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Some Observations on the Behavior of Cerceris architis Mickel (Hym.: Philanthidae).

By C. E. Abbott.

In the summer of 1926, having nothing better to do than build up deficient red blood cells, I was in the habit of frequenting a field east of Elgin (Illinois) to bask in the sun. I discovered several burrows in the clay bank at the top of an abandoned sand pit. Part of the time these burrows were inhabited by busy little black-and-yellow wasps about half an inch in length. For many hours each day the wasps labored irregularly at their excavations.

The opening of each nest was nearly circular and about one centimeter in diameter. Into this the owner plunged, only to reappear a little later, abdomen foremost, behind a heap of loose earth. This kind of digging continued until the opening of the nest was quite hidden. Then the insect appeared, head foremost, from below; the debris was scattered around the opening in the form of a low crater. Of course the nest that opened on a vertical surface did not have this accumulation, which in some cases amounted to a teaspoonful of loose soil. Occasionally a wasp enlarged the door of her burrow by dislodging bits of earth with her jaws.

Often the wasps remained in the nests for hours with their faces in the doorways. This was especially the case on dull days, at which time the only reaction the insects gave was brought about by my sudden appearance or the intrusion of other insects. In the first case each wasp dropped out of sight into its nest, only to cautiously reappear when nothing more occurred to cause alarm. Toward too curious insects they behaved differently; rushing out, they violently drove these away.

Aided by grass stems and plaster of Paris, I was able to trace the extent of some of these burrows. In consequence of roots and stones, they were somewhat tortuous; all tended to incline to one side, so that the whole was curved like a scimiter. There was a surprising uniformity of width throughout the length of each burrow. Excepting the closed end,

where for two or three centimeters its width was fifteen millimeters, the average tunnel had a diameter of one centimeter.

In the terminal chamber, mixed with much loose earth, there were from three to seven weevils. In some nests the beetles were reduced to a few dry fragments. More often there were still slight evidences of life; twitching of the tarsi and movements of the head which ceased after twenty-four hours. The beetles stored by the wasps proved to be *Curculio nasicus* Say. They were about half an inch in length and of a light brown or buff color. They were remarkable for a proboscis nearly as long as the remaining parts of the body.

Each wasp, returned at irregular intervals with a weevil clasped beneath its body. At the door of its nest the wasp dropped the beetle, entered the burrow, and seizing the weevil, dragged it in.

I had the rare good fortune to see one of these wasps attack its prey. A living *Cerceris* and the beetle it had captured were put into a vial. Seizing the weevil by the left prothoracic leg, the wasp tried to drag it through the stoppered end of the bottle. Failing in this, she grasped her prey dorsally, taking its proboscis in her jaws; she then curved her abdomen beneath it and inserted her sting at the ventral juncture of the thorax and abdomen.

The departing wasps circled about their nests before taking off. When the position of objects in the vicinity of a nest were changed the returning wasp was unable to find her burrow.

In conclusion, I wish to thank Dr. S. A. Rohwer and his colleagues for the identification of the specimens.

To Authors of Entomological Papers.

EDITOR, ENTOMOLOGICAL NEWS: I herewith kindly ask you to inform your readers that I request those interested in having their entomological works noticed in the Russian entomological literature to forward their papers to me for the aforesaid purpose. V. YAKHONTOV, Manager of Entomological Department of Agricultural Experiment Station, Old Boukhara, Shiraboudin, S. S. S. R. (Russia).