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## PRACTICAL AND POPULAR ENTOMOLOGY.- No. 7. GRANARY INSECTS.

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Every year, in the United States and Canada, thousands of dollars worth of stored grain is ruined by granary insects, chiefly of three species. These are all well known, and much has been written concerning their habits and the methods by which they can be destroyed. Besides the three very injurious species, the Granary Weevil, the Rice Weevil and the Angoumois Grain Moth, which are responsible for most of the damage done, there are a great many other kinds of insects which do serious harm to stored grain and various other edible products. All of these insects are spoken of popularly as "weevils," but the only true granary weevils are the two mentioned above.

The power of granary weevils to destroy grain, when held for any length of time in stores or warehouses, is enormous. These insects are not natives of North America, nor is it at all likely that they will ever increase sufficiently in Canada, where we have such cold winters, to do very serious injury. It is true they occasionally destroy samples or small quantities of grain kept in heated offices or stores, but this injury cannot compare with their ravages in hot climates, particularly in India and South Africa. In the Southern States they do an enormous amount of damage every year, and it has been estimated of Texas alone that there is an annual loss of over a million dollars. Grain infested by these insects loses in weight, is useless for seed, and is unfit for consumption by human beings or live stock.

## THE GRANARY WEEVIL (Calandra granaria, L.).

This beetle, as well as the two other insects mentioned in this short article, has long been known as a serious enemy to stored grain. When mature, the Granary Weevil is from an eighth to a sixth of an inch in length, of a dark shiny mahogany brown colour, with the head prolonged into a slender snout. Some specimens are almost wholly black. Having no wings beneath the hard wing-cases, it is unable to fly. The eggs are laid in minute holes, which the female beetles bore into the grain with