microclimate, and movement of the colony within the nest or to new nest sites. As a rule, the more elaborate the nest architecture of the species, the less mobile are the colonies. The mound nests of *Pogonomyrmex* and *Formica* have been extensively analyzed by several myrmecologists with respect to microclimate regulation [(34, 86, 127, 134, 135, 136, 153, 181, 209) and contained references]. It is clear in the species studied that mound construction provides higher nest temperatures. Several authors claim further that in the *F. rufa* group the mound temperatures, especially about 20 to 30 cm beneath the surface of the mound apex, vary less than those of the surrounding air and soil and stay consistently close to the ant preferenda (86, 127, 153). In *F. ulkei* Emery, on the other hand, the mound temperatures merely remain higher, and they fluctuate more widely than in the surrounding soil (136). In both cases, the preferenda temperatures are almost always maintained somewhere in the nest, and the brood are shifted accordingly. Moisture regulation in *F. ulkei* is more dramatic. Relative humidity of the nest chambers is much less variable in comparison with that of the surrounding soil, and the grand mean weekly content coincides with the brood preferendum [that is, the zone in which the workers prefer to place the brood (134)]. The workers of *Formica* adjust the mound structure in response to changes in soil drainage and shading and expertly repair major damage (32, 99, 134, 165). Curiously, the *Eciton* army ants show parallel regulation within the bivouacs formed mostly of masses of their own bodies (77, 147). With the recording of these important facts, it must be admitted that very little of concrete value is known about how the regulation is achieved. Some of the phenomena seem logically adaptive, e.g., the mounds are slanted apparently to catch more sunlight, the sponge-like structure of the upper gallery systems seem to provide better insulation, and the exits are open and shut apparently correctly for favorable moisture control. Zahn (209) has even claimed that in cool weather the nests of *F. rufa* are significantly warmed by the return of workers who sun themselves outside the nest. This *Wärmeträgertätigkeit* is suggested to be a new kind of stereotyped social behavior. These various features have been subjected to very little experimentation, however. The analytical micrometerology of ant nests is still a largely undeveloped subject, as Scherba (134) has recently made clear.

Social Parasitism

A rich variety of new parasitic species, representing almost every conceivable evolutionary stage, have been added since the time of Wheeler's general account (185). Reviews of several of the more important parasitic taxa are available (24, 90-93, 95, 96, 154, 202). "Emery's rule," that permanent parasitic species are phylogenetically very close to the host species, has been upheld by the new finds, as noted by Brown (24) and Stumper & Kutter (160). Most of the species have continued to turn up in North America and Europe (where ant collectors are the most dili-