

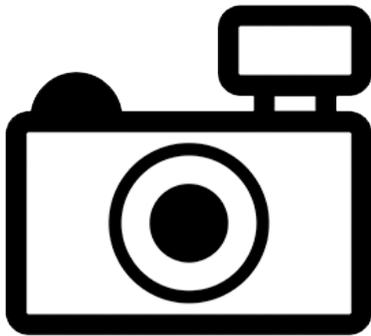
## ***Cherax urospinosus* (a crayfish, no common name)**

### **Ecological Risk Screening Summary**

U.S. Fish and Wildlife Service, November 2011

Revised, May 2018

Web Version, 5/29/2018



No Photo Available

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

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### **Native Range**

From Austin (2010):

“This species is known from Indooroopilly in Brisbane, Australia (C.M. Austin pers. comm. 2008).”

### **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.

From FFWCC (2018):

“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 [...] [The list of prohibited nonnative species includes] *Cherax urospinosus*”

From Washington Department of Fish and Wildlife (2018):

“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 Introduction into the United States

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

## 2 Biology and Ecology

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### Taxonomic Hierarchy and Taxonomic Standing

From WoRMS (2018):

“Biota > Animalia (Kingdom) > Arthropoda (Phylum) > Crustacea (Subphylum) > Multicrustacea (Superclass) > Malacostraca (Class) > Eumalacostraca (Subclass) > Eucarida (Superorder) > Decapoda (Order) > Pleocyemata (Suborder) > Astacidea (Infraorder) > Parastacoidea (Superfamily) > Parastacidae (Family) > *Cherax* (Genus) > *Cherax urospinosus* (Species)”

“Status accepted”

### Size, Weight, and Age Range

No information available.

### Environment

From Austin (2010):

“Freshwater”

### Climate/Range

From Bureau of Meteorology (2018):

“The South East Queensland region [where Brisbane is located] has a subtropical climate. Rainfall occurs throughout the year with most rainfall falling during the summer and autumn months.”

## **Distribution Outside the United States**

### **Native**

From Austin (2010):

“This species is known from Indooroopilly in Brisbane, Australia (C.M. Austin pers. comm. 2008).”

### **Introduced**

No introductions of this species have been reported.

## **Mean of Introduction Outside the United States**

No introductions of this species have been reported.

## **Short Description**

No information available.

## **Biology**

From Austin (2010):

“This species is only known from a single specimen which was found in a concrete drain (C.M. Austin pers. comm. 2008).”

## **Human Uses**

No information available.

## **Diseases**

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

## **Threat to Humans**

No information available.

## **3 Impacts of Introductions**

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No information available. No introductions of this species have been reported. The Florida Fish and Wildlife Conservation Commission (FFWCC 2018) and the Washington Department of Fish and Wildlife (2018) have listed the crayfish *Cherax urospinosus* as a prohibited species.

## 4 Global Distribution

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**Figure 1.** Map of the Brisbane suburb of Indooroopilly, the only location where *Cherax urospinosus* has been recorded. Map: Barrylb. Licensed under CC BY-SA 3.0 au. Available: <https://commons.wikimedia.org/w/index.php?curid=14957647>. (May 2018).



**Figure 2.** Location of the city of Brisbane within Australia. Map: NordNordWest, using United States National Imagery and Mapping Agency World Data Base II data. Licensed under CC BY-SA 3.0. Available: <https://commons.wikimedia.org/w/index.php?curid=4811950>. (May 2018).

## 5 Distribution within the United States

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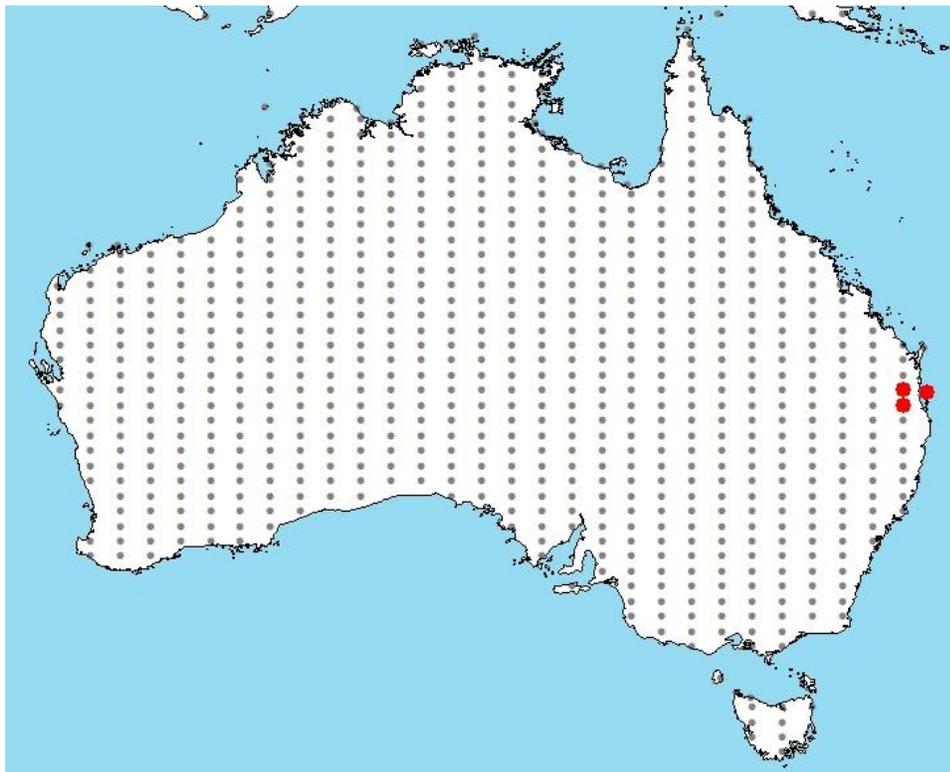
This species has not been recorded in the U.S.

## 6 Climate Matching

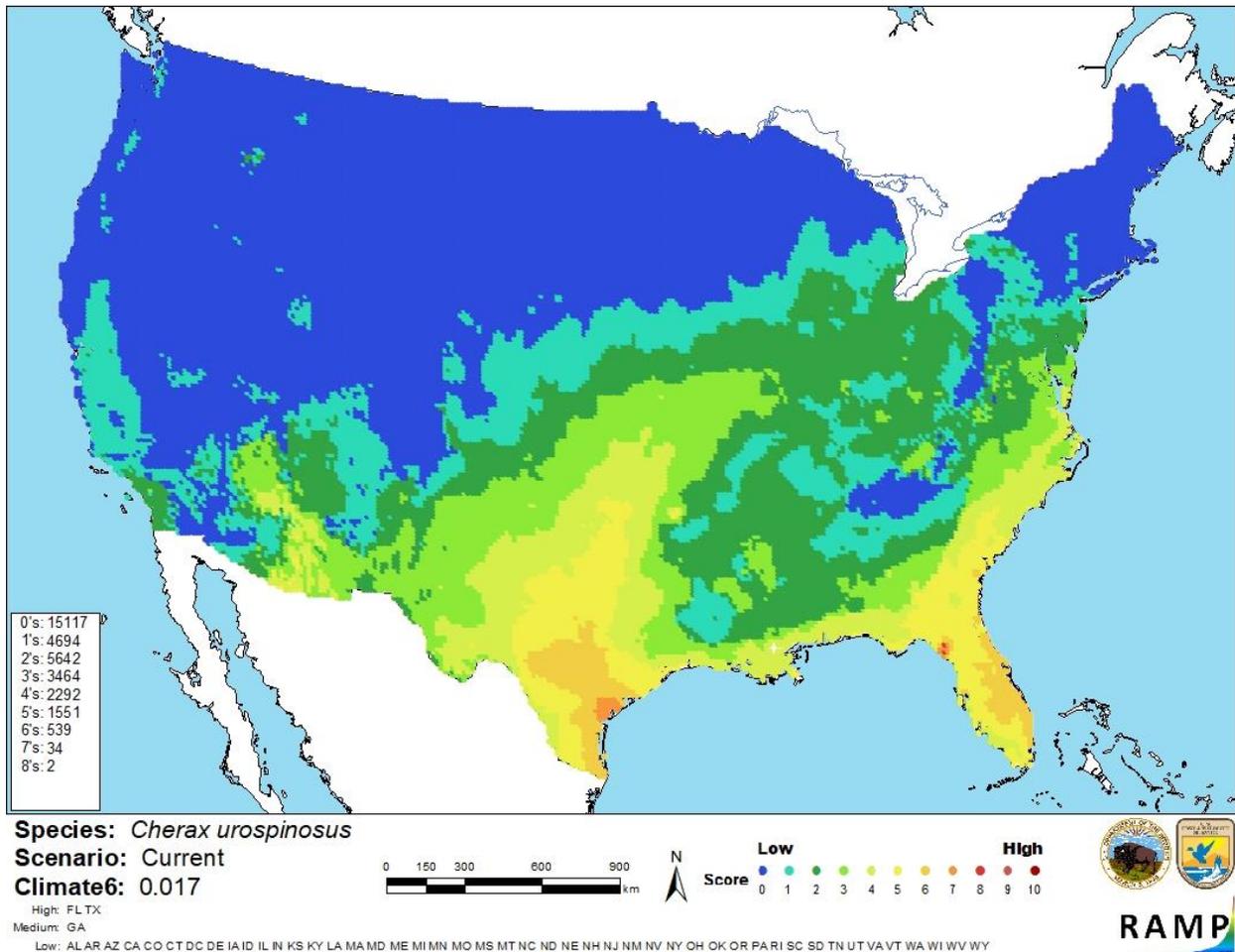
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### Summary of Climate Matching Analysis

The climate match (Sanders et al. 2014; 16 climate variables; Euclidean Distance) for *Cherax urospinosus* was low for much of the contiguous United States. High climate match was restricted to a small area southwest of Gainesville, Florida, and a slightly larger area near Corpus Christi, Texas. Medium climate match extended along the Atlantic and Gulf of Mexico coastlines from Maryland to Texas and included all of peninsular Florida. The climate match was also medium in parts of the Southwest and the Southern Plains. Climate 6 score indicated that the contiguous U.S. has a medium climate match overall. Scores between 0.005 and 0.103 are classified as medium match; Climate 6 score for *C. urospinosus* was 0.017.



**Figure 3.** RAMP (Sanders et al. 2014) source map showing weather stations in Australia selected as source locations (red) and non-source locations (gray) for *Cherax urospinosus* climate matching. Source locations estimated as climate stations within 100 km of the single collection location reported in Austin (2010).



**Figure 4.** Map of RAMP (Sanders et al. 2014) climate matches for *Cherax urospinosus* in the contiguous United States based on source location estimated from Austin (2010). 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
$0.000 \leq X \leq 0.005$	Low
$0.005 < X < 0.103$	Medium
$\geq 0.103$	High

## 7 Certainty of Assessment

Very little biological, ecological, or distribution information is available on *Cherax urospinosus*, as only one specimen has ever been recorded. There have been no known introductions of this species, so there is no indication of the impacts it could have if introduced outside its native range. Certainty of this assessment is low.

## 8 Risk Assessment

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### Summary of Risk to the Contiguous United States

*Cherax urospinosus* is a species of crayfish that is only known from a single specimen that was collected from a concrete drain in a suburb of Brisbane, Australia. *C. urospinosus* has an overall medium climate match to the contiguous U.S. and no introductions have been reported in the U.S. or elsewhere. The Florida Fish and Wildlife Conservation Commission and the Washington Department of Fish and Wildlife have listed the crayfish *Cherax urospinosus* as a prohibited species. With all the uncertainties surrounding this species and its lack of introduction history, the overall risk assessment category is Uncertain.

### Assessment Elements

- **History of Invasiveness (Sec. 3): Uncertain**
- **Climate Match (Sec. 6): Medium**
- **Certainty of Assessment (Sec. 7): Low**
- **Overall Risk Assessment Category: Uncertain**

## 9 References

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- Austin, C. M. 2010. *Cherax urospinosus*. The IUCN Red List of Threatened Species 2010: e.T153696A4533217. Available: <http://www.iucnredlist.org/details/full/153696/0>. (May 2018).
- Bureau of Meteorology. 2018. NWA 2016: South East Queensland: climate and water. Australian Government Bureau of Meteorology, Melbourne, Australia. Available: <http://www.bom.gov.au/water/nwa/2016/seq/climateandwater/climateandwater.shtml>. (April 2018).
- FFWCC (Florida Fish and Wildlife Conservation Commission). 2018. Prohibited species list. Florida Fish and Wildlife Conservation Commission, Tallahassee, Florida. Available: <http://myfwc.com/wildlifehabitats/nonnatives/regulations/prohibited/>. (May 2018).
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- Washington Department of Fish and Wildlife. 2018. WAC 220-12-090 classification - nonnative aquatic animal species. Washington Department of Fish and Wildlife, Olympia, Washington. Available: <https://wdfw.wa.gov/ais/wac.html>. (May 2018).
- WoRMS. 2018. *Cherax urospinosus* Riek, 1969. In World Register of Marine Species. Available: <http://www.marinespecies.org/aphia.php?p=taxdetails&id=885581>. (May 2018).