limits of the quartzite and slate bands, of the gneiss and mica-slate, and of the many irregular dikes and masses of granite and other eruptive rocks, it will present an appearance marvellously intricate and complex, in comparison with the broad coloring of the present map."

In Cape Breton, I think that a large portion of the northern part of the Island, colored as Upper Silurian, will be found to show rocks of the same age as the gold-bearing and underlying gneissoid series. In 1866 I found black corrugated slates, resembling those of our gold-fields, north of Cheticamp; and on the MacKenzie River, about three miles south of Red Cape, a gneissoid series with beds of mica schist.

In New Brunswick, my personal knowledge of the broad belt of "Granite, Syenite," &c., extending from Bathurst, on the Bay of Chaleurs, to the mouth of the Penobscot, in Maine, embraces the country from Bathurst to near the boundary line between New Brunswick and Maine. This belt of rock, on Sir W. E. Logan's map, published in 1865, is colored as "Intrusive Granite, &c.," and in the references (page 15) Sir William Logan states as follows: "For the geology of the adjacent British Provinces we are indebted for New Brunswick to a map by the late Prof. James Robb, and also to the subsequent labors of Profs. Henry Youle Hind and L. W. Bailey, and Messrs. Matthew and Hartt." My "Preliminary Report on the Geology of New Brunswick" was not published until after Sir W. E. Logan's map was printed, and on page 50 of that report I stated with reference to these granites, that "they are indeed to be regarded more as metamorphosed or altered sedimentary strata than as intrusive rocks. They have probably been altered in position and belong to the class named by Prof. Hunt "Indigenous Rocks."

In an incomplete MS. map of New Brunswick now before me, a tracing of a portion of which I sent to Sir W. E. Logan in 1865, no less than eight bands of granite are shown on one section across this great belt of rocks. There are described in my report on New Brunswick, on page 45, under the heading "Numerous granite belts on the Miramichi."<sup>(1)</sup>

(1) The North West Branch of the South West Miramichi.

The following is the order abbreviated from my Report, (page 45,) of a section across the strike of the belt on the North West Branch of the South West Miramiehi:

- 1. Low Granite Domes.
- Micaccous Schists, with Granite Domes occasionally penetrating through them. 2. White Granite, with involved masses of Schist.
- Micaceous Schist and Quartzite Schists.
- 3. White Granite. Ferruginous Schist.
- 4. Granite, with parallel beds of Schist.