

of lake Superior are again being exposed by the stripping away of the overlying series. There are also numerous other localities throughout the plateau—as on the east side of Hudson bay¹, in central Labrador², on Hamilton inlet,³ on Mattagami river,⁴ and at a number of points in the region west of Hudson bay⁴—where flat-lying sediments occur in which no fossils have been found and which are probably of Pre-Cambrian age. In these places, likewise, the ancient floor upon which the sediments were deposited is being once more laid bare by the removal of the flat-lying, less resistant cover.

Although, as indicated in the previous paragraph, the present topography of the Laurentian plateau corresponds very closely in places to Pre-Cambrian erosion surfaces, it is probable that those surfaces are merely remnants which have been preserved either (1) because the surface of the Pre-Cambrian peneplain at the points where the remnants are preserved had originally an elevation somewhat below the general elevation of the peneplain; or, (2) because downwarping or downfaulting has occurred in these localities since the late Pre-Cambrian sediments were deposited; or (3) because the late Pre-Cambrian sediments were originally of greater thickness or have been more resistant to erosion in the localities where they are now found.

Pre-Palæozoic Palæoplain.

During the late Pre-Cambrian there was a cessation of orogenic movements throughout a large part of the Laurentian plateau—as shown by the numerous occurrences of approximately horizontal, late Pre-Cambrian rocks—which terminated finally in a prolonged period of base levelling preceding an early Palæozoic marine submergence. While the geological record is too incomplete for positive conclusions with regard to the extent of this Pre-Palæozoic base level, yet the following data and inferences therefrom indicate that the whole plateau was probably reduced to a peneplain condition at that time.

Palæozoic sediments, which overlap the Pre-Cambrian along the margin of the plateau and in the interior basin of Hudson bay, rest on a surface which has all the characteristics of a well-developed pene-

¹ Bell, R., "The Nastapoka and Manitounuck groups," Geol. Surv., Can., Rept. of Prog., pt. C., 1877-78, pp. 11-18.

Low, A. P., Geol. Surv., Can., Ann. Rept., vol. X111, pt. DD, 1900, pp. 16-31.

Leith, C. K., Econ. Geol., vol. 5, 1910, pp. 227-246.

² Low, A. P., Geol. Surv., Can., Ann. Rep., new ser., vol. V111, 1895, pp. 261-282.

³ Bell, J. M., Ann. Rept., Ont. Bureau of Mines, vol. 13, 1910, p. 140.

⁴ Baker, M. B., Ann. Rept., Ont. Bureau of Mines, vol. 20, 1911, p. 225.

⁵ Tyrrell, J. B., Geol. Surv., Can., Ann. Rept., vol. V111, pt. D, 1895, p. 17; pt. F, 1896, p. 171.