

approximately 8 miles in length and 5 miles in width, which has been intruded abruptly across the rocks of the basal complex, and which for the purpose of description might be designated the Grenville stock. In composition, the mass consists mainly of grey to pink, medium-grained feldspar and dark green hornblende with varying proportions of quartz so that all intermediate types between a granite and a syenite are present, although on the whole the granite is most abundant. Within the granite and syenite there are also numerous masses of fine-grained, dark grey, to pink aphanitic quartz syenite porphyry. The relationships of these masses in places is somewhat obscure, but at other points they are cut across by numerous dykes of the granite syenite indicating that in part, at least, they are included blocks and older in age than the granite syenite.

Though the Grenville stock is not found in actual contact with either the diabase dykes or the Palæozoic sediments occurring in the district, it is probable, as was concluded by Sir William Logan, who studied the mass in 1853, that it is younger than the former and older than the latter; for the diabase dykes, although abundant throughout other portions of the region, have nowhere been observed to penetrate the stock, whereas dykes similar in composition to the granite syenite of the stock have not been observed to intrude the Palæozoic sediments which outcrop in close proximity to the stock on the south. It would seem probable, therefore, that the Grenville stock is very late Pre-Cambrian in age.

#### PALÆOZOIC.

That portion of the Grenville district which lies adjacent to Ottawa river and south of the Laurentian escarpment is underlain by approximately flat-lying beds of Palæozoic shale, sandstone, and limestone, which protrude here and there as ledges in the stream bottoms or as low east-west trending escarpments. The formations represented by these sediments named in ascending order include the Potsdam, the Beekmantown, and the Chazy.

#### PLEISTOCENE.

##### *Glacial.*

In common with the whole territory formerly covered by the Labradorian continental glaciers, the bedrock surface of this region is covered by an irregular mantle of glacial debris. This consists in the main of scattered boulders and irregular knobs or ridges of gravel and sand, in many parts of which deep undrained depressions occur.