

In eastern North America, the crystalline strata, so far as yet studied, may be conveniently classed in five groups, corresponding to as many different geological series, four of which will be considered in the present paper.

I. The Laurentian system represents the oldest known rocks of the globe, and is supposed to be the equivalent of the Primitive Gneiss formation of Scandinavia, and that of the Western Islands of Scotland, to which also the name of Laurentian is now applied. It has been investigated in Canada along a continuous outcrop from the coast of Labrador to Lake Superior, and also over a considerable area in northern New York.

II. Associated with this system is a series of strata characterized by a great development of anorthosites, of which the hypersthene, or opalescent feldspar-rock of Labrador, may be taken as a type. These strata overlie the Laurentian gneiss, and are regarded as constituting a second and more recent group of crystalline rocks, to which the name of the Labrador series may be provisionally given. From evidence recently obtained, Sir William Logan conceives it probable that this series is unconformable with the older Laurentian system, and is separated from it by a long interval of time.

III. In the third place is a great series of crystalline schists, which are in Canada referred to the Quebec group, an inferior part of the Lower Silurian system. They appear to correspond both lithologically and stratigraphically with the Schistose group of the Primitive Slate formation of Norway, as recognized by Naumann and Keilhau, and to be there represented by the strata in the vicinity of Drontheim, and those of the Dofrefeld. The Huronian series of Canada in like manner appears to correspond to the Quartzose group of the same Primitive Slate formation (5). It consists of sandstones, imperfect varieties of gneiss, diorites, silicious and feldspathic schists passing into argillites, with limestones, and great beds of hematite. Though more recent than the Laurentian and Labrador series, these strata are older than the Quebec group; yet from their position to the westward of the greatest accumulation of sediments, they have been subjected to a less complete metamorphism than the palæozoic strata of the East. The Huronian series is as yet but imperfectly studied, and for the present will not be further considered.

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(5) See Macfarlane—Primitive Formations of Norway and Canada compared—*Canadian Naturalist*, vii., 113, 162.