spores are produced in conceptacles, which are exceedingly well protected. They adhere firmly to the substratum on which they have been produced or are imbedded therein.

Our next problem to consider is the mode of life of fungi and their influence upon the host plant.

Green plants or chlorophyll-bearing plants manufacture their food, as you know, from the carbonic acid of the air by means of the small chlorophyll grains in their leaves and by the action of sun and water. This physiological process is known as "assimilation." The first visible product of assimilation is starch. The starch again undergoes certain changes and forms carbohydrates like dextrose and sugar, which are used as food by the plants. In other words, the manufacture of food necessary for the growth of the green plants takes place in the chlorophyll-bearing portions by means of this chlorophyll substance. Fungi possess no chlorophyll. Hence, they are not able to utilize directly the carbonic acid of the air. They are compelled to search elsewhere for the carbohydrates essential for their development and accomplish this by living upon substrata from which they are able to obtain a "ready-made" supply of food. Parasitic fungi live upon plants in various ways. They may be confined to the surface entirely like the mildew fungi, when there will be produced on the mycelium peculiar sucker-like organs—so-called haustoria—by which they absorb their food from underlying cells. Other fungi, by far the greatest number, live within the tissues of the host plant. They may also produce haustoria, but more generally the absorption of food takes place directly by the action of the vegetative hyphae on the infected tissues.

Following the growth and development of parasitic fungi, a collapse of these cells, robbed of their contents, takes place and the earliest symptoms of disease appear. Often the infection is exceedingly local and the result is the production of smaller or larger spots of dead tissue. The shot hole fungi of plums, cherries and peaches, illustrate well this peculiarly confined growth. Quite recently my attention was called to the outbreak of an alarming disease among cherries in Prince Edward Island. On investigating the epidemic I found that this trouble was due to a common plum and cherry leaf spot fungus which had defoliated practically all attacked trees. Two or three years' repetition of this malady has resulted in the wholesale destruction of cherries in this Province.

Other fungi may attack, besides the leaves and fruit, the young shoots of trees and destroy last year's growth and thus much of the expected harvest. Others again, cause cankers which spread from year to year until the whole branch is ringed