



BUG BIZ

Pest Management and Insect Identification Series



Dasymutilla occidentalis, Eastern Velvet Ant (Hymenoptera: Mutillidae)

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Description

Eastern velvet ants within the family Mutillidae (cow killers or velvet ants) are, in fact, not ants at all. Adults are sexually dimorphic wasps, meaning that males and females look different. Females are wingless and can be seen running across grassy fields and open ground. Males are winged and stingless. The stinger of members of the order Hymenoptera is a modified egg laying device (“ovipositor”), so only females are capable of stinging. The eastern velvet ant is the largest velvet ant in the United States, ranging from two-thirds of an inch to 1-inch (15 to 25 mm) in length. The common name velvet ant originates from the velvety appearance of the dense hairs on most of the body. Eastern velvet ant females are red or reddish orange in color with a black stripe or patch across the abdomen and black legs and antennae. Male eastern velvet ants are similar in color pattern but are slenderer than females and possess two pairs of dark brown wings. Larvae are pale white and grublike.

Adult eastern velvet ants are aposematic, meaning they signal their distastefulness. Their bright red color and fuzzy appearance warns predators to stay away. The cuticle, or exoskeleton, is slippery and rock hard.

The eastern velvet ant has a broad continental distribution in the United States but is most commonly encountered in the eastern half of the U.S. Students often see them in mulchy areas of the LSU campus during early fall.

Life Cycle

Cow killers are holometabolous insects, meaning they have egg, larva, pupa and adult life stages. They are brood parasitoids and develop within an insect host that is eventually killed. Adults seek burrows of ground nesting species (e.g., bumblebees, wasps, cicadas and other insects) and lay eggs on the larvae of these insects. The eggs hatch into larvae that feed on the host larvae. When fully developed, they pupate in the host’s brood chamber,

overwinter and emerge as adults the following season. Adults are typically seen in the late summer to early fall.



Female eastern velvet ant (Johnny N. Dell, bugwood.org).



Male eastern velvet ant (Johnny N. Dell, bugwood.org).

Ecological Significance and Pest Status

Cow killers are not considered pests and function as a natural control for other bees and wasps. They should not be touched or handled, however, as their venom is potent and painful. When threatened, adults emit a buzzing noise (stridulation) and begin probing with their long, flexible stinger. Females have a powerful sting that can be deployed multiple times. The venom is rumored to be powerful enough to kill cows, which is, of course, nothing but an urban legend. However, this has become the basis for one of the common names.

Control

No control is needed. Only females can sting, and their coloration makes avoidance easily achieved.

References

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Pub. 3712 (500) 4/20

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