

Although these observations are inconclusive as to the method of colony formation of the *duloticus* female, they do indicate that shortly after the nuptial flight *duloticus* females make no attempt to establish a colony by driving away the adults and usurping the brood and nest of a *curvispinosus* colony. This is especially important in view of the fact that such a method is strikingly exhibited by females of *Harpagoxenus americanus* (Sturtevant, 1927; Creighton, 1929; Wesson, 1939), and may indicate a significant difference in the origin and development of slavemaking behavior in the two forms. Other possible methods of colony formation by *duloticus* females are:

(a) The solitary female hibernates and attacks a *curvispinosus* nest the following Spring. This is suggested by elimination, lack of evidence and the fact that the nuptial flight takes place late in the season.

(b) The female seeks out a nest-founding *curvispinosus* female and cooperates with her in rearing a brood. This is doubtful, since the activity of the migratory females falls off steadily and sharply on the days following the nuptial flight.

(c) The female establishes a nest and rears a brood independently. I know of no known instance of such behavior on the part of a parasitic ant species.

#### V. TYPE LOCALITY.

Over 200 colonies of *Leptothorax curvispinosus* and 10 to 15 of *L. longispinosus* have been examined in several counties of Southern Ohio. Yet only in the type locality have any colonies been found that contain *L. duloticus*. Here, in an area of about 1,000 sq. ft., 4 colonies out of about 20 examined were found to contain *duloticus*. One of these, the type colony, was quite small, containing but 4 workers and a queen of the slavemaker, and was the only one to contain both *curvispinosus* and *longispinosus* slaves. Two others were much larger, containing about 40 workers and a queen of *duloticus*, and numerous *curvispinosus* slaves. The fourth colony was not taken, but was known to be *duloticus* from the presence of scouts about the entrance, and was assumed to be a rather large one from the number of foraging slaves. The small colony mentioned above was nesting in a large oak gall, while the other 3 were nesting in cavities in dead sticks on the ground. No colonies of *Harpagoxenus americanus* were found. The locality was on a steep, dry hillside thickly covered with small oak trees in which were intermingled a few pines and small maples. The ground vegetation consisted of scattered, low bushes, seedling trees and a few herbs. The