

types, however, confirm that *reconditus* is conspecific with, and a junior synonym of, *smithi*.

6. *M. smithi* var. *trinidadensis* Weber, 1937, worker and female. — A syntype worker seen. According to the description "the workers of this variety differ chiefly in sculpture. The anteriorly directed convex and blunt ridge between the anterior mesothoracic spines is more reduced or practically absent. Between the sharply carinate sides of the first gastric segment the surface is longitudinally and finely rugulose". Since these characters vary at random and the examined syntype does not reveal a tangible difference, the present variety is best relegated to synonymy of *smithi* s. str.

7. *M. bolivianus* Weber, 1938, worker. — Syntypes examined. This species has been correctly synonymized by Kusnezov (1956) with *reconditus* Borgmeier, which in turn is a synonym of *smithi*.

8. *M. manni* Weber, 1938, female. — The holotype was examined. The specimen possesses somewhat heavier reticulate-rugose and vermiculate macrosculpture. The antero-inferior scapular spine is rudimentary. Otherwise, this female is much like *smithi* from which it may not be separated specifically.

Bionomics. — The ensuing data have been compiled from papers by Forel (1893a): 371-372, 1912: 187), Wheeler (1907: 773-774), Wheeler & Mann (1914: 42), Eidmann (1937: 85-86), Borgmeier (1937: 248) and Weber (1946: 128-129). The contribution by Eidmann is by far the most complete.

The small and sluggish workers when foraging carry dry leaves and caterpillar droppings back to their nest. The nesting sites are either in open fields and woods or even in moist gullies. The nest proper is in the soil. On the surface it is marked by craters of earth crumbs, measuring not more than 8 cm in diameter. These superficial structures stand out by their color which is different from that of the top soil, indicating that the nest cavities are at some depth. According to Bondar (Borgmeier, 1937) nest chambers have been dug out at a depth varying from 80 to 100 cm. In Colombia, Forel (1912) found a rather shapeless fungus-garden of this species at very little profundity.

A fact reported by many observers and confirmed by my own field experience is that usually a small area contains many craters of the same species, whereas neighboring areas have none at all. H. H. Smith (Forel, 1893a) who first called attention to the phenomenon, suggested that the craters of a given area represent the entrances of just one common formicarium (as happens with *goeldii* during the mating season, according to Luederwaldt). This, however, has not as yet been established conclusively.

The nest cavity, measuring 4-5 cm in width to 2.5-3 cm in height, possesses a flat ceiling and an excavated bottom. From the ceiling without the support of a framework of plant rootlets hang narrow clusters or threads of fungus material. These threads, which are quite consistent, are made up of finely cut up leaf material connected by the mycelium. The fungus itself has not as yet been identified. Eidmann states that superficially it resembles that of *Atta sexdens*, whereas Forel (1912) glibly states that it is not *Pholiota (Rizotes) gongylophora*. Away from the nest chamber lead several fine and threadlike tunnels barely giving passage to the tiny workers. Eidmann (1936, fig. 4) gives a photograph of a nest chamber with the suspended fungus garden.

While collecting in Puerto Rico, Wheeler (1907: 774) made several attempts at excavation of the fungus garden of *M. smithi* but succeeded