

## **Non-Tick Arachnids**

### **Scorpions**

- ❑ While there are several venomous scorpion species present on the trail (the Vaejovids), none are covered explicitly because, though their stings may be painful, they have no lasting effect.
  - ❑ To minimize scorpion risk, just shake out boots in the morning before putting them on, since scorpions like to take cover in them for warmth overnight.<sup>1</sup> Checking any clothes you leave on the ground would be wise as well.
  - ❑ You really shouldn't have to worry about scorpions too much on the AT as long as you pay attention; scorpions are far more common in the desert regions of the Southwest United States (such as Arizona).

### **Spiders**

- ❑ Spiders give you more justification for worrying than scorpions. While spiders are not nearly as dangerous as snakes, and deaths are quite rare, they still pack a nasty punch and can make you take a few zeros.
  - ❑ Brown recluse spiders have hemotoxic venom that can cause lasting tissue necrosis, similar to the venom of the timber rattlesnake and copperhead.<sup>2</sup>
  - ❑ Black widow spiders have a neurotoxic venom that can cause respiratory paralysis similar to the venom of the coral snake.<sup>3</sup>
  - ❑ Black Widow venom is some of the most potent stuff secreted by any animal known to man; brown recluse venom is more powerful than rattlesnake venom drop for drop. The reason why snakes are more dangerous in general is because they inject far larger quantities of their venom than do spiders.<sup>3</sup>
- ❑ Most spiders are absolutely harmless to humans; in fact, of the over 20,000 different species of spiders that inhabit the Americas, only 60 are capable of biting humans. Within that small group, only four are known to be dangerous to humans: the brown recluse, the black widow, the hobo or aggressive house spider, and the yellow sac spider.<sup>4</sup>
  - ❑ Within this even smaller group, only the brown recluse and the black widow have ever been associated with significant disease and rare reports of death.
- ❑ Unfortunately for hikers, the AT (debatably) has both species. Black widows are unquestionably present on the trail, but some refuse to believe that brown recluses are a threat.
  - ❑ While non-endemic speciation is discussed more thoroughly on the tick page, it merits discussion here as well. Other brown spiders are very commonly misidentified as brown recluse spiders because people recognize the name and don't bother to check endemic regions. However, this does not mean there are no

brown recluses outside of the commonly accepted (but rather arbitrary) boundaries placed upon their geographic presence.

- ❑ A map of the geographic range of the brown recluse can be found [here](#). Brown recluses are at least present for the very first leg of the trail in North Georgia (for northbound hikers), so I view learning about them as all gain and no loss. If you never encounter them outside of your brief time in Georgia, at least you'll know about them if you ever live in the midwest.

### Black Widows

- ❑ People familiar with the black widow will know that the gender you have to worry about is the females (they are the large and venomous part of the union). Before we get into the details, let me unload a huge pet peeve of mine: **FEMALE BLACK WIDOWS DO NOT ALWAYS OR EVEN COMMONLY EAT THEIR MALE COUNTERPARTS.** Some black widow species widow themselves more commonly than others, but the trend is far overstated even in the scientific community (who should know better). If you are interested in this or other spider myths, see [here](#).
  - ❑ Adult female black widows are identifiable by the distinctive red hourglass on their abdomen, and through several other physical characteristics (outlined in source 5 and summarized here).
    - ❑ They are generally shiny black in appearance (but may be dark brown), and have a plump abdomen attached directly to the thorax behind the legs.
    - ❑ Their webs are amorphous with thicker threads than normal spider silk, are usually about 30 centimeters in diameter, and generally have one or two white or light brown egg sacs.
  - ❑ Generally, you will know immediately if you have been bitten by a black widow because it is very painful, and other symptoms such as numbness, tingling, rashes, sweating, nausea, vomiting, dizziness, cramps, rigid abdominal muscles, chest tightness, and weakness will manifest themselves.<sup>6</sup>
  - ❑ Some people have worse reactions than others to the venom, but black widow bites are not usually fatal for a grown human with an uncompromised immune system.



Images 1 & 2:  
Black Widow  
Spider



### Brown Recluses

- ❑ Brown recluse spiders, just like black widows, are identified almost exclusively by physical characteristics.
  - ❑ The most sure way to identify a brown recluse spider is by its coloring: if the spider has stripes or other pigments on its legs, it's not a brown recluse; if the spider has more than two pigments on its body, it's not a brown recluse; if the spider has legs that are darker than its body, it's not a brown recluse.<sup>7</sup>
  - ❑ Brown recluses can also be identified by a violin-like pattern on their back or by their web structure, which is amorphous just like that of the black widow.
  - ❑ If you have no fear of getting up close and personal, and have a powerful enough magnifying glass, brown recluses are uncommon among spiders because they only have six eyes instead of the standard eight.<sup>7</sup>
  - ❑ If you want even more information on how to identify brown recluses, see [here](#).
  - ❑ It is more common for brown recluse bites to be noticed after the fact since their bites don't possess the same stabbing pain as do the black widow's.
  - ❑ While the black widow's neurotoxins cause mainly visceral responses, the brown recluse's hemotoxins express themselves dermatologically.
    - ❑ Brown recluse bites cause local swelling, pain, itching, redness, tenderness, and blisters. They eventually form large ulcers and may cause tissue necrosis- death of the tissue in the area of the bite.<sup>6</sup>
    - ❑ Fever, chills, and nausea may also occur as time passes and the venom spreads.



Images 3 & 4: Brown Recluse Spider

### **If You Are Bitten:**

- ❑ First off, very much unlike snakes, spiders are not very difficult to kill once you've been bitten. This, coupled with the fact that their venom is non-lethal to normal healthy people (i.e., you can risk elevating your heart rate somewhat since you aren't going to die from the venom), means that you should kill the spider that bit you for purposes of identification. Do not risk getting bitten multiple times for this purpose, but try to do it if at all possible.<sup>8</sup>
- ❑ Clean the site of the spider bite with soap (if you have it) and water. Bacterial infection, just like for snake bites, is a possibility that should be guarded against.
- ❑ Treatment for serious reactions to a black widow spider bite will be beyond the scope of most medical offices and urgent care centers.<sup>3</sup> Fortunately, serious reactions are not very common.
- ❑ Black widow bites will cause pain and cramping (especially of the abdominal area); if you have very debilitating pain or have whole-body symptoms, you should seek medical care.
- ❑ While antivenin is available for black widow bites, its use is contested because some medical authorities believe that the risk of allergic reaction is greater than the non-fatal (though painful) symptoms characteristic of black widow bites. More can be read [here](#).
- ❑ If you suspect a brown recluse bite, it is almost always best to seek medical attention.<sup>3</sup> While brown recluse bites are not typically fatal, the tissue necrosis can be so devastating in certain cases that skin grafts are necessary to mask some of the damage. Not all bites for all people will develop in such a manner, but the risk is present.
  - ❑ If you need convincing, type "brown recluse necrotic bites" into Google images. When you hurl, please aim somewhere other than your computer.
- ❑ In the case that you (or a health professional) have determined symptoms to be minor and of an irritating rather than dangerous nature, there are several things you can do. To get yourself back to full trekking efficiency.
  - ❑ If you were bitten by a black widow or have waited long enough to determine that no severe necrotic symptoms are manifesting from a brown recluse bite, you should (adapted from source 9):
    - ❑ Ice the wound. Ice helps decrease swelling and pain, but also slows down blood flow (why you ought to avoid it if you believe a recluse bite is destroying tissue). Ice may be difficult to come by depending where you are on the trail.
    - ❑ Elevate the wound. By keeping the bite area above the level of your heart, you decrease redness and swelling. Again, the caveat is that decreased blood flow is bad if hemotoxins are at work.
    - ❑ Compress the wound. A compression bandage around the wound can reduce pain and swelling. Same warnings as above.

- ❑ If you happen to have brought medication with you on the trail, certain things can help reduce the discomfort that spider bites can bring. Antihistamines, (non-anabolic) steroids, and painkillers (e.g. ibuprofen) can all be useful depending on your symptoms.<sup>9</sup>
- ❑ Additionally, antibiotics are not a bad idea if you think the bite is infected or has a possibility of becoming so. Most people can't just carry around prescription antibiotics ( a dilemma discussed more in the ticks section), but if you do happen to “have” some, they can be useful.

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#### Images:

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