

## THE CANADIAN HORTICULTURIST.

be "only adapted for laying eggs on the surface," it being of such a shape that it could neither pierce the calyx lobes nor be inserted in any way into the covered basin. He learned that in fact the eggs are laid "on the smooth surface of the fruit without much choice as to location," that they "may be glued anywhere it happens to the surface of the fruit, to the stem, or even on the adjacent leaves," and says that though he has "seen hundreds of the eggs during the past two years on apples," he had "*never yet seen one on or down in between the calyx lobes.*"

Notwithstanding these facts the worms, to the extent of seventy-five per cent. or more, were found to enter the apples at the blossom end. They began to appear about a fortnight after the trees are out of bloom, and having found their way into the blossom end "spend several days feeding around in the calyx cavity," reaching "the core in about a week." The worm is "from twenty to thirty days of its life feeding inside the fruit," and when nearly full grown "proceeds to eat a passage way, usually by the shortest route, toward the exterior."

We have therefore learned, thanks to Mr. Slingerland, *First*, that though the mother moths do not lay their eggs in the basin of the blossom end as was supposed, yet the tiny worms, not longer than the sixteenth of an inch, to the extent of not less than three fourths of them enter the apple by way of the calyx basin, where they tarry for several days "feeding around."

*Second*, that in about eight days after the petals fall, the calyx segments are so closed over the basin that it is very difficult or quite impossible to place in the basin a poison that the worm might swallow with its food; a fact that accentuates the necessity of the poison being put there within the few days that elapse

between the fall of the petals and closing of the calyx segments.

*Third*, that somewhere about a fourth of the worms get into the apples by some other way than through the blossom end. Whether any considerable eating of the parenchyma of the leaves is done by the worms that are hatched from the eggs laid on them, has not yet been ascertained. If they do feed on the leaves for a time, we might be able to poison the most of them. Be that as it may, there will be a number for us to kill that we have not been able to poison. If the fruit grower is prompt and thorough he may, by spraying immediately after the fall of the petals, and again before the calyx lobes have closed so much as to exclude the spray, deposit in the basin sufficient poison to make it very probable that the worms in feeding there will eat enough to kill them. The best poison is pure Paris-green; London-purple is both cheaper and lighter, but its strength as a poison cannot be relied upon. One pound of Paris-green in two hundred gallons of water, which is a quarter of a pound in a fifty gallon barrel, is the quantity to be used, first making it into a thin paste with a small quantity of water, and as it is slowly poured into the barrel having the water constantly stirred so that the poison may be evenly distributed. If added to a barrel of Bordeaux mixture it can be used immediately, otherwise it will be necessary to stir in half a pound of freshly slaked lime. In order to make sure of having the calyx basins all well supplied with the Paris-green it will be necessary to spray twice, once as soon as the petals are fallen, again just before the calyx segments interfere with the spray getting into the basin. The almanac is no guide in this matter, but the time must be ascertained each season by watchful observation of