

PHYSICAL CHARACTERISTICS OF CANADA.

Extending from the bases of the hills forming the boundary between the first and second prairie steppes there is much broken or parklike country. This is also met with in the Qu'Appelle river valley and in other parts of the zone. Poplar and Oak are the chief trees of the bluffs, and the herbaceous vegetation, as might be expected, is made up of a mixture of prairie and woodland forms.

The greater part of the second prairie steppe is true prairie, where no trees are met with except in the river valleys. Shrubs occur, generally forming low thickets or copses, and very frequently small clumps composed of a single species. On the exposed prairie their growth is always stunted. Snowberry (*Symphoricarpos occidentalis*), Silver berry (*Elæagnus argentea*), Buffalo berry (*Shepherdia argentea*), Saskatoon berry (*Amelanchier*) and Roses of which there are several species, are the most important. In damper situations, Meadow Sweet (*Spiræa salicifolia*) occurs, and in wet places, such as borders of ponds and marshes, willows are abundant. The herbaceous vegetation varies somewhat with soil conditions. The following species may, however, be mentioned as representing the typical prairie flora¹: *Stipa viridula*, *Spartina gracilis*, *Avena Hookeri*, *Poa crocata*, *Calamovilfa longifolia*, *Elymus Macounii*, *Agropyrum Smithii*, *A. tenerum*, *A. Richardsonii*, many species of *Carex*, *Allium cernuum*, *Lilium philadelphicum*, *Smitacina stellata*, *Rumex persicarioides*, *Lychnis Drummondii*, *Anemone hirsutissima*, *Ranunculus rhomboideus*, *Lesquerella argentea*, *Sisymbrium incisum*, *Cleome serrulata*, *Potentilla arguta*, *P. pennsylvanica*, *P. bipinnatifida*, *P. camporum*, *P. effusa*, *P. plattensis*, *P. pulcherrima*, *P. viridescens*, *Geum triflorum*, *Thermopsis rhombifolia*, *Astragalus caryocarpus*, *A. hypoglottis*, *A. adsurgens*, *A. bisulcatus*, *A. pectinatus*, *A. missouriensis*, *Psoralea esculenta*, *P. argentea*, *Glycyrrhiza lepidota*, *Petalostemum candidum*, *P. purpureum*, *Hedysarum boreale*, *Zizia cordata*, *Lomatium macrocarpum*, *Musineum divaricatum*, *Asclepias ovalifolia*, *Acerates viridiflora*, *Phlox Hoodii*, *Agastache Fæniculum*, *Physostegia parviflora*, *Monarda mollis*, *Pentstemon gracilis*, *Orthocarpus luteus*, *Lobelia spicata*, *Liatris scariosa*, *Grindelia squarrosa*, *Aster multiflorus*, *A. lævis*, *Erigeron glabellus*, *E. philadelphicus*, *Antennaria campestris*, *Ambrosia trifida*, *Lepachys columnaris*, *Helianthus rhomboideus*, *Helenium autumnale*, *Artemisia biennis*, *Senecio palustris*, *S.*eremophilus*, *Cirsium undulatum*, *Agoseris glauca*.

Third Prairie Steppe.—This steppe includes the rest of the prairie up to the foothills of the Rocky Mountains. In its northern parts, i.e., north of lat. 52°, the flora is very similar to that of the second prairie steppe. The southern part of the region, however, is of an altogether different type. The rivers and even creeks are flowing in deep narrow valleys, and the country in general is broken by coulees and low hills. The precipitation is scant, and, as a result, the vegetation is xerophile and often desert-like in character. Except on Wood Mountain and Cypress

¹ For these and for other plants in the West only the Latin names are given, the reason being that the majority of the species characteristic of Western Canada have no generally recognized common names.