

of aphides that might be mentioned are ichneumons, some kinds of dragon-flies, wasps, etc.

Artificial remedies.—1. Dusting the affected leaves with sulphur. 2. Watering the under side of the leaves (which may be done with a large syringe, or garden engine), with a mixture of strong soap-suds, salt, and saltpetre, so that a brine is made about half as strong as common beef pickle, to which is added one pound of copperas to every five gallons of liquid. 3. A similar application of a strong decoction of tobacco, one pound being boiled in a gallon of water, —the stems and other refuse parts can be cheaply procured at the tobacco factories, and answer the purpose quite as well as that to be purchased in the shops.

**FIR-TREE CATERPILLARS.**—E. R. M., of Halloway, County of Hastings, whose communication respecting some caterpillars on the balsam fir we published, together with remarks of our own, in our issue of Aug. 1st, has recently sent us some of the cocoons that he found about the trees. They are about a quarter of an inch long, oval in form, and composed of silk so strongly glued together as to form a tough brown envelope. They are undoubtedly the pupæ of a saw-fly, and probably of a *Lophyrus*, as we conjectured. One or two have hatched out, and doubtless belonged to a former brood, while a few of the others have a small round hole in them made by a parasite, the destroyer of the original inhabitant. When the fly comes out, which it may not do now till next year, we shall be able to determine its species.

**APPLE-TREE CATERPILLARS—THE FALL WEB-WORM.**—The above correspondent has also sent us for identification several caterpillars which, he states, "are now operating upon the leaves of apple-trees. They appear upon a few trees in this vicinity in colonies, which build a web-tent about the scene of their operations; within this tent single threads are extended in every direction, forming narrow-gauge roads for its occupants. They consume the softer portions of the leaves, leaving only a network of veins, and destroy all that comes within their fatal net. Orchardists would do well to look for them, and cut off their nests and burn them upon their first appearance." These caterpillars are what are commonly known in the neighboring States as the fall web-worm (*Hyphantria textor*, Harris); they have not, that we are aware, been before recorded as occurring in this country, but this year we have found them in our own garden, more than a hundred miles to the west of our correspondent. The caterpillars vary in their general color from black to blue and greenish; they have a broad blackish stripe on the back, in which, when nearly full grown, a blue line appears. On each segment (except the two at each extremity, which have fewer), there are twelve little warts, from which thin bundles of whitish hairs proceed, viz., four rust yellow or orange on each side, two black ones in a line with them on the back, and a little in front and between these two smaller ones, also black at first, becoming rust yellow when the worm is older. The head, and the sixteen feet, are black. They spin large webs, and live in communities, as our correspondent has described. When full grown, they disperse, and spin their cocoons in crevices of the bark and other sheltered places. The moth appears early in the following summer, and is of a milk-white color, without any spots or other markings on the wings. The best remedy is to go round the trees and destroy the webs as soon as they appear. We should mention that they infest cherry as well as apple-trees. E. R. M. also inquires, "what insect cuts off apple leaves in *lots*, as he frequently finds shoots entirely denuded of their leaves, having only short bits of leaf-stalks to show where leaves once were." This is, probably, a "cut-worm," somewhat similar to that which cuts off young cabbages and other plants. The only way to discover the depredator is to visit the affected trees with a lantern at various hours of the night, and just at daybreak in the morning. There are many night-feeding caterpillars which retire to their hiding places when the early birds are about to rise and look for them.

## Canadian Natural History.

### Native Birds.

To the Editor of THE CANADA FARMER:

SIR,—You have doubtless seen a work entitled "The Sportsman and Naturalist in Canada," by Major W. Ross King, published by Hurst and Blackett, London, and concerning which I have a few observations to offer. As to the getting up of the work, nothing is left to be desired. The type is clear and excellent, the colored engravings good, though perhaps a little too highly tinted, the wood cuts first-rate, and the binding handsome and strong. In short, it would ornament any drawing-room table, and attract general notice. It is not my intention to criticise the whole of the work, which, indeed, I am not competent to do, even were I so inclined; and I am willing to make the general admission that the articles on mammalia and fishes are, I believe, allowed to be reliable and graphic. What I wish to direct your attention to, is the article on "Birds" (Chap. v). At the very outset Major King makes a blunder; he says:—"Though one might not unnaturally imagine that birds of every kind would enliven the vast tracts of wood clothing the face of the country, the Canadian forest slumbers in everlasting, and almost oppressive silence." Surely Major King can never have been in the woods during the months of April and May, for the air is then filled with melody, principally caused by the Warblers, of whom there are above forty species. The only possible way in which we can account for the "oppressive silence," is by supposing the major to be stone deaf. Again he says, alluding to the Scarlet Tanager, Baltimore Oriole, etc.: "In strange contrast with these bright and novel plumages appear (in Canada) the homely Chaffinch, Jay and Yellow Hammer, and many other home friends." If Major King be deaf, at any rate he is not blind, but on the contrary must possess a remarkably sharp pair of eyes, to have seen the Chaffinch and Yellow Hammer in our Canadian woods. Though my vision, thank God, is very good, I have not been so fortunate. As to the Jay, the Canadian species is distinct from the English bird, and the "many other home friends" are certainly not friends of mine out here, for I have not had the pleasure of meeting them. A little further on the Major writes: "It may not be out of place to mention the curious fact, that notwithstanding the presence of so many of our common birds in Canada, the ubiquitous Sparrow is unknown there." This is, no doubt, true; and in fact scarcely any of our British birds are found in Canada, the exceptions being the common Buzzard, the Jenny Wren, the Creeper, the Waxwing, (only an occasional visitant to England,) the Raven, the lesser Redpole, and perhaps one or two others. Several of our rare British birds are found here, such as the Lapland Bunting, the Cross-bill, the Shore-lark, the Mealy Redpole, the Pine Grosbeak, etc., but none of the common ones with the above exceptions, and perhaps one or two more. And even out of the above brief list two are not common, viz.: the Raven, and the Bohemian Waxwing. The writer is again at sea when he says (page 113) that "the yellow-winged Woodpecker is the largest of the family, the ivory-billed, black Woodpecker (*Picus Pilatus*) certainly carrying off the palm in point of size. What species he means to particularize when he speaks of "the black and white Woodpecker," (since several have that colour), and "the grey Woodpecker," passes my comprehension. The epithets are far too vague. Do you not think, sir, that these errors disfigure the whole work? When one pays a guinea for a book, one has a right to expect common accuracy as to facts. Without the slightest wish to disparage Major King's valuable addition to our libraries, I think this "exposé" only due to the public, and I make it to obviate the dissemination of false ideas on the subject.

SCRUTATOR.

Toronto, Aug. 1867.

**LYNX SHOT.**—On Wednesday, Aug. 7th, a large lynx was shot three miles above Weston, by Mr. J. R. Evans. It was in a bush alongside the road; and, it need hardly be added, was the only one of its kind which has made its appearance in that section for years. It measured three feet long.

This is the second instance recorded during the present year, of the lynx being found in the settled districts.

**HOW RABBITS MULTIPLY.**—The following extract from the *Melbourne Argus* affords a notable example of the way in which the rabbit increases and multiplies on a favourable soil:—"Eight years ago fourteen rabbits were turned out on Mr. Austin's estate of Barwon Park. The number of their progeny shot last year on his estate was 11,253; and in spite of this destruction, and what goes on outside the estate, they have swarmed over the neighbouring country, and have been found at considerable distances around."

## The Apiary.

### How to Italianize an Apiary.

As many bee-keepers are purchasing Italian queens, it will not be amiss to consider the best method of Italianizing an apiary and keeping the stock pure. Particular attention should be paid to the stock into which the Italian queen has been successfully introduced. Care should be taken that it has plenty of honey and bees, and that it is wintered in a proper place, where it will neither be too warm nor too cold. It should be placed in some situation which is dark, dry and cool; for, if too warm, the bees will become much excited, and keep up a continual roaring; many of the bees will die, and your stock come out weak in the spring; the same results will also follow from being too cold; whereas it is desirable, in fact, almost necessary, that it should come out strong. As soon as spring opens it should be fed a little every day, to excite breeding. It should also be placed in a situation where it can have plenty of sun and be sheltered from the north and west winds, which will, with the feeding, promote the early production of drones, and long before drones appear in your black stocks you will have plenty in your Italian stock. As soon as the drones appear, the Italian stock may be divided by removing the Italian queen with one card of comb from the stock, and putting them into a new hive, which set in the place of the old stock, putting the old stock on a new stand. The bees in the old stock will at once start several queen cells; on the tenth day after dividing all the cells may be cut out, except one, and given to black stocks, first catching and destroying the queens. The black stocks will, in almost every case, receive the queen cell, and an Italian queen will be developed; there being no drones but Italian, the queen will mate with them and be pure. If there should not be queen cells enough to give to all the stocks, the queen may, as soon as the new stock has become sufficiently strong, be removed to some other stock, and allow the stock from which she is taken to start another lot of cells. By watching black stocks in which drones are breeding, as soon as they are capped over the cells may be shaved off with a sharp knife, which will destroy the larvæ, and the bees will drag them out; by so doing, black drones may be prevented from maturing to any great extent: while care should be taken to increase the breeding of Italian drones by placing drone combs near the centre of the hive in which the Italian queen is breeding. It will also be remembered that a pure queen that has mated with a common drone will produce just as pure drones as if she had mated with an Italian drone, though her working progeny may be half-breeds. She will, therefore, be just as valuable to stock an apiary with drones as if she were pure.