

KEY TO COMMON INDOOR SPIDERS FOUND IN UTAH

Alan H. Roe
Insect Diagnostician
Utah Plant Pest Diagnostic Lab
November 2005

This key is intended as an identification aid for spider specimens commonly collected from indoor situations in Utah. It is not all-inclusive and will not correctly identify all spiders. However, the key does include groups that comprise about 90% of the specimens that are submitted from household situations in Utah, and about 80% of spiders submitted from all situations.

This simplified key is designed for use by persons with a minimal knowledge of spider anatomy. Anatomical characteristics utilized by the key include eye arrangements, the number of claws on the tarsi, the presence or lack of claw tufts, the appearance of the spinnerets, and the arrangement of teeth (if any) on the rear margin of the cheliceral fang furrow. Actual photographs of spider anatomy are utilized to illustrate the various characteristics described in the key.

A dissecting microscope (20X minimum power) is recommended to observe the necessary characteristics. One or two pairs of fine forceps and a dissecting pin are useful for manipulating specimens. A silicone-filled dissecting dish and insect pins may also be useful for holding specimens in the required viewing positions. Ethyl alcohol (70%) is recommended for preserving spider specimens. Specimens can be viewed submerged under alcohol or dry, but dry specimens are prone to breakage.

Spiders included in this key are identified to the family, genus, or species level. A list of these spiders and their classification level is given in the table below. The actual key follows the table.

COMMON NAME, CLASSIFICATION AND SCIENTIFIC NAMES OF SPIDERS INCLUDED IN THIS KEY (in order of appearance in the key)

Common Name	Classification Level	Scientific Name
Pillbug spider	Species	<i>Dysdera crocata</i>
Cellar spiders	Family	Pholcidae
Crab spiders	Family	Thomisidae
Jumping spiders	Family	Salticidae
Hunting spiders	Family	Gnaphosidae
Sac spiders	Genus	<i>Chiracanthium</i> spp.
Black widow spiders	Genus	<i>Latrodectus</i> spp.
Cobweb spiders	Genus	<i>Steatoda</i> spp.
Wolf spiders	Family	Lycosidae
Grass spiders	Genus	<i>Agelenopsis</i> spp.
Domestic house spider	Species	<i>Tegenaria domestica</i>
Hobo spider	Species	<i>Tegenaria agrestis</i>

KEY TO COMMON INDOOR SPIDERS FOUND IN UTAH

1. With six eyes in a 2-4 arrangement (Figure 1); fangs very large; cephalothorax red, reddish brown, or chestnut color; abdomen a uniform cream to yellow color.....**pillbug spider**

1.' With eight eyes in various arrangements; other characters variable.....2

2. Legs extremely long and thin (Figure 2); tarsi flexible with many pseudosegments; with eight eyes located on an elevated prominence.....**cellar spiders**

2.' Legs not unusually long and thin; tarsi not flexible; with eight eyes of varying arrangements.....3

3. Tarsi with two claws, with or without claw tufts (Figure 3) (if claw tufts are present assume there are only two claws).....4

3.' Tarsi with three claws and without claw tufts (Figure 4), though other hairs may be present that obscure the claws.....
.7

4. Without claw tufts; at least the first two pairs of legs rotated to point forward in a crab-like position (Figure 5); usually rather small spiders.....**crab spiders**

4.' With claw tufts (Figure 3); legs in the normal position.....5

5. Four eyes in front row with the median eyes much larger than the laterals (Figure 6); hairy, compact spiders that jump or have rapid, jerky movements.....**jumping spiders**

5.' Four eyes in front row with all eyes about the same size.....6

6. Spinnerets with anterior (ventral) pair larger and cylindrical, as in Figure 7; eye arrangement 4-4, usually with some eyes oval in shape.....**hunting spiders**

6.' Spinnerets not as above; cephalothorax and legs yellow to yellow-green without any obvious markings; eye arrangement 4-4; eyes round (Figure 8).....**sac spiders**

7. Rear margin of the cheliceral fang furrow without teeth (Figure 9); eye arrangement 4-4 (Figures 12 & 13).....8

7.' Rear margin of the cheliceral fang furrow with two or more teeth (Figures 10 & 11); eye arrangement variable.....9

8. Lateral eyes separated by at least one eye diameter (Figure 12); adult female entirely black except for red markings on underside of the abdomen; immature females and adult males with lighter markings on abdomen.....**black widow spiders**

8.' Lateral eyes separated by less than the radius of an eye (Figure 13); carapace a dark brown color; abdomen colored with with yellow, purple or gray, but variable markings depending on species.....**cobweb spiders**

9. Eye arrangement 4-2-2 (Figure 14), with uppermost two eyes to the rear and more or less on the top or sides of the cephalothorax.....**wolf spiders**

9.' Eye arrangement 2-4-2 or 4-4 (Figures 15 & 16), with all eyes on the front of the cephalothorax.....9

9. Eye arrangement 2-4-2 (Figure 15); rear margin of the cheliceral fang furrow with three teeth.....**grass**

spiders

9.' Eye arrangement 4-4 (Figure 16).....10

10. Rear margin of the cheliceral fang furrow with three to five teeth of the same size (Figure 10).....**domestic house spider**

10.' Rear margin of the cheliceral fang furrow with six to eight teeth, the inner two or three teeth being reduced in size (Figure 11).....**hobo spider**



Figure 1. 2-4 eye arrangement of a pillbug spider (oblique frontal view).



Figure 2. A cellar spider showing the extremely long and slender legs (genus *Pholcus*).

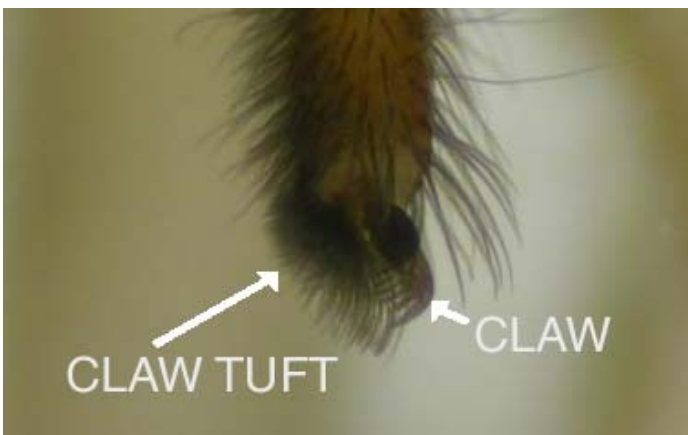


Figure 3. Tip of tarsus of a sac spider (a two-clawed spider) showing the claw tuft and one toothed claw.



Figure 4. Tip of tarsus of a grass spider showing the two toothed claws and the third, smaller claw.



Figure 5. A crab spider showing front two pairs of legs rotated to point forward (genus *Misumenops*).



Figure 6. A jumping spider showing front row of eyes with the median eyes much larger than the lateral eyes (genus *Phidippus*).

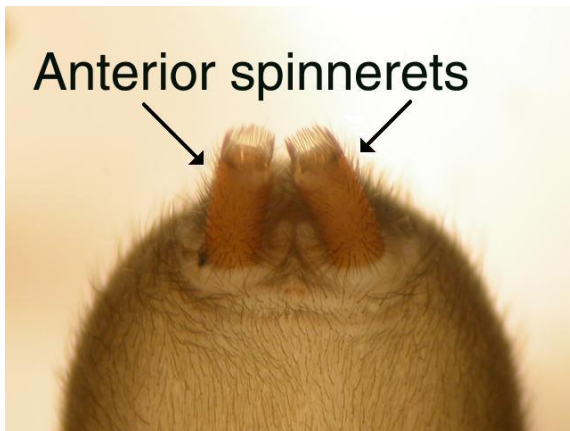


Figure 7. Cylindrical anterior spinnerets of a hunting spider (ventral view).



Figure 8. 4-4 eye arrangement of a sac spider (dorsal view).



Figure 9. Chelicerae of a black widow spider showing the lack of teeth on the rear margin of the cheliceral fang furrow (view from rear of the chelicerae).



Figure 10. Chelicerae of a domestic house spider showing four teeth on the rear margin of the cheliceral fang furrow (view from rear of the chelicerae).

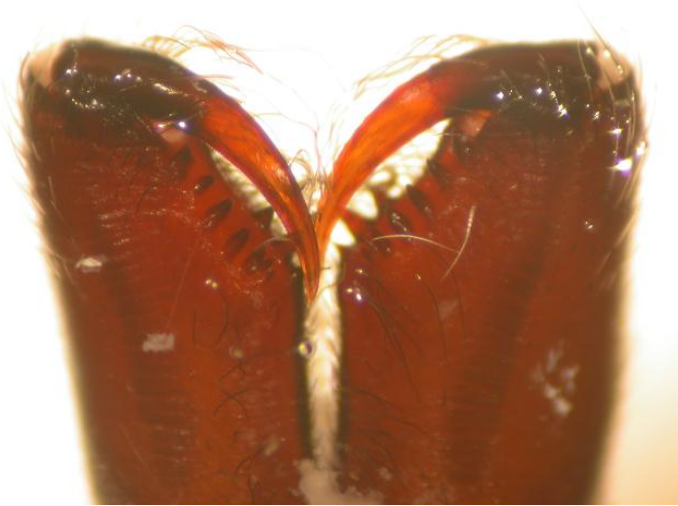


Figure 11. Chelicerae of a hobo spider showing seven total teeth with the inner three teeth reduced in size (view from rear of the chelicerae).

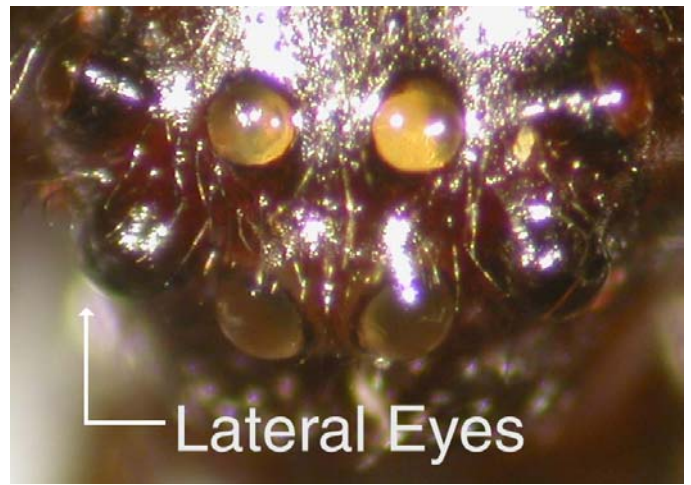


Figure 12. 4-4 eye arrangement of a black widow spider showing the lateral eyes separated by a least one eye diameter (oblique frontal view).

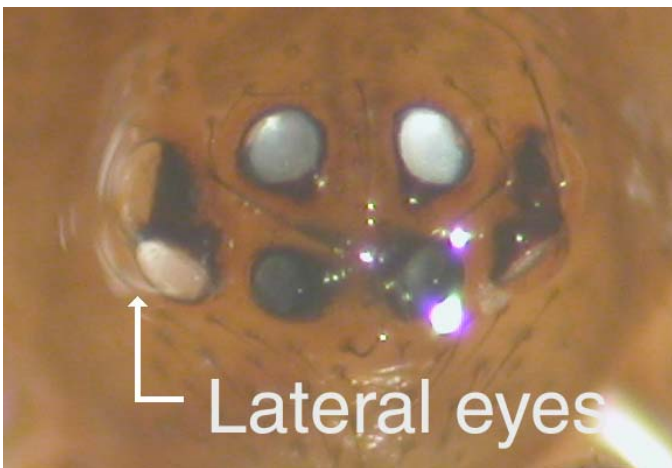


Figure 13. 4-4 eye arrangement of a cobweb spider showing the lateral eyes separated by less than the radius of an eye (oblique frontal view).



Figure 14. 4-2-2 eye arrangement of a wolf spider (frontal view).

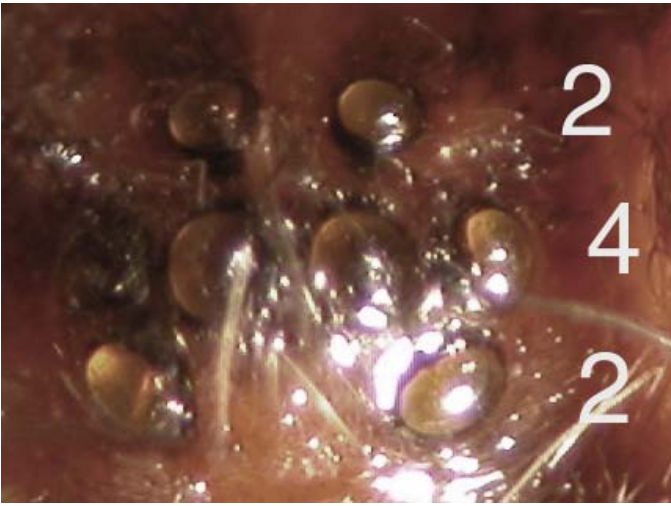


Figure 15. 2-4-2 eye arrangement of a grass spider (oblique frontal view).



Figure 16. 4-4 eye arrangement of a hobo spider (oblique frontal view).

Photographic credits:

Figures 1, 3-4, 7-16: Alan H. Roe, Utah State University
Figure 2: Jim Kalisch, University of Nebraska-Lincoln
Figure 5: John A. Haarstad, University of Minnesota
Figure 6: Alejandro Calisto, Texas A&M University