

A NEW *PHEIDOLE* WITH REVERSED PHRAGMOSIS (HYMENOPTERA: FORMICIDAE)*

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INTRODUCTION

A number of ants have plug-shaped heads, known or assumed to be used to stopper the nest entrance. This phenomenon, called *phragmosis*, is best understood in certain groups of *Camponotus* and *Cephalotini* (e.g. Wheeler 1910: 209-212, Szabó-Patay 1928, Creighton and Gregg 1954), but Wheeler (1901: 534; 1927) also described species with phragmotic-like heads in *Pheidole*, *Crematogaster* and the dacetine genus *Colobostruma*, while Patrizi (1948) published the problematical *Solenopsis* (*Crateropsis*) *elementeitae* (placed by Ettershank, 1966, in *Oligomyrmex*). In most of these forms, either the queens or the soldiers, or both, are the phragmotic castes; in *Colobostruma leae*, the assumed phragmotics are the queen and the monomorphic workers.

In the new species of *Pheidole* described below, phragmotic behavior at some stage of the life cycle is indicated only for the queen caste, and even then is inferred from her aberrant body form. But in this case, the plug is formed, not by the head, but by the highly modified gaster (Figs. 6 and 7).

Two queens showing this plug-like modification of the gaster were taken separately from rotten wood in rain forest in the general vicinity of Manaus during my collecting trip of 1962 in the Brazilian Amazon. In one case, and possibly in both, the queens belonged to definite colonies with workers, soldiers and brood. (Notes on collection M-60 are ambiguous because two *Pheidole* queens, one of *embolopyx* and one of a totally different species, were in the vial with this number, but the notes state that "the" queen was taken apart from the soldiers, workers and brood. Probably one of the two queens was taken up in the aspirator along with bits of rotten wood without my knowing it.)

The queen's thickened scape base (with a gelatinous sheath) and the largely smooth and shining alitrunk with overhanging scutal margins, are "protective" characters suggesting social parasitism as a way of nest-founding for this caste. The strong similarities in color, sculpture and pilosity between the queens and the accompanying

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