fested as not to be worth picking. There is no profitable means of combatting these insects upon plants in the wild state.

Fungous diseases.

A fungous disease is caused by the presence in the plant tissue of a fungus, which is a plant of a lower type. Its activity may be roughly compared to that of bacteria in producing disease in animai bodies. There are two abundant fungous diseases of the partridge-berry, at least one of which is of present interest from a commercial point of view; and one or two minor ones.

Club-Shoot.

A club-shoot disease is found not only upon the partridge berry, but upon the low biueberry (Vaccinium pennsylvanicum.) Its presence causes a great increase in the thickness of the cortical layer of the bark; so that the shoot is abnormaily lengthened. At the same time it assumes a handsome pink color, the whole presenting a distinctive and easily recognized appearance. These clubshoots are produced from basal buds. and usually arise in numbers in the infected region forming a 'witch's broom.' Unlike the undiseased shoots the club-shoots endure for one season only, though in that time they make a growth in length which is often double that attained by the normal shoots in their iffe of four or five years. Toward the end of the summer they turn a dark brown, and during the winter the bark shrinks more rapidly than the central cyiinder of wood, and cracks around the stem in horizontai lines, so that last year's diseased shoot's look like strings of The cyiindricai beads on a chain. hyphae or vegetative threads of the fungus are easily seen in the infected cortex when the latter is sectioned and examined microscopically. At present it is impossible to make any statement regarding the nature of the fungus, or the mode of infection. The fact that infected shoots always arise from basal buds suggests that perhaps infection may take place beneath the soi!.

It goes without saying that since

the fungus stimulates the plant to produce roughly ten times as much tissue as it would normaily form in a season its presence prevents the use of the plant's energies in the formation of fruit to a very important extent.

Leaf-Spot.

A leaf and fruit-spot disease is even more prevalent. The infection first appears upon the leaves in the form of white patches which iater turn black. A section of the leaf shows ro fungus hyphae, but simply a decay of the celis which lie just be-neath the upper epidermis. This decay continues to spread inward. until it reaches the lower surface of the leaf, producing a hole which extends entirely through the leaf, except for the thick cuticle on the upper surface, which usually remains intact. When the berry is about haifformed, dark spots appear upon its surface, and inspection of the tissue shows them to be similar to the spots upon the leaf. As the berry ripens they increase in size, and often crack. While the connection of the fruit spot with the berry spot is not proven, yet it is beyond reasonable doubt, since the iesions are strikingly similar, and occur upon the same shoots. So far as observed, no fruit is produced by the fungus in the course of the disease, and the determination of the nature of the parasite awaits cultur-ai study. This disease is at present much the most important of the two, since it affects the marketed fruit.

While the enemies just mentioned are not now of great commercial importance, yet they should be thoroughly studied if the berry is to be brought into cultivation, since under such conditions diseases of all kinds are likely to be more prevalent than in nature. Of course they are also much more easily controlled.

V.—PICKING AND PACKING. The Act.

The berry crop has been seriously injured in years past by over eager pickers, who insisted upon tramping over the grounds and knocking the berries from the plants before they were ripe. This evil has been remed-