4. A Second Strawberry Leaf-Roller (*Exartema* (*Tortrix*) *permundana*, Clemens.)

This species was found in immense numbers attacking Mr. Bishop's strawberry vines in 1868 and 9, along with the "crown borers" already described. All these leaf rollers have the habit of rolling up the leaves and fastening them with silken threads, and living within the enclosure, but this little creature prefers taking the flowers, expanded and unexpanded, and bringing them together with silken threads into a sort of ball, it feasts on their substance. This peculiarity makes its attacks much more annoying and destructive than any mere consumption of leaves would be. It is small in size, of a green colour, and with very active habits, wriggling itself quickly out of its hiding place when disturbed. It is the progeny of a small moth, with its fore wings yellowish varied with brown streaks and patches, and darker hind wings, who lays her eggs quite early in the spring, placing them upon the developing leaves, where the newly hatched larvæ may be sure to enjoy an abundance of tender and juicy food, and these attain to nearly their full growth, and are just then capable of most mischief, at the time when the plant is coming into full flower. During 1869, Mr. Bishop must have lost nearly half his crop of strawberries from this cause alone. We have found this species attacking the wild strawberry in different localities, and have little doubt but that it is widely disseminated; but why it should so persistently attack the plants in one locality, and multiply so amazingly there, while comparatively unknown in other places, we are unable to do more than guess at: possibly they may have been kept under in other localities by parasites which feed on them. The larvæ of most moths are liable to attack from one or more of such enemies, and we know that this species is not exempt, for several of the larvæ which we succeeded in bringing into the chrysalis state, instead of producing moths, yielded specimens of these small parasitic flies instead.

We are indebted to Mr. C. V. Riley for determining this species for us. It was described by Dr. Clemens in the Proceedings of the Academy of Natural Sciences, Philadelphia, for August, 1860, where the author states that "the larvæ bind together the terminal leaves of Spiræa." Hence it would appear that this insect does not confine itself to the strawberry as a food plant, and may possibly be quite a general feeder.

The chrysalides of this species were of the usual dark brown colour, from which the moths made their escape from the eighth to the twelfth of July.

5. A Third Strawberry-Leaf Roller (*Lozotœnia fragariana* Packard.)

This insect has been reared by Dr. A. S. Packard, of Salem, Mass., from the wild strawberry, and is described in his "Guide to the Study of Insects." The larva was found in Maine early in June, in folds of the leaves; the moth appearing about the middle of the same month. The moth is very pretty, and measures, when its wings are expanded, eight-tenths of an inch. Its fore wings are red, darker on the outer half, and with a large triangular white spot near the middle of the front edge; the outer edge of the spot is hollowed out. The outer edge of the wing is pale especially in the middle, and about the same colour as the head and thorax; the hind wings and abdomen are of a whitish buff, underneath they are whitish. It is quite likely that this species occurs also in Canada, although it has not yet been observed.

6. Other Strawberry Leaf-Rollers.

Fig. 10.

Several other species have been observed by us affecting the strawberry, all of them green, with pale or dark brown heads, and more or less semi-transparent bodies, sometimes tinged in parts with yellowish. One of these, the oblique banded leaf roller *Lozontœnia rosaceana*, Harris' is a very general feeder, and has been already referred to in the reports of the Entomological Society of Ontario for 1870 and 1871, and to these the reader is referred fer its full history. We shall, however, reproduce the figures relating to this insset, as they will serve somewhat to illustrate all the leaf-rollers spoken of, since