apparently not being sufficiently extensive to permit of certainty in the matter. This is the only known instance in New York where any of these rocks occur in other than the dike form.

Basic dikes (camptonites, monchiquites and fourchites). Of these basaltic rocks the main mineralogic constituents are a basic feldspar, usually andesin or labradorite, augite, brown hornblende, olivin and biotite. The camptonites are feldspar augite, or feldspar hornblende rocks; in the monchiquites and fourchites the feldspar retreats or disappears, thus separating them from the camptonites, and they are distinguished from each other by the presence in the former rock, or the absence in the latter, of olivin. Some glassy base is usually present, specially in the latter two rocks, and they not infrequently contain analcite.

Camptonites are mostly characterized by the presence of brown, basaltic hornblende in sharply bounded crystals. It is often more or less replaced by augite, up to complete disappearance of the hornblende. Such rocks differ but little from diabases, the difference being a minor, structural one; in the diabases the augite formed somewhat later than the feldspar and accommodated itself to the feldspar outlines, instead of presenting its own outlines; in the camptonites it formed earlier and is more apt to have its normal outlines. In most cases at least some brown hornblende is present, and serves to distinguish the two rocks. In many of the dikes there is no augite whatever. Magnetite is the only other mineral uniformly present. Some little glassy base is apt to be at hand also.

The monchiquites consist of olivin, augite, hornblende, biotite (one or all three of the last named), and a glassy base. Like the camptonites these are apt to be porphyritic. Analcite is not infrequently present. The fourchites are similar except for the lack of olivin, and consist principally of augite, though with some hornblende or biotite. They are much rarer than the monchiquites in the Champlain district. A related rock, ouachitite, in which the biotite predominates and augite retreats, has not been so far noted in the district, though biotite is abundant in several of the dikes.

Age of the Champlain dikes. Kemp was the first to note that these acid and basic dikes of the Champlain region are of the