

The Apiary.

Management of the Apiary for November.

BY J. H. THOMAS.

If the weather is cold and snow has fallen, all stocks should be put into winter quarters. I am often asked, "What is the best method of wintering bees?" I would say, any method that will secure the following conditions:—an even temperature, neither too cold nor too warm; proper ventilation; freedom from moisture; perfect darkness; and quietness. A good cellar or room away from the fire may answer very well, or a house built for the purpose would probably be still better. To secure proper ventilation with common box hives, they may be inverted, and wire cloth or stiff net tacked on the bottom of the hives to keep the bees in. Moveable comb hives should have the honey board removed and wire cloth or stiff net put on in its place. Stocks that are to be wintered out of doors, if in box hives, should be so ventilated that there will be no danger of the ventilation being closed up by snow or ice; if in moveable comb hives, all under ventilation should be closed up, the honey board should be removed, and after putting on the wire cloth, it should be covered with corn cobs or dry straw—all that the cap or cover of the hive will shut over. It having been a very bad season for bees, where natural swarming was allowed, nearly all swarms will require feeding, and if not already fed, should at once be removed to a warm room and fed enough to winter them, so that it will not be necessary to disturb them during the winter. It would be better to feed a stock two dollars worth of sugar, rather than lose it. Where artificial swarming was practiced, and swarms were made early, not much if any feeding will be necessary. I would impress upon the minds of bee-keepers generally, the necessity of carefully examining their stocks as many will perish if not fed, and though feeding should be attended to in September, yet, by following the directions given above, many stocks may be saved even now.

The Proper Dimensions for a Bee-Hive.

To the Editor of THE CANADA FARMER:

SIR,—In THE CANADA FARMER for September 15, there appears an article from the pen of John Jewitt, of Lucknow, C. W., under the head—"Hive Improvements," in which he says, speaking of the Thomas hive, "There is no doubt but it is a very good hive. But if the bees could speak they would say the hive is not perfect." The opinion advanced by him is, that the hive is not of the right size and shape to allow the bees to form a natural cluster. He then gives the size and shape of a hive made by himself, which he considers superior to the Thomas hive. I must, however, beg to differ from him in several particulars. In the first place, according to his own reasoning, the Thomas hive is a better shaped hive than his own, for as he remarks a "natural cluster of bees is half as deep again as it is broad." Therefore as "that is the position they like to be in" a hive should be made nearly as deep again as it is broad; which is about the shape of the Thomas' hive, while Mr. Jewitt's hive is considerably more than as deep deep again as it is broad; being only 9½ in. broad and 22½ deep. Now, there are many swarms of bees which in a cluster measure from 8 to 9 inches in diameter. Such a cluster in Mr. Jewitt's hive would come in contact with the walls of the hive at the sides, while the end walls would be about 3½ in. from the bees, and the distance from the bottom board would be still greater. In the Thomas hive the distance from the bees to the walls of the hive is far more uniform, being at the sides 1½ inches, and 2½ inches at the ends, which proves it to be the best proportioned hive. As to the size of the hive, it is now admitted by nearly all leading apiarists that a hive containing about 2,000 cubic inches is sufficiently large for any climate. Says Quimby, "Every inch over 2,000 is worse than useless," and my own experience has been that it

is sufficient. I find, however, that the Thomas' hive contains about 2,100 cubic inches, which is even more than is necessary. But Mr. Jewitt's hive contains about 3,375 inches, being 1,275 more than the Thomas' hive, or 1,375 more than is required. According to Quimby this extra space is "worse than useless"; and yet it is the smallest of three sizes which Mr. Jewitt makes. The entrance to a hive I think should always be at the bottom, as bees always prefer to go up to deposit their stores. In conclusion, I would say that I have seen and used a great variety of hives but have never used any that, all things considered, equals the Thomas' hive; although perhaps Mr. Hill, of Cape Breton, speaks rather strongly when he pronounces it "a perfect hive." Perfection is a big word to use about anything human.

BEE FANCIER.

Toronto, Oct. 23, 1866.

Entomology.

A Plague of Ants.

Numerous and not uncalled for are the complaints that notable housewives make in this country respecting the inroads upon their sugar and preserves and other goodly stores by the swarms of little ants that infest our houses in the summer months. There are at least two species that affect our domestic arrangements in this way, while several other kinds are to be found in our woods and fields; a full investigation of them, however, and an account of their curious habits and instincts still remains unaccomplished, and will well repay any careful student of natural history who takes it in hand. But the annoyance caused by these little insects in this country cannot for an instant be compared with their fearful ravages in hot climates. Some idea of the amount of damage they at times inflict may be formed from the following account recently laid before the Entomological Society, in London, England, and reported in the *Zoologist*.

About twenty years ago a small species of white ant was introduced into the island of St. Helena, in some timber from the west coast of Africa, but its ravages only became serious within the last ten years. "At the present time," Mr. Layard relates, "Jamestown may be said to be devastated by it, the whole of the Cathedral is destroyed, and indeed everything in the town made of wood is more or less injured; the library is also destroyed by them, and it has been noticed that the theological works were eaten first, which he attributed less to the fact that the insects studied divinity, than to these books not being consulted by the reading public as novels and lighter works, and the insects less disturbed in their work of destruction. Teak seemed to be the only wood they did not eat, but they would freely bore holes through it in order to get at other kinds more suited to their tastes: this fact had been proved by placing a deal plank between two pieces of teak, when the latter were perforated and the deal devoured. They might even be said to make their way through tin cases, for in the Government stores it was found that their moist grass on the outside of such cases caused rapid oxidization of the metal, which enabled the insects to make their way in and devour the contents. He believed that unless some effectual remedy could be provided, it would, ere long, be impossible to use timber on the island for any purpose; anyone who could suggest such means would confer a vast benefit on the inhabitants. The ravages of the insect were at present confined to Jamestown, but might spread all over the island at any moment, and even reach vessels in the roadstead in firewood, or by other means, or be carried to the Cape, Ascension or elsewhere. It was a subject for serious consideration; the injuries done to the Government buildings, &c., would necessitate an outlay from the public purse of many thousand pounds."

Poultry Yard.

NEWLY HATCHED CHICKS.—The brooding hen affectionately adopts all the chicks brought to her indiscriminately and blindly—on the same footing, those which she has hatched herself, and those hatched by others. She has the same tenderness and care for all. Twenty-four hours after they are hatched the chicks show evident signs of hunger; but it is better

first to give them some pure water to drink, in a shallow plate. The food for the chicks must be prepared with great care. It is composed of stale bread crumbs crumbled fine, hard boiled eggs chopped fine, with lettuce leaves, young sorrel or turnip, cabbage and beet root, also chopped very fine. The proportions are—bread crumbs 3 lbs.; eggs, white and yolk together, 1 lb.; green food, 1 lb. of the mixture. The whole is mixed together without kneading, in the form of a paste; but the different substances remain separate, and may be picked out by the chicks without difficulty. The green food has the effect of retaining the bread crumbs fresh, and preventing it becoming too hard by drying. Only enough for one day's consumption is made of this paste at a time. A little practice will soon show how much must be prepared for the wants of the day. The chicks show great relish for it. If they appear delicate, a little cider or ale may be mixed with the bread crumbs, in lieu of green food; it has a beneficial effect generally. The second or third meal should consist of oatmeal porridge, made with milk when possible. Whatever the article of diet, a small quantity of salt should be mixed with it.—*Cassell's Family Paper*.

Veterinary Department.

Fardel Bound; or Impaction of the Third Stomach in Cattle.

The digestive apparatus of the ox differs materially in its structure and magnitude from that of the horse. The stomachs are four in number. The first is called the Rumen, or Paunch, and is the largest. The second receives the name of Reticulum, or honey-comb, so called from its peculiar appearance. The third is the Anasum, or manfolds, and is lined internally by a number of leaves presenting various characters. It is in this receptacle that the coarser portion of the food, after rumination, is triturated or broken down and made better fitted for the true process of digestion, which takes place in the fourth, or Abomasum. In certain seasons of the year the food becomes firmly embedded betwixt the leaves of the third stomach, interfering with the digestive process, and in very many cases terminating fatally. In the spring and fall a common cause of this disease is the eating of indigestible food, as animals grazing in woods, where, with eating the fresh grass, they swallow considerable quantities of coarse herbs, &c. In the summer months, it is often brought on from an insufficient allowance of pure water; and in winter from continued feeding on pea straw, without any more nutritive or succulent food.

Symptoms.—If in a milch cow the secretion of milk is lessened or altogether suspended, rumination ceases, and very often in the early stage there is slight diarrhoea, which is very speedily followed by obstinate constipation: the pulse is quickened, the mouth hot, and the muzzle dry, the roots of the horns warm, and the body alternately hot and cold. As the disease advances, the breathing becomes accelerated, and the brain affected sympathetically. In some cases the animal is dull, the eyesight is impaired, whilst in other cases the brain becomes excited, and the animal gets into a frenzied state, which is followed by convulsions, and then death.

Treatment.—As in other diseases and derangements of the stomach and bowels, when caused by an over accumulation of food, large doses of purgative medicines should be given, and perhaps the best purgative for cattle is Epsom salts, which should be given in doses of one to two pounds, combined with powdered gentian or ginger. In obstinate cases we would also use croton seeds or oil combined with calomel; warm oatmeal gruel should be administered every four or six hours, and the patient encouraged to take plenty of liquids, and in some cases stimulants are of decided benefit in promoting the action of the bowels. Stimulants applied to the belly and sides are also useful, and enemas of soap and water should be given three times a day. When an animal becomes very much excited treatment in these cases is generally useless.