

Velvet Ant or Cow Killer

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All velvet ants belong to the family Mutillidae and have a dense pile of hair of a variety of striking colors that serve as a warning signal to potential predators. They can be found worldwide, but in Nebraska, the most common velvet ant is the cow killer ant, *Dasymutilla occidentalis*. They are commonly found during the summer months wandering around the yard in urban landscapes and open areas like pastures.

Ant or Wasp?

This insect is not an ant, but rather a wasp. The females do not have wings, so they look like ants. Not to worry though, ants and wasps are in the same order, so they do happen to share a fair number of characteristics. It does not possess a node (or two) on the waist, which is characteristic of all ants.

Description

The female cow killer ant is a large, hairy, wingless wasp that resembles a worker ant. They can be up to 3/4" long with a black body covered with coarse and bright reddish-orange hair on the head, thorax and abdomen. The males are larger with dark brown wings and different color patterns on its body.

Both male and female velvet ants produce a squeaking or chirping sound when alarmed. It is often difficult to determine whether male and female specimens are the



Photos: Jim Kalisch, UNL Dept. of Entomology

In Nebraska, the most common velvet ant is the cow killer ant (female shown magnified).

same species because their physical appearance differ greatly.

Biology

Unlike social wasps, such as yellow jackets and paper wasps that live in a central nest with a great number of individuals working together, velvet ants are solitary wasps. Males fly in search of females to mate. The mated female will enter a ground nesting bee or wasp nest, and lay eggs on or near the other insect's larva. They are parasitoids because their larvae emerge and feed on the host's larvae, killing them. Adult velvet ants feed on nectar.

Defenses

The female cow killer, though grounded, has many defenses. Besides bright warning colors and squeaking warning sound, they are quick movers, have a very strong exoskeleton and can release smelly odors. In addition, females are capable of delivering a very painful sting. Females have a large stinger which is a modified egg-laying organ called the ovipositor.



Only females have stingers (female shown magnified). They only sting if provoked.

On the Schmidt's sting pain index which ranks and describes insects based on one scientist's evaluation of stinging insects, it is ranked 3 out of 4 (4 is most painful). Therefore, they can inflict an excruciating sting if handled or stepped on, which is why they are called cow killers. As far as we know, no cow has ever died from a sting. The sting may be painful, but the venom is not very toxic.

Despite their massive defenses, velvet ants are not aggressive. If you see velvet ants around your home, no need to worry. Just leave them alone. No control measures are necessary and they are not an indoor pest.

FOR MORE INFORMATION

- Mutillidae identification key: <http://entnemdept.ufl.edu/creatures/misc/wasps/mutillidae.htm>
- Schmidt's sting pain index: www.atlasobscura.com/articles/the-colorful-pain-index-of-the-stinging-ants-bees-and-wasps-around-the-world
- Velvet ant defenses: www.bbc.com/earth/story/20151014-superpowers-of-the-near-invincible-velvet-ant

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