

4. Allow a regular supply of salt—it is useful, but an observance of the preceding rules without salt, will be incomparably better than their infraction with it.

5. Never feed musty or bad food. If musty fodder must be used, pass it through a rapid cutter, and moisten, salt and meal it.

6. Avoid unwholesome or poisonous plants in pastures and in hay.

7. Guard all animals against cold rain, and snow falling on them, and against lying on cold, wet ground.

8. All changes of food must be gradual. If from hay to grass, let the grazing be but an hour the first day, two hours the next, three the next, &c. The same caution must be carefully observed in beginning to feed with roots, grain, &c.

9. Be careful that animals always have enough of exercise—and plenty of pure, fresh air. Stables must be well ventilated—animals often become sick from breathing foul air.

10. Lastly, and by no means least, let strict cleanliness be observed. All animals, even pigs, kept clean and curried, are found to maintain their flesh better, or fatten faster, than when dirty or neglected—and cleanliness is more important to health than for flesh.—*Ex.*

## Entomology.

### The Turnip Bug or Flea.

To the Editor of THE CANADA FARMER:

SIR,—In my last I spoke of a certain insect which affects to a great extent our root crops, namely, the "wire-worm." This insect I attempted to expose as affecting the "bulb" or "root." Now there is another insect, not very generally known by its proper name, which will destroy a whole crop of turnips or cabbages by its attacks upon the leaf. This pest is generally known as "Flea"—"Turnip Flea Beetle." Its scientific cognomen is "Haltica," there being two kinds, "Haltica Concinna" or "Brassy Beetle," and "Haltica Memorum" or "Striped Beetle." They are distinguishable by the marks on the "Elytra" or External Wings. The "Elytra" of the "Concinna" are marked by a dark, brassy colour, spotted slightly, the "Memorum" being of the same hue, but striped. They are one of the smaller species of beetle known, and yet do damage to an inconceivable extent. The "Haltica" feed chiefly on a tribe of plants known to the botanist as "Crucifera" or "Cross Plants." The turnip on first appearing above the ground throws forth two leaves, known as the Cotyledon leaves. These Cotyledons, as you may easily perceive, thus form the very lungs of the plant, and these our insect attacks. In March and April thousands of these insects come forth, and feed on the weeds of the species "Crucifera," such as Charlock, Mustard, Cresses and Rape. We may rank these weeds as the nursery of the Haltica. When the turnip first appears about the commencement of June, this insect forsakes the weed and attacks the plant, breaking the "Epidermis," or eating into the cells.

Now the reason why these insects are so little known is, that they are excessively difficult to find. Directly a shadow is thrown upon them, they leap from the plant and hide themselves in the ground. Go into your field now and examine your young turnip plants; get the sun in front of you, stoop down and scrutinize closely, you will see the little rascal quietly feeding on the tenderest of leaves, and eating dollars out of your pocket; pass your hand quietly over the plant so as to throw a shadow, and you will perceive this flea hop off and hide itself in the clods below.

Such is the insect; what is the remedy? It is simple. Be careful to sow no dirty seed. If you sow charlock weeds with your seeds, you will be forming a nursery in which to rear your enemy. If we consider that the seeds from one plant of charlock produce 4,000 to 5,000 such weeds, the importance of sowing clean seed must be clear to all.

AN OLD COUNTRY MAN.

Glanford, May 30th, 1864.

**Toads.**—Live toads form a regular article of commerce in the London market. They are generally imported from France, and sell from fifty cents to \$1.50 per dozen, according to their size and activity. They are purchased by market gardeners in the vicinity of the city, to protect their choice vegetables from slugs and insects, which they do very effectually.



## The Apiary.

### Advantages of Moveable Comb Hives.

To the Editor of THE CANADA FARMER:

SIR,—There are many, especially in Canada, who look upon every attempt to improve upon the old box or straw hive as useless, hence they consider every patent hive a "humbug." Doubtless many, if not all, the patent hives which have been offered for sale in Canada, until quite lately, were worthless, or nearly so; but it by no means follows that all patent hives are "humbugs"—that no improvements can be made upon the plain box or straw hive, and that we must still resort to the "old-fashioned," cruel and unnecessary practice of killing the bees to obtain their honey. No person is prepared to judge of the merits of a hive until he understands the nature and habits of the bee. It is ignorance in this respect that causes persons to buy such patent hives as are described by "B." in THE CANADA FARMER of May 2nd, page 120. Those patent hives, called "dividing hives," in which a partition is used, with a hole through the partition, are worthless, for the same reasons as those described by "B." In one side of the hive they will build nearly all brood comb; when that is full they will pass through the partition and build all store, or coarse comb, the same as they would build in a box. When cold weather comes on the bees will crowd into the part containing brood comb, and where the queen is, of course, and if they get out of honey there, as they are pretty sure to do, they will starve, with plenty of honey in the adjoining side, as it is so cold they cannot move through into their store-house, which is full of frost and ice from the breath of the bees, and they will as soon enter fire as frosty comb. Bee-keepers who have used the plain box-hive, with drawer on the top, will have experienced the same difficulty—whole colonies perishing with a drawer full of honey. Now, all these difficulties; and many, if not all others, are overcome with a properly constructed moveable-comb hive. All moveable-comb hives, however, are not properly constructed, but such as are, possess many advantages over any other hive now in use, some of which I will mention. The comb is not attached to the body of the hive, but hangs in moveable comb-frames, which allow the bees to pass over the whole surface of the comb, that is, between the comb and hive, on every side, giving more ready access to every part of the comb to deposit their honey. In winter it allows the congealing breath of the bees to pass down the walls of the hive without coming in contact with the comb. The combs are thus preserved, to a great extent, from frost and ice. Again, the comb may be removed at any time for the purpose of destroying the moths; removing old and dark comb; obtaining honey from the body of the hive; giving to a colony or taking from a colony; and queen cells containing nymph queens, as may be desired; also, by means of the moveable-comb frames, the apiarian is enabled to divide his colonies, to make artificial swarms successfully, and save the care and loss (by swarms escaping to the woods) attending natural swarming. Still further, the boxes for surplus honey being of the same temperature as the body of the hive, the bees will work earlier in the morning, and more readily than in close or common hives; and the bees, having quite as easy access to the boxes as to the base of the hive, will deposit far more surplus honey than in common hives; also, the bees at work in the boxes are not separated from the mass, as in other hives. The difficulty which your correspondent, "B." finds, is entirely removed, as the apiarian need not allow the bees to work in the boxes until they have amply supplied the body of the hive with honey for winter use, which may easily be known by examining the hive. Moreover, with a properly constructed moveable-comb hive, millers may be kept out by shutting the bottom-board at night. Drones may be shut out and destroyed, thus saving a large amount of honey, and the bees shut in whenever the hives are to be moved. In fact, the apiarian has perfect control of the bees, and the difficulties heretofore experienced are entirely removed.

J. H. THOMAS.

Brooklin, C. W.

## A Method of Hiving Bees.

TAKE a smooth dish with a handle and carefully lift a portion of the bees from the thickest part of the cluster, and turn them down in front of the hive—let this be done again and again until a quart or two of the bees have been removed—by this time they will commence to call the others to their new domicile by humming in and out, and making a continuous buzzing sound with their wings. If the bees are then so scattered that the operator can do nothing more by dipping, and those at the hive continually buzzing, he may take a handful of grass, or a bunch of leafy twigs, and strike them lightly, until they are all driven from the spot of clustering. They will then make a few circles in the air, and alight at the call of the others in front of the hive. If the queen is with them, they will soon all go up, become quiet, and may be removed to the stand.

If an apiary is near large and high trees, the bee-master will often have considerable difficulty in hiving his swarms; yet if the spot upon which they have clustered can be reached by a ladder, the bees may be hived, although upon a large limb, or even upon an elevated portion of the body of the tree. In such cases the hive may be brought near the cluster by elevating it upon a table or stand. The swarm should then be saturated with the sugar-water in such a manner as to moisten the greater part of the bees; this will not only render them good natured, but it will increase their weight and prevent them from being able to fly until the fluid has been evaporated or swallowed by the bees; then let the operator take a light box and dipper, ascend the ladder a second time, and dip off the greater part of the bees and put them into the box, which he should hold with one hand during the operation of dipping with the other. When the greater part are in, he may come down quickly and empty it in front of the hive. The remainder of the bees upon the tree may then be disturbed with the bunch of grass as before directed, when they will soon leave and join their fellows at the hive.—*Colonial Farmer.*

## Robbing Hives.

ONE source of trouble and loss to inexperienced bee-keepers, is the robbing of hives. On the principle that "might makes right" the stronger colonies attack the weaker ones, deprive them of the means of subsistence, and blast the hopes of the apiarian. These depredations are usually committed on warm sunny spring days, prior to the growth of flowers. They may be effectually prevented by very simple, precautionary measures. The weak families should be sought out, and the passage into their hives made so small that only one or two bees can enter at once; this enables the rightful occupants of the hive to defend themselves against intruders and marauders. The invasion of a hive is proved in early stages by the fighting of the bees at and around the entrance. In such a case, the only remedy is to close up the hive until evening, then open it and allow the robbers to go home. Next morning, before the bees have gone out, close up the entrance to the robbed hive, giving air by putting a thin strip of wood under one side. Next day the passage must be opened so that one or two bees can pass at once, and the attacked colony will be able to maintain a successful defence.

## Artificial Swarming and the Moths.

To the Editor of THE CANADA FARMER.

SIR,—Those intending to practice artificial swarming the present season, should establish their nucleus for rearing young queens for the forced swarms, and others that may become queenless during the summer, if they have not already done so. I am of opinion that the common honey-bee of the country can be improved in size, industry, and temper. Take from the best hive in the apiary a frame with comb brood bees, and be sure that there are eggs in the workers' cells to breed queens. As soon as the young queens are about twelve days old, they should be used; for when the first leaves her cell, she will immediately destroy all the others. As soon as the queens are all used from the first comb, return it to the hive after shaking the bees from it, and supply the nucleus with a fresh comb as before described. Queens one year old seem the best to breed from.

A word about the honey moth. I have come to the conclusion that the female moth will deposit her eggs in any vacant comb in any hive she can enter. There they remain until the queen bee deposits her eggs in the same cell, and the nurse bees hatch the egg of the moth and bee at the same time. When the brood is sealed, the moth devours the young bees.

DIOGENES.