the northern and southern slopes of a mountain, the vegetation at the same level is markedly different. The orographical map facing p. 10 indicates those regions in Canada (confined principally to the western Cordillera, to Gaspe, to the eastern coast of Labrador, and to the Arctic islands) where altitudes are sufficiently great to materially affect vegetation.

Environment.

No very definite line can be drawn between the influences of climate and environment, since climate itself may be the cause of peculiar environmental conditions. Similarly latitude, geology, topography, and altitude all have their effect upon the conditions of vegetation. All these factors cannot be discussed here, but some mention should be made of instances in which certain plants exhibit special characteristics in relation to their environment, such as parasitic plants, climbing plants, water plants, etc. Groups characterized by these peculiar adaptations are discussed briefly below under ecological relationships.

In the course of the agricultural settlement of Canada and the development of trade with other parts of the world during the past three centuries, many forms of plant life not originally present in Canada have been introduced either intentionally or accidentally, and many of these forms have been able to so adapt themselves to conditions in various parts of this country that they have become established under natural conditions of reproduction. Such plants are briefly treated on pp. 34 and 35, under exotic flora.

Ecologic Relationships and Groups.*—Any account of the Canadian flora which did not contain a brief description of those groups of plants which stand in a peculiar relationship to environmental conditions would be lacking in completeness. Such ecologic relationships are commonly considered to include: plants which, while attaching themselves to other plants, actually obtain their nourishment from the air (these are called epiphytes); parasitic and partially parasitic plants, which derive nourishment from the roots or stems of other plants; carnivorous plants; which trap and absorb insects or small aquatic animals; climbing plants; water plants; salt-loving plants; etc. With the exception of epiphytes, most of these groups contain a considerable number of representatives in our flora.

Hemiparasites are exemplified by several species of Dwarf Mistletoe *(Arceuthobium)* found growing on the branches of coniferous trees. Others in this group, such as *Castilleja* and *Pedicularis*, attach themselves to the roots of other plants.

Total parasites with no green colouring matter are exemplified by Dodder *(Cuscuta)* and the family *Orobanchaceae* with 5 Canadian genera.

Saprophytes likewise contain little or no chlorophyll and occur in some genera of *Orchidaceae*, such as Coral-root *(Corallorrhiza)*, and 5 genera of *Monotropaceae*. In this last family the Indian Pipe *(Monotropa uniflora)* is the best known.

Three genera of carnivorous plants, namely, *Drosera*, *Pinguicula*, and *Sarracenia*, have leaves adapted for the capture of insects, while *Utricularia* has bladder-like organs in which minute aquatic animals are trapped.

Representatives of climbing plants occur in 23 genera. A variety of Poison Ivy *(Rhus Toxicodendron)* climbs by means of rootlets developed on the woody stem, while species of *Galium* scramble over other vegetation by means of hooks. Tendril-climbers occur in 4 families represented by *Smilax*, *Vicia*, *Vitis*, *Echinocystis*, and 3 other genera, while leaf-climbers are exemplified by *Adlumia*.

* For an explanation of the classification and naming of the species mentioned in connection with these groups, see the part of this article dealing with "Classification of Flora", pp. 35 to 37.