UC SANTA CRUZ CAMPUS NATURAL RESERVE

EMPIRE CAVE AMPHIPOD

Stygobromus balconis--a similar species in the same genus as Empire Cave Amphipod *(Stygobromus imperialis),* for which no photos exist

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Scientific Name: *Stygobromus imperialis*
Common Name: Empire Cave Amphipod
Global Rarity: Critically Imperiled
U.S. or State listing: Critically Imperiled
UCSC Rarity: Extremely Rare

Conservation Status

Critically Imperiled

General Description

The Empire Cave Amphipod is an extremely rare and relatively large cave-dwelling crustacean species presumed to be endemic to Empire Cave in Santa Cruz County, California. In 1979, a single female specimen was collected in found in Santa Cruz's Empire Cave and was classified as a distinct species by Wang & Holsinger in 2001.

Identification

The single specimen observed was a female measuring 9.2 mm in length. Like other cave amphipods, they are likely white/unpigmented. One antenna is about 58% of the body length and 70% longer than the other antenna; the longer antenna's primary flagella has 18 segments, whereas the shorter has only 6. The mandible's second palp segment has 6 rather long setae on its inner margin.

Ways you can help

In your community:

1. Respect cave closures. If you are in a cave, do not step in puddles or wet cave floor surfaces.

Life history

Habitat: Pools of water within Empire Cave

Diet: Unknown, but likely decaying organic matter

Predators: Unknown

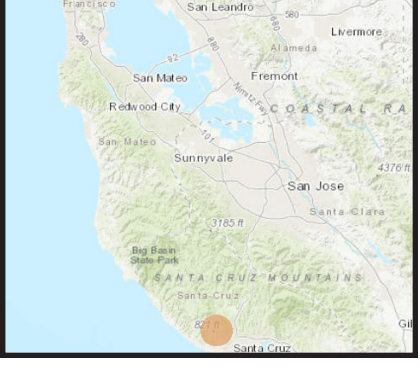
Geographic Range

The Empire Cave amphipod is presumed to be endemic to the Empire Cave on the UC Santa Cruz campus. The entire species is known from a single specimen collected in 1979.

Threats

The Empire Cave amphipod is threatened by:

1. Disturbance from cave visitors
2. Changes in hydrology that may impact aquatic environments with Empire Cave



References and Photo Credits

Holsinger, J.R. 1978. “Systematics of the subterranean amphipod genus Stygobromus (Gammaridae). Part II: Species of the Eastern United States”. Smithsonian Contributions to Zoology. 266: 1–144. doi:10.5479/si.00810282.266.

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Wang. D. 2001. Systematics of the subterranean amphipod genus Stygobromus (Crangonyctidae) in Western North America, with emphasis on species of the Hubbsi group. A Dissertation Submitted to the Faculty of Old Dominion University in Partial Fulfillment of the Requirement for the Degree of Doctor of Philosophy, Ecological Sciences, Old Dominion University. Unpublished Dissertation. Retrieved from https://digitalcommons.odu.edu/cgi/viewcontent.cgi?article=1104&context=biology_etds on 20 May 2021.