mens determined by Heer, and to correct the generic determinations (1867). He considered that the following genera were represented: *Tetramorium (?), Prenolepis (?), Aphaenogaster, Myrmica (?), Cataulacus, Leptothorax (?), Dolichoderus, Liometopum, Lonchomyrmex,* Plagiolepis, Oecophylla, Lasius, Formica,* and *Camponotus.* The Oeningen ants were described by Heer also, at the same time, but since no myrmecologist has revised his determinations, we are obliged to disregard these ants at present.

Two deposits in the British Isles have yielded a few members of this family. From the older of these, the Bagshot beds of Bournemouth (Eocene), Cockerell has described (1920) two species, but since only the wings are preserved, the generic determinations are very dubious. The second deposit is at Gurnet Bay, Isle of Wight, and belongs to the Oligocene period. A few ants from there were first described by Cockerell (1915), and these were later revised and added to by H. St. J. K. Donisthorpe, the well-known British myrmecologist, who was able to examine a large series of these fossils (1920). The genera recognized by Donisthorpe include *Syntaphus,* Euponera, Ponera, Emplastus,* Dolichoderus, Leucotaphus,* Oecophylla,* and *Camponotus.* The ants of the other European deposits have not been sufficiently well treated to warrant their mention in this paper.

The study of fossil insects, with the exception of most of those imbedded in amber, is beset with many difficulties which make progress exceedingly slow, and which at times are responsible for no little discouragement. These obstacles are the direct result of the flattened condition of the insects, caused by the pressure of the strata above that containing the specimens. As the weight of these strata increases with the accumulation of sediment, the insects are pressed almost into a single plane. The disadvantage of this is obvious, for when the systematic position of a living insect is to be determined, the specimen must usually be examined in various positions and attitudes in order to reveal all the necessary characters. But since the fossil insect can be seen in just one position, only those characters visible in this position can be determined. The shape of the head, for example, can be used as a descriptive character only when the fossil shows a dorsal aspect. In the case of the ants this flattening is especially disconcerting, because the dorsal aspect of the head and a lateral view of the pedicel are nearly essential for the determination of the affinities of a species. Fortunately, there are a few structures, such as antennae and wings, which are visible in any attitude and are consequently the principle means of correlating the specimens in various positions.

* Extinct.