the stomach, and produce footless grubs, which attach themselves to the coats of the stomach by means of two little hooks, one on each side of the mouth, and here they adhere, drawing their nutriment from the juices of the stomach, till they arrive at their full growth, when they loosen their hold, and are carried along with the contents of the bowels and finally discharged. They then burrow a few inches into the earth, change to pupæ, and in periods varying much according to temperature, emerge in the perfect or winged form. It is possible that those which enter the earth late in the fall may pass the winter in the chrysalid state.

It is a disputed question whether bots injure horses. All horses which run at pasture in the summer undoubtedly have bots in their stomachs. Yet so few suffer any apparent inconvenience from them that it becomes a question whether they are ever injurious. If they are so, it can be only in very rare cases, where they exist in unusual numbers. Mr. Bracy Clark, who was one of the first and most elaborate writers upon these insects, and who had had a large experience as a veterinary surgeon, held the opinion that they are actually useful by assisting digestion. There is no doubt that most, if not all the deaths of horses, attributed to bots, have been produced by colic or some other disease, and as we have seen, the discovery of bots in the stomach after death proves nothing to the contrary. We have heard of more than one case in which it was said that the stomachs of horses which had been supposed to have died from bots, and which had been examined after death, were found full of holes. But the statement rested on no good authority. It is true that the bot-grub is furnished with a pair of teeth or mandibles, but they are very small and straight, and not shaped like the mandibles of gnawing insects. Besides, it is evident that it is not the nature of these insects to subsist by gnawing the stomach, but simply by imbibing its secretions, and perhaps also the fluid contents of the stomach, by which they are surrounded.

If it be thought necessary, the nits can be scraped off with a knife, or washed off by repeated applications of hot soap and water, or they could undoubtedly be destroyed much more expeditiously by wetting with spirits of turpentine or kerosene oil. - *Prairie Farmer*,

How to Destroy Ants.

Mr. C. Turver, of Davenport, states that his lawn is covered with large ant-hills, and wishes to know how to get rid of the pest. If any of our correspondents can inform us of an effectual remedy for them, we shall be very thankful to receive it. At a former residence we were much troubled with ant-hills on our lawn, and never succeeded in subduing them, though we tried many methods. Since that time we have met with the following modes, recommended in the columns of our exchanges as being thoroughly effectual; they are worthy of a trial, though we cannot vouch for their value, as we have not had an opportunity of putting them to the test.

1. Pour, copiously, hot water—as near the boiling point as possible—down their burrows and over their hills; and repeat the operation several times.

2. Entrap the ants by means of narrow sheets of stiff paper or strips of board, covered with some sweet, sticky substance; the ants are attracted by the sweets, and sticking fast, can be destroyed as often as a sufficient number are entrapped.

3. Lay fresh bones around their haunts; they will leave everything else to attack these, and when thus accumulated can be easily destroyed by dipping in hot water.

4. Pour two or three table-spoonfuls of coal-oil into their holes, and they will abandon the nests.

5. Bury a few sliced onions in their nests, and they will abandon them.

Gall on Wild Raspberry.

We have received from J. McL. a specimen of a gall found on a wild raspberry. It is a dark reddish-brown excrescence, taken apparently from the end of a twig, of a corky consisteney, and filled with a number of little cells. It is a deformation caused by the punctures of a minute black-bodied four-winged fly, belonging, most probably, to the genus *Diastrophus*. We shall send the specimen to Mr. Bassett, of Waterbury, Conn., who makes a special study of these curious and interesting productions, and hope to receive some further account of its inhabitants from him. We shall always be thankful to receive from our readers specimens of any kind of galls or excrescences found on trees or plants; they occur on all sorts of plants, and vary wonderfully in size, shape, and colour, as well as in inhabitants.

To Destroy the Currant Worm.

James M. Wardner writes to the Essex Co. *Republican* that he saves his currant bushes in the following manner, which we can heartily recommend:—

"Keep close watch of the bushes after they are fully leaved out, examining very closely the lower leaves on the new shoots, and as soon as you see one that is perforated with small holes, pick it and drop it into an old pail, and so go over all the bushes carefully every other day, as long as the worms continue to hatch, which will be about two or three weeks, and burning the leaves plucked. Be sure and pick each time going over the bush every leaf gnawed by the worms. I have about seventy-five as fine bushes as you often see, while most of the currant bushes in this vicinity are entirely destroyed. I have had to be vigilant and persevering, but I have conquered so far, which is some satisfaction, as well as the pleasure of having all the nice currants I want to use."

Apiary.

Bees—Their Nature and Habits.

WORKERS.

The workers may be considered the "bone and sinew" of the hive, as they do all the labour—providing for the wants of the brood, building comb, storing honey and bee-bread, guarding the hive, and labouring for the general interest of the whole colony.

As has been already stated, they are produced from impregnated eggs laid by the queen in the small or worker cells. They are developed from the egg to a perfect bee in about twenty days. If an Italian queen is introduced into a colony of black bees, by examining the combs about twenty days after, young Italians may be seen issuing from the cells, but only here and there one. They do not, however, often go out of the hive until several days later. It is also better to wait until the twenty-fourth or twenty-fifth day before examining the combs, when larger numbers will be issuing from the cells, and they can be more readily discovered, and the purity of the queen be determined. If the queen be a pure Italian, all the young bees will be marked with yellow bands; but if she be impure or hybrid, some of the young bees will not show the yellow bands, but be entirely black, like the native bee.

Workers do not, as a rule, go to the field immediately after issuing from the cell, but remain in the hive for several days. It has been stated by some apiarians that the workers are divided into companies or detachments for special purposes; some attending to the gathering of honey, while others nurse the brood, and others again build comb; but I am not satisfied that such is altogether the case, inclining rather to the belief that one and all attend to whatever is to be done. It is true, however, that all do not produce wax at the same time, but I have no evidence that any or all may not produce it when necessary. Wax is secreted by the workers in a manner somewhat similar to that in which tallow is secreted by the ox, and exudes from between the rings of the abdomen in small scales. Almost any time when the bees are building comb rapidly, numbers of the workers may be seen with the scales of wax projecting from between the rings of the abdomen. This is sometimes removed by the bee that produces it, and sometimes by other bees that are building the comb; the workers producing the wax also assist in building the comb. The scales of wax are taken in the mouth, cut up, and moulded into cells. Often large numbers of these scales are dropped by the bees, and may be found on the bottom board of the hive. Small fragments of old comb are also used in building comb. Often combs the size of a man's hand are entirely constructed from old combs.

J. H. THOMAS.