

The vegetation in the arctic zone is, generally speaking, of a low-growing and even dwarfed type. As mentioned above, the arctic zone has no real trees. The woody plants, even when half a century old or more, reach a very inconspicuous height in comparison with their next of kin farther south and are often prostrate or even trailing along the ground. In the more northern parts of the arctic zone the most conspicuous woody plants are willows and dwarf birches. Farther south, on the tundra, i.e., the more or less boggy lowlands north of the tree line, the woody plants are chiefly represented by members of the blueberry family.

In respect to herbaceous vegetation, the arctic flora of Canada is very closely related to the so-called circumpolar flora in general. Not only are there many species in arctic Canada which occur all around the north pole, but in general characteristics the Canadian arctic plants are very similar to arctic plants elsewhere, and particularly to those growing in Greenland and arctic Europe.

A striking form of growth encountered in many species is the dense, compact, bunched type, which especially is found well developed on rocky ground in the northern sections of the arctic zone. This form of growth, as is well known, is characteristic also of arid and semi-arid regions in hot climates, and at first sight it may seem strange that it should also be found in the arctic. The arctic zone, however, from a plant physiological point of view, is somewhat akin to arid regions farther south. In the latter regions the bunch growth is generally considered to be associated with a shortage of water supply in the ground, and so it may also be considered in the arctic, to some extent at least. For, even if the ground may apparently be well supplied with moisture, the plants relying upon the moisture are often unable to utilize it on account of the temperature in the ground being at times so low that the water-absorbing parts of the plants are incapable of functioning.

Compactness of growth is also displayed by a number of plants which, although not growing in defined bunches, form dense and often rather extended mats. On the other hand, however, there are quite a number of species which grow neither in bunches nor in mats; these are common especially on the tundra.

Practically all arctic plants are perennials. Owing to the shortness of the season they are often caught by early frost before they have ripened their fruit and when still developing blossoms. Indeed, many species enter the winter regularly in this condition and hibernate with flower and leaf buds in an advanced stage of development. When the returning sun again wakes them up to renewed activity, they are therefore ready to spring into blossom over-night, as it were, and to present a surprisingly rapid development of vegetative as well as of floral organs.

The Sub-arctic Forest Zone.—The sub-arctic or so-called coniferous forest extends, in the east, from the arctic zone southward to a line running approximately from Anticosti to the south end of lake Winnipeg. This line is practically identical with the northern