

## Entomology.

## A New Wheat Insect.

Specimens have been submitted to us of some different kinds of wheat, all more or less affected by a new insect, which we do not remember to have before heard of or observed. It is a worm more closely described in the communication of Dr. Morris, of this city, given below. This worm, from whatever kind of fly it proceeds, buries itself in the body of the grain, while still in the milk, and gradually destroys it by devouring the contents. There are often several of these worms in a single kernel of wheat, and they seem to have no particular predilection for any kind, as they have been found in several sorts of spring wheat. Whether it is likely to be of any importance, or whether it is a mere casual thing, we cannot, of course say, but it is most sincerely to be hoped that it will be found to be only casual and transitory. This insect seems to destroy the grain in all stages, at all events, in those verging on ripeness. It is evidently deposited in the kernel of the grain, in the same manner as the pea bug is deposited, since many grains were found which only showed by a slight discoloration that the enemy was at work within. We commend the matter to the close examination of our observant country friends and request our agricultural exchanges to favour us with a notice of their opinion on the case, and whether anything similar has been observed in their several districts. The wheat from which the worm was obtained was an experimental patch grown in a garden in this city. Being desirous of obtaining all the light we could in reference to this matter, we sent an ear of the affected wheat to Dr. Morris, an experienced entomologist of this city, who has favoured us with the following communication:

"The parasites infesting the ear of wheat with the sight of which you have favoured me, belong to more than one species and order. On examining the wheat and chaff carefully, I separated two small grubs or caterpillars and three cocoons. The two first are those of some small moth, the latter belong to a wheat midge, probably *Cecidomyia tritici*. The caterpillars may be those of the Angoumois moth (*Anacampsis contracta*), or some allied species, but it would be very difficult to decide this point without farther information. The caterpillars are two lines, or one-sixth of an inch in length, of a yellowish colour, with three lighter dorsal lines. The head is of a darkish brown. They have six pectoral, eight ventral, and two anal feet. They may possibly belong to some species of *Tortrix*, but I am not aware that any of this genus prey upon wheat in the growing state, though they are known to do much mischief to it when stored in granaries. It is, however, ascertained that the caterpillars of the *Anacampsis* destroy wheat both in the granary and the field. I am, on this account, inclined to believe that these little caterpillars do not belong to the genus *Tortrix*. They were in a moribund state when I received them, which prevents my being able to rear them, when the point might have been settled.

"The three small *chrysalides*, or rather *larvae*, covered with a membrane, and in a sort of transition state, belong to the ordinary wheat midge, *Cecidomyia tritici*. On careful examination, one of the membranous cases appears to have lost its inmate, which has probably left it in order to make its way to the earth, in which, it is believed, it goes into its true chrysalis state. These little cases, which are about one line, or one-twelfth of an inch in length, are of a yellowish colour, inclined to orange. I should augur badly for the success of a wheat attacked in its first season by two such parasites as I have above described."

## The Hessian Fly and its Remedy.

Mr. LEWIS BULLMAN, of Bloomington, Ind., gives this description of the Hessian fly in his article on wheat in the Report of the Agricultural Department of the United States Government:—

"The received account of the introduction of this fly into the United States is known by every person to its common name refers to it. That it was brought in some way with the Hessian troops, employed in the Revolution against us, is possible; but the history on like pests shows that sooner or later they spread over the whole earth where their favourite food may be grown and climate influence will permit. The bee-moth and the curculio are instances of the fact

that nearly all the products of the farm have their enemies. It is not necessary to describe this fly, nor particularize the nature of its depredations, except to say that it deposits its eggs, from twenty to forty in number, in the hollow of the blades of the wheat. The egg hatches a small, light-coloured worm, in from four days to three weeks, according as the weather is warm or cool.

"The worm crawls down the leaf between the sheathing of the leaf and the stem, firmly fixes itself there, sucking the juices or sap of the plant on which it lives. It gradually becomes imbedded in the stem by the latter growing around it. As it increases in size, it becomes in colour, size, and shape, like a flax seed; hence this state of the larva is called the flax-seed state. In this condition it remains during the winter, unaffected by the severest cold. In May it is changed into the fly, and this fly lays its eggs higher up on the same stock, and no others around it, and also on the spring wheat. These eggs hatch, and the worms undergo the same changes until in August, when they appear as flies, ready to deposit eggs on the young fall wheat plants. The fact that of so many eggs but few hatch (for not more than two or three worms are found in the same plant) shows that the Hessian fly has its deadly enemies. This is true; two of which I will notice, being parasites of this parasite. Both these are flies, one of which deposits its eggs within the egg of the Hessian fly. Both these eggs hatch, but the worm from the last-deposited egg is within the worm of the Hessian fly, and it lives upon it, gradually destroying it, until, having undergone its various changes, it emerges from the skin of the Hessian worm a fly, ready to deposit its eggs in those of the Hessian fly. The other parasitic insect lays its eggs in the larva when in the flax-seed state, which hatches within it and lives upon it. It is to these friendly insects we owe the fact that the Hessian fly does not spread over large districts of the wheat region, nor, indeed, in any part of it to any great extent, and that it is seldom destructive in the same place for more than a season or two. The friendly flies, by their rapid increase, soon drive the Hessian fly to other portions of country in order to shun their fatal attacks. The usual remedy against the Hessian fly is late sowing of the winter wheat. Whilst this may afford some protection, it leads to habitual late sowing, by which the plant is weakened and rendered less able to endure the changes of our winters. A greater loss is thus occasioned than would result from an occasional entire destruction of the crop by the fly. A strong-rooted plant will more easily overcome a serious attack of the fly than a late sown and weak one can resist the freezing out to which it is certain to be exposed."

LIFE AMONGST THE SOUTHERN INSECTS.—The thermometer stands at 100 degrees, and he throws himself into a chair at the well-supplied table for his evening meal. Sweets and savoury dishes are attractive not to him alone. Not one flitting, hopping, crawling entomological specimen that has visited him during the day is now without its representative, from the great feathery lepidoptera that will come flopping into the lamp, and hurling itself among the glasses or falling helplessly into the sugar-basin, or the huge coleoptera, two or three inches long, with terrible mandibles and wonderful antennae, to innumerable smaller beetles, black, brown, and green; daddy long-legs appears with a length of limb incredible; moths come, gnats and mosquitoes—flies, of course, and nondescripts innumerable. Such a buzzing and such a dashing, and such a flitting out of candles, such charges at your nose, such an entanglement of creatures among curls or whiskers, or the braids of hair; such mad plunges into the cream-jug or at preserves, and rash attacks upon soft butter-pats, whence there is no escape; such spinning and fizzing round your teacup, or under the knife and fork upon your plate; such incessant work for servants and children in the catching and despatching of these evening visitors, would be the death of a timid maiden lady of delicate Northern nerves; but the entomologist then dines in Paradise. At length he beats a retreat to his chamber. The evening breeze comes gratefully through the open windows, but so also do the fresh specimens. In a few moments entangled legs and wings are struggling round the candle-wicks. The room is noisy with the monsters that dash against walls and ceilings, whence the concussion sends them whizzing to the floor. The candles are almost extinguished by their reckless assaults, and, in spite of the intolerable heat, even the sated entomologist is fain to close the windows in order that he may take his bath in peace. Then he finds that his skin, moist and sensitive from steady perspiration, is speckled all over. With what? Not only red spots and itching tumours, but with scores of little dark brown creatures, clinging and grappling so firmly that he cannot brush them off.—*Dickens' "All the Year Round."*

## Veterinary Department.

## Anæmia in a Colt.

Anæmia—Signifies an impoverished state of the blood, usually occasioned by want of nutritious food, and exposure to inclement weather.

I was called a short time ago to see a yearling, said to be ailing and unthrifty, and had been so for some time. The principal symptoms were as follows:—

The head, face, and eyes, were in a dropsical condition and much swollen; underneath the heart and along the lower part of the abdomen, dropsical swellings were also observed; the membranes of the mouth and nose appeared pale, almost bloodless; the pulse was quite slow and the action of the heart feeble; the respirations were somewhat hurried. Yet the lungs were not expanded to their full capacity. I was informed that the urine was thick and of a cream-like colour, and the feces hard and scanty. The muscular system was spare and wiry; the ribs could be easily counted, and the animal was unsteady on his legs. From such symptoms as these the reader will perceive that the case was one of debility, and from the fact that the animal had been confined to an innutritious diet, or rather like a hen, had to scratch for a living; it will also be inferred that the debility was the result of partial starvation. I gave the animal one drachm of sulphate of iron, and three ounces of the fluid extract of rosin weed, per day, during a period of ten days; at the same time he was liberally fed on oats, and good timothy hay, under which treatment he rapidly gained in health and strength, and soon recovered. Dr. Dudd.

## Caked Udder.

ESQ. PRAIRIE FARMER: The following has been my practice in curing this disease. It sometimes acts very slowly, but generally accomplishes the purpose.

Tie the cow fast and with a sharp knife cut a hole through the skin, in the brisket, four or five inches from the lower or fleshy part, large enough to permit the insertion of your finger, the full length. Take a piece of "garget root," the size of a hazel nut, and push in as far as possible with your finger. Close up the hole, and with a needle and strong thread, take two or three stitches to close the aperture. This garget rowel will get sore, be considerably inflamed and irritated, but as it becomes so the udder becomes less inflamed. The rowel will discharge for several weeks, during which time the garget will disappear.

I give a pailful of bran, into which I stir a tablespoonful of flour of sulphur and a small piece of saltpetre dissolved in warm water, for several mornings, and then a little rosin the same day. I have never found anything ill attending this treatment.—W. R. F., in *Prairie Farmer*.

Ridotte, Ills., July, 1861.

RELIEVING CHOKED CATTLE.—We have seen many cattle choked, but so far have never found but one remedy that was entirely safe to the animal. This is the insertion of a stout wooden frame to hold the mouth open, while the arm is thrust through this frame and down the throat at full length, to withdraw the obstruction. Using a flexible rod for ramming the obstruction downward is unsafe, on account of the liability to bruise the throat, and can never succeed very well, unless the obstruction is already far down. We observe, however, in a late number of the *Rural New-Yorker* the notice of a mode of using this remedy which we think must be attended with very little danger and succeed in all cases where the obstruction is not in the upper part of the throat. It consists in tying a piece of pork-rind on the end of the flexible stick, so that the soft part of the pork shall be outward. It must be secured to the stick immovably by a piece of strong twine. Its softness and lubricating character enables the operator to push the obstruction downward with more ease and safety than could be accomplished in any other way. The head should be held firmly by the horns in a nearly level position, and the tongue drawn out by the hand. Good management, by seeing that apples, potatoes and the other food placed before cattle, are always properly sliced before feeding, would obviate the necessity of anything of this kind; but as we cannot wholly avoid the employment of careless labourers, it is well to understand the remedy.—*Country Gentleman*.