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"THE GREATEST POSSIBLE GOOD TO THE GREATEST POSSIBLE NUMBER."

VOL. I. BEETON ONTARIO, MARCH 10, 1886 No. 50

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TO CONTRIBUTORS

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THE D. A. JONES CO., ED., Beeton, Ont.

THE CANADIAN BEE JOURNAL

PUBLISHED BY

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WEEKLY - - \$1.00 PER YEAR

D. A. JONES, - - - - - EDITOR.

F. H. MACPHERSON. AS'T ED'R, & BUS. M'GR.

FOR THE CANADIAN BEE JOURNAL.

SUGAR AS A WINTER FEED FOR BEES.

MY article in the CANADIAN BEE JOURNAL on the subject of feeding sugar to bees has brought me more letters of commendation than any article I have written for a year past. It has also brought out articles from the pens of other writers, and the ball is set rolling. Mr. Geo. A. Wright, in February *Gleanings* says he knew a man to feed sugar to have unfinished sections completed and then sold them for honey. It has been the mistaken policy of some good meaning bee-keepers to keep the matter of adulteration in the background. I think there never was a greater mistake than this. The time is at hand when the reputation of the bee-keeper will have to be the standard of purity of the article he offers to sell. It must be clear to every mind that no bee-keeper can establish a reputation for honesty and conscientious dealing by hiding fraud under a bushel. Ten years ago the masses knew nothing of adulterated honey. The reader will please note the terms I use. They were aware of "artificial" honey being exposed for sale, and would buy it to a limited extent, but they never dreamed that bees could be employed to adulterate their own products. It was left to sugar feeding to teach them this "science." Some time ago an acquaintance of mine told me of a man in Indiana who kept his bees in a bee house, and employed them to "make honey" all winter by supplying them with sugar as the "raw material." I knew the man was laboring under a delusion and was ignorantly spreading the hurtful story among the people, and for this reason I carefully explained to him that the Indiana bee-keeper was simply feeding his bees on sugar syrup to keep them from starving till the spring blossoms would give them a living. I soon saw that this explanation was not satisfactory, it was taking the romance out of a good story, and the physical fact that sugar had been taken into that bee house, out-weighed in his mind all the explanations that I could make in favor of the opposite conclusion. The increase of the bee and honey business under our blind policy is swelling the sugar trade to immense proportions. Five years ago such a state of

things could not have been conceived of, or seen by unprophetic eyes. I would like to impress the minds of bee-keepers with what I believe to be a reasonable conclusion. It is this, if all the bees in the care of modern bee-keepers had subsisted solely on their own products for the two past years, there would to-day be a fair demand for all the honey that could be put on the market.

Now permit me to say a few words about sugar as winter food for bees. From some tests of mine not very carefully made. I have heretofore admitted that pure sugar syrup was the equal of honey as a winter food for bees. But having tested the matter more carefully this winter I have reconsidered the matter and now decidedly pronounce in favor of honey for this climate. Last fall I prepared several colonies on clean combs and fed them on pure sugar syrup. Several more were prepared in the same way and fed with extracted honey diluted with warm water. One colony was induced to store all the sorghum syrup that they would take. The rest of my apiary had natural stores just as the bees had fixed it up. The winter was mild up to the 8th of January and the bees were on the wing every few days. Well, on the afternoon of the 8th of January the great snow storm reached us and it turned wonderfully cold for this climate. For four days the mercury never rose above zero, and went down to 16 below on the morning of the 11th of January. Taking the four days together they were perhaps the coldest ever known here. My bees were in single wall hives without any packing. All my fine breeding queens, including the one I have from Brother D. A. Jones, were in colonies that had no protection except a quilt over the frames. These were on the standard L. frames. And besides these I had bees wintering in my shallow sectional hive the cases being only 5½ inches deep. The bees confined to a single case on frames 5 x 17½. These bees had a woolen quilt over the frames and an empty case set on, and the hive cover on the latter. Well, during those terrible ninety-two hours with the mercury below zero every hour and minute of the time, I walked time and again through the apiary hoping to catch some sound of life, to verify what we have been so often told about bees rousing up and exercising themselves to raise the heat in the hive. But all was as still as a grave yard, day and night—for I was there in the night time too. Looking after "science" you know. On the 14th day of January the sun came out warm, though the snow covered the ground completely, and the bees had a general fight. To my surprise (but very agreeably so) every colony that had natural stores were in good

condition, except that there was a heavy loss of bees as the dead ones dragged out showed. Even the colony that had been compelled to store sorghum syrup were as lively as rats. The colonies fed on sugar syrup fared the worst, though the main part of the bees fed on sugar were apparently all right, bees were seen dragging themselves out of the entrances of the hives so loaded that they were helpless so far as wing power was concerned. I gathered up some of those loaded bees and took them to my office and emptied the contents of their abdomens on a sheet of white paper. Guessing at it, I would say that the contents of the abdomen of an individual bee was twice as much as the ordinary load of a bee. The contents of the abdomens of these sugar fed bees were to all appearances except as to sweetness, identical with the syrup when it was fed in the fall. And although some of it was put under a glass of considerable power it showed the presence of nothing foreign to ordinary sugar syrup unless it was a slight logwood tinge in streaks through it. The bees wintered on natural stores were examined, and although they were of natural size, lively and active, they all had a small amount of pollen in the form of a paste in their intestines. But unlike the sugar fed bees, their honey sacs were entirely empty, at least of anything resembling pollen or syrup. The sugar fed bees examined, were brim full of the syrup like liquid, and felt cold and clammy. Now here was a case of bee diarrhoea *so far as the distended abdomen of the bee was concerned*. I am now satisfied that sugar is inferior to honey as winter food for bees in this climate.

G. W. DEMAREE.

Christiansburg, Ky.

There is one thing certain that bees *have* wintered well, and do winter well on pure honey, and if no sugar is used except in special cases, perhaps with our new light on wintering we may be able to succeed without using sugar. The non-use of sugar will certainly reduce the quantity of honey on the market, so that any benefit arising from the use of pure honey alone, as a winter food, will accrue to the bee-keeper in the decrease of quantity and consequent increase in price.

FOR THE CANADIAN BEE JOURNAL.
SCIENCE AND APICULTURE.

UNDER the above head, page 722, Prof. Cook very courteously calls attention to my article on "Exercise and Heat" page 692. He states that those are "not the views of the leading Physiologists of to-day," that they

were once held by Liebig but like many other theories lack the important element of truth and that Carbon is not fuel to be burned as wood is burned in a stove, and he illustrates by describing certain physiological experiments which would seem to support his statements. He also says that "nutrition or the changing of food into tissue and the breaking down of such in work results in heat and in this complex process oxidization results, but it is direct and only to supply heat."

I would say that I did not go back to Liebig for my ideas but received them from late teachings and books of our most eminent medical men. I do not wish to advocate error and would ask Prof. Cook to give the late authorities who hold views as given by him that we all may look it up for ourselves. I will then give the source of my views. I would not have anyone think that I meant that Carbon is burned in the body just the same as wood is burned in a stove. I used the illustration to make it plain, not to give the idea that fire was the same as vital action. But does not the Prof. compare the result from flesh subject to electrical current as the same as vital action, which it is wholly unlike? We know that water may be decomposed, its gases separated and dead bodies made to move their limbs by such agencies, but that is not vital action. In regard to nutrition being the changing of carbonaceous and other food into tissue, does not the Prof. tell us in his essay on the "Pollen Theory" that nitrogen is what makes tissue and that bees require no nitrogen when quiescent, only honey (which is almost entirely carbon) to keep up—what? tissue? No, heat, force, without which there can be no vital action. In my article I said that the slow wearing away and oxidization of tissue also furnishes some heat. I would have it read "the wearing away and slow oxidization of *tissue* also furnishes *some heat*," and that most of it is produced by the carbon combining with oxygen as brought about by vital processes. Does carbon produce heat in a stove lamp, etc. and not in the body? Then what is done with it. Is a hog all tissue?

That is all, now, on the part which refers to my views, but as the subject of the rest of his article interests me I will call attention to parts of it. The Prof. has advanced substantially the following, that possibly the air in a hive alone may be sufficient to supply the wants of the bees in winter quarters if kept in the quiescent state; to support this, he gives experiments of scientists and speaks of the girl who was buried alive. That human beings under certain conditions breathe so little air that the air in a coffin suffices perhaps for days and weeks, that it is like hibernation when animals live with almost

no air. Does any one know how soon after being buried the girl turned in her coffin and tore her hair or how long she lived? I read to-day an article by Prof. Cook, page 87 A.B.J., in which he says bees do not hibernate but are constantly using food and moving from outside to inside of cluster when in the quiescent state. I was very much interested, but does that agree with the argument in regard to the small amount of air needed by bees? If bees use food daily or oftener and do not hibernate, is it fair to compare them to a person in a trance state, or to animals that do hibernate, and if the bees in quiescent state are continually moving and breaking down or wearing away tissue how can they get along without pollen which is required to replace that tissue.

But the Prof. sets us all at rest when he says at the close of his article:

"I would advise for in-door as well as out-door wintering, that the hive be well open at the entrance at bottom of hive." "A little learning is a dangerous thing," indeed but can any one of us get all there is to know? we will do well if we get proficient in, even one, of the many branches of knowledge and just a little of the rest. No one surely is infallible.

The ideas in regard to gases and vapor in the hive are well put and must make some points clearer to us all.

I would here say that I have great respect for Prof. Cook as a writer and as one who has done great service to the Bee-keeping interest and that my motive in writing is solely to add my mite to enable us all to get at the truth.

Will Messrs. Tinker, Clark, Corniel, Pringle and any readers who are medical men please give us their views on these points.

SAMUEL CUSHMAN.

Pawtucket, P. O.

In reference to the girl who was buried alive, which went the rounds of the papers, we saw it contradicted shortly afterward in a paper published near where the affair is supposed to have occurred. We have no doubt that Prof. Cook will be able to answer your questions very satisfactorily, and, although these discussions on scientific points sometimes have some very sharp corners about them, still we think much good will result, and we know the discussion will be carried on in such a friendly spirit that our most peace-loving bee-keepers can not become offended. You will see by reference to C.B.J., page 764, that Prof. Cook's article read just the contrary of what he wished to say, so that possibly on this point both are of similar views.

FOR THE CANADIAN BEE JOURNAL.

OUR HONEY MARKET.

ON page 743 of the C. B. J. friend Thom has an article under the above caption, and endeavors to give some reasons for the decline in prices. The first two play a considerable part in this trouble, especially the selling of small lots at any and every price by those who do not know the cost of production, while the third will do serious mischief in any place where it is practised; still I have encountered more difficulty from a fourth cause than from the other three combined, and that is, the great abundance of small fruits. In the summer of 1883, and again in 1884, there was quite a brisk demand for honey during the honey season, and along through the fall, but last season it was not so, and almost invariably the reason assigned was the abundance of fruit. I tried to work off the honey during November and December and met with the same difficulty, but not to the same extent, but since the New Year I have disposed of nearly all of my last season's crop, having at this date only about 150 lbs. unsold. I have not shipped any, choosing rather to work up a home market and create a local demand than to send the honey to some of the cities in bulk. I have had all of the aforementioned evils to contend with, and yet I have succeeded in obtaining as good prices as formerly, with the exception of making a slight reduction to parties who bought larger quantities. My honey was nearly all extracted, and the way I disposed of it was this: I took a sample of honey, went from house to house, and took orders, and then was very careful that the quality of the honey delivered and the clearness of its appearance should not displease the most fastidious. I had two or three hundred pounds of dark honey that I sold at ten cents, but my bright honey went at twelve to twelve and a half cents, and that to parties who had purchased from farmers and others at ten cents and in some cases at nine cents per pound; and what was more pleasing, a few pounds taken on trial almost invariably brought a larger order soon after.

Perhaps I will be excused if I say, I do not think any person in this vicinity placed a nicer article on the market this season than I did, which may account, to a certain extent, for my success.

I thought last year that I had about reached the limit of the home market, but this year I have sold fifty per cent more honey, and the limit of possibilities in that direction appear about as far off as last year at this time, as I am very likely to have plenty of calls for the new log before it comes in.

I have been thus precise, because I believe that in the not very distant future the home market will be the boon or bane of the average bee-keeper. By all means let us develop a taste and a market for first-class honey at our very doors, and then see to it that the demand is supplied.

J. K. DARLING.

Almonte, Feb. 25, 1886.

Friend Darling is almost another McKnight—the principle upon which they work is about the same in both instances, and both are successful. Perhaps we ought to say here that we have never yet had any difficulty in disposing of all the honey we produce, and it is generally admitted that we have about as much to “get rid of” as most bee-keepers, and we never spend very much in trying to dispose of it either. The past season's supply is all gone but perhaps 2000 lbs., and it has not as yet cost us one cent for canvassing for sales.

FOR THE CANADIAN BEE JOURNAL.

SCIENCE AND APICULTURE.

On page 723, C. B. J., Prof. Cook says, “I have seen the light of a candle extinguished by a person blowing through several inches of hard solid wood.” After reading this sentence, I said to a friend without mentioning the author's name, “What do you think of this?” and then repeated the sentence. Very promptly came the reply, “It's a lie.” Without knowing the author, I should have said the same thing. I cannot believe Prof. Cook capable of wilful misrepresentation, and I know he is above the petty artifice of concealing his true meaning by an ambiguous play of words, but under ordinary circumstances, taking the plain surface meaning of the sentence in question, I should be able to stand outside a solid wall of two inch oak plank and with my lips at the middle of a plank blow out a lighted candle on the inside of the wall. I don't believe Prof. Cook means this. Professor, what do you mean?

On page 725, C. B. J., is an article on “Formic Acid.” I seriously question the logic contained in the third paragraph. Is it true that praise of Ligurian or Italian bees is misplaced? Is it “indolent?” and all this because it “hardly ever stings?” Are we to understand that the lack of stinging in the Italian results the same as with the Melipone, in a lack of honey stored? Isn't the writer all in a fog?

C. C. MILLER, 179-340.

Marengo, Ill., Feb. 12th, 1886.

We leave the matter in the hands of

Prof. Cook. He will be able to explain his meaning clearly to us, we feel sure. We do not know that we have heard of anything quite like the experience of friend C, but we have often heard that it was possible to blow out a lighted match through the length of an ash or elm log. We have, through elm roots five to ten feet long with one end in water, blown blubbers, thus showing that air may be forced through long thicknesses of wood—of course this was *with the grain*.

FOR THE CANADIAN BEE JOURNAL.

NOTES ON “SCIENCE AND APICULTURE.”

I AM glad to notice in the last C. B. J., page 722-3, that Prof. Cook has abandoned his untenable position on the minimum amount of air required by a swarm of bees. Instead of the quantity contained in the hive, he now takes in addition what passes through the walls of the hive, or perhaps several hundred hive-fulls the amount, depending upon the hive and other conditions. Even from this multiplied supply of oxygen he must still consign his bees to a “quiescence” so profound that they pass far beyond the state of hibernation into that of suspended animation, an illustration of which he gives in his article. Even the Rev. Clark will cry stop before he gets as far as this. There is probably as much difference between the not profound hibernation of the honey bee and suspended animation as there is between day and night. And there is not so much less difference between the prolonged torpidity of cold blooded animals and the winter state of the bee. I therefore object to having language that I use with the one applied to the other. Spallanzani kept frogs and serpents alive for three years and a half at a temperature of 38° and 39°. He also resuscitated animal culæ after having been in a dry state for 27 years by adding water to them. That common-sense writer, Mr. Demaree tells us on page 700, C. B. J., what becomes of bees with only the amount of air contained in the hive. My views as to the amount of natural ventilation or passage of air through walls of hives, winter repositories, etc., also on the diffusion of gases may be found pages 222-3 of the A. B. J. for 1878. I have neither time nor inclination to write more at present and will leave that part of Prof. Cook's article, in which he criticises Mr. Cushman to this gentleman for correction. Perhaps when the light of Diogenes' lantern shall fall upon some of the Professor's assertions, it may again appear to a modest man that a

“little learning is a dangerous thing.”

P. H. ELWOOD.

Starkville, N. Y., Feb. 16th, 1886.

QUERIES AND REPLIES.

UNDER THIS HEAD will appear each week, Queries and Replies; the former may be propounded by any subscriber and will be replied to by prominent bee-keepers, through, out Canada and the United States who can answer from experience, as well as by the Editor. This Department will be reserved for the more important questions, others will be answered in another place.

PROTECTION FOR BEE HIVE.

QUERY No. 64.—Which is the best protection from cold or heat for a beehive, a solid wall, hollow or a packed wall, according to science?—B. L.

PROF. A. J. COOK, LANSING, MICH.—A packed wall.

DR. J. C. THOM, STREETSVILLE, ONT.—A packed wall.

H. COUSIL, THE GRANGE, ONT.—The hollow or packed wall.

P. H. ELWOOD, STARKVILLE, N. Y.—A properly packed wall.

DR. A. B. MASON, WAGON WORKS, O.—“A packed wall, according to science”

JUDGE ANDREWS, MCKENNY, TEXAS.—I have not studied this question—do not answer.

G. W. DEMAREE, KY.—A double wall “packed” for cold weather, and a thin single wall for warm weather.

J. E. POND, JR., FOXBORO, MASS.—My own opinion is a double wall with 3 or 4 inches or more for a dead air space.

H. D. CUTTING, CLINTON, MICH.—A hollow wall divided into as many compartments or hollow walls as possible.

S. T. PETTIT, BELMONT, ONT.—A hollow wall protects best against heat. A packed wall, if the material of both hive and packing be of the best kinds, protects best against cold.

G. M. DOOLITTLE, BORODINO, N. Y.—Am not sure, but a hollow wall would be as good as a packed dead air space. Either I consider superior to a solid wall.

R. MCKNIGHT, OWEN SOUND, ONT.—Neither is best—both combined is necessary. Of the two the packed wall is preferable, provided it is properly done.

O. O. POPPLETON, WILLIAMSTOWN, IOWA.—This depends entirely on the materials, out of which the solid and packed walls are made, either of which can be made better than a hollow wall.

DR. O. C. MILLER, MARENGO, ILL.—If you mean which is the best non-conductor, I should say a hollow wall, *provided* the walls are perfectly air tight—if cracks in the walls, then packing is better. If you mean which is the best wall for a hive, opinions differ.

ALLEN PRINGLE, SELBY, ONT.—The packed wall is doubtless the best as a protection against heat and cold; but if we take everything into consideration, especially the important point of dryness, the hollow wall if properly made, is perhaps the best.

DR. DUNCAN, EMBRO.—The best protectors from cold are non-conductors of heat. All solid bodies conduct heat faster than porous. Confined air is the best non-conductor of heat; fine fur is warmer than coarse, because the air is more confined among its fibres than it is amongst coarse hair. Therefore I think a hollow wall is warmer than a solid one, and if the hollow is filled with chaff or sawdust it is still warmer because the air is more confined among the particles of either those materials and forms a better non-conductor of heat. The hollow wall would be the best protection from heat if the air inside was allowed to escape above, and cool air would enter below if there was proper ventilation.

S. CORNEIL, LINDSAY, ONT.—A solid wall of cork, if it could be obtained. According to the Table of Thermal Conductivities in the Encyclopædia Britannica if we represent the power of cork to conduct heat by 29 that of air will be represented by 49, grey unsized paper by 94, carded wool by 122, walnut sawdust by 195, fir wood across the fibre by 260, walnut across the fibre by 290, fir wood along the fibre by 470, walnut along the fibre by 480, wood generally by 500, water by 2,000, and copper by 960,000. In hollow walls the air must be confined perfectly, or the advantage from its nonconducting property will be to a great extent lost. It must also be dry. “If we represent the power of common dry air to conduct heat by 80, its power, when loaded with moisture, rises to 230. For this reason damp air feels cold to the body.” And for the reason that water conducts heat so much better than air, or any of the materials used for packing, all the substances mentioned above should be kept dry. From the foregoing it will be readily inferred that the best available protection against cold is a wall packed with granulated cork, the interstices of course being filled with still air, but wool has properties for passing off moisture from bees which on the whole make it more desirable if it were not for the expense. Upholsterers use a kind of wool made from old woolen cloth, costing about six cents per pound, which, I think, would make good packing for hives.

LARGE OR SMALL SWARMS FOR WINTERING.

QUERY No. 65.—Is it necessary to go into winter quarters with a large swarm of bees to secure successful wintering.—
J. O. D.

H. D. CUTTING, CLINTON MICH.—No.

S. T. PETTIT, BELMONT, ONT.—No.

DR. A. B. MASON, WAGON WORKS, O.—No.

G. M. DOOLITTLE, BORODINO, N. Y.—No. I prefer a medium one.

O. O. POPPLETON, WILLIAMSTOWN, IOWA.—
It is certainly preferable to do so.

H. COUSE, THE GRANGE, ONT.—No. Medium sized colonies often winter better than very strong ones.

M. EMIGH, HOLBROOK, ONT.—Not necessary if you have the right kind of a place to winter them.

T. H. ELWOOD, STARKVILLE, N. Y.—Yes. A good average swarm for the climate of Central N. Y.

S. CORNEIL, LINDSAY, ONT.—No. A stock of moderate strength may be protected so as to winter successfully.

PROF. A. J. COOK, LANSING, MICH.—I think it safer. In a good cellar I can winter even small nuclei at that, in the most severe winters.

DR. C. C. MILLER, MARENGO, ILL.—No. Most bee-keepers however feel safer with large colonies. Some think medium ones winter best.

DR. J. C. THOM, STREETSVILLE, ONT.—It is all the better if open-air wintering be meant. If a proper winter repository is meant, I would prefer small or medium swarms in the fall.

J. E. POND, JR. FOXBORO, MASS.—Not at all, provided due care is taken in winter preparation. I have wintered a three-frame nucleus with success, and can do it again I think. A large swarm is better than a small one as a rule.

R. MCKNIGHT, OWEN SOUND, ONT.—A moderately large sized colony of young bees will—other things being equal—winter better than a large swarm of older bees. A large swarm consumes less stores in proportion than a smaller one.

ALLEN PRINGLE, SELBY, ONT.—Ordinarily speaking it is not necessary—that is, if the winter repository is comfortable—but in the case of bees wintered in a low temperature without

proper protection, the more numerous the bees the better, provided they have plenty of stores

JUDGE ANDREWS, MCKENNY, TEXAS.—Other things equal, I would give, in November or March, as much for a colony of one quart of bees as for one of one gallon, looking to the results of the next year as well as to wintering [This answer is strictly from a Texan standpoint.]

DR. DUNCAN, EMBRO.—A medium sized swarm will winter just as well if they have a prolific queen, they will come out in the spring with a fine lot of young bees. A great many of the bees put into winter quarters die of old age and if there is not a good queen in the hive your strong one would be the weaker in the spring.

G. W. DEMAREE, CHRISTIANBURG, KEN.—It is not necessary to have the colonies large. Good average colonies do the best as a general rule. Some years ago, in the fall when I was fixing up my apiary for the winter months, I tried this experiment. I chose the figures 100 to represent an average colony, and marked the hives according to the relative size of the colony, the figures ran from 75 up to 150. Well, on the first of April the following spring I went over them, examining them carefully and retaining the figures 100 as the average size, and when I was through I was surprised to see how the figures contradicted each other. Colonies marked 150 in the fall were marked 75 in April, and some put at 75 in the fall took on 150 and so on, up and down the scale.

HONEY PLANTS.

WITH NAMES AND DESCRIPTIONS.

FAMILY—"ASCLEPIADACEÆ."

THE following has reference to the sample sent us by Mr. George Strangways, of Elora: "The seed-vessel sent me last week, is a pod of a very common perennial herb—Family—*Asclepiadaceæ*, Genus—*Asclepias*, Species—*Cornuti*, commonly known as Milkweed or Silkweed. The stem is usually simple (having no branches), about four feet high, leaves, oblong-lanceolate, acute at both ends, the under side tomentose (covered with tangled hairs.)

Flowers—in nodding umbels, springing from the axils of leaves, each of twenty or more sweet scented flowers.

The calyx is five-parted—corolla five-parted and reftexed when mature. A horn-like process projects from the three-leaved staminal corona, and curves towards the stigma, hence

the specific name—*cornuti*.

The pollen masses are in five distinct pairs suspended from the apex-follicles or pods vectricose; seeds-comose, (furnished with silk-like fibres) flat and margined. Every part of the plant is full of a thick, viscid milky juice, having properties very similar to india-rubber, for which, indeed, very sanguine people have proposed to substitute it. It has also been proposed to use the silky fibres attached to the seeds, as a substitute for cotton.

Experiments, on a considerable scale, have been made to test the commercial value of this plant in both respects, but the results have not been such as to depreciate the market value of either rubber shoes or cotton stockings.

There are several species of this genus widely diffused throughout Ontario, all of which furnish abundance of honey.

Occasionally the pollen-masses adhere to the legs of bees, and other insects, holding them fast prisoners till released by death; generally, however, as Sampson circumvented the Philistines by carrying off the gates of Gaza, so does the bee release itself by carrying off a pair of pollen-masses, many of which may be seen at the entrance of the hive during the months of June and July. Yours etc.

C. MACPHERSON.

Prescott, Feb. 27th 1886.

MIDDLESEX BEE-KEEPERS.

AN IMPORTANT AND INTERESTING SESSION.

The North Middlesex Bee-keepers' Association met in the Town Hall here at half past two this afternoon, the president, Mr. F. Atkinson, in the chair. Minutes of the previous meeting were read and on motion adopted.

The treasurer's report was then read, and showed a balance on hand of \$5.65.

Moved by the president, seconded by Wm. O'Neil, that the report be accepted.

The secretary here read a number of letters from different persons, expressing their regret at not being present.

The president then opened the business with the following speech:

MR. SECRETARY, LADIES AND GENTLEMEN.—It gives me much pleasure to be present at this large meeting of the North Middlesex Beekeepers' Association. I must say that we have passed a crisis in the history of bee-keeping which must be met by those of us who are interested in the pursuit. We must meet it in a broad, honest

and unselfish way. Every well-informed bee-keeper is reminded that the time for large profits to be expected from our products has passed away. Each year the price of honey has been reduced, until at the present time we find ourselves without a paying market for last year's half crop, and of the great loss of bees during the winter and spring of 1886 staring us in the face. We must not lose sight of the lesson we have learned. We must be careful and not put too bright a side on bee culture, and be prepared for future results. Let our products put their brightest side outwards by their quality and flavor. Our calling is an honorable one in the agricultural branch. The honey bee is indispensable for fertilization. Honey is a wholesome and desirable article of food, and is furnished at our doors, and if we fail to preserve it our calling is neglected and the purest of sweets is lost. With all these points in view we must use economy we have been extravagant in many of our expenditures. These we must endeavor to reduce to correspond as much as possible with the price of honey for as compared with other sweets and syrups of the market of to-day, honey is below its real value. It is evident we need much practical scientific manipulating to gain knowledge in apiculture. We have new fields to investigate, we have to change our methods of handling and managing our bees, and those who are the most successful with bees practice the most rigid economy in all its branches, and have their honey put on the market in its purest and cleanest state, with labels, and with their name and post office address on every package. I have a few more remarks to make at a future stage of the meeting. Thanking you, ladies and gentlemen, for the hearing I have received, and hoping that all members will take part in the discussions of this meeting, the Secretary will now call the roll of officers, directors and members of this association.

The election of officers resulted in the choice of Atkinson, of Ailsa Craig, as president; D. P. Campbell, of Parkhill, Vice President; A. W. Humphries, Secretary-Treasurer.

The newly elected officers thanked the members of the association for the confidence placed in them, as shown by their re-election. The President then

stated that he had some important matters to place before them. The prize list of the Western Fair had only \$10 offered for prizes, but by a committee of this association visiting the directors, the sum was increased \$150 and rooins granted free of charge, in which to hold a B. K. convention three nights during the fair. But last year this was neglected and we were asked why we had not prepared a prize list, as it was badly needed. Prizes are now being given under rules by agricultural fairs, that are to say the least, injudicious. Honey is shown in all shapes—five, ten and twenty pound packages in an old box—any way for a prize. Let us recommend to these boards of directors which way we think best to offer the prizes for honey. In sections, in cards, in jars, or cans, or any way that you may determine so that an old box of black stuff called honey will not stand as good a show for the prize as the best package of clover honey. Nine times out of ten the prizes are given to thin, light stuff, whereas it should be given to honey having color and body, and also in comb; honey sections should be well filled and nice, neat and white. There seems to be a deal of dissatisfaction at all the fairs on account of the unjust awards. I will here call upon Mr. Aches who has had a good deal of experience in that line.

Mr. Aches said:—I won't say much about prizes, but in order to have our honey get fair play we want to put it in a good shape. In the first place the judges have a good deal to do with it. The directors of the Western Fair wanted us to put it in shape, and it was our own fault if we did not. But at the Provincial Fair it was very unsatisfactory. If a committee of the right men were appointed to see the directors of the Western Fair, matters might be greatly improved for next year. What we want and must have is more accommodation than heretofore, and now is the time we must pick out our committee to meet these men to draft a scheme for putting into the prize lists the offers or rewards for honey. Whatever we do it is to our interest to get up the honey in as good shape as possible. D. P. C. says, the largest amount of honey shown takes the prize. This is not fair, for the small

bee-keepers do not stand the same

chance as the man who raises a large quantity. J. Aches says, but the small bee-keepers come in for a good display of small quantity and quality. D. P. Campbell:—Quantity takes the prize, not quality, the way the prize lists are got out. He thinks the small bee-keepers should stand the same chance as the larger. Mr. Coleman took two tons of honey to the Provincial Exhibition, in London, and did not get a chance to show it, but had to team it home again. This meeting does not approve of that way—offering prizes and not providing a place to show goods. Mr. J. Aches does not agree with Mr. Campbell regarding the quantity and quality. If the largest quantity was of inferior quality, the small quantity would take the prize. The old prize list says the largest and best display of honey in the most marketable condition, best display, best shown, best shape we can get it in for the judges to see. If it is the best honey and the best display it gets the prize.

D. Smith said:—The prize lists say largest and best display, not the quality. There is nothing to draw a man to the home fairs. He showed in Thedford once, and did not get a prize, but the man who did get it said he should not have received it, as Mr. Smith's was the best honey, but the taste did not suit that of the judge, as well as his friends. Mine was in small sections, the other in large bulk.

D. P. Campbell again, in reference to quality, said:—Judges seldom taste the honey, it was a prize on largest and best display, not the quality of it.

Moved by Mr. Donald Stewart, of Nairn, seconded by J. Withers, of Widdier, that Joseph Aches, of Poplar Hill, D. P. Campbell, of Parkhill, and Wm. Coleman, of Devizes, be a committee to draft the rules to govern the directors of fairs as to how the prizes shall be given and hand them to the secretary for publication at once.—Carried.

Mr. Glass said the judges ought to taste the honey, but that the largest and best display should get a prize too. The judges were gentlemen and wanted to do the right thing, but he would leave the rest in the hands of the this committee.

D. Stewart moved, seconded by J. A. Manning, that the Secretary send a report of this committee to the news-

papers for publication, also to the board of directors of each of the agricultural fairs in Western Ontario.—Carried.

Question—Will the association recommend feeding sugar to bees all the fall for wintering and make a market for sugar, thereby damaging the bee industry, or shall we recommend feeding our best honey, and what way?

D. P. Campbell said to feed good honey. Mr. Aches said this had been discussed in the papers pretty freely, but after a long time I have concluded that sugar can be used to advantage. If you get good honey it is good, but if you run short of honey try sugar. I have fed everything, sugar, candy and honey, but I find sugar the best if you run short of honey—though I have not used one barrel of sugar since I began keeping bees, and therefore have not had the experience that some have had. Does it pay to use sugar? Yes; it pays. I don't recommend feeding at all unless they come short. If you have to feed give them good granulated sugar syrup, but best sealed honey is the best. I fix my sugar thus: Take 3 lbs. granulated sugar, 1 quart water, mix and bring to a boiling heat. It is then ready for use.

Mr. Coleman, of Devizes, would not feed sugar at all. He went to St. Mary's once to sell honey. A grocer said he would buy honey from no man that fed sugar to his bees, for the honey was adulterated.

Mr. Aches said:—I agree that honey is better than sugar, but if you come short feed syrup.

Dr. Stewart, Nairn, said:—Feed sugar, but feed it at the right time of the year for the bees to live on, and not in the extracting season. If it is fed during extracting time it can be told in the honey by tasting.

D. P. Campbell, Parkhill, said:—Many of the public will not believe that honey is adulterated, because all the papers are preaching up "feed sugar," they not knowing why it is fed or what for.

J. Aches, Poplar Hill:—I don't think so much harm of sugar as some. I find it serves a good service. I have wintered bees well on granulated sugar syrup. Some extract from brood hives. If they feed sugar they will get sugar when they extract, but if you extract from the top storey there will be no

danger of your getting sugar. I would recommend a two-story hive as the best in use. For good thick, ripe honey leave the honey in the surplus box until sealed over. You will have no trouble selling it at home. If extracting is done from the lower story or brood frames, the honey is mixed with water that is used for breeding the young bees. Some have broods in the combs that they extract from. The surplus box is better.

D. P. Campbell asked—Will you convert D. A. Jones, of Beeton, first?

Mr. Aches—I admit that more honey could be got by extracting from the lower story, but it injures the brood to extract from it, and the honey is of inferior quality.

D. Smith said:—Discard sugar altogether. It is spoiling the honey market.

D. P. Campbell said that neither Mr. Aches nor himself were afraid of the sugar; it is the people that are afraid of it.

Mr. Aches said he had 250 colonies of bees, and had not fed 200 pounds of sugar this fall. His bees are Italians and Holy Lands.

Mr. Pickering, Forest, put in 15 hives; 13 came out good and strong, he fed them sugar syrup. He put 9 outside, 7 died, though they were in double board hives filled with chaff. This was last year, which, of course, was a hard winter on bees.

Mr. Withers said he could not get honey to feed, so he fed sugar. A man would feed his horse straw rather than see him die, even if it was not his proper food.

The President put the question—Shall we feed sugar for wintering purposes only? Yeas, 27. Nays, 8. Many did not vote. The President said that sugar was a better price than honey today, as all must admit. The reason this question was put was to get the feeling of the association as to whether we should discountenance the use of sugar or not.

Mr. Langford, of Elginfield, said that twenty years ago he fed maple sugar to his bees and saved many swarms that he would otherwise have lost. He had fed honey this fall and a little sugar, but don't recommend the sugar if honey can be got. Honey is easiest fed in the comb.

(Continued next week.)

CONVENTION NOTICES.

The next meeting of the Patsulgie Bee-Keepers' Association will be held at Arcadia, March 20th, 1886. M. J. Rushton, Sec., Raif Brand, Ala.

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BOSTON.

Honey is selling very well but prices are very low, and we are often obliged to shade our prices in order to make rates. We quote 1 lb. comb, 14 to 16 cents. 2 lb. comb, 12 to 14 cents, Extracted, 6 to 8 cents.

BLAKE & RIPLEY.

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Demand is extremely slow for extracted honey. Manufacturers seem to have taken a rest. There is only a fair demand for honey in glass jars and for comb honey. Prices are unchanged and nominal with occasional arrivals and a large stock on the market. We quote extracted honey at 4c. to 8c. on arrival and choice comb honey at 12c to 14c. in a jobbing way. There is a good home demand for bees wax. We pay 25c. a lb. for choice yellow.

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Without any material change. White comb honey in one pound frames brings 16 cents; very fancy 17 cents. Dark is slow sale. Extracted honey 6 to 8 cents per pound. Beeswax 25 to 26 for yellow, market steady.

R. A. BURNETT.

Chicago,

DETROIT.

No change in Detroit honey market, supply good, sales slow, at prices last quoted. Beeswax in good demand at better figures, 25 to 28c. per pound.

M. H. HUNT.

Bell Branch, March 1st, 1886.

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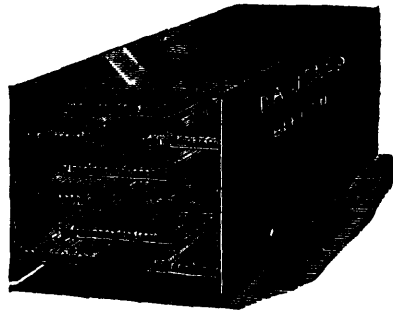
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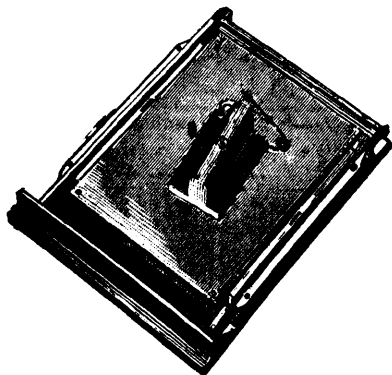
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