

of the summer season, and live over the following winter for the continued propagation of the species. In more southern latitudes there are probably three or more generations in the year.

Wet seasons are usually destructive to this and many other kinds of insects, though the past summer does not appear to have had this desirable effect upon the specimens at Grimsby; still, in all probability, they would have become much more numerous had they been favoured with the dry weather of former seasons. As suggested by our correspondent, it will be very useful to know to what extent this pest has invaded Canada. Now that winter with its long evening hours of comparative leisure is so near at hand, we trust that many of our farmer friends will get down some account of the season's experience, and let the whole community have the benefit of it through our columns. In the insect department particularly such information is very valuable, and will when collected in an available manner prove of advantage to all.

We append a mode of dealing with these little pests taken from the columns of our valued contemporary the *Prairie Farmer*, which we have no doubt will prove as effectual as thus described.

"If any Western rustics are verdant enough to suppose that chinch bugs cannot be out-flaked, headed off and conquered, they are entirely behind the times. The thing has been effectually done during the past season, by Mr. Davis, Supervisor of the town of Scott, Ogle county, Ills. This gentleman had a cornfield of a hundred acres, growing alongside of an extensive field of small grain. The bugs had finished up the latter and were preparing to attack the former, when the owner, being of an ingenious turn, hit upon a happy plan for circumventing them. He surrounded the corn with a barrier of pine boards set up edgewise, and partly buried in the ground, to keep them in position. Outside of this fence deep holes were dug, about ten feet apart. The upper edge of the board was kept constantly moist with a coat of coal tar, which was renewed every day.

"The bugs, according to their regular tactics, advanced to the assault in solid columns, swarming by millions, and hiding the ground. They easily ascended the boards, but were unable to cross the belt of the coal tar. Sometimes they crowded upon one another so as to bridge over the barrier, but such places were immediately covered with a new coating. The invaders were in a worse quandary than that of Butler and Weizel at Fort Fisher, and, in that state of mind, crept backward and forward until they tumbled into the deep hole aforesaid. These were soon filled, and the swarming myriads were shoveled out of them literally by wagon loads, at the rate of thirty or forty bushels a day—and buried up in other holes, care for the purpose, as required. This may seem incredible to persons unacquainted with this little pest, but no one who has seen the countless myriads which cover the earth as harvest approaches, will feel inclined to dispute the statement. It is an unimpeachable fact. The process was repeated till only three or four bushels could be shoveled out of the holes, when it was abandoned. The corn was completely protected, and yielded bountifully."

Birds—Their Usefulness—An Appeal to Farmers and Sportsmen.

DR. TRIMBLE, of Newark, N. J., one of the leading entomologists of this country, recently addressed the Essex County (New Jersey) Sportsmen's Club upon the importance of protecting the insect-eating birds. A report appears in the *Newark Advertiser*, from which we extract the following:—

THE BALTIMORE ORIOLE.

"He first spoke of the Baltimore oriole, showing different specimens, illustrating how much the female and the males of different ages differ from each other. They are becoming quite numerous; large elms suiting them. This family is chiefly insectivorous. When it first arrives it feeds upon leaf-eating caterpillars—so injurious to our fruit and shade trees. Now it is feeding upon the canker-worm—that terrible pest in New England. Later in the season it is found eating the drop-worms.

"The lecturer stated that by aid of the microscope he had been able to prove positively that the oriole feeds upon that terrible enemy of the fruit-grower—the curculio; that a small portion of head of what was supposed to be a curculio was found amongst the comminuted contents of the stomach of one of these birds, and the microscope enabled him to count the 147 lenses in one of the eyes—the exact number known to make the eye of this particular species of the curculio family.

THE DOWNY WOODPECKER.

This is the most valuable of all the birds of our country. It knows where to find, and is busy in

searching out, the apple worm—the second in importance of the insect enemies of fruit, which, with the curculio, are the chief cause of the ruin of the fruit business, especially in our State. The little chick-a-dee also feeds upon the apple-worm, but finds it accidentally, and not by boring for it, as the downy woodpecker does.

THE CEDAR BIRD.

Of the cedar bird, or cherry bird, the Doctor spoke at some length, wishing to rescue it from its bad reputation as a thief of cherries. It is a gross feeder, and consumes immense numbers of canker worms, span worms, and other injurious insects of that class. This bird and the yellow bird, or finch, resemble each other in one respect, both remaining in flocks till midsummer, and are thus on hand in great numbers when their services are most required; while most other birds are at home attending to their domestic duties. You find the cedar birds in New York and Philadelphia in large flocks in June, after the worms, and if they could be properly protected by closing the parks, so that they should not be frightened away by the people, they would do much toward ridding those cities of these pests. The yellow birds, in immense flocks, will be found in those wheat fields where the midge is so destructive. They are in pursuit of the larvæ of these flies in the heads of the wheat, while the grain is in its milky state; and farmers have supposed these birds were the cause of the trouble, not knowing that they were their best friends.

THE WARBLERS.

The family warblers include some 30 or 40 species. They are all small, but exclusively insectivorous—most of them are very beautiful, and some are charming songsters. Many are with us all summer, but others breed further north. They sometimes remain with us a few days, both going and coming. In the spring they will be feeding on plant lice, as found in the orchards; in the fall they stop and feed on the late brood of Palmer worms that so infest our elm and maple trees, becoming exceedingly fat.

THE WHIPPOORWILL.

Individual insects are as wonderfully made as any of the rest of creation. Moths fly only at night, yet "Solomon in all his glory was not arrayed like one of these." Ten thousand lenses to form the eyes; one hundred thousand feathers to complete the wings; yet the whippoorwill will snap up dozens of them in a single night. The whippoorwill is a nocturnal bird, and its beak is so formed that it takes in moths as a net takes in fish. The eyes of flies enables them to see all around them, and the muscular force of their wings is so quick that they can dodge the rain drops in a shower; yet the swallow is so formed that it lives exclusively on insects taken on the wing.

THE BEAKS OF BIRDS.

The beaks of all species of birds differ from each other, but the beak of each is exactly fitted for taking the insects its instinct teaches it to choose as its food. Many of the birds live exclusively on insects—as the warblers, bluebirds, and creepers. Some, again, that are classed as insectivorous will occasionally take berries, cherries or grapes—as the orioles, mocking-birds, cat-birds and thrushes. Some seem omnivorous, and eat almost anything, as robins and cedar-birds, and are gross feeders. A large class, as the bob-o'-links, blackbirds, finches, and some of the sparrows, will live on insects in summer and seeds in winter; or mix them when they can find both. Others again have still a wider range, as jays, crows and butcher-birds.

THE ICHNEUMON.

But the most important agent in the regulation of the insect world is an order peculiar to insects. We have nothing corresponding to it in the other departments of animated creation. They are sometimes called parasites, but not correctly. Parasites are everywhere; even vegetables have them. The mistle-toe is a parasite. But these are not necessarily destructive to the life of the victim. The ichneumon is. I allude to those peculiar flies—wasp-shaped and with four wings—that deposit their eggs in the bodies of other insects—the young feeding upon the living flesh of these victims, and upon which they grow to maturity. This seems a strange Providence, and hard to comprehend—but still it is so. Without such an agent, the Hessian fly would have destroyed the wheat crops of this country, but with it the Hessian fly was controlled in a single season, and has been kept in check for 50 years. Thousands of other insects that would soon be troublesome are controlled in the same way, and so quietly that we hardly know how.

HESSIAN FLY.—The *Practical Entomologist* gives the following rule for eluding the Hessian fly, which appears to be a good one: Notice in each neighbourhood at what date the latest sown wheat that is taken by the fly is sown, and sow for the future a little later than that particular date.

ONION MAGGOTS.—A correspondent of the *Maine Farmer* sprinkled white pine sawdust upon his onion bed when the plants were coming up, and also at each hoeing, and was not troubled by the maggot.

WHAT USE IS THE ARMY?—In reply to a correspondent who puts this question, the *Journal of Horticulture* says:—You might ask the same question as to everything in creation that is occasionally injurious to man, and the inference you would draw—that they were made for no good purpose—would be in each instance the reverse of truth. Few things are injurious so long as they are kept in their right place, which they usually may be if man uses due diligence: and those things which do injure him without a want of care on his part are compensatory by a far greater amount of general benefit. It would be easy to show, if that were appropriate to our pages, the good effected not only by the aphid, but by more noxious insects. Besides, their lives are not, as you say, "nothing but misery" themselves and others; and we rather agree with him who says—"Insects generally must lead a truly jovial life. Think what it must be to lodge in a lily. Imagine a palace of ivory or pearls, with pillars of silver and capitals of gold, all exalting such a perfume as never arose from human censers. Fancy, again, the fun of tucking yourself up for the night in the folds of a Rose, rocked to sleep in the gentle sighs of summer air, nothing to do when you awake but to wash yourself in a dew-drop, and fall to and eat your bed-clothes."

Veterinary Department.

THE CATTLE PLAGUE IN ENGLAND.—*Bell's Messenger of Oct. 3.* contains the following satisfactory item on this subject:

"The last returns respecting the cattle plague are very gratifying; should the same ratio of decrease that has taken place during the last few weeks continue a few days longer, England will be free from the disease."

WARTS ON HORSES.—H. H. Howe, Nebraska Territory, informs the *Rural New-Yorker* how to cure warts on horses.—Mix equal quantities of spirits of turpentine and sulphuric acid, stirring slowly in a tumbler, and afterwards bottle the ingredients. Rub grease around the base of the wart, and then apply the medicine to the wart with a feather once or twice a day; it will gradually eat them off. I have taken them off horse's neck in this way when as large as turkeys' eggs."

EXTRAORDINARY SEDIMENT IN THE STOMACH OF A HORSE.—At a late meeting of the Chemical-Agricultural Society of Ulster, in Belfast, Dr. Hodges exhibited a large mass of heavy, solid substance, taken from the stomach of a horse which had died of inflammation. It weighed 7lb., and was almost round, resembling in shape a great cannon ball, and on examination it was found to be composed principally of phosphate of magnesia and the hairs of the hairs of oats. This large stone, as it may be called, was the cause of the horse's death.

HOW TO RELIEVE CHOKED CATTLE.—A correspondent of the *Rural American* says: I have fattened many cattle on potatoes, and always fed them whole, and occasionally one gets choked. I then put the animal in a yard, where there are bars, which I let down, so that she can jump over, but as high as she will jump. I then place her about two rods from the bars, with her head towards them, and with a good whip, well applied, I ran her over the bars on the jump, and when she touches the ground, on the opposite side, the potato will fly out of her mouth. I have informed my neighbours of this remedy, many of whom have tried it, and in no case have I known a failure.

HORSE BATHING.—We read, in "*Thrall's Herald of Health*," "baths for horses have been so thoroughly tested that their use is becoming quite common. Tattersal, the greatest horse owner in London, who furnishes the best of horses for lords and nobles to drive, and who figures largely at the Derby races, treats his horses to the Turkish bath, and in this way cures them of the very few diseases to which, with the wise hygiene of his stables, they are subject. Drugs find little place where such care is given. We ought to have in New York and all large cities, hygienic establishments for treating horseflesh, and if the new veterinary college will do what it can to favour this idea, they shall have our hearty sympathy. But if it is only the old story over again of the other medical schools—drugging, bleeding, dosing, purging, the fewer we have the better."