In general, social parasites very frequently have certain relations to polygyny, either in being (facultatively) polygynous themselves like their host species (many inquilines, some temporary parasites, e. g. of the genus *Formica*), or in parasitizing polygynous host species (most slave-makers, which themselves are usually monogynous) (BUSCHINGER 1970). This supports the hypothesis of polygyny being favorable for the evolution of dependent nest foundation and parasitism. In fact, BOLTON (1986a, b) terms "autoparasitism" the behavior of young queens seeking adoption in conspecific polygynous colonies, which later reproduce by budding or fission, and WHEELER (1910, p. 439) suggested the idea of a "transition from parasitism of the queen on the same to parasitism on an alien species".

The "deficient" genes causing a queen bias might even be advantageous under certain conditions, for example when colonies with only "normal" queens due to bad nutrition etc. are not able to produce young queens at all. Colonies with queens being heterozygous for (codominant) "deficient" genes may reproduce under these suboptimal conditions, and the "normal" genes are carried on as well. The "deficiency", too high queen production, might also become manifest only as a polygenic effect, whenever "latent deficiency genes" by chance are combined somewhere in the range of a species.

It appears plausible, then, that there are manifold possibilities for certain "deficient" genes to survive and to spread in populations of polygynous species.

The other, more important question is how such deficient genotypes could achieve a partial, and later absolute, isolation within and from the original gene pool. A second phenomenon which is also widespread among polygynous ants, intranidal mating and inbreeding, is apparently involved. In many polygynous species mating occurs within, on top of, or in close vicinity of the mother nest. This may be adaptive in certain ecological conditions. HEINZE and BUSCHINGER (1987) speculate that in some non-parasitic ant species the evolution of flightless, intermorphic queens is due to a selective advantage of mating and remaining within a suitable habitat as compared to swarming and getting lost in the less favorable surrounding area. BOLTON (1986b) similarly discusses the evolution of apterous females in the *Monomorium salomonis*-group.

There are also many reports on ants, e. g. of the genus *Formica*, where sexual offspring from one nest may exhibit diverse behaviors, some mating on top of the nest, others flying off (ROSENGREN and PAMILO 1983). If the tendency to produce fewer workers in favor of sexual production (the "deficient" genes) somehow is linked with the tendency to mate in or on the nest, and for the females to remain there, the genetic condition of an incipient parasite, a "preparasite", is already achieved. This linkage evidently occurs automatically in polygynous species.

Nest-mating provides an at least partial sexual isolation between the swarming phenotypes and those remaining in place. Nest-mating increases inbreeding, and thus the accumulation of "deficient" genes, and it will gradually increase the genetic differences between nest-mating and swarming genotypes.

Other mechanisms may enhance the speciation process. Thus, a conceivable means to produce more sexuals would be to reduce them in size. Smaller sexuals have less reserves for a long mating flight, and the females would be less adapted to independent colony foundation. Both features are not disadvantageous, however, when mating occurs without swarming, and the young queens join existing colonies. And often the inquilinous and temporary parasitic ant queens are considerably smaller than the related host species queens.

The "preparasite" may also disperse into distant, and thus genetically somewhat different populations of the "host" species (the huge ranges of host species have been mentioned above; for a general consideration of differences between parapatric subspecies see HEWITT 1988). Or, if we assume a deleterious effect of the "preparasite" on its original "host" population, a less familiar genotype may invade the infested area. Under both conditions the sexual isolation of the "preparasite" increases, finally ending up in a genetic