

then the deposited compounds could be expected to be quite non-volatile. That this is the case is indicated by the fact that artificial trails prepared from the poison glands (and vesicle) of *Trachymyrmex* were highly active when tested three weeks after their preparation. Furthermore, when poison glands of *Atta cephalotes* were crushed on microscope slides, the semisolidified secretion retained its original appearance for 28 days at room temperature (approximately 28°C.) and released strong trail following behavior in *Trachymyrmex* when artificial trails were prepared from chloroform extracts.

## SUMMARY

In *Cyphomyrmex rimosus* (Spinola), *Trachymyrmex septentrionalis* (McCook), *Acromyrmex octospinosus* (Reich) and *Atta cephalotes* (Linnaeus), four attine genera representing the broad phylogenetic development of the tribe Attini, odor trail substances originate in the poison glands. These substances, when cross genera tested, were found to be non-generic specific. This fact is interpreted as further evidence for the close relationship of the attine genera.

## REFERENCES

- CARTHY, J. D.  
1951. The orientation of two allied species of British ants. II. Odour trail laying and following in *Acanthomyops (Lasius) fuliginosus*. Behaviour, 3:304-318.
- CREIGHTON, W. S.  
1950. The ants of North America. Bull. Museum Comp. Zool. Harvard Coll, 104:1-585. 57 plates.
- MOSER, J. C. AND M. S. BLUM  
1963. Source and potency of the trailmarking substance of the Texas leaf-cutting ant. Science 140:1228.
- WEBER, N. A.  
1958. Evolution in fungous-growing ants. Proc. Intern. Congr. Entomol., 10th, Montreal, 1956, 2:459-473.
- WILSON, E. O.  
1959. Source and possible nature of the odor trail of the fire ant *Solenopsis saevissima* (Fr. Smith) Science, 129:643-644.
- WILSON, E. O.  
1962. Chemical communication among workers of the fire ant *Solenopsis saevissima* (Fr. Smith). I. The organization of mass-foraging. Animal Behaviour, 10:134-147.
- WILSON, E. O. AND M. PAVAN  
1959. Source and specificity of chemical releasers of social behavior in the dolichoderine ants. Psyche, 66:70-76.