## OBSERVATIONS ON THE NEST OF APHAENO-GASTER FULVA SUBSP. AQUIA BUCK. (FORMICIDAE, HYMENOPTERA.)1

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While collecting insects along a roadside five miles south of Cedar Falls, Iowa, July 17, 1926, the author came across a nest of the ant, Aphaenogaster fulva subsp. aquia Buck. strip of upland prairie vegetation about one rod wide and relatively undisturbed was noticed at the south side of the road. narrow tract showed the typical aspect of a Stipa spartea-Andropogon scoparius (needle grass-beard grass) association, and the soil was a well-drained, brown, sandy loam occurring well toward the top of a low hill. Because such prairie is very scarce in Iowa at this date in her history our party of collectors decided to sweep this vegetation thoroughly for typical insects.

Soon after he had begun to sweep the author's attention was drawn to a piece of rusted tin about ten inches wide and two feet long lying on the ground among the grasses and about ten feet from the wheel tracks. Because such an object might harbor a desired insect or two the author felt prompted to turn the tin over. Several large jawed ants met the approach of the author's hand and their pinches were not tokens of welcome; but thereby the observer's curiosity was incited further. Beneath the tin a colony of ants had excavated several shallow rooms that were connected by runways. Three or four holes led from the rooms of the north end deeper into the ground. At that end in a nursery about six inches in diameter were seen approximately one hundred larger larvae and pupae. Almost immediately the nurses began to carry their charges out of sight into the holes which led to a lower nursery. At the end of thirty minutes the larvae and pupae were all out of the observer's reach and sheltered from the hot rays of the midday sun.

Toward the south end of the nest a granary four inches in diameter contained a few seed coats and partially eaten achenes of panic grass (Panicum Scribnerianum Nash.). In a second room of the same size as the granary occurred a small pile of the

<sup>&</sup>lt;sup>1</sup> Contribution from department of Zoology and Entomology, Iowa State College.

exoskeletons and appendages of some ants. The colors and sizes of the remains suggested the species *Formica fusca* L. to the author. This is a somewhat larger ant than A. fulva aquia, the living inhabitants of the nest.

During these observations an open salve box containing a few small dead insects was placed rather absentmindedly near the nest of ants. Later when the box was noticed three members of the colony were seen vigorously tugging at the fortunately located food supply. Interference on the part of the author and owner met with an attack by one of the foragers which stood up and fought for the spoils. A second foraging ant could not be persuaded to loosen its hold upon a small leafhopper. Hence it went into a cyanide bottle as a specimen of the colony, but kept its hold on the prey until death. After collecting several more individuals the observer felt compelled to go on about other insect business. The tin roof was placed back into its former position in order that the ants might continue about their business.

The author is indebted to Dr. M. R. Smith for the identification of the species.

Erratum.—On Plate III, fig. 3, the last line of legend should read "swept away."—Phil Rau.



Hendrickson, G O. 1930. "Observations on the nest of Aphaenogaster fulva subsp. aquipa Buck. (Formicidae, Hymenoptera)." *Bulletin of the Brooklyn Entomological Society* 25, 78–79.

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