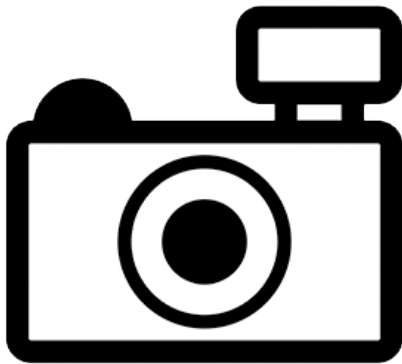


Koonac (*Cherax plebejus*)

Ecological Risk Screening Summary

U.S. Fish and Wildlife Service, September 2011
Revised, September 2012 and March 2018
Web Version, 5/21/2018



No Photo Available

1 Native Range and Status in the United States

Native Range

From Crandall and De Grave (2017):

“Western Australia”

Status in the United States

This species has not been reported in the United States.

The Florida Fish and Wildlife Conservation Commission has listed the crayfish *Cherax plebejus* 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 2018).

From Washington Department of Fish & Wildlife (2018):

“(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 Introduction into the United States

This species has not been reported in the United States.

Remarks

Department of Fisheries (2011) indicates that the common name “koonac” is used for two different species of crayfish. Austin (2010) applies the common name “koonac” to *Cherax preissii*.

2 Biology and Ecology

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 plebejus* (Species)”

“Status accepted”

Size, Weight, and Age Range

From Department of Fisheries (2011):

“Koonacs are also relatively large freshwater crayfish, growing up to 200 mm in length.”

Environment

From Department of Fisheries (2011):

“[...] they are often found in seasonal rivers and swamps that dry-up during summer.”

Climate/Range

From Department of Fisheries (2011):

“Their distribution is more inland than for marron [another crayfish] [...]”

Distribution Outside the United States

Native

From Crandall and De Grave (2017):

“Western Australia”

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 Department of Fisheries (2011):

“Koonacs have four keels on the head and two are very prominent. Koonacs have no spines on the rostrum or telson. The chelipeds are unique, being very broad and serrated on the inside edge. Koonacs are usually very dark in colour, ranging from blue-black to mottled brown-black.”

Biology

From Department of Fisheries (2011):

“Koonacs survive drought because they can burrow and remain there for months at a time.”

From Horwitz and Richardson (1986):

“Burrows of *Cherax plebejus* (Hess) from the south-west of Western Australia usually descend vertically without branching to a small chamber. They may often contain a male and ovigerous female together (Horwitz and Knott 1983).”

Human Uses

Department of Conservation and Land Management (2008) includes *C. plebejus* in a list of several “commercially and recreationally important crayfish species”.

Diseases

No information available.

Threat to Humans

No information available.

3 Impacts of Introductions

No information available. No introductions have been reported.

The Florida Fish and Wildlife Conservation Commission (FWCC 2018) and the Washington Department of Fish and Wildlife (2018) have listed this species as a prohibited species.

4 Global Distribution

No georeferenced occurrences are available for *Cherax plebejus* (GBIF Secretariat 2017).

From Crandall and De Grave (2017):

“Western Australia”

5 Distribution within the United States

This species has not been reported in the United States.

6 Climate Matching

Summary of Climate Matching Analysis

No climate matching analysis was possible due to a lack of reported georeferenced occurrences of *C. plebejus*.

7 Certainty of Assessment

Very little information is available on the biology, ecology, and distribution of *C. plebejus*. No georeferenced occurrence records were found for this species, so no climate matching could be conducted. No introductions of this species have been reported, so any impacts of introductions remain unknown. Certainty of this assessment is low.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Cherax plebejus is a large, dark-colored crayfish native to Western Australia. Very little information has been published about this species. Climate match with the contiguous U.S. is unknown, as are potential impacts of introduction because no introductions of *C. plebejus* have been observed. The States of Florida and Washington prohibit possession or trade of this species. Overall risk posed by *C. plebejus* to the contiguous U.S. is uncertain.

Assessment Elements

- **History of Invasiveness: Uncertain**
- **Climate Match: --**
- **Certainty of Assessment: 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 preissii*. The IUCN Red List of Threatened Species 2010: e.T153690A4532362. Available: <http://www.iucnredlist.org/details/full/153690/0>. (March 2018).
- Crandall, K. A., and S. De Grave. 2017. An updated classification of the freshwater crayfishes (Decapoda: Astacidea) of the world, with a complete species list. *Journal of Crustacean Biology* 37(5):615-653.
- Department of Conservation and Land Management. 2008. Dunsborough burrowing crayfish (*Engaewa reducta*), Margaret River burrowing crayfish (*Engaewa pseudoreducta*) and Walpole burrowing crayfish (*Engaewa walpolea*) recovery plan 2007-2016. Western Australian Wildlife Management Program no. 41. Department of Conservation and Land Management, Bentley, Australia.
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- GBIF Secretariat. 2017. GBIF backbone taxonomy: *Cherax plebejus* (Hess, 1865). Global Biodiversity Information Facility, Copenhagen. Available: <https://www.gbif.org/species/4648601>. (March 2018).
- Horwitz, P. H. J., and A. M. M. Richardson. 1986. An ecological classification of the burrows of Australian freshwater crayfish. *Australian Journal of Marine and Freshwater Research* 37:237-242.
- Washington Department of Fish & Wildlife. 2018. WAC 220-12-090 classification - nonnative aquatic animal species. Washington Department of Fish & Wildlife, Olympia, Washington. Available: <https://wdfw.wa.gov/ais/wac.html>. (January 2018).
- WoRMS. 2018. *Cherax plebejus* (Hess, 1865). World Register of Marine Species. Available: <http://www.marinespecies.org/aphia.php?p=taxdetails&id=885569>. (March 2018).

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.

Horwitz, P., and B. Knott. 1983. The burrowing habit of the koonac *Cherax plebejus* (Decapoda: Parastacidae). *Western Australian Naturalist* 15:113-117.