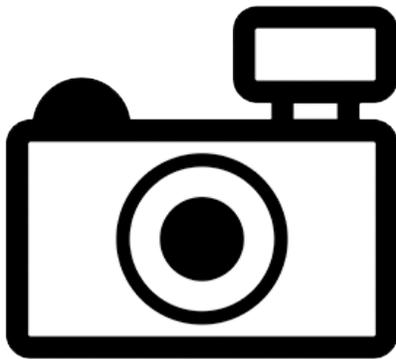


***Cherax barretti* (a crayfish, no common name)**

Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, August 2011
Revised, September 2012 and October 2017
Web Version, 12/13/2017



No Photo Available

1 Native Range and Status in the United States

Native Range

From Fetzner (2017):

“Japanese Creek, Wessell [*sic*] Is., Northern Territory. [...] Known only from type locality.”

Status in the United States

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

From Washington Department of Fish and Wildlife (2017):

“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*, *Cherax papuanus*, and *Cherax tenuimanus*.”

From FFWCC (2017):

“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. Very limited exceptions may be made by permit from the Executive Director [...]

[List of prohibited species includes:]

Crayfish – Genus *Cherax* [...]

Cherax barretti”

Means of Introduction into the United States

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

Remarks

From Clark (1941):

“This species is based on a single specimen [...] The distinctive characters, however, remove any doubt as to the specimen being an aberrant form of any known species.”

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

From GBIF Secretariat (2016):

“Kingdom	Animalia
Phylum	Arthropoda
Class	Malacostraca
Order	Decapoda
Family	Parastacidae
Genus	<i>Cherax</i> Erichson, 1846
Species	<i>Cherax barretti</i> Clark, 1941”

“SPECIES | ACCEPTED”

Size, Weight, and Age Range

From Clark (1941):

“Length of type male, 57 mm.”

Environment

No information available.

Climate/Range

No information available.

Distribution Outside the United States

Native

From Fetzner (2017):

“Japanese Creek, Wessell Is., Northern Territory. [...] Known only from type locality.”

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

From Clark (1941):

“Rostrum broad, reaching almost to base of third segment of second antennae, apex obtuse, carinae sharp, three or four small tubercles on each carina near apex; lateral carinae sharp, ending in a small rounded boss, a small sharp spine anteriorly on each carina.”

“Carapace shorter than abdomen, broader than high, densely punctate; branchio-cardiac grooves obsolete, areola very broad; four or five small sharp spines along anterior of branchiostegites below the cervical groove.”

“Telson with a small sharp spine on each lateral margin at posterior third; posterior third of telson membranous. Uropods longer than telson [...] Lobes at base of uropods with upper and lower lobes produced to a small sharp spine.”

“Sternal keel high, very slender and sharp. First two pairs of lateral processes small and sharp, third pair larger, sharp; fourth pair large, concave, each with a small round opening on outer lateral surface, lateral margins sharp; processes between fourth pereopods short, upper surface concave, lateral margins sharp.”

“Great chelae stout, with a few scattered small punctures; propodus twice as long as broad, upper margin serrated, lower margin smooth, four or five small tubercles along cutting edge; dactylus stout, upper margin smooth, one or two small tubercles along the cutting edge. Carpus with three sharp spines along upper margin and a row of small tubercles on upper surface below the spines, a small spine at anterior margin, surface of carpus punctate. Merus with one large sharp spine and several small tubercles along the upper margin.”

Biology

No information available.

Human Uses

No information available.

Diseases

No information available.

Threat to Humans

No information available.

3 Impacts of Introductions

No introductions of this species have been reported.

From Washington Department of Fish and Wildlife (2017):

“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. [...]

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[List of prohibited species includes:]

Crayfish – Genus *Cherax* [...]

Cherax barretti”

4 Global Distribution

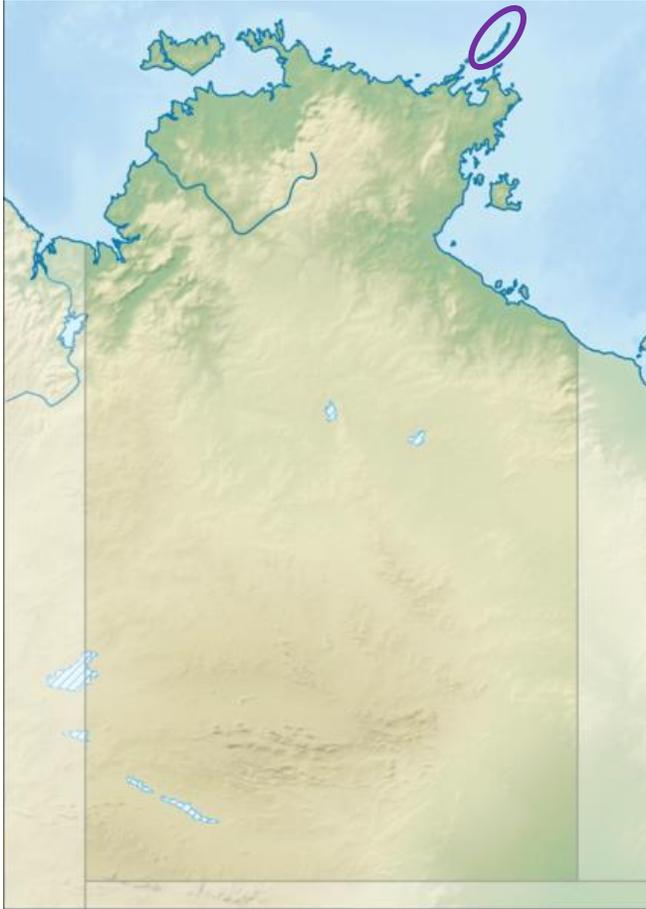


Figure 1. The Northern Territory, Australia. The Wessel Islands, the only known location where *C. barretti* has been collected (Fetzner 2017), are circled in purple. Map credit: Tentotwo. Licensed under CC BY-SA. Available: https://commons.wikimedia.org/wiki/File:Australia_Northern_Territory_relief_location_map.png. (October 2017).

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 low in all areas of the contiguous U.S. except for southern Florida, where the climate match was medium. Climate 6 score indicated that the contiguous U.S. has a low climate match overall. The range of scores for a low climate match is 0.000-0.005; Climate 6 score for *Cherax barretti* was 0.000. However, there was only one source location for the climate match and it came from a small

island. There is no assurance, particularly with an island species, that the species distribution is limited by climate so the climate match shown here may be an underestimate of the true climate match to the contiguous U.S.

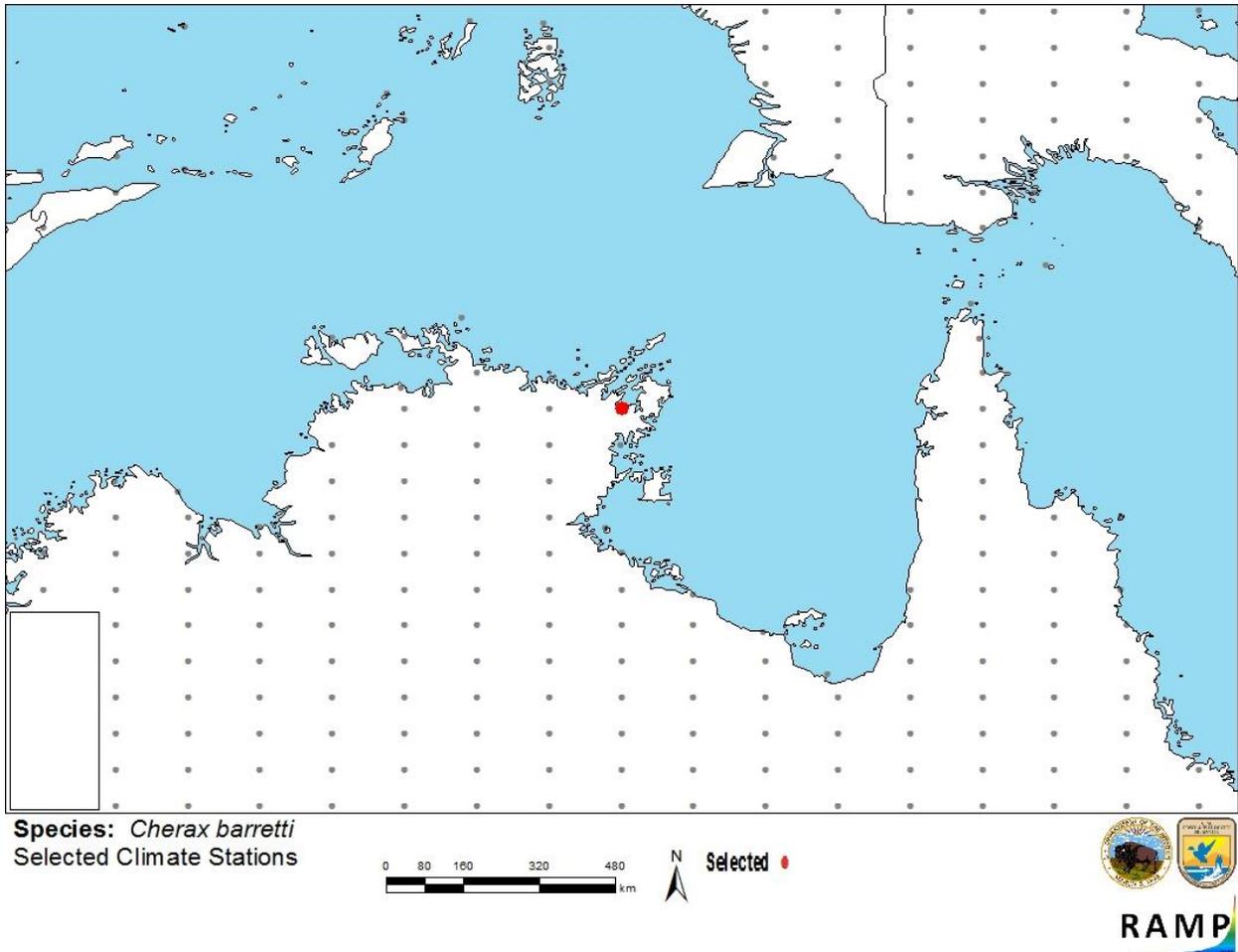


Figure 2. RAMP (Sanders et al. 2014) source map showing weather stations selected as source location (red) and non-source locations (gray) for *Cherax barretti* climate matching. Source location from Fetzner (2017).

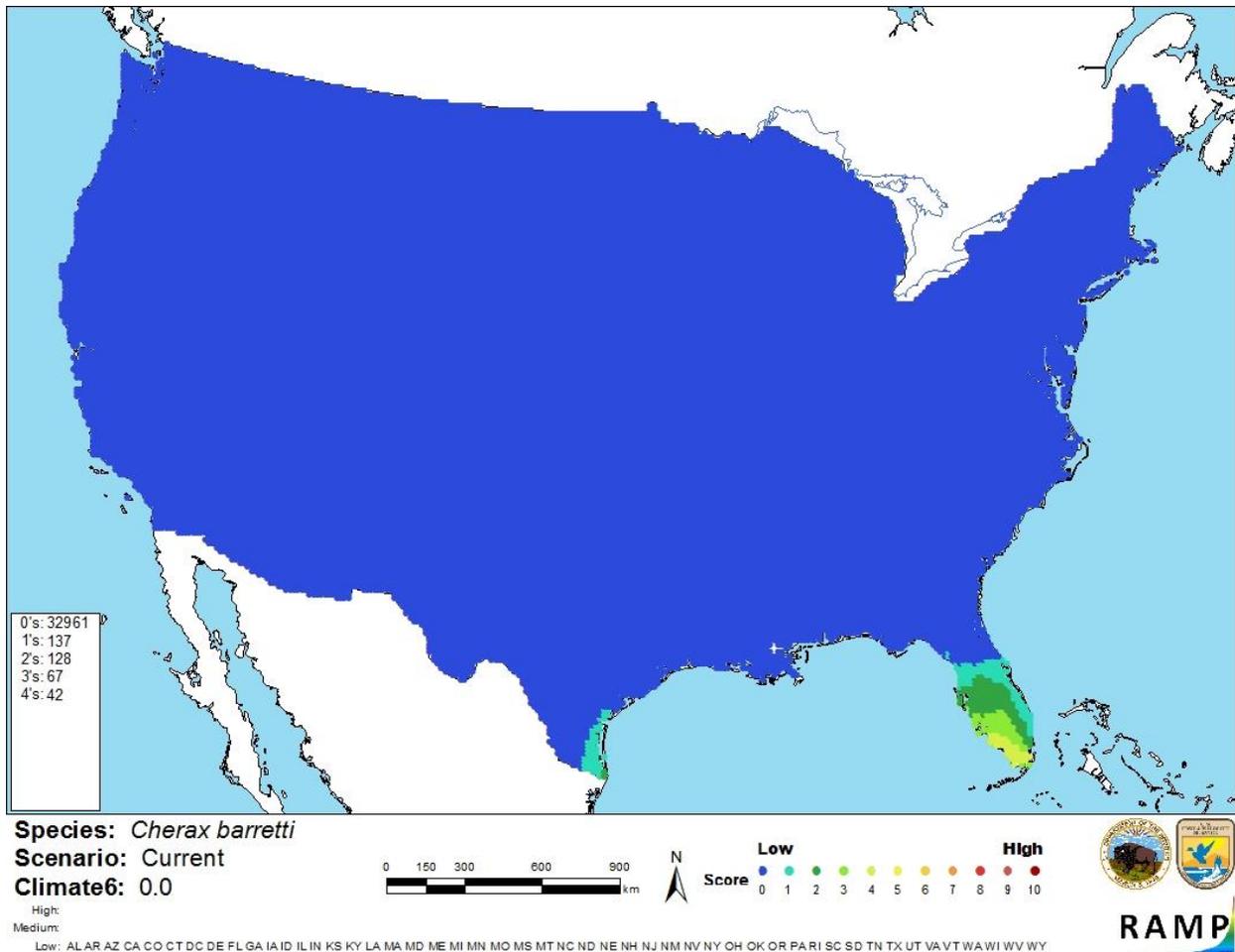


Figure 3. Map of RAMP (Sanders et al. 2014) climate matches for *Cherax barretti* in the contiguous United States based on the source location reported by Fetzner (2017). 0=Lowest match, 10=Highest match.

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

7 Certainty of Assessment

Very little information is available on the biology and ecology of *Cherax barretti*. It has been reported from only one location globally and that was on a small island, increasing uncertainty in the climate matching analysis. No introductions of *C. barretti* have been reported, so any impacts of introduction remain unknown. Certainty of assessment is low given the paucity of information.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Cherax barretti is an Australian crayfish species that has only been reported from the Wessel Islands, off the coast of the Northern Territory. Without any history of introductions outside its native range, nothing is known about potential impacts of its introduction. However, the species is prohibited from transport and possession in multiple U.S. states over concerns about the impacts of introduction of species in the genus *Cherax*. The climate match to the contiguous U.S. was low, with only southern Florida showing medium match. Overall risk posed by *C. barretti* is uncertain.

Assessment Elements

- **History of Invasiveness: Uncertain**
- **Climate Match: Low**
- **Certainty of Assessment: Low**
- **Overall Risk Assessment Category: Uncertain**

9 References

- Clark, E. 1941. New species of Australian freshwater and land crayfishes (Family Parastacidae). *Memoirs of the National Museum of Victoria* 12:31-40.
- Fetzner, J. W. 2017. *Cherax barretti* Clark, 1941. The Crayfish & Lobster Taxonomy Browser. Carnegie Museum of Natural History, Pittsburgh, Pennsylvania. Available: <http://iz.carnegiemnh.org/crayfish/NewAstacidea/species.asp?g=Cherax&s=barretti&ssp=>. (October 2017).
- FFWCC (Florida Fish and Wildlife Conservation Commission). 2017. Prohibited species list. Florida Fish and Wildlife Conservation Commission, Tallahassee, Florida. Available: <http://myfwc.com/wildlifehabitats/nonnatives/regulations/prohibited/>. (September 2017).
- GBIF Secretariat. 2016. GBIF backbone taxonomy: *Cherax barretti* Clark, 1941. Global Biodiversity Information Facility, Copenhagen. Available: <https://www.gbif.org/species/4648627>. (October 2017).
- Sanders, S., C. Castiglione, and M. Hoff. 2014. Risk Assessment Mapping Program: RAMP. U.S. Fish and Wildlife Service.
- Washington Department of Fish and Wildlife. 2017. WAC 220-12-090 classification - nonnative aquatic animal species. Washington Department of Fish and Wildlife, Olympia, Washington. Available: <http://wdfw.wa.gov/ais/wac.html>. (September 2017).