ABOUT INSECTS.

[All inquiries concerning insects or plant diseases should be accompanied by specimens, if possible. In sending insects please observe the following directions: Adult insects should first be killed. This can easily and quickly be done by putting the insect for a few moments in a closed vessel with a few drops of chloroform. Any method, however, which does not mutilate the specimens, will answer. Place the specimens to be sent in a stout tin or wooden box, packing them with cotton, so they will not be broken. Caterpillars and other larval forms should be sent alive, care being taken to put enough of the food plant in the box to last two days. Do not punch holes in the box. The mailing rate on packages of insects or plants is 1 cent per ounce. Accompany the specimens with your notes and observations. Write your name plainly on the outside of the package, and address it to PROF, C. V. PIPER, Pullman, Wash.

THE PEAR LEAF BLISTER MITE.
(Phystoptus pyri.)

Considerable alarm has been felt lately among fruit growers throughout the state owing to the appearance of a new disease of the pear, specimens of which have been sent us from several localities. The trouble becomes apparent even before the leaves are fully unfolded, by the appearance of several or many bright red pimple-like spots on the leaves. These spots are usually about one-eighth of an inch in diameter, and more conspicuous on the upper side of the leaf.

At the present date they have turned green like the rest of the leaf and are scarcely noticeable. A little later they will turn brownish or blackish, becoming thickened or corky in appearance especially on the under side of the leaves.

This disease has long been known to horticulturists and is caused by the minute mite, named above, which causes the gall-like thickening much as tree galls are caused by insects. This mite is not an insect, but is more nearly related to the "red spider" mite; it is exceedingly minute, being invisible to the naked eye, and appearing merely as a speck with a good lens. To study it at all satisfactorily a good microscope is necessary. The creature measures about one-one hundred and fiftieth of an inch in length, is cylindrical in shape, and has its body marked by numerous ring-like striae. It possesses but four legs placed at the front end of the body.

The life history of the pest is as follows: The eggs are laid in the spring by the females in the galls, which they cause to form on the leaves, and here young hatch. Sooner or later they leave these galls through a minute opening on the under side, which can be seen with a lens, and migrate to new leaves, and take shelter in crevices on the twigs, usually beneath the scales of the terminal buds, where they remain through the winter.

The damage done by these mites, while not serious is considerable. The principal effect is to interfere with the function of the leaves, so that a lessened supply of food is stored up by the plant; the diseased leaves also fall earlier.

Until the last two years the only remedy proposed was to pick off the diseased leaves and burn them, a tedious and unsatisfactory method, or to prune back the trees vigorously in winter. Experiments made at the Cornell University station in 1891 and 1892, demonstrate that the pest can be completely exterminated by a thorough spraying during the winter with ordinary kerosene emulsion diluted only six times. Other insecticide substances did more or less good, but only the kerosene emulsion was perfectly satisfactory. owing undoubtedly to the fact that the oil penetrated all crevices, while other substances do not.

Excellent accounts of this mite are to be found in Saraner's Plant Diseases (German); Cornell Experimental Station Bulletins 23 and 61; and in the Second Annual Report of the state entomologist of Illinois.

The impression seems to be abroad among the orchardists of the state that the above disease is the pear leaf blight caused by the fungus entomosporium maculatum, and in at least one case we know of Bordeaux mixture being applied. This is a good remedy for the fungus disease, but is totally useless so far as the mite is concerned. The fungus disease can be distinguished easily by the fact that it produces neither the corky appearance nor the thickening that the mite does.

Flea Beetles.

These little pests are even more numerous than usual this season, and the leaves of beets, potatoes, radishes and cabbage, punctured with minute holes, makes their presence and the damage they cause easily noticeable. They also thrive on the various pigweeds and knotweeds.

The following are good remedies for the pest: Paris green in the proportion of one ounce to ten gallons of water. Strong tobacco water or tobacco powder. Kerosene emulsion will kill all it touches, but the beetles soon return.

If the beetles are not numerous, their attacks can be discouraged by dusting the plant with wood ashes or slacked lime. It is well also to keep down the pigweeds, the natural food of the beetles.

Our commonest and most troublesome species is the small punctured flea beetle, (Psylliodes punctulata). The attacks of the species are severe only in spring—just at the time the plants are small and can illy withstand the damage. So don't fail to spray your plants if attacked.

The beetle remains with us all summer, but after July 1st its attacks are not serious.

Tent Caterpillars.

The insect is numerous this summer and if you have not attended to it, do so at once, for very soon they will take wings to themselves, and millions of eggs will be laid. A good torch early in the morning or in the evening makes quick work of the pest. It's just as well also, while you are about it, to destroy the numerous "tents" to be found on choke cherry and wild rose bushes.