

Explore the Watershed Spiders Can Be Prey Too — the Small-headed Fly

What's sticking out of this pretty orange monkeyflower? A small-headed fly (Family *Acroceridae*, Genus *Eulonchus*) is resting in the blossom with only its abdomen visible. The butt sticking out is a shiny metallic color. This photo was taken in mid-June at the pollinator garden at the end of Bridgeview Trail near Bridgeview Drive.



This fly attacks spiders, but the adult fly doesn't eat them—its larvae parasitize the poor spiders. Gwen Heistand, Director of Education and Resident Biologist of Audubon Canyon Ranch, has been surveying small-headed flies, and has this to say about their unusual life cycle:

Small-headed flies are parasitoids of mygalomorph spiders. A parasitoid is a parasite that kills its host at one stage of its lifecycle. Mygalomorph spiders are "primitive" spiders like trapdoor and turret spiders [like the one pictured below].

Host-seeking is the job of the first larval instar (called a planidium). When a planidium meets a spider, it grabs hold, crawls up the spider's legs and forces its way into the spider's body. The small-headed fly larvae may remain lodged inside the spider's body for several years before completing their life cycles. Mature larvae emerge from the spider's posterior and pupate away from the host inside a protective webbing that the spider prepares before it dies! Once adults emerge, they live only a few short weeks. Up to 5,000 tiny eggs may be deposited by each female.

Flies, in the Order *Diptera*, have had about 225 million years to figure out ways to reproduce. There are over one million species of flies, and if there is a way to parasitize a spider and reproduce, they'll come up with it.

There aren't only bees in the Bridgeview Pollinator Garden. Take a look inside the blossoms there and in your own garden: You may find an interesting surprise.

--Kathleen Harris

