

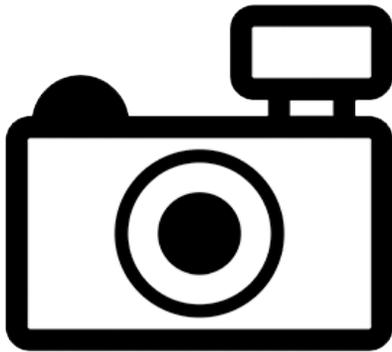
***Cherax monticola* (a crayfish, no common name)**

Ecological Risk Screening Summary

U.S. Fish and Wildlife Service, April 2014

Revised, January 2018, May 2018

Web Version, 5/21/2018



No Photo Available

1 Native Range and Status in the United States

Native Range

From Austin (2010):

“Indonesia (Papua)”

“This species has been collected from Ibele River, 15 km northeast of Habbema Lake and Balim River Camp on Balim River, East of Habbema Lake, Irian Jaya, Indonesia (Holthuis 1950).”

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.

The Florida Fish and Wildlife Conservation Commission has listed the crayfish *Cherax monticola* as a prohibited species. Prohibited nonnative species “are considered to be dangerous to the ecology and/or the health and welfare of the people of Florida. These species are not allowed to be personally possessed or used for commercial activities” (FFWCC 2017).

From Washington Department of Fish & Wildlife (2017):

“(1) Prohibited aquatic animal species. RCW 77.12.020

These species are considered by the commission to have a high risk of becoming an invasive species and may not be possessed, imported, purchased, sold, propagated, transported, or released into state waters except as provided in RCW 77.15.253. [...] The following species are classified as prohibited animal species: [...] Family Parastacidae: Crayfish: All genera except *Engaeus*, and except the species *Cherax quadricarinatus* [*sic*], *Cherax papuanus*, and *Cherax tenuimanus*.”

Means of Introductions in the United States

This species has not been reported in the United States.

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

From GBIF Secretariat (2017):

“Kingdom Animalia
 Phylum Arthropoda
 Class Malacostraca
 Order Decapoda
 Family Parastacidae
 Genus *Cherax*
 Species *Cherax monticola* Holthuis, 1950”

Size, Weight, and Age Range

No information reported for this species.

Environment

From Austin (2010):

“Freshwater”

Climate/Range

From Austin (2010):

“Subtropical”

Distribution Outside the United States

Native

From Austin (2010):

“Indonesia (Papua)”

“This species has been collected from Ibele River, 15 km northeast of Habbema Lake and Balim River Camp on Balim River, East of Habbema Lake, Irian Jaya, Indonesia (Holthuis 1950).”

Introduced

No introductions of this species into natural habitats have been reported.

According to Faulkes (2015), *Cherax monticola* is found in the pet trade in Germany (Churcholl 2013) and in the Czech Republic (Patoka et al. 2014; Patoka et al. 2015).

According to Patoka et al. (2014), *C. monticola* is available in the pet trade in the Czech Republic. Its wholesale availability is reported as “very rare.”

Means of Introduction Outside the United States

No introductions of this species into natural habitats have been reported.

Short Description

No information reported for this species.

Biology

From Austin (2010):

“This species is known to occur in rivers and pools up to an altitude of 3300 m [10,830 feet] (Holthuis 1950).”

Human Uses

From Austin (2010):

“This species is harvested on a subsistence scale for human consumption (Holthuis 1950), though it is not known to what extent this is impacting populations of this species.”

According to Faulkes (2015), *C. monticola* is present in the pet trade in Germany and the Czech Republic, but not in the United States, Brazil, Ireland, the United Kingdom, the Netherlands, Greece, Slovakia, Turkey, or Singapore.

According to Patoka et al. (2014), the wholesale availability of *C. monticola* in the Czech Republic is reported as “very rare.”

Diseases

No OIE reportable diseases have been documented for this species.

Threat to Humans

No information reported for this species.

3 Impacts of Introductions

According to Patoka et al. (2014), *Cherax monticola* has a potential invasiveness (FI-ISK score) of three and a risk category (FI-ISK category) of Medium. The abbreviation “FI-ISK” stands for the Freshwater Invertebrate Invasiveness Scoring Kit.

The Florida Fish and Wildlife Conservation Commission (FFWCC 2017) and the Washington Department of Fish and Wildlife (2017) have listed this species as a prohibited species.

4 Global Distribution

No georeferenced occurrences were available for *Cherax monticola* (GBIF Secretariat 2017).



Figure 1. The island of New Guinea, with a purple star indicating the approximate location of Habbema Lake, close to which *Cherax monticola* has been collected (Austin 2010). Public domain map.

5 Distribution Within the United States

This species has not been reported as established or introduced 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 low throughout the United States. Climate 6 match indicated that the contiguous U.S. has a low climate match. The range for a low climate match is 0.005 and below; Climate 6 match of *C. monticola* is 0.0.

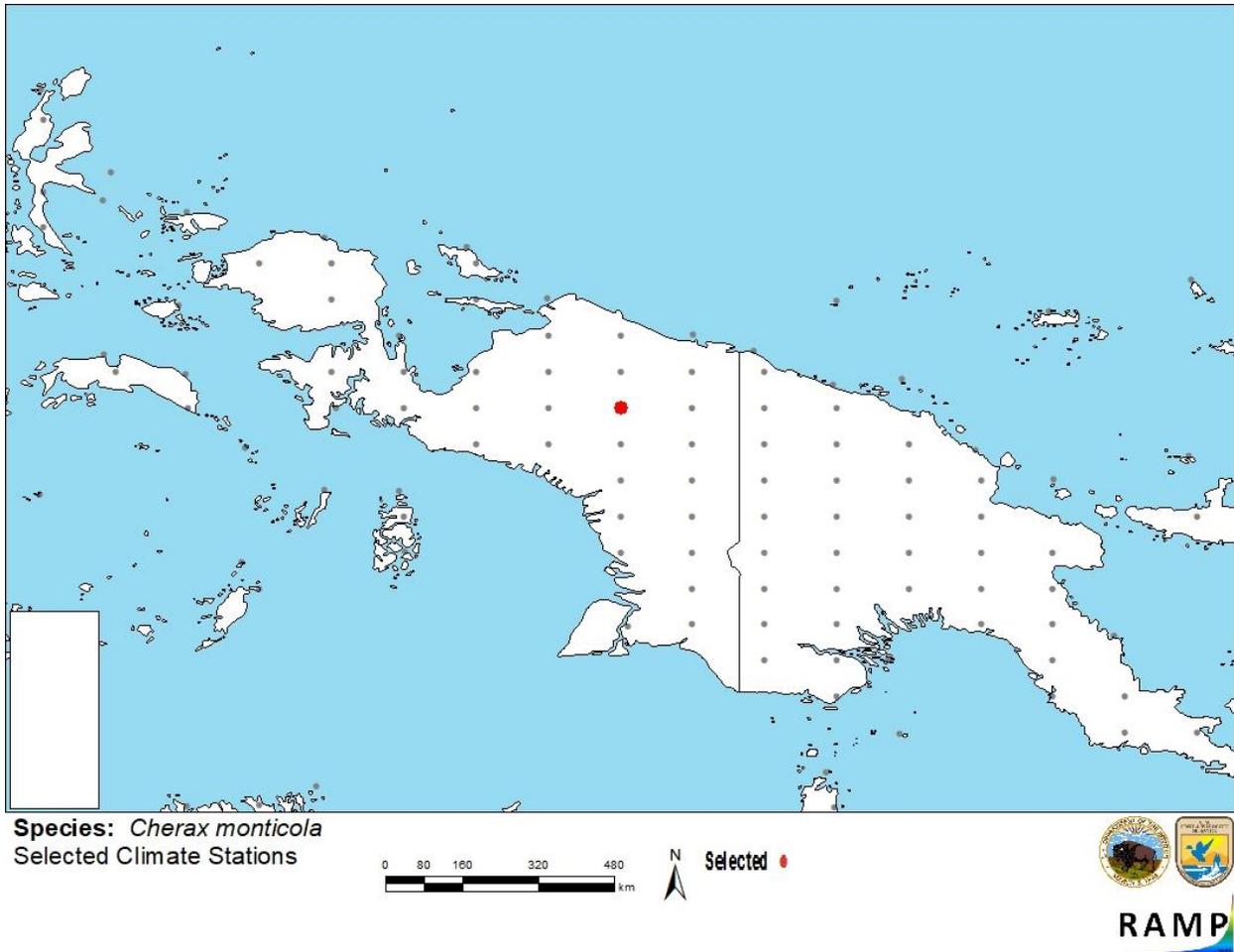


Figure 2. RAMP (Sanders et al. 2014) source map showing weather stations on the island of New Guinea selected as source locations (red) and non-source locations (gray) for *Cherax monticola* climate matching. Source location estimated from verbal description of occurrences provided by Austin (2010).

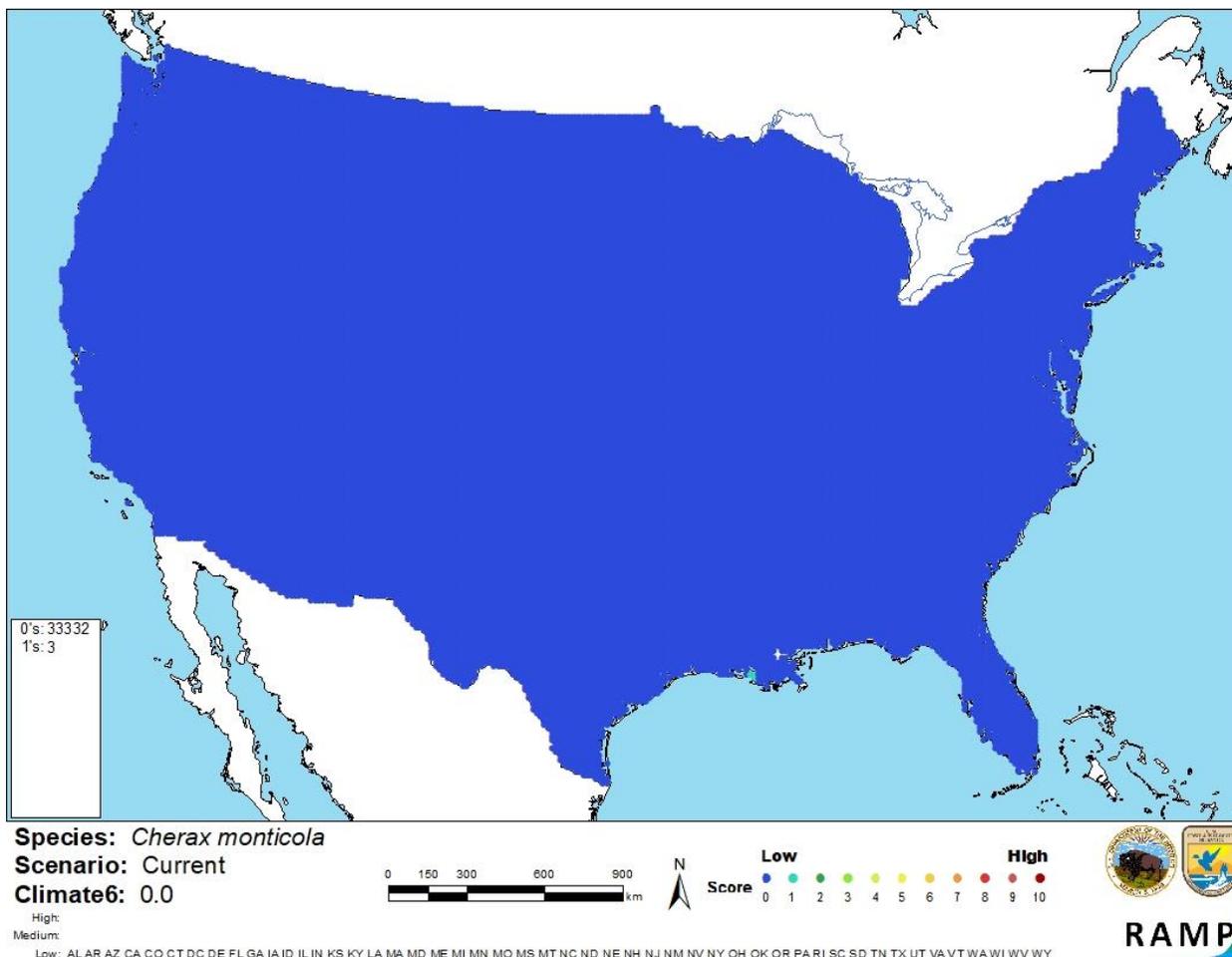


Figure 3. Map of RAMP (Sanders et al. 2014) climate matches for *Cherax monticola* in the contiguous United States based on source locations estimated from verbal description of occurrences provided by Austin (2010). 0=Lowest match, 10=Highest match.

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

Information on the biology and distribution of *Cherax monticola* is not widely available. This species is reported as available on the market for trade in Germany and the Czech Republic; however, little scientific information is available on the impacts of introductions, and what is available is speculative rather than documentation of realized impacts. Certainty of this assessment is low.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Cherax monticola is a freshwater crayfish native to Indonesia. It is reported to be available on the market for wholesale trade in Germany and the Czech Republic. In the Czech Republic it has a potential invasiveness (FI-ISK score) of three and a risk category (FI-ISK Category) of Medium. Florida and Washington prohibit *C. monticola*. Data on impacts of introductions are lacking; absence of this research makes the certainty of this assessment low. Climate match with the United States is low. Overall risk posed by this species is uncertain.

Assessment Elements

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

Austin, C. M. 2010. *Cherax monticola*. The IUCN Red List of Threatened Species 2010: e.T165922A6164009. Available: <http://www.iucnredlist.org/details/165922/0>. (January 2018).

Faulkes, Z. 2015. The global trade in crayfish as pets. *Crustacean Research* 44:75-92.

GBIF Secretariat. 2017. GBIF backbone taxonomy: *Cherax monticola* (Holthius 1950). Global Biodiversity Information Facility, Copenhagen. Available: <http://www.gbif.org/species/5789932>. (January 2018, May 2018).

Patoka, J., L. Kalous, and O. Kopecký. 2014. Risk assessment of the crayfish pet trade based on data from the Czech Republic. *Biological Invasions* 16:2489-2494.

Sanders, S., C. Castiglione, and M. Hoff. 2014. Risk Assessment Mapping Program: RAMP. U.S. Fish & 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.

Chucholl, C. 2013. Invaders for sale: trade and determinants of introduction of ornamental freshwater crayfish. *Biological Invasions* 15:125-141.

Holthuis, L. B. 1950. Results of the Archbold Expeditions No. 63: the Crustacea Decapoda Macrura collected by the Archbold New Guinea Expeditions. American Museum Novitates 1461.

Patoka, J., L. Kalous, and O. Kopecký. 2015. Imports of ornamental crayfish: the first decade from the Czech Republic's perspective. Knowledge and Management of Aquatic Ecosystems 416:04.