

The Largest Wasp in Nebraska: Cicada Killer

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Jody Green
Extension Educator

July and August is stinging insect season in Nebraska. The sight of a wasp frightens people and rightly so. Some individuals suffer adverse reactions to wasp venom similar to the anaphylactic response to a bee sting. Cicada killer wasps can be considered scary, but they seldom sting. The damage to yards, landscapes and gardens are often more of an aesthetic problem than the health hazards of the wasp itself.

Identification

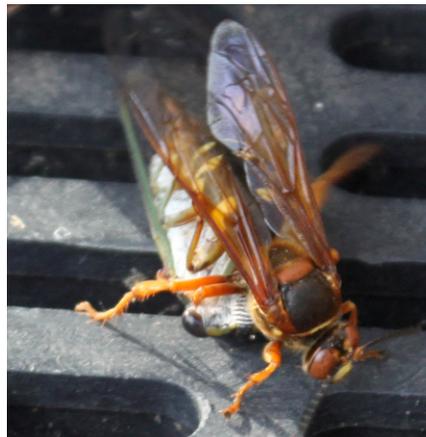
Of the solitary wasps, the cicada killer is the largest species in Nebraska, reaching lengths from 1½–2 inches. They have large, rust-colored eyes, wings, legs and antennae. Their abdomen appears hairless, black and marked with bright, bold yellow patterns (usually three broken bands). They are considered solitary because they do not live in large colonies and collectively feed and care for multiple individuals. They live on their own, excavating a burrow in which to provision with prey and to lay their eggs upon. When female wasps locate a favorable location, nesting aggregations form, so it is common to have many nests in a small area, yet each burrow is nest to a single wasp.

Biology and Behavior

Female cicada killers possess a large, visible stinger, which is a



Cicada killer wasps feed on nectar and larvae feed on cicadas.



Cicada killer female wasp has paralyzed a cicada with her stinger. She will take it to her burrow underground.

modified egg-laying device. She uses her stinger to subdue and paralyze a cicada, so she can fly with it back to her nest, drag it into the hole, down into the burrow and lay an egg on its body. She is a strong, daytime flier and returns to the surface to hunt and

capture more prey. The larval wasp, which looks like a legless white grub, emerges from the egg a few days later and feeds on the living cicada left by its mother, spins a silken pupal case and prepares to overwinter. Pupation occurs in spring and adults emerge in June/July. There is one generation per year.

The male cicada killer wasps are much smaller than the females and remain close to the nesting location. They patrol the area, flying fast, erratic and seemingly furious to creatures in their territory. They will make contact with one another, try and mate with the female when she returns, land on flowers to feed on nectar and chase away any competition.

Pest Status

Cicada killer wasps are considered nuisance pests because nesting locations are often adjacent to homes; their presence elicits fear. The female cicada killer is capable of delivering a painful sting if handled, trapped in clothing or stepped on without shoes; otherwise she is not a threat to people. Likewise, the male wasp lacks a stinger, and so, although it appears to be aggressive in nature, he is completely harmless.

Cicada killer wasps become a pest midsummer when cicadas are active. They dig burrows in well-drained, light-textured soil in areas of full sunlight. They prefer areas with sparse vegetation and no mulch. This would include edges

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along lawns, sidewalks, driveways, golf course sand pits and garden beds. They also burrow in spaces between landscape features such as retaining walls, garden planters, under porches and posts holes. Sometimes they will even burrow in the middle of the turf. Burrows are often identified by a half-inch diameter hole with a distinct U-shaped mound of kicked out soil. Without a wasp sighting, homeowners may mistake the cicada killer wasp burrow for rodent damage because of the kicked out soil.

Management

Cicada killers are considered beneficial insects and disappear when the cicadas die off in the fall. We don't encourage eliminating the cicada killers because they are insect predators and great pollinators. They do no permanent damage to the landscape nor do they harm plants. Homeowners may attempt to modify the environment in early June to discourage burrow excavation. Things like excessively watering of the area, creating shade, changing the soil type or increasing undesirable mulch may help cut down the number of cicada killers.

If numerous nests become a problem in the landscape, the infested area can be treated with an insecticide labeled for use on wasps or turf applications. One formulation to treat individual burrows may be to apply an insecticidal dust to the holes to contact wasps as they exit and enter. Be sure to always read the label for correct application and follow any safety precautions. Wear appropriate protective clothing and treat individual burrows in the evening, when female wasps are in their burrows for the night.



Burrow of a cicada killer wasp as evidenced by half-inch to one-inch diameter entrance hole and a mass of loose soil.



Prime nesting habitat for cicada killers is this limestone retaining wall with well-drained, light-textured soil in an open area with full sunlight.

Photos: Jody Green, Nebraska Extension in Lancaster County