Amaoka, D. E. Stevenson, E. L. MacDonald, B. K. Urbain, and J. A. López. 2000. Freshwater fishes of the Kuril Islands and adjacent regions. International Kuril Island Project (IKIP), University of Washington Fish Collection, Washington.