

TIME OF THE DISAPPEARANCE OF THE FLIES FROM THE ORCHARD.

The tables show that adults may continue to emerge up to almost the end of August; however, the percentage of those emerging after the first week in August is small and by the 20th of that month the number of individuals to be found on the trees diminishes quickly. By the end of August they have often totally disappeared. Some years, however, they continue to be found in small numbers up to the middle of September.

The following data have been obtained on the date of disappearance. In 1911 at Bowmanville all had gone by August 27th, and in 1915 at Simcoe by August 31st.

In 1912 a few flies were found at Bowmanville up to September 15th and in 1917 at Stoney Creek (Niagara district) up to September 17th. Accurate data have not been obtained for the other years.

LENGTH OF LIFE OF THE FLIES.

In cages well protected from excessive heat, three individuals (one male and two females) were kept alive for over five weeks, and a single female for forty-six days, or six weeks and four days. The great majority, however, of the many flies used in the experiments died much earlier. Some writers suppose that because flies do not act normally in cages they therefore live longer in the open and that under normal conditions in the orchard they probably live for at least five weeks. This is very doubtful, because, as shown in tables 2 and 3, large numbers of flies emerge the last week of July, and yet in the orchard it is not unusual to find all the flies gone by August 31st. It would therefore seem justifiable from the tables and the information given above on the date of disappearance to suppose that the average length of life was not much more than three weeks, though some individuals may live a good deal longer. It is likely that some years many flies die in times of drought from lack of moisture just as they do in cages. It is also likely that chilly nights towards the end of August kill many.

PROPORTION OF MALES TO FEMALES.

In rearing cages the number of males compared with females was as follows: —

	Males.	Females.
In 1912	292	538
In 1913	85	226
In 1914	41	76
Totals	421	840

This shows that almost twice as many females as males emerged from the cages. Yet in the orchard on almost every occasion each year the males appeared to be more numerous than the females, the proportion often being as high as four males to one female. The explanation of these conflicting facts has not been found.