



Klamath Network Featured Creature

May 2014

Cave Cobweb Spiders (Family Nesticidae)

General Description:

Nesticidae spiders, commonly called Cave Cobweb or Scaffold Web spiders, are small (2 – 6 mm) yellow/orange “ish” for the two reported genera in our region (*Nesticus* and *Eidmannella*). Being generally non-descript, telling the genera apart requires close up examination under microscopes of their reproductive organs.

With limited distinguishing characteristics and their small size, identifying these spiders beyond the family level is difficult, doubly so as immature specimens. At the sexually immature stage, even identification of family is difficult.

There are 218 described species, but true estimates of worldwide diversity is likely higher due to undescribed or cryptic species.

Habitat:

Nesticids frequent caves or cave like habitats, although in the tropics they are also associated with leaf litter.

The photos here of a Nesticidae spider were taken in a cave in Lava Beds National Monument during a trial run of Cave Communities protocol sampling, where the spider made a distinct tangled, blanketing web underneath the basalt cobbles of the cave floor.

Distribution:

They are distributed world-wide, except for Antarctica and far northern climes.



Ecology:

Not much is known on the ecology or has been formally studied of these spiders. They feed on other cave invertebrates, possibly springtails (order Collembolla), millipedes (orders Julida, Polydesmida, Spirobolida, or Chordeumatida) diplurans (*Haplocampa* sp.) (diplurans are primitive insects called bristletails). These are all invertebrates encountered in the cave sampling.

According to Dr. Jean Krejca, of Zara Environmental, an environmental contracting firm assisting the protocol development, Nesticids may have a life cycle similar to aquatic insects, where the majority of the life span is spent in the immature stages, and the adult reproductive stage is relatively short. For cave dwelling spiders, the immature may last 5+ years, while the adult stage is substantially shorter (months instead of years).

Like the famous Black Widow, they probably also partake of “Sexual Cannibalism,” where the female member consumes the male following reproduction. A variety of hypotheses explain this occurrence, but in cave predatory species with a limited food base, the extra energy gained by the female likely acts to increase the reproductive output of the mating.

Where to see in the Klamath Parks:

No widespread terrestrial surveys of invertebrates have been done for the parks of the network, nor are there invertebrate species lists for the parks. We now know them to occur in Lava Beds, and probably in our other park with cave resources, Oregon Caves National Monument.

With the implementation of the Cave Community sampling, we will gain a knowledge of these spiders distribution, and hopefully work with a taxonomic specialist to gain species identifications, and maybe discover new endemic species.



Interesting Facts:

These spiders are closely related to a sister family, Theridiidae, the Cobweb Weavers. The Cobweb Weavers are among the most diverse family of spiders (2,300+ species), and include the Common House Spider (*Parasteatoda tepidariorum*), the most common worldwide spider, and the Black Widow Spider (*Lactrodectus* sp. – see the October 2010 Feature Creature).

More Information:

Encyclopedia of Life;
eol.org/pages/206/overview

Adams, R.J. 2014. Field Guide to Spiders of California and the Pacific Coast States. University of California Press.