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INSECTS INJURIOUS TO DRUGS.

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[From an Inaugural Essay presented to the Philadelphia College of Pharmacy.]

In this paper is given simply what has been noted by the writer during a study of these insects extending over more than a year.

Sivodrepa panicea.—This is the elliptical, reddish-brown beetle, about one-eighth of an inch long, which is found in almost every edible drug, and in some, such as aconite root and capsicum, that would be pronounced far from edible. In addition to these two drugs, I have found it in bitter almonds, sweet almonds, angelica, boneset, calumba, chamomile, chocolate, coriander, dandelion, elm bark, ergot, extract of licorice, German chamomile, orris root, prince's pine, rhubarb, squill, and sweet flag.

The larva is white, with a brown head, is about twice as long as the beetle when full grown, although it is seldom or never seen stretched out at full length, always remaining curled up in a ball. It will in time fairly honeycomb a piece of root with small holes about one-twenty-fifth of an inch in diameter, at the end of which it is generally to be seen at home. Under the influence of camphor, these larvæ become uneasy, but being apparently unable to crawl away, resign themselves to their fate, and seem to thrive just as well with camphor as without it.

Calandra remotopunctata.—This is a small, black beetle, about the size of the last, with what is popularly termed a "snout," projecting from the front of the head downwards. Under the microscope the back, thorax, and head are seen to be finely pitted, giving the insect a rough appearance. It was found in large numbers, the larva feeding on pearl barley, inside of which it lives, the egg being probably laid in the grain by the parent, and on hatching, the little insect makes its home there, eating all but the shell, and sometimes attacking the grain from the outside.

Tenebrioides mauritanica, a species of "meal-worm," was found in pearl barley, and one specimen in calumba. It is a dark brown beetle,