

Preliminary Contributions toward a Revision of the Ant Genus *Pheidole* (Hymenoptera: Formicidae). Part I.¹

WILLIAM L. BROWN, JR.

Department of Entomology, Cornell University, Ithaca, New York 14853

ABSTRACT: New synonymy is given for 7 *Pheidole* species, mostly neotropical. *P. punctatissima* (=subsp. *napaea*); subsp. or varr. *annectens*, *insulana*, *jamaicensis*, *barbouri*, and *praeterrimissa* are removed from *P. punctatissima* and are all considered temporarily as forms of *P. annectens*. *P. vafra idiota* var. *maculifrons* is placed as a junior synonym of *idiota*. *P. subarmata* (= *cornutula*, s. var. *elongatula*, c. var. *imbecillis*, s. var. *nassavensis*, s. var. *borinquenensis*, *hondurensis*, s. var. *nefasta*, c. var. *dentimentum*). *P. tristis* (= *fumipennis*); *P. fabricator* (= *nigriventris*). *P. ursus* (= *cressoni*, u. var. *gracilinoda*); *P. megacephala* (= *testacea*). *Ceratopheidole pergandei* is transferred to *Aphaenogaster*.

Pheidole is certainly one of the most important ant genera in the world. In tropical forests, arid scrub, grassland and warm deserts, it appears often to dominate the insect parts of communities, and it is clear that the genus will increasingly occupy the attention of ecologists in these biomes. Identification of *Pheidole* species has always been a problem. Partly, the difficulty can be laid to the very large number of described forms in the genus. More than 1050 species, subspecies and varieties have been named in it through 1975, including known and still undetected synonyms. Problems also arise from the poor quality of much of the taxonomic work done during the early, mainly descriptive phases of the investigation of the genus.

Pheidole is a young genus in geological scale (Brown, 1973:173), and most species-groups show appreciable phenotypic variation. This variation provided a happy hunting ground for describers of (mostly nongeographical) subspecies and varieties. Most of these forms were described in works that were "faunal" in nature; i.e., the papers dealt with the ants of one particular country or restricted part of a continent, and most authors tended to neglect the possibility that some species could occur over ranges nearly continent-wide. Also, it seems, most of the authors before 1950 spent relatively little

¹ A report of research from the Cornell Agricultural Experiment Station. Research supported in part by National Science Foundation Grants DEB-7522472 and DEB-8003722.

Received for publication 18 September 1980.