County, Utah. One of these, an isolated specimen, is possibly a ponerine queen; the remaining three, which are close together on a small slab of the shale, seem to belong to different genera, but they are so poorly preserved that their generic affinities cannot definitely be ascertained. At any rate, these four species, together with the three discussed above, are sufficient to show that the ant fauna of the Middle Eocene was essentially a modern one, at least to the extent that several of the living families were already established and the castes differentiated.

2. The kaolinite of the Jackson formation (Upper Eocene) has yielded a single, splendidly preserved forewing of an ant.

(Formicidae) eoptera (Ckll.)

Formica eoptera, Cockerell, T. D. A., 1923. Amer. Journ. Sci., **5** (29), p. 399–400.

"Anterior wing, 11 mm. long and 4 wide; hyaline, faintly reddish, with pale but stout veins; stigma lanceolate, slender; costal cell very slender; basal nervure with upper section only slightly out of straight line with lower, the lower distinctly but not much longer; nervulus about 1.6 mm. basad of basal nervure; discoidal cell large, subquadrate, but narrower above than below, and apically broader than basally, the upper basal corner obtuse; marginal cell long and broad, its inner corner acute; marginal and cubital nervures forming a cross as in Camponotus."

Locality.— Mossy Creek, Brazos County, Texas.

The holotype of this insect appears to be lost; it is not recorded at the National Museum, where the rest of Professor Berry's types are located.

As Wheeler has already pointed out (1928), a generic determination of this ant is impossible.

IV. The Miocene Ant Fauna

1. The ant fauna of the Quesnel clays (Fraser Formation) is even more fragmentarily known than that of Green River; only four specimens have been found and these are so poorly preserved that very little can be said of their affinities. The species represented by these fossils were described by Scudder, three of them as ants and the fourth as a brachonid.