

Colorado Insect of Interest

Cat-Faced Spider

(Western Plains Orb-weaver)



Figure 1. Cat-faced spider swollen with eggs.

Scientific Name: *Araneus gemmoides* Chamberlin and Ivie

Class: Arachnida (Arachnids)

Order: Araneae (Spiders)

Family: Araneidae (Orbweaver spiders)

Identification and Descriptive Features: The large, full-grown females (Figure 1) are the stage most often seen. These vary from about 5-7 mm long and 4.5-5.5 wide. Males (Figure 7) are considerably smaller, about half as large. Both sexes have a bulbous abdomen with a pair of projections on the front. A faint white line runs down the midline of the front of the abdomen and it is usually crossed with small V-shaped markings. Overall coloration is highly variable and ranges from straw-colored (Figure 2) to dark grayish brown (Figure 3). The combination of the projections of the abdomen, dimples and markings lead to the common name “cat-faced spider”. *Araneus gemmoides* is also sometimes referred to as a “monkey-faced spider”.



Figure 2. Cat-faced spider light form.



Figure 3. Cat-faced spider dark form.



Figure 4. Cat-faced spider underside markings.

Distribution in Colorado: *A. gemmoides* occurs throughout the state and is common.

Life History and Habits: The cat-faced spider spends the winter in the egg stage, within a silk-covered sac (Figure 5) produced by the mother during fall. Eggs hatch in spring and the tiny spiderlings (Figure 6) disperse, usually by ballooning. This involves movement to the edge of a leaf or other exposed point where they then let out silken threads. Light winds catch the threads and carry the spiderlings, thus redistributing them thoroughly each new season.

The cat-faced spider captures prey by use of a sticky web that it usually establishes among vegetation a few feet above ground. The web is of concentric design, typical of those spiders in the orb-weaver spider family, with spiraling sticky coils. As the web is damaged, it may be torn down, consumed and reconstructed regularly. The spiders may also relocate their webs repeatedly. Late in the season cat-faced spiders are most often seen near porch lights or just outside windows, areas that are likely to attract flying insects.

During the day the spiders sometimes may be seen in the center area of the web or even at work in its repair. However, usually they remain within an area of retreat at a corner of the web, often hidden. While waiting within the retreat a leg maintains contact with a thread of the web to detect vibrations indicating snared prey. When an insect does get stopped in the web the spider moves out, swaths it with sheets of silk, then paralyzes it with its digestive saliva. The prey is then usually carried back to the area where the spider later consumes it.

Mating occurs in late summer. At that time the smaller males (Figure 7) move about in search of receptive females. After mating, sperm is stored by the female and later used to fertilize the eggs. As the eggs mature



Figure 7 . Male cat-faced spider.

the body of the female spider may rapidly increase greatly in size. Ultimately an egg sac is produced somewhere in the near vicinity of the web. If conditions (food, temperature) are favorable the spider will continue to live for awhile longer and may even produce a second egg sac. At the end of the season all the spiders die and the only surviving stage between growing seasons are eggs.



Figure 5. Cat-faced spider mother and recently produced egg sac.



Figure 6. Cat-faced spiderlings.

Cat-faced spiders do have many natural enemies including various insects and other spiders that may feed on them. Probably the most conspicuous predator is the black and yellow mud dauber (*Sceliphron caementarium*), which captures spiders, paralyzes them with a sting, and uses them to provision their mud nest cells (Figure 8).



Figure 8. Paralyzed cat-faced spiders collected from mud dauber nest.

If handled, a mature cat-faced spider may give a sharp pinch of a bite, although they can not normally pierce the skin. Furthermore, they are not a dangerous species and do not possess venom that produces any serious effects on humans.

Related Species: Many orbweaver spiders (Araneidae family) occur in Colorado and make their characteristic patterned webs amongst vegetation. At least four other *Araneus* species occur in the state, but none are nearly as commonly encountered as is the cat-faced spider. Other orbweaver spiders that are common primarily occur in the genera *Neoscona* (Figure 9), *Aculepeira* and *Argiope*.



Figure 9. *Neoscona* sp. spider swathing prey.