

Some female spiders pretend to be dead so potential male sexual partners won't fear being eaten

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A team of bio-scientists affiliated with several institutions in China, working with a colleague from Australia, has found that the females of

some species of funnel spiders play dead to attract male sexual partners. In their study, reported in the journal *Current Zoology*, the group collected several specimens of *Aterigena aculeata* and tested their behavior in the lab.

Funnel-weaving spiders are spiders that spin webs in the shape of a funnel. They are found in many places around the world, but only those species living in Australia are considered dangerous—without treatment their venom can cause [severe pain](#) and even [death](#). Many species of funnel-weaving spiders are known to engage in sexual cannibalism, in which the female kills and eats the male after coitus. This [behavior](#) has led to mating problems for some species, resulting in sexual catalepsy—in which one of the [sexual partners](#) plays dead during some or all of the mating process. To learn more about this behavior in *A. aculeata*, the research team collected several samples and carefully tested them in their lab.

One of the things that the team wanted to know was whether the female's death-like state was controlled by the female herself, or if the male was somehow influencing it to protect himself. In the first experiment, a pair of the spiders was allowed to mate as they naturally would. The second involved shaking the female in a tube before allowing the pair to mate and the third involved putting the female in a death-like state artificially using an anesthetic. Following the experiments, all of the specimens were frozen and ground up, allowing the researchers to study their chemical states.

The research team found that the male was not sending any signals to induce the death-like state—thus, it was all the female's doing. They also found that putting themselves into such a state allowed the female to be choosy—they only did so for males they deemed worthy of siring their young. They also discovered that the females were fully capable of controlling the duration of the death-like state—they got up and walked

away as soon as copulation was concluded.

More information: Jihe Liu et al, Females adopt sexual catalepsy to facilitate mating, Current Zoology (2023). DOI: [10.1093/cz/zoad010](https://doi.org/10.1093/cz/zoad010). [academic.oup.com/cz/advance-ar ... 3/cz/zoad010/7081690](https://academic.oup.com/cz/advance-article/doi/10.1093/cz/zoad010/7081690)

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