

The adaptational hypothesis to explain the presence of pronotal spines is more than plausible, but the supposed phylogenetic relatedness between *lokitae* and *quadrensensis* and *sulcaticeps* and the one between *sexspinosa*, *singularis* and *variabilis* are not certain.

The following two arguments can be considered in favour of the homoplastic origin of the pronotal spines:

1. Pronotal spines are known only for the subgenus *Pheidolacanthinus* but other species of *Pheidole* (e. g. *P. sulcaticeps* from India and *P. variabilis* from Australia) possess humeral angles more or less toothed. As a matter of fact, to EMERY'S examples of similarity in pronotal structure one should add at least *Pheidole caldwelli* MANN from Viti Levu.

EMERY'S argument, however, is not conclusive in this context. The hypothetical demonstration, for example, of a relationship between *P.* (s. str.) *sulcaticeps* and *P.* (*Pheidolacanthinus*) *quadrensensis* greater than the one between the latter species and *P.* (*Pheidolacanthinus*) *cervicornis*, would imply the synonymy of the two subgenera *Pheidole* s. str. and *Pheidolacanthinus* as they are currently defined (and this was EMERY'S aim), but this will not automatically indicate that all these species (i. e. including *sulcaticeps*) belong to different clades. More or less angulate pronotal spines are known from a much wider array of species in *Pheidole*. Such a structure is present also in a major worker of an undescribed *Pheidole* species from Mexican amber sent to Professor WILSON for study.

2. One Australian species, *P.* (*Pheidolacanthinus*) *mjoebergi* FOREL, shows pronotal spines only in the major workers and not in the minor ones (FOREL, 1915) and another (*Pheidole aristotelis* FOREL from Sarawak) has pronotal spines in the minor workers only while the major ones have a weakly angulate pronotum.

The uneven caste distribution of this character and the undoubted great morphological differences among some *Pheidolacanthinus* species may be explained by the antiquity of their differentiation. The solution to this problem would be possible only by means of a phylogenetic analysis of the whole genus *Pheidole*, a task far beyond the scope of this paper. One should remember, in addition, that there are other non-related *Pheidole* species with mesonotal instead of pronotal spines (e. g. *P. annemariae* FOREL from Madagascar) but I don't think that the presence of the former morphology can be seriously used to demonstrate the polyphyly of the latter. None of these arguments appears to be completely cogent.

On the other hand, there are two arguments which can be interpreted as favouring the monophyly hypothesis:

1. The pronotal spines are a rare character in ants and unique for *Pheidolacanthinus* among the plethora of *Pheidole* species.

2. All the 25 extant species sharing this trait have a circumscribed geographical distribution (Fig. 12). Even *P. sulcaticeps*, *P. variabilis*, and *P. caldwelli* hypothetically linking some *Pheidolacanthinus* to other *Pheidole* clades are restricted to neighbouring areas in the Indomalayan and Notogean regions.

If, on the one hand, it is conceivable that the pronotal spines may have been selected more than once in a convergent way, it is less persuasive that this character originated more than once or survived more than once within the same geographic area only.

Whatever the most probable phylogeny (and hence the taxonomic status) of the "subgenus *Pheidolacanthinus*" could be, from a purely morphological point of view,