

numerous as the males. This was true throughout all the earlier part of the season, but towards the end both in 1913 and 1914 the males became much the more numerous, there being approximately five males to each female the last two weeks. In the cages more females than males emerged right up to the end, so it would appear as if the males of this species lived longer than the females. Further experiments would be necessary to determine this with certainty.

HOW LONG THE FLIES LIVE.

At St. Catharines in 1914, 51 freshly emerged flies of the Black-bodied species were placed in a cage enclosing a small tree with plenty of fruit on it. A little water was thrown over this cage once every dry day so that the flies would not die of thirst. One month later all the flies were dead, the last one having lived thirty days. In another cage containing five freshly emerged flies of the same species two males lived for thirty days. We thus see that the adults of this species may live for a month; a very few probably live longer. The average length of life in the orchard is probably less. This is inferred from the following: The cages on the ground (see Table 1) showed that the majority of the flies emerged between June 8th and 13th, 83 per cent. being out by the latter date. Observations in unsprayed orchards showed that, while a few of this species could be found in 1914 as late as July 17th, the great majority had disappeared more than a week earlier.



FIG. 6.—Diagram of head of Cherry Fruit-fly to illustrate mouth parts. Note the large lip-like tip.

The same condition of affairs existed in 1913, the last fly of this species being found on July 15th, very few being seen after July 7th. It seems reasonable, therefore, to conclude that the average length of life is a little less than one month. It is probably nearer to three weeks.

The White-banded Cherry Fruit-fly apparently lives about the same average length of time as the other species, though the males may live longer. In 1913 at least one fly lived a month in a large cage enclosing a tree. In 1914, in each of three similar large cages, a few, but only a very few, flies lived a month. These cages also had a little water thrown over them daily, except when it rained. In the cages on the ground the majority of the flies were seen to have emerged by June 21st, but by July 21st there was scarcely a fly of this species to be seen except a few males. In fact, after July 15th, the flies were very scarce in the cheek orchards. This is three days less than a month from the date of maximum emergence, June 18th. It is natural, therefore, to conclude that the average length of life is less than one month, and probably not more than about three weeks. One may occasionally find a few individuals of this species, usually males as previously stated, later than the above date; for instance two were found in 1912 on July 29th at Grimsby; in 1913 on August 6th at St. Catharines; and in 1914 at the latter place on July 26th, but as the last fly emerged in our cages on July 3rd in 1914 it would not be surprising if even these individuals were not more than a month old.