

Mountains the bottom of the drift consists of gravel not glaciated. This extends to about one hundred miles east of the mountains, and must have been swept by water out of their valleys. The boulder clay resting on this deposit is largely made up of local *débris*, in so far as its paste is concerned. It contains many glaciated boulders and stones from the Laurentian region to the east, and also smaller pebbles from the Rocky Mountains, so that at the time of its formation there must have been driftage of large stones for seven hundred miles or more from the east, and of smaller stones from a less distance on the west. The former kind of material extends to the base of the mountains, and to a height of more than 4,000 feet. One boulder is mentioned as being $42 \times 40 \times 20$ feet in dimensions. The highest Laurentian boulders seen were at an elevation of 4,660 feet on the base of the Rocky Mountains. The boulder clay, when thick, can be seen to be rudely stratified, and at one place includes beds of laminated clay with compressed peat, similar to the forest beds described by Worthen and Andrews in Illinois, and the so-called interglacial beds described by Hinde on Lake Ontario. The leaf beds on the Ottawa river, and the drift trunks found in the boulder clay of Manitoba, belong to the same category, and indicate in the midst of the Glacial period many forest oases far to the north, having a temperate rather than an arctic flora. In the valleys of the Rocky Mountains opening on these plains there are evidences of large local glaciers now extinct, and similar evidences exist on the Laurentian highlands on the east. A recent paper of Dr. G. M. Dawson on the Palæogeography of the Rocky Mountains illustrates in a most convincing manner the changes which have occurred in the Cordillera of North America, and the differential elevation and depression which have affected its climate in the later geological periods.¹

Perhaps the most remarkable feature of the western drift region

¹ Transactions Royal Society of Canada, 1890.