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TROPICAL SOCIAL PARASITES IN THE ANT GENUS  
*PHEIDOLE*, WITH AN ANALYSIS OF THE ANATOMICAL  
PARASITIC SYNDROME (HYMENOPTERA : FORMICIDAE)

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## SUMMARY

Because social parasites are relatively rare in tropical ant faunas, new or poorly known forms deserve special attention. Two *Pheidole* species evidently parasitic on *P. indica* are here described as new species from India (*P. lanuginosa*, *P. parasitica*), while a previously known northern South American form, *P. microgyna* Wheeler, is redescribed and evaluated as a possible parasite of *P. minutula* or a closely related host species.

Next, all of the nine certain or likely social parasites of *Pheidole* known worldwide are compared, and an anatomical parasitic syndrome is identified through character state analysis. The nine species appear to be independently evolved. The parasitic character states have tended to evolve within each of these species at different rates, and hence the evolution is interpreted as having been not only parallel among species but mosaic in nature within species (see *table 1*). In spite of the lesser irregularities in this pattern, an overall trend is evident: the first changes to occur were loss of the worker caste (a loss still incomplete in the overall slightly modified *P. inquilina*), reduction of size, lengthening of the scape, reduction of sculpturing on the body surface, and broadening of the postpetiole. These shifts were followed by reduction of the mandibles and the segments of the funiculus.

The genera *Anergatides* and *Bruchomyrma*, each based on a single extremely advanced species, are placed in synonymy under *Pheidole*. The problematic genera *Hagioxenus*, *Parapheidole*, and *Sifolinia* are compared with *Pheidole* and their status evaluated.

The greater known diversity of parasitic ants in the temperate zones, as compared with the tropics, remains a key problem in the study of ant evolution. Whether the difference is genuine or an artifact of differential sampling cannot be determined until more intensive collecting is undertaken in the tropics.