



APICULTURE.

OFFICERS OF THE ONTARIO BEE-KEEPERS' ASSOCIATION.

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Communications on the business of the Association, and bee-keepers' department of the CANADIAN FARMER to be addressed to the Secretary-Treasurer, 251 Parliament St., Toronto.

NEW VARIETIES OF HONEY BEES.

Through the efforts of Messrs. D. A. Jones, Frank Benton, and others, who have spent much time and money in this direction, several varieties of bees, new to this country, have been introduced, and their comparative value to some extent tested.

The Cyprians have some marked characteristics. They have been quite thoroughly tested, but do not grow in favor with the majority. They are far to irritable to be agreeable to handle. Some consider them superior honey-gatherers. I have given them quite a thorough trial, and the only point I could find in their favor, was a tendency to breed late in the fall, which is desirable as affording a good force of young bees when going into winter quarters. I have not tested the Syrians. Mr. Benton pronounces them among the very best. The Carniolans are said to possess some very desirable qualities, and a cross between them and the Italians have a good reputation. Much has been said of the Holy Land or Palestine bee, but my own experience does not corroborate all that is claimed for them.

Mr. Julius Hoffman received an importation of Caucasian bees in 1880. He has experimented quite extensively with them and is of the opinion they are superior in many respects. In fact, I have never heard more desirable points claimed for any one variety than Mr. Hoffman claims for these. He is one of our most practical bee-keepers, and his conclusions should be received with confidence. Much credit is due those who have been so persevering in securing to us these new varieties. The ultimate results must be of great good, as the future crossing of these strains will no doubt give us one with a combination of very superior traits.—L. C. Root, Author of "New Bee-Keeping."

NORFOLK BEE-KEEPERS ASSOCIATION

The fourteenth regular meeting of the above Association was held in Simcoe on the 7th inst. First Vice-President (Mr. Moses A. Kitchen) in the chair. Minutes of the last meeting read and adopted.

Question drawer opened:

(1) Which is the better for bees, during the time of breeding, honey or pollen? After a full discussion it was decided that both are absolutely necessary.

(2) What is the cause of so many bees leaving their hive in the spring? There are various causes; but the principle one is a need of supplies.

(3) When a colony finds itself queenless and then rears a queen of its own, is it advisable to leave this queen with the

colony? No; for when the bees find that they are without a queen, they are sure to set about rearing a queen from larva already eight or nine days old, and which has previously received no special nourishment; and the result is sure to be an imperfectly developed queen.

The next question that came before the Association, was one concerning adulterated honey. Some one had said that a bee-keeper had placed adulterated honey on the market. A sample of the article being produced, was examined by experts, and pronounced to be unadulterated, but of an inferior quality; having been gathered late in the season, and not properly cured.

After discussing other matters pertaining to the Association, the meeting adjourned to meet again at 2 o'clock, on Saturday, the 6th of September, at the residence of Mr. Moses A. Kitchen, on the gravel road between Bloomsburg and Waterford. All are cordially invited to attend.

ELLIS CLOUSE,

Simcoe, 20th June, 1884. Secretary.

SUGGESTIONS FOR THIS HONEY SEASON.

The much talked of clover season is here, and bees are hovering over the fragrant bloom, and drawing up the precious nectar from the tiny wells. Every facility for depositing honey should now be given them, and no colony be allowed to cluster on the outside for want of storage room. As fast as the combs are sealed, remove them, so that their delicate whiteness may not be impaired by the bees traveling over the caps. When the surplus receptacles are filled with comb-builders, and there are more bees clustered on the outside more room should be provided, and they should be given a hint to go in and possess it.

Sometimes bees loiter on the outside because the heat of the hive is too great, and there is danger of the comb melting and breaking down. Supply all needed ventilation from below, and raise the cover or the cap above the surplus arrangement. It may be necessary at times to shade the hive. No bee-master allows his bees to remain in idleness during the season of flowing nectar.

Bees may be prevented from swarming by using the extractor freely. Some bee-keepers say that honey should not be extracted before it is fully ripened and sealed, while others equally successful, practice and recommend extracting before sealing, and evaporate afterwards. This is done in California in large tanks, in the hot sun. The thin honey rises to the top, while the thick is drawn through a gate at the bottom.

In order to produce a fine article of extracted clover honey, clean combs should be given the bees at the commencement of the flow, and extracted when sealed, or partially so, and kept entire by itself. No combs partially filled with uncapped larva should be extracted from, for fear of "grub-juice." White clover nectar is fit to set before a king.

When the honey is sealed the bees should be intimidated with a little smoke, and as the frames of colonies are removed from the hive brush the bees off with a feather or little twig, or an aspirator branch. Put into a receptacle with a cover, such as a tin comb-basket, or box, and convey it to the honey-house. The capping can be shaved off with a knife made for the purpose, or with an old case-knife; then put into an extractor, where a few swift turns will

throw out the contents. The empty frames can then be exchanged for full ones.

A swarm of bees came out this morning (June 16) and commenced clustering in the top of a cherry tree. I anticipated some tall climbing to get them down, and watched to see if I could catch the queen as she issued. In a few moments I noticed the bees returning, when I perceived the queen among the grass; she was two heavy with eggs to fly, and catching her by the wing, I put her into a hive, and removing the old one from its stand, put the one with the queen in its place, where her subjects soon gathered. The old hive was removed to a new stand, which will probably prevent after-swarming, and the partially filled honey-boxes removed to the new colony to be completed, as it will be very strong on account of occupying the old stand, as all the working force will return.—Ez.

A MOVEABLE FIELD OF LABOR.

Some time ago some one conceived the idea of a floating apiary to move around to different climates as the season and bee-food demanded. This did not pay. Lately, however, a new kind of the same movement has sprung up, and we are likely to have movable apiaries.

Mr. M. M. Baldrige, the well-known apiarian of St. Charles, Ill., and Mr. E. T. Flannigan, of St. Clair County, in the same State, last November took to the neighborhood of New Orleans some 300 swarms of bees for wintering. The plan was to keep them there to work in early spring, say to about the second week of June, then ship them north to Kane Co. to feed upon white clover, and other superior honey-producing plants, until the first of August; then move them down to St. Clair County to gather honey from Heart's Ease, Spanish Needle, etc., until cold weather closes honey-gathering. It will thus be seen that it is expected to secure three distinct honey seasons, and if desired, three periods of natural increase. Besides the advantage of an early honey crop it is calculated that in the mild climate of Louisiana there will be little if any loss in wintering.

The first part of this programme has been carried out, and the 300 colonies, filling two cars, arrived in Chicago on Monday en route for St. Charles, their summer home. Mr. Baldrige informs us that the bees wintered without loss, but that the extreme wet weather along the lower Mississippi greatly interfered with plant bloom, and that the honey crop was exceedingly light—indeed less than for many years, so he does not consider the profit settled for the first third of the season. The test for the second third will now be entered upon in Kane County.

The freight on bees in quantity from New Orleans to Chicago is about one dollar per hive, to which expense must be added the time and services of the attendants. To take them back, stopping at St. Clair County, will add something to the cost of freight and handling. Apiarists will watch the progress of this new bee enterprise with interest. We shall report in due time as to its results.

CHEMISTRY OF HONEY.

The following article on the above interesting subject taken from the Country Gentleman.

Naturalists have not yet decided whether honey is a secretion of the bee or whether it exists already formed in plants. It is certain that the nectaries of flowers contain a saccharine matter which is ex-

tracted by the insect, and the fact is well known that the flavor and character of honey are so much affected by the nature of the plants which predominate in the vicinity of the hive, that, when these plants are poisonous, the fluid sometimes partakes of their noxious qualities. Several cases of poisoning from eating honey from a particular source, are recorded in medical literature. Still, it probably undergoes change in the organs of the bee, as the saccharine matter of the nectaries, so far as it has been possible to examine it, wants some of the characteristic properties of honey.

Honey is apt to form a crystalline deposit, and to be ultimately converted into a soft, granular mass, being then called "candied." Its specific gravity is about 1.35. It contains crystallizable sugar, analogous to that of grapes, and according to Prof. Soubiran, two other kinds of sugar, one of which is changed by acids, and has the property of turning the plane of polarization to the right. The other, acted on by acids, is possessed of a strong left-hand rotating power. The first of these two sugars is not always present, as there is reason to believe that it is in time wholly changed by its acid into granular sugar—candied. It is especially abundant in new honey. The second variety is very similar to the uncrystallizable sugar produced by the action of acids on cane sugar, being identical with it in composition, and, like it, incapable of crystallizing, and very sensitive to the action of alkalis. But it is distinguished by the impossibility of converting it into granular sugar, and by having nearly twice the rotating power of common uncrystallizable sugar.—(Journal de Pharm., 3d series, xvi, 253.)

Honey contains, beside the saccharine principles, an aroma, an acid, wax and, according to Guibourt, a little mannite (a principle; a 40th part of pure manna). The crystalline sugar may be obtained by treating granular honey with a small quantity of alcohol, which, when expressed takes along with it the other ingredients, leaving the crystals nearly untouched. The same end may be attained by melting the candied honey, saturating its acid with carbonate of lime (chalk), filtering the liquid and setting it aside to crystallize, and washing the crystals with alcohol. Inferior honey usually contains a large proportion of uncrystallizable sugar and vegetable acid. Samples of cane sugar also differ essentially in chemical composition. According to the Chemical Gazette, brown sugar consists of cane sugar, associated with variable quantities of hygroscopic moisture, uncrystallizable sugar, gum, albumen, extractive saline matter, and insoluble organic and inorganic substances. Among the organic substance is a small proportion of lime. By keeping it, it becomes soft, gummy and less sweet—a change attributed to the lime.

Bee-culturists are aware that the great drawback in wintering bees is dysentery. The cause is yet a mooted problem not satisfactorily explained. Poor honey, such as contains acids, ferments, gum, and all the deleterious substances in excess, unavoidably produces morbidity if consumed by bees while in confinement. Different samples of honey cannot be distinguished by purity of saccharine, except by analysis. One bee culturist suspected that dysentery was caused by some deleterious substance that chanced to be collected with honey in some seasons, and he fancied it was "bacteria." His conclusions as to what the injurious substance is, has not been accepted by others; but the fact that dysentery is attributed to the quality of the honey eaten by the bees, is not doubted by intelligent and experienced apiarists. If bacteria sometimes infect samples of honey it is unsafe to eat it, because the spores might produce as fatal results as follow the eating of trichinous pork, so that honey for table use is attended with more risk of life and health than is the much derided glucose.