

Woody plants are exemplified by dwarf shrubs of various kinds whose low stature is doubtless due mainly to harsh climatic conditions, such as cold soil, strong winds, etc. Some of these, such as *Diapensia lapponica*, exhibit the cushion-like type of growth found in herbs; others, such as *Empetrum nigrum*, have a trailing habit of growth. In *Loiseleuria procumbens* the leaves have a leathery texture, while in *Salix glauca* the leaves are covered by a waxy deposit to diminish transpiration.

The families best represented as regards number of species are *Gramineae*, *Cyperaceae*, *Compositae*, *Cruciferae*, *Caryophyllaceae*, *Saxifragaceae*, and *Ranunculaceae*.

There are 5 genera, namely, *Bartsia*, *Chrysanthemum*, *Eutrema*, *Lagotis*, and *Parrya*, which do not appear to be represented in Canada outside the Arctic Region.

Many species of Arctic plants occur also on the summits of mountains farther south where the climatic conditions are somewhat similar, but so far as is known at present there are about 120 species not found south of the Canadian Arctic Zone.

In spite of the comparative inaccessibility of the greater part of the Arctic Region, that territory has received a good deal of attention from botanical investigators. The most complete account of the flora is to be found in the work of Simmons<sup>25</sup> who records 8 species of ferns and their allies, 59 species of monocotyledons, and 137 species of dicotyledons. The report of Macoun and Holm<sup>26</sup> on the results of the Canadian Arctic Expedition, 1913-18, includes 230 species of vascular plants, while a recent report by Gröntved,<sup>27</sup> dealing with the 5th Thule Expedition, enumerates 6 species of ferns and their allies, 2 conifers, 47 monocotyledons, and 139 dicotyledons, together with 12 hybrids. Polunin<sup>28</sup> records 391 species from Akpatok island, of which 129 were vascular plants and the remainder various groups of cryptogams. Other important contributions to the flora of this region are those of Holm<sup>29</sup> and Johansen.<sup>30</sup>

### Transcontinental Region.

This region occupies, to a large extent, a transitional position between the Arctic Region to the north and the Eastern Region to the south, not only in regard to climate but also in its vegetation. As the name implies, it stretches across the continent from the gulf of St. Lawrence to Yukon and through Alaska to the Pacific ocean. It includes the whole of the Hudsonian and the western part of the Canadian Zone in Merriam's classification. No land elevations in the eastern part reach an altitude likely to alter the characteristic plant life, but in the far northwest and Yukon there are mountainous areas reaching to high altitudes. East of this mountainous part, the region is characterized by a generally flat topography with innumerable lakes ranging in size from mere ponds up to Great Bear lake with an area of 11,660 square miles. Bogs and muskegs are also very common. The altitude of the mountains and the areas and elevations of the chief lakes will be found in Chapter I at pp. 8 and 9, and 12 and 13 respectively.

Some idea of the variations in the climate of different parts of this region may be obtained from the figures in the following statement, derived from records covering the years 1909 to 1937, inclusive. It should be noted that the places of record are on the sea coast or along river courses and therefore are not representative of higher altitudes occurring especially in the northwestern part of the region.