

The Locust.

We have given our readers a cut representing that scourge of the West, the Locust. Our readers are all acquainted with the grasshopper. It is seen every day in our grass lands, but seldom in great numbers collected in one place, and individually the harm it does is so slight as to be little noticed. But the locust that migrates in such vast swarms, and does incalculable injury to the West, is the one represented in the figure. Dr. Harris gives the following description of the grasshopper: "It is grizzled with dirty olive and brown, a black spot extending from the eyes along the sides of the thorax, an oblique yellow line on each side of the body beneath the wings, a row of dusky-brown spots along the middle of the wing covers, and the hindmost shanks and feet are blood-red with black spines. The wings are transparent, with a very pale, greenish-yellow tint next to the body, and are netted with brown lines. The hindmost thighs have two large spots on the upper side, and the extremity is black, but are red below and yellow on the inside. The appendages at the tip of the body in the male are of a long, triangular form. Length, from three-quarters of an inch to an inch; expansion of the wings, from $1\frac{1}{4}$ to $1\frac{3}{4}$ of an inch."

The locust that in its periodical visitations to the Western States so devastates the country, differs but little from the grasshopper as here described. The greatest difference is that in the locust the wings are longer than in the true grasshopper, being about one-third longer than the body; they are quite transparent with nerves slightly dusky, and have the appearance of large snow-flakes when seen high up in the air against the sun.

Mr. Bethune, in the Report of the Commissioner of Agriculture, quotes from Clavigero the following remarks on the natural history of the locust:

"The female at the latter part of July, or early in August, lays a number of fine, small eggs, of a yellowish color, in a string, united with a glutinous matter, which appears like a cord of fine silk. These are deposited together and dropped into a small hole which they make in the ground with a small apparatus attached to their tools. Each female lays from seventy to eighty eggs, and sometimes more.

"The birth of these new grasshoppers has no particular time, but is dependent upon the early or late appearance of the rains, but they generally hatch during the latter part of September or early in October. Their life, from birth to death, lasts ten months, during which they cast their coats twice and change their color five times. When the wings have become of sufficient strength, and the body at its maturity, they begin to ascend into the air, and fly like birds, and commence their ravages in every direction, desolating the fields of every green thing. They unite in masses of ten or twelve thousands, always following their conductors, and flying in a direct line without falling behind, for they consume every growing thing before them. To whatever height their guides conduct them, to obtain a sight of food, they follow, and as soon as growing crops or any verdure is sighted, instantly the swarm will alight and speedily devour and devastate the fields around to the extent that when they are seen by a new swarm of their fellows, there is not any more left to injure or consume."

The devastation of an entire country, when visited by these terrible insects, is indescribable. We are told of whole States laid waste, and the cultivation of the soil starving. One year they covered the entire territories of Washington and Oregon, and every valley of the State of California, the entire territories of Utah and New Mexico, the immense grassy prairies on the eastern

slopes of the Rocky Mountains, the dry valleys of the Republic of Mexico, Lower California, Central America and parts of Texas. They consumed everything before them—the foliage of trees, orchards, gardens, vineyards, fields of young grain, crops and vegetables—everything was eaten up in a particular locality in a single day, leaving the ground a withered, blackened desert.

In Canada they are only known by report, unless in the Province of Manitoba, and there their periodical visitations fall far short of the devastation in the Western States.

Our brief remarks on the locust would be incomplete without saying somewhat of the way to prevent their ravages. The locust is not without its natural enemies, so man has his allies to contend with this as well as other insect foes. All birds inhabiting the West devour the eggs of locusts, and by this means perform invaluable service by checking in some measure the vast increase of the numbers. So well is the good work they do known that the great increase of locusts and other insects in the West has been attributed to the killing of large numbers of quails and prairie hens. Not only do birds destroy the eggs and young in great multitudes, but toads, frogs and snakes feed on them. And besides these enemies there are parasites preying upon them.

The means employed against their ravages are to destroy the eggs, to destroy the unfledged young, and, as far as in our power, to destroy them when on their march or feeding grounds. The eggs are deposited in masses under the surface of the ground seldom more than one inch deep. Harrowing the ground when the eggs are laid destroys great numbers of them. By turning cattle and hogs into the grounds many will be destroyed. Plowing the eggs deeply is another very beneficial measure for the destruction of the eggs. Where they cannot be destroyed by plowing or harrowing the eggs are sometimes collected and destroyed. This is sometimes paid for at a fixed rate per bushel.

The young or unfledged locusts are destroyed by the following means: Burning the heaps of stubble under which they gather; crushing by heavy rollers; trapping by machines, such as the one described in another place; digging deep trenches with perpendicular sides as a protection to a field; catching as in bag machines made for the purpose; use of destructive agents, as kerosene. Each of these means for destroying the locust has been tried with much benefit.

The benefits from the destruction are forcibly expressed by Prof. Riley, to whose valuable work on the Locust Plague we must acknowledge our indebtedness for much reliable information on the subject. He says every bushel of eggs destroyed is equivalent to a hundred of acres of corn saved.

Wheat Crops, &c.

There has been some discussion in regard to the proper time to sow wheat this year. From the 3rd to the 10th of this month appears to be the most suitable time. Too great a growth may be obtained if sown much earlier, and the weevil will deposit its eggs on early sown wheat, and in some localities the next crop may be shortened by both the above causes. There have been disparaging remarks made in regard to the quality of the Clawson wheat. It is not quite as valuable as the Treadwell and some other varieties, but in the majority of cases the yield has been highly satisfactory, and it has been generally as profitable as any wheat this year. The Silver Chaff is a better milling wheat; it may supplant the Clawson. Some accounts of it are very encouraging. Each of the old varieties have in some localities succeeded so well that it is prudent to continue them.

The crop of wheat harvested this year in Canada and in the Western States is unprecedented. We have no statistics of our crop, but the crop of the State of Missouri alone is estimated at thirty millions. Rain has caused some damage to the spring wheat. There is more sprouted wheat in our country than we have had for many years. The winter wheat was secured in good order. Great damage has been done to the pea crop in many places; many have been shelled and many are grown. Some of the oats have been injured. Notwithstanding the damages, there is a large cereal crop secured, and a large part of it is in good order.

Barley is a light crop and somewhat discolored. The root crop is unusually good. The pastures have been excellent. This must give us a large butter and cheese product, and put our stock in excellent condition for the butcher or for winter quarters.

Our farmers should rejoice and be thankful. We again repeat our advice—sell your grain without delay; do not let war prospects hinder you from obtaining a good price. From all prospects that we can see, we believe that grain will be much cheaper next year than this; also that it will be cheaper next summer than in the winter, and that it will be cheaper in the winter than it is now. One farmer was offered \$1.50 per bushel for his crop of over one thousand bushels, and he refused it. This day he could not get so much by \$400 for his crop. Very likely he will keep it until it reaches \$400 more. If you have young, thriving steers, or half-fatted stock, do not sell them; feed your coarse grain, and purchase some when you want it from your less enterprising neighbors. Sell fat stock. The extra feed will fatten your hind and fill your pockets.

We may not be correct in our opinions; some, we know, hold different views. The future alone can tell.

A Nut for Canadian Farmers to Crack.

A writer in the *American Agriculturist* (W. Atwater, of Connecticut), writing of wood ashes, says:—"Many of our best farmers in Connecticut use leached ashes, imported from Canada at a cost of from eighteen to twenty-eight cents or more per bushel, in preference to all other fertilizers except barnyard and stable manure." If New England farmers find it profitable to purchase leached ashes for fertilizers in Canada, and to bear, in addition, the price paid for carriage, are they not worth the cost price to Canadian farmers? Are their lands so exceedingly fertile that they can afford to send away one of the best fertilizers to be obtained in the country for the sake of the few dollars they will receive in exchange? Ashes are not so lightly valued by any other agriculturists as as they are here. In Ireland not only is every shovelful of ashes from their turf fires carefully saved as a most valuable fertilizer, but even earth ferns and headlands are burned in large ash-fires to obtain the ashes for manure; and these ashes are not equal for the purpose to wood ashes.

We know from experience that ashes is a fertilizer of great value to all our farm and garden crops. We have used it on the growing cereals and root crops, and in all cases with advantages. To the potato crop we have found it especially beneficial, and as a top-dressing for lawns and meadows. All who have had much practical knowledge of the benefits to crops generally will fully agree that the analyses by chemists do not rate constituent elements more highly than is borne out by experience. From analyses by Prof. Johnson and others the average percentages of plant food are from forty-seven to fifty pounds per one hundred pounds weight of wood ashes. A dressing of fifty pounds of unleached ashes to the acre would give 200 bushels of potash, 768 pounds of lime, 120 pounds of magnesia, 48 pounds of phos-