

## When is a Bug Not an Insect?

An insect is usually described as an arthropod that has an exoskeleton, three body segments (head, thorax, abdomen), the head usually has antennae, mouthparts, and compound eyes and the thorax has three pairs of legs.

Non-insect arthropods include those with 1, 2 or multiple body segments, but never 3; they may have 8, 10 or more legs, but never 6; they have no wings and simple but not compound eyes. So when is a bug not an insect? When it is a scorpion, a spider, a tick or mite, a sowbug or pillbug, a centipede or millipede or a harvestman.

Scorpions have 4 pairs of legs plus pincers and long tail. Spiders have two body segments (cephalothorax and abdomen), are wingless, have 4 pairs of legs, and no antennae. Ticks and Mites have a single body segment, 8 legs, wingless, piercing-sucking mouthparts and no antennae. Sowbugs and pillbugs have 7 pairs of legs. Centipedes and millipedes have many body segments and centipedes have one pair of legs attached to each segment and millipedes have two pairs of legs attached to each body segment.

Harvestmen certainly look like spiders, but they have only one body segment with 8 legs and 2 eyes. Most of us grew up calling them daddy-long-legs. They are in a separate Order, the Opiliones. There are lots of different families of harvestmen worldwide. In Texas there are 18 different species, all in the Phalangiidae family.

There is a common myth that harvestmen are highly poisonous but have too small a mouth to bite humans. They do secrete a smelly fluid which may be the basis of this myth, but it is quite harmless, as are the harvestmen themselves.

In contrast to spiders, which have piercing-sucking mouthparts and only ingest liquids, harvestmen can ingest small bits of solid. They are omnivorous and eat mainly small insects, bits of plant debris, dead organisms and bird dung.

During the summer in the daytime, we can always find from one to 3 or 4 different aggregations of harvestmen clustered together on the rock walls underneath our porches or under the eaves in protected areas. They don't use the exact spot every day, so how they find each other to congregate is a mystery. If disturbed, sometimes they will bob up and down, presumably to look even larger and to discourage potential predators.

If one loses a limb, the limb will twitch, apparently to confuse any predator while the healthy 7-legged harvestman escapes. They can be observed "cleaning their legs" by alternatively pulling each leg through their mouth part. These are fascinating, fragile-

looking creatures that have survived for at least 400 million years according to amber fossil records.

Since this is “chigger” season, everyone might be interested to know that chiggers are really mites. It is the larval stage that attaches to your legs when walking through grass and they crawl to some protected area in your socks or other clothing and attach to your skin where they feed for a day or two, then fall off. After that you may begin to experience itching and a reddish welt. This larva is only 1/150<sup>th</sup> of an inch long, which is why you never see them.

Ants, wasps, scorpions and spiders may be critters to avoid getting too close to, but the majority of arthropods have some beneficial quality such as pollination of desirable plants or control of other insect populations, or, in the case of many insects, they are just beautiful or interesting to watch. It is also important to remember that bugs are at the base of the food chain and are necessary food for birds, reptiles and other small omnivores and therefore are important for the higher carnivores as well.

So just because it is a “bug” doesn’t mean it is bad. Natural populations of native insects are part of a healthy native habitat and therefore we should not try to eliminate all “bugs”. We try to never use any insecticide outside (with the exception of an occasional wasp nest by the back door or fire ants in the electrical box). We have never lost a native plant to insect damage—remember that all native plants survived alongside all of our native insects for thousands of years before we and our chemicals came on the scene.

Until next time...

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