

wanting. In the Pipestone area on the Nelson river, mispickel and copper-pyrites are recorded by Mr. Tyrrell, as well as a promising showing of mica on the south side of the Indian Reserve island in Cross lake.

DETAILED DESCRIPTIONS.

The Saskatchewan River.

Saskatchewan
river.

From the foot-hills to the edge of the second prairie steppe the Saskatchewan river flows through a country underlain by soft easily disintegrated rocks and therefore it has cut a deep channel. From Nepewin to Thobin rapids the high banks gradually become lower, until below the latter point the river emerges on a low delta plain which reaches to Cedar lake. In its upper part the stream is still actively cutting in its channel, and its waters are at all times heavily charged with the denuded material. In the lower part of the delta the process is reversed and the stream becomes the active agent in filling up what seems to have been a chain of lakes. The uppermost one was probably partly filled while the higher levels of Lake Agassiz still covered this basin. On its recession to an elevation of about 900 feet in this vicinity, it is probable that there still remained a lake whose eastern margin reached to the ridge at The Pas. On the further recession of this former lake, the outlet at The Pas was slowly worn down through the boulder clay and parts of the original lake were drained. The eastern end near the outlet seems not to have been so deeply filled by river detritus. Through the plain thus formed, now winds not only the channel of the main stream, but also several other smaller ones. The course followed by the river of late years is by a channel that has been built up so high above the surrounding plain that at several points other channels have broken out and connected with streams both to the north and south. Latterly, however, one has been opened to the upper part of Cumberland lake, and now most of the water of the river passes through it, and in this way the lake acts as a new settling basin which will rapidly silt up.

Lacustrine
deposit not
deep.

Near The Pas ridge the depression is but partly filled and shallow lake appear on either side of the channel. That the lacustrine deposit is now of very great depth is shown in the fact that boulder clay knolls appear as islands in Saskeram lake and also in a ridge crossing the Saskatchewan below Tearing river, on the south side of which an Indian reserve is located. In the low stage of water at the time of Mr. Klotz's survey of the river, boulders appeared at this