

Although in many instances, and in limited areas, the succession of such eruptions can be ascertained with tolerable accuracy, any attempt to correlate this succession in detail over extended areas has invariably ended in more or less complete failure."

The *Grenville Series* includes a small quantity of altered sediments, chiefly limestones. The *Hastings Series* consists of thinly bedded limestones and dolomites "cut through by great intrusions of gabbro, diorite and granite."

In the Nipissing and Temiscaming regions more recently studied both in their field as well as petrographical or microscopical characters, the Laurentian rocks are divided by Dr. Barlow into two groups, as follows :—

"I. *An acidic group*: consisting of those foliated rocks similar in composition to granites, etc., to which they correspond, their differentiation being determined solely by their foliated texture, which, usually pronounced, is sometimes obscure and occasionally altogether absent.

"II. *A basic group*: These rocks occur interbanded with the more acidic gneisses and represent either basic segregated portions of the granite magma, or foliated basic irruptives allied to diorites, diabases, etc., caught up in it."

In a careful petrographical study of the rocks of the Laurentian in this area, Dr. Barlow, in conjunction with Mr. W. F. Ferrier, have recognized seven groups of acidic gneisses, besides two varieties of basic or hornblende gneisses.

Except in limited and isolated basins, throughout the length and breadth of Ungava and Quebec as well as Labrador—forming the Labrador Peninsula and the right limb of the great V-shaped Pro-taxis upon which the Post-Archæan sediments were laid—Mr. A. P. Low has recognized Laurentian and Huronian rocks, in his numerous traverses.

To the west of Hudson bay, there is, according to Mr. J. B. Tyrrell, an extensive and undifferentiated mass of granites which represents in the main the fundamental gneisses of the southern part of the great Canadian Protaxis. They consist of granites and gneisses and other crystalline rocks which are similar in structure and chemical composition to the fundamental gneisses (typical Laurentian) and newer crystalline limestones (probably equivalent to the Grenville series) in the same portion of Canada. Northward, in the Athabasca lake and Churchill river basins, Tyrrell has also recognized Laurentian rocks which he describes as granitoid gneisses, hornblende and mica-granites, gabbros