

indicate the end of the moraine formations. For not less than 500 km. to the west up to the foothills of the Rockies there is erratic material of Laurentian origin, such as boulder clay with polished stones. But the predominance of these glacial forms in the landscape is past. They become secondary features of the scene, the chief features of which receive their character from the irregularly laid cretaceous, and superimposed old tertiary (Laramie) strata. The latter form table rocks between the valleys, *e.g.*, the Cypress Hills, which bear the only forest in a wide circumference. A zone of moraines covered with loess is not present: the loess in America as in Europe does not reach above 300 to 400 meters. From the Missouri Coteau, which marks an ascent of over 100 meters, the C.P.R. keeps at a level of over 700 m.; only at Medicine Hat, where we cross the Saskatchewan, does it descend to 655 m. This is the great steppe country on the east of the Rockies—a land that offers the best prerequisites for cattle raising. The cattle here are replacing the buffalo, which is extinct. On the literally immeasurable plains one still sees tribes of Indians with wagons and some cattle wandering on their broad paths.

Yet even this is but an artificial accident in the natural scenery, which with all its uniformity makes a deep impression on the most rapid traveller. When the sun sinks and its parting beams suffuse the dry hills with a subdued glow and the shades of night creep into the hollows while the western sky is still gleaming with bright gold—it is then one feels the indescribable magnificence of this scenery and learns to comprehend that the dweller on the steppe loves his poverty-stricken land scarcely less than the sailor loves the sea. This landscape, indeed, is somewhat like the sea.

In the night of September 1st-2nd our sleeper was uncoupled at Calgary from the transcontinental train in order to be taken on to the Rockies after daybreak as a special train. Clear and sharp on the western horizon of the capital of Alberta was descried the broken rocky wall, forming in truth the Rocky Mountains.

If one could imagine the Karwendel chain advanced to the very border of the Upper Bavarian plateau, one might get such a view as we had during our subsequent ride, now from the windows of our sleeper, now from the windows of the caboose, and above all from the locomotive itself, in all parts of which our members had posted themselves in order to admire the magnificent mountains. Their vicinity was proclaimed by the geological formation of the land through which we were passing. Strata of the cretaceous system which had accompanied us so far in flat deposits appeared upright and in some places in a folded position. They form a few not very high ridges parallel to the mountain chain, the so-called foothills which take the place of a foreland to the mountains. After a journey of 80 km., during which we had only ascended at the Bow river 200 m. above Calgary (*i.e.*, 1,250 meters altogether), our train stopped on an open stretch at the foot of the Rocky Mountains. Before us rose its bare, bald walls to a height of 1,000 to 1,500 meters. They consist for the most part of palæozoic limestones which have been shoved out over the cretaceous strata of the foothills. At the same time they have been pressed together confusedly whilst the former just at this point have been only slightly disturbed. On the border of the Rockies one sees old rocks turned upside down some kilometers away above the younger ones, and this fact lends a peculiar interest to the profile of the Kananaskis.

After a short stop we went on through the gate of the Bow river, "The Gap," into the mountains which here show a rare regularity in their geological structure. Every chain represents a block of Devonian-carboniferous strata which is raised in the east and declines in the west. In consequence the same succession of strata is repeated over and over again as is typical for the isoclinal structure. Between these palæozoic stratifications extends a trough of cretaceous deposits which the Bow river follows for some distance to the neighborhood of Banff. The palæozoic strata encroach upon it again from the west, as one can plainly discern from the profile of the three peaked mountain which bears the name of the Three Sisters, (2,957 m.) Not far away is the highest mountain of the region, Wind Mountain, 3,170 m. high. These lofty peaks exhibit the forms of great mountain chains. The intervening valleys are broad and level, having their sides bordered with moraines. The latter attach themselves to the slope of the mountains stretching away in a regularly curved talus. At the same time they support the beautiful