

The rapids are not rough enough to require portaging when the water is sufficiently deep, but in ascending the river it is necessary to pole or track for much of the distance.

*Glacial Forms.* A large part of the Paleozoic section is covered by clay of varying thickness deposited during submergence of the region by glacial lake Agassiz. In this particular map-area this covering is not so important as farther east, but because of its presence and the flatness due to the Paleozoic structure, parts of the country inland from the drainage systems are covered by large muskegs. Since protecting rock protuberances are not found in the homogeneous Paleozoic formation, as they are in the heterogeneous older formation, deposits of till are almost lacking.

#### *Border Zone.*

Where the Pre-Cambrian and Paleozoic topographic districts meet there is a border zone that has some characteristics found in neither the Pre-Cambrian nor the Paleozoic areas. The sapping of the lower and less resistant beds of the Ordovician produces cliff faces which rise 50 to 80 feet above the older rocks and form one of the most striking physiographic features to be found in the whole area (Plates II and VI A). Outliers are scattered along the main border, standing out as flat-topped, steep-sided hills. The prominence of these is, however, masked in most places by the much greater height of the trees on the soil-covered lower rocks than on the thin sterile soil covering the dolomite. Many of the larger lakes lie in this border zone, their basins apparently being troughs eroded in lenses of basic rocks with the southern parts of the troughs blocked by the dolomite which forms a sort of retaining wall along that shore. The cliff faces so commonly found along these "glint" lakes are quite different from the low swampy shores of lakes lying completely within the dolomite. The drainage of some of the glint lakes is through openings in the dolomite, others drain by rivers along the dolomite escarpment.

#### CLIMATE.

The amount of rainfall and snowfall is not large. The total precipitation is 15 to 20 inches per annum as compared with 35 to 40 inches for southern Ontario and Quebec. The snowfall is 30 to 60 inches as compared with 60 to 90 inches for southern Ontario and 90 to 120 inches for a large part of Quebec.<sup>1</sup> The winters are cold and long, the summers short and hot. The large lakes freeze over during the first part of November and are seldom free of ice until the middle of May. Frosts

<sup>1</sup>Atlas of Canada, 1915, Dept. of Int.