

Colorado Arachnid of Interest

Whitebacked Garden Spider (Banded Garden Spider)

Scientific Name: *Argiope trifasciata* Forsskal

Class: Arachnida (Arachnids)

Order: Araneae (Spiders)

Family: Araneidae (Orbweaver spiders)

Identification and Descriptive Features:

The whitebacked garden spider (Figure 1 and 2) is a large species, with a generally ovoid form and bright markings. Mature females may be 13-14.5 mm when fully extended and the carapace of the body typically between 5-6.5 mm in length. Males are much smaller and are sometimes seen at the edge of the web (Figure 4). Adult males also have prominently enlarged pedipalps projecting from the side of the head and these are used in sperm transfer.



Figure 1. Whitebacked garden spider adult, dorsal view.



Figure 2. Whitebacked garden spider, ventral view.

The back of the spider is covered with silvery setae. Numerous dark lines cross the body and yellow banding is usually present as well. The legs are dark yellowish-brown with darker rings.

Distribution in Colorado: Statewide, except at highest elevations

Life History and Habits: The whitebacked garden spider is an orbweaver spider that produces its large concentrically patterned web in areas of tall grass and shrubby vegetation. The web is sticky and strong, capable of holding fairly large and active insects such as wasps and grasshoppers. Numbers of whitebacked

garden spiders often increase in years when grasshoppers are abundant.

The whitebacked garden spider is a day active hunter and can usually be observed resting in the center of the web, although they may drop readily when disturbed. Unlike many orbweaver



Figure 3. Whitebacked garden spider adult with webbing-wrapped grasshopper prey.



Figure 4. Adult female (left) and male (upper right) of the whitebacked garden spider.

spiders, they do not make a retreat along the edge of the web.

The overwintering stage is the eggs, which are protected within an egg sac attached to vegetation. Upon hatch in spring the spiderlings disperse, often by ballooning with wind currents. Prey items are captured by snaring them in sticky webs then paralyzing them with venom injected through the fangs. Often prey are swathed and bundled with silk to be later eaten (Figure 3). Webs are torn down and reconstructed frequently during their development.

Adult males begin to appear in late July and females shortly afterwards. The males wander while the females remain within a web. Mating occurs in the latter half of the summer and females produce egg sacs, which have a general shape of a kettle drum. Freezing temperatures kill off all remaining spiders at the end of the season and they have a one year life cycle.

Related Species: Several other orbweaver spiders (Araneidae family) occur in Colorado and make their characteristic patterned webs amongst vegetation. In eastern Colorado the closely related **yellow garden spider** (*Argiope aurantia*) is sometimes encountered, particularly in the Arkansas Valley. It can range even larger in size than the whitebacked garden spider.



There are many other orbweaver spiders that occur in Colorado in the genera *Araneus*, *Neoscona* and *Aculepeira*. Perhaps the largest of these is the **cat-faced spider**, *Araneus gemmoides*, which is most often seen establishing webs on the sides of buildings. A separate sheet discusses this common spider. The **western spotted orbweaver**, *Neoscona oaxacensis*, is another common orbweaver in eastern Colorado.



Figure 5. Yellow garden spider dorsal view (top) and ventral view (bottom). Both are feeding on grasshoppers, a common prey. Lower picture courtesy of Jim Kalisch, University of Nebraska.

None of the orbweavers are harmful to humans. Larger individuals may give a pinch if grabbed and handled.



Figure 6. *Aculepeira packardi*, a large orbweaver found in eastern Colorado.



Figure 7. Western spotted orbweaver.