

The St. Lawrence lowlands in the Province of Quebec lie between the Appalachian mountains on the southeast, and the Laurentian plateau on the northwest. This intermediate lowland is the final product of Tertiary erosion upon soft strata of Palæozoic age. The western portion of the plain of the lowlands is developed on nearly horizontal strata and is separated from the eastern part by a thrust-fault known as the "St. Lawrence-Champlain" fault, or the "Logan" fault-line of Schuchert.¹ This represents an overthrust from the southeast and the strata to the east are standing on edge with steep dips to the southeast.

Across this lowland, in a line a little south of east, extends a series of ten isolated hills which rise abruptly from the plain and are spaced at more or less regular intervals, making a bridge from the Laurentian plateau to the Appalachian mountains. The two most westerly of this series are outliers of the Pre-Cambrian and are not related to the other eight; the latter are closely related both in age and in the high sodic content of the intrusive igneous rocks forming the central portions of the hills, so that they have been called "The Monteregian Hills," and form a distinct petrographic province as pointed out by Dr. F. D. Adams. From west to east these mountains are: Mount Royal, St. Bruno, Johnson, St. Hilaire (Beloeil), Rougemont, Yamaska, Shefford, and Brome. Some of these have been described as typical volcanic necks, and others as of laccolithic origin; the present paper gives a detailed description of St. Hilaire (Beloeil) and Rougemont, and a summary of the other occurrences is here given for reference and comparison.

MOUNT ROYAL.

Mount Royal is the most westerly of the Monteregians; it has an area of about 2 square miles and an absolute altitude of 769 feet. It is made up of three principal hills, connected by ridges which have been more or less worn down, enclosing a broad, relatively flat basin. The igneous mass of the mountain is the product of two main intrusions, the first one of essexite made up of "labradorite, reddish-violet augite, brown hornblende, and brown

¹ Paleogeography of North America. Bull. Geol. Soc. Am., Vol. XX, 1910, pp. 427-606.