

Forel, on the other hand, advances the following reasons for regarding the Cerapachyinae as true Ponerinae. While they undoubtedly exhibit traits which ally them with the Dorylinae, their habitus is, nevertheless, decidedly Ponerine. The little that is known of their habits certainly indicates that they live in small, stationary colonies like the Ponerinae, instead of populous, nomadic colonies like the Dorylinae. The queens, moreover, are so nearly of the same size as the workers as to preclude anything like the great fecundity of the queens of *Dorylus* and *Eciton*. The Cerapachyinae, too, have short legs of such a structure as to indicate a slow gait and more sedentary habits. The workers of the Cerapachyinae have ordinary faceted eyes, whereas those of the Dorylinae are absent or ocelliform, while the atrophied eyes of the Ponerinae have a very different structure.<sup>1</sup> The conditions of the

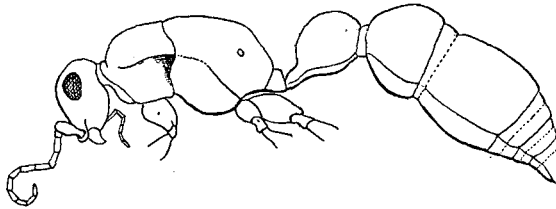


FIG. 5. *Apterogyna olivieri*. Female, after Emery.

pedicel in the males, females and workers of the Cerapachyinae are correlated as they are in the Ponerinae, and do not exhibit the differences seen in the Dorylinae between the worker on the one hand and the male and female on the other. The wingless con-

<sup>1</sup>The distinction to which Forel calls attention is worthy of histological study. I am inclined to think, however, that it may be a distinction without a difference. I have recently sectioned a number of pupæ of *Eciton schmitti* and find that the ocelliform lateral eyes are really very much atrophied compound eyes, too much atrophied, in fact, to be at all functional as visual organs. *The retinal hypodermis, which is somewhat thickened under the convex lens, shows indistinct but unmistakable traces of ommatidia. The optic nerve is very short and not connected with the brain. It ends freely in a blunt point a short distance from the ommatidial layer. This is interesting as proving that the visual fibers must arise in the retina and grow towards the brain and not in the reverse direction from cells in that portion of the brain known as the optic ganglion.* If there is a distinction between the abortive eyes of the Dorylinae and Ponerinae it would seem to be that in the former subfamily the ommatidia disappear both by fusion with one another and by reduction in number, while in the latter the number of ommatidia is gradually reduced without fusion.