

gray almost opaque variety of sphene known as leucoxene. A strange fact noticed, moreover, is that frequently the less altered phenocrysts of Huronite occur in an exceedingly decomposed diabase as is the case in the Pogamiasing and Eastmain specimens, while the more highly altered porphyritic individuals of this mineral are frequently developed in a groundmass more or less remarkable for its freshness. This is noticeably the case in the original specimen from the Drummond Island boulder.

The first stage in the decomposition or "saussuritization" of the plagioclase shows a cloudiness due to the development of a dull, fine grained, more or less opaque material, with a higher index of refraction causing the granules to stand out in relief from the surrounding felspar. In many cases, even in the thinnest sections, this is beyond the highest power of the microscope to resolve into its component mineral or minerals. This is accompanied, or immediately followed, by the development of sericite (hydrated muscovite) in small scales showing characteristic brilliant interference colours. The cleavage planes and fissures are seen to contain large scales and plates of this mineral, while certain other cracks and fissures are filled with chlorite and serpentine resulting from the decomposition of the bisilicates present. The smaller granules now coalesce and form larger masses and individuals of zoisite and epidote, while larger plates and scales of sericite are developed and the original plagioclase is finally replaced by a comparatively coarse grained aggregate consisting of zoisite, epidote, sericite, chlorite, calcite, and felspar. Where the alteration has been extreme, as in the case of the plagioclase originally present in the matrix of the Pogamiasing specimen, the lime is more or less completely removed, and the alkaline portion of the plagioclase has crystallized into pure limpid grains of albite which seldom show twinning striations and are accordingly frequently mistaken for quartz with which they are often associated.

The larger phenocrysts very frequently showed a marked difference both in the degree and character of the alteration of their central and peripheral portions. The zoisite and epidote were much more abundant in the zone or belt immediately surrounding the crystals, while muscovite is the prevailing decomposition product present in the cen-