various parts of the ants are a necessary addition to the specific descriptions, and in the case of some males and a few workers, it has not been possible to give any other specific characters. Unless otherwise noted, the dimension given is the average of the results obtained from measurements of all the individuals of a species; only when a species has been found to be unusually variable are the two extremes indicated.

With some exceptions, each description of a new species is accompanied by a photograph of the holotype and a diagrammatic drawing of the ant. The photographs are essential to show the habitus of the fossils and will be of much assistance in the determination of material, although few details are visible in photographs of the size used. The drawings are not based upon any one specimen, except in the case of uniques, but are composite pictures containing all the characters which have been found in the specimens of the species illustrated. They are not, however, reconstructions in the usual sense of the term. The legs have been omitted from the figures, since they are not ordinarily well enough preserved for taxonomic purposes.

The preceding discussion has been made rather detailed in order to explain some of the problems encountered in this study, and the methods by which they have been partly, at least, overcome. This was considered advisable because the average entomologist appears to be skeptical of the results obtained by the study of fossil insects. The specialist who has for many years been determining his species by the distribution of hairs on the insect's head or the structure of the genitals naturally doubts the systematic value of the gross characters which are alone visible in the fossils, and consequently hesitates to accept the conclusions of the palaeoentomologist. Those who hold such an opinion have, I believe, overlooked the very significant fact that the study of fossil insects is essentially a division of palaeontology, rather than entomology. The palaeoentomologist is primarily concerned with the phylogeny of the insects, and whether or not one of the extinct forms has a little more pubescence on the abdomen than another is of very little consequence. If I have included under the name of *Formica robusta* two closely related species, differing only by the intensity of sculpturing on the clypeus, our conception of the geological history of the ants remains unchanged. The important fact is that the genus *Formica*, or even that a Formica-like genus, existed in Colorado during the Miocene.

The reconstruction of prehistoric life is always a slow process, whether we are concerned with the minute insect or the gigantic dinosaur. The picture of the earth's past is necessarily formed by the grad-