

MERMIS PARASITISM IN *PACHYCONDYLA STRIATA*.

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In my collection of ants from Alto Parana (Paraguay) I encountered a large specimen of *Pachycondyla striata* F. Sm. which was infected with a nematode worm (*Mermis*). In a recent paper by Professor W. M. Wheeler<sup>1</sup> the whole problem of *Mermis*

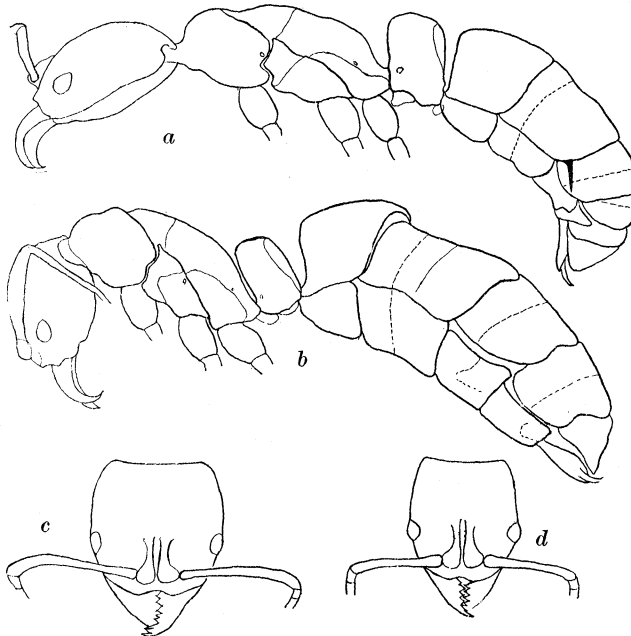


Fig. 1. a, *Pachycondyla striata*; normal; b, *Pachycondyla striata*; Mermithized; c, head of normal worker from above; d, head of Mermithergate.

parasitism and intercastes among ants is reviewed. He has given an account of all cases of mermithism, including several new cases among certain Neotropical Formicidæ. Professor Wheeler gives also an interpretation and a discussion of the whole problem of mermithized ants and a list of the relevant literature.

The *Pachycondyla striata* from Paraguay, which I have

<sup>1</sup>Wheeler, W. M. *Mermis Parasitism and Intercastes among Ants*. Journ. Exper. Zool. Vol. 50, No. 2, 1928.

studied in Professor Wheeler's laboratory at the Bussey Institution, represents a new case of mermithization, similar to that of *Pachycondyla fuscoatra*, described by Emery.

*Pachycondyla striata* was found in small colonies under dead leaves. It stings severely and when disturbed can bury itself quickly into the ground. I encountered the parasitized specimen of *Pachycondyla striata* running along a trail in the forest in the neighborhood of Puerto Bertoni, where the famous naturalist Dr. M. S. Bertoni lived. The movements of the ant were slow.

The differences presented by the morphology of the parasitized *Pachycondyla striata* in comparison with an unparasitized specimen may be seen from the accompanying figures.<sup>2</sup> The gaster of the mermithergate is very voluminous and swollen. In the normal ant the abdominal segments are fitted into one another so as to allow the abdomen to dilate as a whole. But in the parasitized individual some of the segments are more or less separated from one another, so that the abdomen is increased in length from 6.5 mm. in a normal to 8.5 mm. in the mermithergate individual and from 2.25 to 3 mm. in diameter. The petiole of the parasitized ant is narrower and lower, than in normal workers. Some modifications in the thorax were also observed. The pronotum of the mermithergate is shorter and the epinotum narrower than in normal *P. striata*.

The greatest difference is discernible in the head, which in the parasitized specimen is conspicuously smaller and less robust, i. e. narrower and shorter, and of a peculiar narrow, more rectangular shape behind the eyes. There are no traces of ocelli.

The mandibles of the infected specimen are narrower and smaller, the antennal scapes decidedly shorter and a little thinner. The funiculus is also slightly shorter.

The surface of the body is smoother and more shining than in normal *P. striata* workers, owing to the fewer hairs on all parts of the body. The color of the hairs is also different. In the parasitized specimen they are more grayish, but in normal *P. striata* they are golden-yellow.

In the intersexual form of *P. striata* we have parasitic castration and mingling of the normal secondary sexual characters.

<sup>2</sup>Made by camera lucida.



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