

Natagan lake about 3 miles south of the National Transcontinental railway, in Fiedmont township, flows northward for 70 miles to outlet into the Bell, at Kanikawinika island. There are also a number of other tributary drainage channels, including Coffee river—so-named because of the dark brown colour of its water—Shabogama river, Kiask river, and Garden Island river, all streams of considerable size but small as compared with the Migiskan and Natagan.

LINEAR VALLEYS.

Among the physiographic features which characterize the Laurentian plateau, in the Timiskaming region, probably the most interesting and unique are the numerous deep, linear, trench-like valleys which maintain their direction with remarkable uniformity across all its Pre-Cambrian bedrocks, without regard to their variety, structure, or age. Prior to the Glacial epoch, these rocky depressions were even more conspicuous topographic features than at present; for, many of the valleys were, without doubt, greatly modified by glacial erosion and those which survived the erosive action of the continental glaciers are now partly filled with glacial drift deposited as the ice-sheets withdrew. Their existence in the region at present is indicated chiefly by numerous series of long narrow lakes, linearly continuous with one another.

Of all the linear trench-valleys of the region the depression occupied by lake Timiskaming and Ottawa river between lake Timiskaming and the village of Mattawa is undoubtedly the most striking, having a length of 100 miles and a depth in places within 100 feet of sea-level. The character of this depression is aptly described by the late A. E. Barlow as follows:¹

"The greater portion of this valley is a very steep, rocky gorge fringed on either side by lofty hills or perpendicular cliffs, which rise abruptly to a height of from 400 to 600 feet above the surface of the water while the average of a large number of soundings indicates that the lake has a depth of over 400 feet. The depression, therefore, occupied by these waters would be about 1,000 feet below the level of the surrounding country, and as the bottom of the lake wherever examined, consisted of the deeper portions of a very fine, grey unctuous clay or silt, this depression may have been much greater before the accumulation of this material. From Mattawa to the mouth of the Montreal river, these abrupt and rocky shore-lines prevail, but about the mouth of this stream the lake undergoes considerable expansion and the shores exhibit a more gradual slope towards the surface of the water. The traveller ascending the Ottawa river is thus usually impressed with the mountainous character

¹ Geol. Surv., Can., Ann. Rept., vol. X, 1897, pt. 1, p. 23.