

mountain; its area within the outer edge of the hornstone collar is approximately 0.77 square miles, and the area of the igneous core is 0.423 square miles. The mountain rises to an absolute elevation of 875 feet or about 720 feet above the plain; it is nearly circular in outline. There has been only one main intrusion in this case, and it shows an exceptionally perfect differentiation with more or less abrupt transition from pulaskite on the borders to an essexite core. The pulaskite, or soda-syenite, is made up of "biotite, hornblende (pyroxene), soda-orthoclase, nephelite, sodalite, apatite, magnetite, and sphene." It has a decidedly porphyritic, but massive structure, and has a marked preponderance of feldspar. The essexite contains the same minerals as the pulaskite, except that there is very little orthoclase present, and the plagioclase varies from an acid labradorite to oligoclase though most of it is andesine; olivine is also present in small amount. The central portion is finer grained and is massive. Flow structure is well displayed in the essexite but more particularly in the transition zone to the pulaskite, where the large phenocrysts of feldspar are prominent. The banding follows the border contact, in strike, and in dip it is nearly vertical, showing an upward movement of the magma.

CHAMBLY OCCURRENCE.

"At Chambly a mass of porphyritic trachyte is in the form of a bed among the strata of the Hudson River formation (Richmond); and about midway on the Chambly canal, a similar trachyte is met with which contains in drusy cavities, crystals of quartz, calcite, analcime, and chabazite. The base of this rock is of a pale fawn colour, and appears at first sight to be micaceous, but on closer examination it is seen to be almost entirely feldspathic; minute portions of pyrites and grains of magnetic iron are rarely met with, and small scales of a dark green, micaceous mineral are very abundant; they are sometimes an inch in length and one-fourth of an inch in thickness."

MOUNT YAMASKA.

This mountain is situated about one-half mile east of the St. Lawrence and Champlain fault line, and it has been said to be on the line of an inferred fault, parallel to the former, and forming the

¹ Geol. of Canada, Logan, 1863, p. 657.