

Although quite a number of species of *Leptogenys sensu stricto* had been described by the end of the nineteenth century, no one had ever seen a female. To those acquainted with these insects in the field this would not be surprising, because the great majority of them form small colonies in the soil or in old logs, are rare and very sporadic, and when their nests are disturbed escape so rapidly into the surrounding vegetation that usually only a few specimens can be secured. In a few species, however, like *Lobopelta diminuta*, *processionalis*, *fallax*, etc., which form populous colonies a conspicuous mother queen, possibly like the dichthadiigynes of *Dorylus* and *Eciton*, might be expected to exist. In 1899 Forel¹ published the following remark:

Notwithstanding the considerable number of species of *Leptogenys* scattered throughout the world, the female has hitherto been sought in vain. One might contend that she does not exist, as Mr. Emery has supposed, and that she is replaced by the workers. At my request Mr. Wroughton dug out to a considerable depth an immense formicary of *L. diminuta* and sought in vain among the thousands and thousands of workers. All he could discover was a worker whose abdomen was very considerably distended by the ovaries. In other respects this worker differs absolutely in nothing from the others, and even the condition of its abdomen presents nothing very extraordinary.

In 1900, while studying the habits of *Lobopelta elongata* in Texas, I succeeded in proving that the female is actually represented in each of the colonies by a worker with an enlarged abdomen.² I found that the node of the petiole of these fertile individuals was more conical than that of the worker and the pilosity longer. There were no ocelli.

In 1903 one of my students, Miss Margaret Holliday,³ undertook a more searching examination of the females and workers of *L. elongata*. In both she found two to three ovarioles in each ovary. There was a receptaculum seminis in the females and also in a single worker which contained a few normal, fully developed eggs. She discovered two types among the females, one with long ovarioles consisting of five follicles, the other with short ovarioles of only one or two follicles, and remarked: "It is interesting to note that in regard to external anatomy also the queen is represented by two types; one in which the node, the distinguishing characteristic, is like that of the worker; in the other type it is like that of the male. Seven of the former and two of the latter were found."

¹'Les Formicides de l'Empire des Indes et de Ceylan,' 1899, Journ. Bombay Nat. Hist. Soc., XIII, p. 312.

²'A Study of Some Texan Ponerinae,' 1900, Biol. Bull., II, pp. 1-31, 10 figs. See also my paper: 'A Crustacean-eating Ant, *Leptogenys elongata* Buckley,' 1904, Biol. Bull., VI, pp. 251-259, 1 fig.

³'A Study of Some Ergatogynic Ants,' 1903, Zool. Jahrb. Abt. Syst., XIX, pp. 293-328, 17 figs