

Nothing is capable of vexing us more than to see a dog playfully tormenting a cow. The reader has often seen it. The dog enjoys the sport, but the cow does not, and if it were our dog, and there was no other way to stop the annoyance, we would make a target of him. The manner in which the cows are treated in going to and from the pasture, and often in milking, is nothing short of brutality. They are hurried, screamed at, swore at, and sometimes clubbed, while the officious dog is on hand to add his voice to the distracting medley. The system of the animal is all shaken up, the nerves all unstrung, and reason must dictate that the milk must suffer injury. The cow that is treated as if she were a valuable friend that has nothing to fear, and that knows she has a friend in one who has the care of her, will do the very best she can, and actually appear to try to do it. Animals may not know as much as we sometimes give them the credit of knowing, and their apparent extra effort to repay kindness, may be in no way the part of intelligence, but they do appear sometimes to exert themselves as a special recognition of kindness. Perhaps this often may be true of the horse, but the cow appreciates kindness as much as any other animal, and in the midst of the quiet that results from kind treatment, she does much better than she otherwise would, whether she tries or not.



## APIARY.

### OFFICERS OF THE ONTARIO BEE-KEEPERS' ASSOCIATION.

President, R. McKnight, Owen Sound. 1st Vice-Pres., Dr. Shaver, Stratford. 2nd Vice-Pres., W. C. Wells, Philipstown. Sec'y., Treas., R. F. Holtermann, Fisherville. Executive Committee.—Dr. Duncan, Eubro, J. B. Hall, Woodstock; P. A. Jones, Boston; D. Chalmers, Musselburg; Dr. Thoin, St. Thomas; M. Rainer, Cedar Grove, and N. B. Colcock, Welland.

### BEE CONVENTION.

#### THE QUESTION DRAWN.

(Continued from last week.)

The adjourned session of the Ontario Beekeepers' Association, resumed business in the City Hall, Toronto, on Thursday evening, Sept. 14th.

In the absence of the President, Mr. Cornell was called to the Chair. The attendance was not large, but much interest was manifested.

We regret that we were unavoidably absent, and have to be contented with publishing the report of the meeting, as given in one of the Toronto papers.

At the suggestion of the Secretary, Mr. McKnight, a question-box was opened. Slips of paper were handed round, and in a few minutes a goodly number of questions were written out and deposited in the box.

#### INTRODUCTION OF NEW QUEEN.

Mr. Woodward asked verbally what was the best method of introducing a new queen late in the season?

Mr. Cornell explained his method. He formed a cage of wire cloth with an opened side, which is placed on the combs. The queen, thus protected

took a deep draught of honey, and then set about her proper business. In a short time, a young brood surrounded her, and she felt quite at home.

Mr. Jones said he had had much experience in introducing queens. He took a piece of wire cloth and formed it into a box without a lid. He cleaned a piece of comb, placed the queen on it, and then covered her with the wire-cloth box. In a short time the bees gnawed through the comb, and liberated the captive. The operation was then complete. He had also successfully introduced a queen with the assistance of chloroform. He believed the best way was to cage the bee on a comb. A gentleman of Cincinnati had successfully introduced queens by enclosing them first in a close wire-cloth cage and suspending it for a time in the hive. Subsequently he made an aperture at the bottom and covered it with wax. The bee then gnawed her out in a friendly way. It was a very unwise thing to disturb the hive, after introducing the queen.

Mr. Cornell thought the cage should be as large as the frame.

Mr. Jones added that the bees should always be fed liberally when the queens were being introduced.

Mr. Chalmers wanted Mr. Jones to explain how he used chloroform, he thought it was a rather dangerous operation.

Mr. Jones said he confined his doctoring with chloroform entirely to his bees. After the application of chloroform, the bees lay as if dead on the bottom of the hive, but when a little fresh air passed over them they revived. Care must be taken to give the whole hive a uniform dose. A sponge moistened with chloroform must not be introduced into the hive.

#### BLACK HONEY.

The written questions were now read. The first requested the Secretary to explain how his bees had gathered black honey this year.

Mr. McKnight stated that his third gathering of honey had been very dark in colour, resembling molasses. He had not discovered from what source the honey came. The flavour and consistency of it were satisfactory. The combs were also black.

#### EXTRICATION OF BEES.

Q 2.—What can be done for a broken down colony of bees, if discovered before the bees are smothered?

Mr. Jones explained that this occurred sometimes in shipping. He cooled the combs until they became stiff, and then replaced them. The bees very soon repaired breaches.

Mr. Chalmers asked what could be done for bees smeared with honey.

Mr. Jones thought the best way was to allow other bees to remove it. He would not wash them.

Mr. Forfar was of opinion that the best way was to wash off the honey with warm water.

Mr. McKnight said the bees shook their wings and used every effort to extricate themselves. If they could move round at all, they would clean themselves.

#### APIARIAN INHABITIVENESS.

Q 3.—In moving bees for better pasturage, how near may they be placed to their former position, so that they will not return thither?

Mr. Cornell stated that he had moved some hives three miles, and there had been no returning. He was, however, satisfied that he could move them a quarter of a mile without fear of their returning, provided he used precautions.

Mr. Jones had moved some of his a distance of less than two miles, without any of them returning. If trees were present, they could be removed a smaller distance. He did not believe in the practicability of moving them to different places in the same yard, by setting up boards.

Mr. Cornell was of opinion that this could be done, provided the bees were shaken up. The motion of a wagon would be sufficient.

Mr. Chalmers had found them to return two miles. This year he had moved a hive half a mile. He had shaken them up and set a board before them as a mark. Few of them returned.

Mr. McKnight narrated an experience of his in removing bees. They had got a most thorough shaking, but some of them returned half a mile.

#### REVERSIBLE FRAMES.

Q 4.—What are the advantages to be derived from reversible frames, and what is the simplest means of reversing them?

Mr. Rutherford, of Strathroy, said that by reversing the frames, the combs were completed with feed, and made perfect both above and below. When not reversed, bees often left an open space below. By reversing the four corners of the comb, instead of two, corners were filled with honey, and the centre as usual with brood. He also described an improved form of feeder, which he had invented. It enabled feeding to be regulated in speed and applied in any position. He had also invented another one called the general bee feeder.

#### BEES FEEDING.

Mr. Jones, in reply to a verbal question, said he had tried most methods of bee feeding. During the last four years he had used about 120 barrels of sugar. In half an hour he had supplied as much as a thousand pounds, by simply pouring the syrup upon the backboard of the hive. He fed at night and allowed them to consume it before morning. It was well to feed the whole yard at once, to prevent robbing. He recommended nothing but the best sugar.

Mr. Cornell thought granulated or loaf sugar was better than crystallized sugar. In the former, the water of crystallization was evaporated out.

#### MERITS OF DIFFERENT RACES.

Q 5.—Would any lady or gentleman present, having different races of bees, give their comparative merits as regards early and late breeding, storing honey, working on foundation, raising queens, also temper and any other points?

Mr. Rainer, of Cedar Grove, spoke highly of Holy Land or Syrian bees.

Mr. Cornell had received favourable reports from a friend of his about the same kind of bees.

Mr. Woodward spoke favourably of Cyprians. With careful handling their stinging propensities might be overcome.

Mr. Rutherford preferred the Italians in some respects to the blacks. The Cyprians, according to his experience, were "terrors." Before handling them, he required to smoke them above and below, and even then it was a hazardous matter to handle them. Last year his Cyprians had done admirably. This year they had also done well. He did not look upon his as pure Cyprians. He believed they were crossed with Italians.

In reply to a question, Mr. Rutherford said he had one hive of Cyprians which contained nothing but brood.

Mr. Jones thought the Cyprians were too irritable, but when crossed with Italians they were excellent honey gatherers. He believed the Holy Land Bees crossed with Italians, were the best in his yard. He had had a sad experience with black bees. Six or seven of these hives were starving, while the Cyprians and Holy Land bees were filling their hives with honey.

#### FERTILIZATION IN CONFINEMENT.

Q 6.—"Has any gentleman experimented on fertilization in confinement, and with what results?"

Mr. Woodward narrated a case of a

queen that could not fly, being mated in her own hive, contrary to what was usually accepted as the rule.

Mr. Jones said this question had been discussed last year. No one at that time had been successful in obtaining fertilization in confinement. A committee, consisting of himself and Prof. Cook, of Michigan, had been appointed to make experiments. Prof. Cook had taken five young queens, cut their wings, and confined them by means of guards. Four of these never laid. One, after fourteen days, did lay, and the offspring was perfect. The queen of this hive had been examined, and was found incapable of flying. Professor Cook came to the conclusion that she must have been mated in her own hive.

Q 7.—"When a hive is opened and the bees fill themselves with honey, is it returned to the cells?"

Mr. Jones—It's returned to the cells; there's no doubt about that.

Mr. Rutherford believed that they did put it in the cells, but he had made observations which raised doubts in his mind.

#### DYSENTERY.

Q 8.—"What is the cause of dysentery and foul brood?"

Mr. Cornell believed that dysentery was due to dampness of the atmosphere. Honey, he said, was a hydro-carbon, and when combined with oxygen water was formed. Comparative physiologists knew that honey in this condition produced dysentery among other bad results. The effect of damp weather on man was to prevent proper exhaustion. Consequently the excreta that would have passed off by the skin was thrown into other channels and produced dysentery. It required dampness to produce fermentation, fermentation to produce bacteria, and bacteria to produce dysentery. The proper prevention was ventilation. When air was humid more ventilation was required than when the air was dry. Every 27 degrees increase of temperature in the atmosphere doubled its capacity for absorbing moisture. He had made experiments to verify this. By making suitable arrangements of pipes in his cellar he entirely prevented dysentery among his bees. This was done by keeping the air dry and of proper temperature. He considered it as important to put a hygrometer as a thermometer in cellars, in order to test the humidity and temperature of the atmosphere.

Mr. Rutherford stated that he had lost 30 hives by dysentery last winter. He had found confinement produce the disease. His theory was that excitement in breeding caused dysentery. His hives were perfectly dry so far as he could see, and well ventilated.

#### POSITION OF PURE AIR IN ROOMS.

Mr. Cornell said that experiments of a very careful character had been made in an hospital in Montreal to ascertain in what part of the rooms the air was purest and in what part foulest. These experiments showed that the purest air was in a layer on the floor and in a layer a little deeper close to the ceiling. The air midway between these layers was foulest. These experiments, the accuracy of which he did not doubt, exploded the old theory of the purest air being midway between the floor and the ceiling. Taking into consideration the law of the diffusion of gases, he could not see how a layer of carbonic acid gas could lie on the floor. If they enclosed two gases in any space both would be found after a time equally distributed throughout it.

The meeting adjourned to meet again in Toronto during the exhibition week of 1883.