

fauna with that now occupying the same area. In doing this, however, it must be borne in mind that our knowledge of the Tertiary ants is very meagre, partly because the forms found at any one locality represent only the fauna which existed in a certain environment. For this reason the absence of a genus from a deposit only indicates that it was absent in that particular environment; it may very well have been present at the same time under different conditions, which did not favor preservation.

The recent ant fauna of North America has already been discussed by Wheeler in several publications (1908, 1910, 1917, 1928), so that only a brief survey need be presented here. Excluding a few types which are now restricted to the nearctic region (*Myrmecocystus*, *Vermessor*, *Novomessor*, etc.), and which probably had diverse origins, the North American genera may be conveniently separated into three groups, each with a definite tendency in geographical distribution:

1. The first of these contains the genera which are limited to the New World, and which are almost entirely confined to the neotropical region, only a few species extending as far northward as the southern part of the nearctic. Here belong *Eciton*, *Neoponera*, *Pachycondyla*, *Pogonomyrmex*, *Cryptocerus*, *Atta*, *Forelius*, etc.

2. The second division consists of genera which are widely distributed in the tropics of both hemispheres and which are represented in the temperate regions by a small number of species or subgenera, as *Stigmatomma*, *Sysphincta*, *Monomorium*, *Pheidole*, *Leptogenys*, etc.

3. The last group includes those genera which are cosmopolitan or which inhabit the holarctic regions, as *Ponera*, *Stenamma*, *Formica*, *Lasius*, *Camponotus*, etc.

None of the American Tertiary ants belong to genera which are now restricted to the nearctic region, just as none of the amber species can be referred to genera confined to the palearctic. On the other hand, the first group of genera defined above is well represented in the Florissant shales, by *Archiponera* (a close relative of *Dinoponera*), *Pseudomyrma*, *Pogonomyrmex*, and *Protazteca*. The second division is represented by *Pheidole*, *Dolichoderus*, and *Iridomyrmex*; and the third, by *Aphaenogaster*, *Liometopum*, *Formica*, *Lasius*, and *Camponotus*. It is obvious, therefore, that the ant fauna of North America contained the same geographical elements during the Tertiary as it does in recent times. The only genera (*Novomessor*, etc.) which now exist in this area, and which may have been excluded from the Tertiary fauna, probably arose during a later period than the Miocene. We cannot, of course, derive detailed conclusions from such a small amount of evidence without becoming