

The Aphids which appear in Spring are exclusively females, no males being found till the autumn. It is not necessary for the young females produced during the Summer to pair with males; yet these females go on producing each a host of living young ones, all of which become in a short time as fertile as their parent.

It has not come within the province of this report to describe more in detail the habits of these insects, but to those of our readers who are interested in this curious subject we may refer them to the following accessible works, in which they will find much valuable information.

First and Second Report on the Noxious, Beneficial, and other Insects of the State of New York. By Asa Fitch, M.D.

Lectures on Insects. New Edition.

The Farmers' Encyclopedia. By Cuthbert Johnson.

The English Cyclopaedia.

Stephens' Farmers' Guide.

The question naturally arises, why were these insects so numerous during the present year? The cause is to be traced, very probably, to the extraordinary dryness of the spring months of 1862.

The Aphis multiplies much faster in a dry season than in one which is humid; like the red fly, and many other destructive insects, it is fond of a warm and dry atmosphere. The month of May was extremely dry, and the quantity of rain recorded at the Toronto Observatory was only one third of the average which has fallen in that month for twenty two years.

The month of June was also remarkably dry, the amount of rain which fell reaching only one third of the average of twenty-two years, and it was the driest June which has occurred during the entire period in which observations have been made at Toronto. Fortunately for the wheat and other crops July was extremely wet, the nearly double the average fall of rain, so that not only were the crops pushed forward by the unusual moisture of the earth, but an immense host of insects were washed off the leaves of the growing crops by the heavy and copious fall of rain. By the most unusual providential fall of rain in that month the multiplication of the Aphis was arrested and the crops of the country saved. It will be noticed throughout Canada, that in general the fall wheat has been harvested at an average time of the year—the spring crops are later than is common in some years. The fall wheat was sustained during the long drought by the great amount of moisture in the soil at the advent of spring, from the fall of snow and rain which fell in February and March. In March we had one inch more of rain and nearly ten inches more snow than the average of twenty-two years.

The retardation in the growth of spring crops is owing from the dryness of May and June has been of immense value to the country

in destroying the Midge. That this insect was very abundant in many parts of Canada during the present year there is no reason to doubt; observations in many different quarters have recorded its presence in infinite numbers, but the fly appeared before the wheat was ready to receive it, and its eggs were deposited where there was no suitable food for the young worms when hatched; myriads would consequently die for want of food, and therefore we may look upon the unusually dry spring of 1862 as having been a blessing of incalculable value to the Canadian Farmer by destroying one of the worst and most widely distributed enemies of his wheat crops. The maggots of the Midge were also seen in vast numbers in the fall wheat, but generally it was too far advanced for them to injure it to any considerable extent. The fall wheat was suddenly pushed forward by the July rains (which at the same time destroyed the Aphis) and the Midge could not penetrate the chaff or sheath to deposit its eggs, or if it succeeded in penetrating the germ the young worms were hatched after the grain had been formed. Although this year has been one of most exceptional character in relation to the distribution of snow and rain, yet when viewed in the proper light it will afford a striking illustration of that wise and merciful beneficence which disposes and adjusts all things for some excellent purposes, which do not appear to our eyes until the object for which the disposition was made is attained, and sometimes not even then.

The following table from the records of the Provincial Observatory has been kindly furnished by Professor Kingston—an examination of its contents will show the extraordinary character of May June and July of the present year.

|                         | May.  | June. | July. |
|-------------------------|-------|-------|-------|
| Mean Temperature 1862   | 52.17 | 60.52 | 66.70 |
| Average for 22 years .. | 51.39 | 61.36 | 66.85 |
| Difference from average | +0.78 | -0.84 | -0.15 |

|                         | Inches. | Inches. | Inches. |
|-------------------------|---------|---------|---------|
| Depth of Rain, 1862 ..  | 1.427   | 1.007   | 5.244   |
| Average of 22 years ..  | 3.241   | 3.100   | 3.490   |
| Difference from average | -1.814  | -2.093  | +1.854  |

|                         | Days. | Days. | Days. |
|-------------------------|-------|-------|-------|
| No. of Rainy days 1862  | 8.0   | 10.0  | 15.0  |
| Average of 22 years ..  | 11.3  | 11.9  | 10.0  |
| Difference from average | -3.3  | -1.9  | +5.0  |

May, 1862, was mild, and extremely dry, but it was thrice surpassed in that respect: it only records one-third of the average depth of rain.

June, 1862, was comparatively cold and extremely dry, the depth of rain recorded only reached one-third of the average; it was absolutely the driest June during the last 23 years.

July, 1862, was comparatively cold and extremely wet, showing nearly the double the aver-