

UC SANTA CRUZ CAMPUS NATURAL RESERVE

EMPIRE CAVE PSEUDOSCORPIOIN



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Scientific Name: *Fissilicreagris imperialis*

Common Name: Empire Cave Pseudoscorpion

Global Rarity: Critically Imperiled; Listed as Vulnerable by the International Union for Conservation of Nature (IUCN)

State Rarity: Critically Imperiled

UCSC Rarity: Extremely rare

General Description

The Empire Cave Pseudoscorpion is an arachnid and troglobite (animal restricted entirely to underground habitats) in the Neobisiidae family found only within five caves in the karst cave system at Cave Gulch adjacent to and on the University of California, Santa Cruz campus. Very little is known about this species.

Identification

Size: 2.5 - 3.5 mm

Color: Abdomen is tan, cephalothorax and pedipalps are dark reddish brown

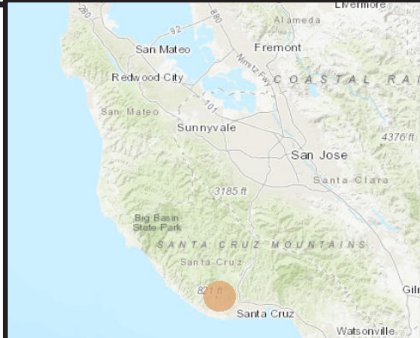
Legs: Eight legs

Head: Two pedipalps (claws) connect to the head; two chelicerae, smaller claw-like appendages used to eat and hold prey are located near the mouth.



Geographic Range

The Empire Cave Pseudoscorpion is endemic to at least five caves within the Cave Gulch region of Santa Cruz County and has been found nowhere else on Earth.



UCSC Distribution

The Empire Cave Pseudoscorpion is found in Empire Cave within the Cave Gulch drainage.

Life history

Habitat: Dark to twilight zones of moist caves, specifically damp cave floors made of clay. Researchers have found this species under rocks or on or under wood within the caves.

Diet: Invertebrates smaller than themselves, including springtails.

Behavior: When preying on smaller invertebrates, Empire Cave Pseudoscorpions wait with their pedipalps, or large claws that contain sensory setae and venomous glands, extended until prey touches their setae. They then seize, paralyze, and use their mouth to wrap the insect in silk, which then slowly dissolves into nutrient liquid that they consume.

Reproduction: Unknown

Research Highlights and Fun Facts

- The species is nearly blind, but has eyes that produce poor vision that is not good enough to rely on during predation
- The species is thought to exist nowhere else in the world other caves within Cave Gulch in Santa Cruz County.
- Pseudoscorpions, like spiders, produce silk and use it to restrain their prey.

Conservation Status

Vulnerable

In 1996 the IUCN Red List of Threatened Species listed the conservation status of the Empire Cave Pseudoscorpion as Vulnerable.

Ways you can help

In your community:

1. Do not enter or attend parties held in Empire Cave
2. If you do enter Empire Cave, do not litter or remove wood and be wary of where you step

Threats

UCSC campus:

1. Vandalism
2. Partying and other gatherings in their cave habitats
3. Well-intentioned cave clean-ups that remove their microhabitats (such as wood)
4. Logging that may impact hydrology and geology of the Cave Gulch cave systems

References

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