



Cyberbee.msu.edu

Bugs Around Your House

Cicada Killer Wasp

(Scientific name: *Sphecius speciosus*;
Family: Vespidae; Order: Hymenoptera)

MICHIGAN STATE
UNIVERSITY
EXTENSION

Description The female cicada killer wasp is quite large, with body about 1-1/8 to 1-5/8 inches long. Males are slightly smaller. The abdomen is black with light yellow markings. The head and wings are rusty red as shown in the photo below.



© Z. Huang

Fig. 1. A cicada killer wasp trying to carry home a cicada that has been paralyzed.



Fig. 2. The nesting hole and the soil dug out by a cicada killer. Photos by Zachary Huang

Behavior and biology Cicada killer wasps are solitary wasps and have a life cycle very different from the social wasps such as hornets and paper wasps. The stings are designed to paralyze cicadas rather than for nest defense, so despite their large size, the sting is not as painful. The female wasps are not defensive, they will only sting if caught by bare hand or caught in one's clothing. Males will chase after other wasps or even buzz around humans, if one comes into their territory, but they have no stings. Adult wasps emerge about mid July in Michigan and live for about 2 months. Adult wasps will dig nesting holes during July and August. Nesting holes are usually in full sun, with sparse vegetation, in well-drained soils that are sandy slightly clayey. The soil thrown out of the hole usually forms a U-shaped open tunnel at the entrance (see Fig. 2 above). Female wasps will make burrows that are about 6-10 inches deep and drag paralyzed cicadas inside. A burrow may have 10 to 20 cells with each cell provided with 1-2 cicadas and one egg. Each female egg is provided with two cicadas and male egg is provided with one cicada. Eggs hatch into larvae in two days and larvae will consume the live but paralyzed cicadas in 4-14 days and then spin a cocoon. The larvae then enter into a diapause. They pupate in the next spring and emerge as adults mid July the next year, completing the full cycle. Female wasps will locate singing cicadas and sting them to cause paralysis, then either glide from a tree to their burrow or drag them to the burrow on the grass.

Control and prevention If you do not enjoy the singing of cicadas during summer, then the cicada killer wasps are your friend. One female wasp will hunt 10-30 cicadas per summer. However when they become too abundant, especially near door steps, golf courses, or flower beds, people can get annoyed or scared. The most effective control is to use a tennis rackets to swat them like large flies, or one can capture them using insect nets. Because the wasp only nests in areas with sparse vegetation, improving your lawn with adequate watering and fertilizer will remove infestation after 1-2 years. If one prefers to use pesticide, locate the burrows during day time and apply pesticide after it is dark so the wasps are inside their burrows. Dusts such as bendiocarb (Ficam), carbaryl (Sevin), or diazinon can be applied to the nest entrance directly. If the density of burrows are high, consider spraying of the same type of insecticides. One may need to treat continuously for 2-3 weeks if there is an influx of new wasps from other places. If you are allergic to insect stings, have someone help you or call a pest control firm listed in your yellow pages.

Disclaimer: This fact sheet is for information only. Mention of products does not indicate endorsement. Prepared by Zachary Huang, Department of Entomology, Michigan State University, East Lansing, MI 48824, USA. Email: bees@msu.edu.

url: <http://cyberbee.msu.edu/column/stinging/cicadkiller.pdf>