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The New Zealand Beekeepers' Journal.

DECEMBER 10th, 1915.

ISSUED MONTHLY
FOR
THE NATIONAL BEE-KEEPERS' ASSOCIATION OF N.Z.

PER ANNUM: 3/6 IN ADVANCE.

STONE, SON & CO., LTD., PRINTERS, DUNEDIN.

The Beekeepers' Exchange.

FOR SALE. | WANTED. | TO EXCHANGE.

ADVERTISEMENTS on this Page will be inserted at the rate of 2/- per 36 words per insertion.

WANTED (not later than 21st December), Six Dozen Nicely Filled CLOVER HONEY SECTIONS. Who can supply?

R. W. BRICKELL,
50 Castle Street, Dunedin.

ITALIAN QUEENS.—Reared from Pure Stock. Untested, 5/-; Tested, 10/-. Reduction for quantities. Cash with order. "Upon the Queen rests all that is hopeful in Apiculture." (Swarthmore.)

E. G. WARD,
C/o H. Winchester,
Lakeside, Canterbury.

FOR SALE, "EAT HONEY" STICKERS; good advertising medium; 500 for 12 penny stamps.

SECRETARY N.Z. Beekeepers' Association,
Box 572, Dunedin.

The New Zealand Beekeepers' Journal

The Official Organ of the National Beekeepers' Association of N.Z.

No. 18 DUNEDIN. 3/6 PER ANNUM.

SECTION HONEY.

Unsatisfactory as was the price and the marketing of extracted honey up till about a year ago, the price and the marketing of section honey is at the present moment in an even worse position. The improvement that has taken place in the extracted honey position will, we believe, follow the movement which has been inaugurated by the New Zealand Co-operative Honey Producers' Association just recently. This Company is attacking the position with the same thoroughness that marked its previous efforts.

One of the principal reasons why section honey has been so cheap is that all sorts and conditions of sections have been packed in one crate or case, the very finest and the very lowest grade, and all sold at a flat rate. The Association intends at its various depots to handle section honey from shareholders, and they have made a step in the right direction when they stipulate that the sections must be graded by the producers, and the various grades packed in separate crates. When the grading of sections was first introduced by the National Beekeepers' Association of America and the various Honey Producers' Associations of the States, the price of sections was in the vicinity of ten to twelve cents each. After grading was introduced, the price advanced rapidly, until to-day the average price is in the vicinity of eighteen cents, or 9/- per dozen for best grades. It is many a long year since sections were sold at anything like this rate in New Zealand, but with the introduction of proper handling there is no good reason why we should not obtain similar good results.

Nicely filled sections weighing about 15oz. sell in all the best shops at 1/- each. The producer is entitled to at least 8/6 per dozen. We believe we are safe in saying the average does not reach 6/- per dozen. Grading and the proper packing of sections will only take a few minutes per dozen, and the additional work will be amply repaid.

The Ontario Foul-brood Act reads:—"Every owner or possessor of bees, and any other person who is aware of the existence of foul-brood, either in his own apiary or elsewhere, shall immediately notify the Minister of the existence of such disease, and in default of so doing shall incur a penalty of five dollars." In commenting on this Act, Mr. Morley Pettit, Provincial Apiarist, Agricultural Department, says that an Apiaries Act to be of the greatest value for a beekeeper should be his or her own inspector, and to make this possible an educational campaign should be undertaken by the Agricultural Department.

FOUL BROOD AND OTHER DISEASES OF BEES.

(Extract from Thirteenth Annual Report of the Illinois State Beekeepers' Association.)

(Continued from March issue.)

Strong colonies of bees in the fall, with a young laying queen, and an abundance of good honey, sealed or capped by the bees, if properly cared for during winter, whether in the cellar or in chaff hives, wintered out of doors in sheltered location, seldom have pickled brood, chilled or other dead brood, or dysentery, and are the colonies that give their owner profit.

Black Brood.

Black brood is another fatal and contagious disease among bees, affecting the old bees as well as the brood. In 1898, 1899 and 1900 it destroyed several apiaries in New York. Last year I found one case of it in Wisconsin, which was quickly disposed of. Dr. Howard made more than a thousand microscopic examinations, and found it to be a distinct form of bacteria. It is most active in sealed brood. The bees affected continue to grow until they reach the pupa stage, then turn black and die. At this stage there is a sour smell. No decomposition from putrefactive germs in pickled brood. In black brood the dark and rotten mass in time breaks down and settles to lower side-walls of the cell; is of a watery, granulated, syrupy fluid, jelly-like; is not ropy or sticky, as in full brood, and has a peculiar smell, resembling sour, rotten apples. Not even a house fly will set a foot upon it.

Treatment.

Best time is during a honey-flow, and the modified McEvory plan, much as I have treated foul brood, by caging the queen five days, remove the foundation starters and giving full sheets, keeping queen caged five days longer, as great care should be taken of diseased hives, combs, honey, etc., as in foul brood.

Dysentery.

Dysentery among bees in Wisconsin in the spring of the year is often quite serious. Many colonies die with it. Dysentery is the excrements of the old bees; it is of brownish colour, quite sticky, and very disagreeable smelling, and is sometimes mistaken for foul brood.

Causes.

1. Bees confined too long in the hives, so that they can no longer withhold their excrements, and are compelled to void the same on the other bees and combs.

2. Poor winter stores, gathered in the fall from honey-dew, cider mills, sorghum mills, rotten fruit; also some kinds of fall flowers.

3. Old and especially mouldy pollen or bee-bread.

4. Hives too cold or damp. If moisture from the breath of the bees is not carried out of the hive by some means, such as through a deep cushion of some kind over the bees that will absorb moisture and at the same time retain the heat, or by some means of ventilation, so that all is dry and comfortable. If mould forms on the combs or cellar is so damp as to form mould, there is great danger the bees will have dysentery and die.

Treatment.

1. First of all have an abundance of combs of sealed clover or basswood honey in brood-frames carefully saved, and see that each colony is wintered on such food. Three or four such combs will winter a fair colony safely, if confined on those combs late in the fall, and the hive contracted to fit the same. This is one of the most important conditions for success in wintering.

2. If in the fall the bees have gathered this unwholesome honey from the abovenamed sources, it should all be extracted and either exchanged for those honey-combs, or feed the bees good honey or sugar syrup until winter stores are secured. This should be done before cold weather in the fall.

3. Hives contracted and made comfortable, whether in cellar or outdoors.

4. If wintered in chaff hives outdoors, with feed as above directed, and there come one or two warm spells during winter so that the bees can have a cleansing flight, they will not have dysentery or dead brood, and will be much stronger when clover opens.

If wintered in the cellar, the bees will not need so much honey, and if the winters are generally long, with doubtful warm spells, the cellar will be best. But to keep the bees from dysentery, so often fatal to cellar-wintered bees, they should have such winter stores as above spoken of, then the cellar kept at a medium temperature, about 32 deg. F., ventilated so the air is fresh, and no mould will form in the cellar. Fresh air-slaked lime on the bottom of the cellar may help, if it is damp or has poor air.

5. Dysentery will not appear if bees are kept on sugar syrup, or best grade white clover or basswood honey, and are in a dry place, either sheltered by cellar or chaff-hive.

ITALIANIZE, ITALIANIZE!

The best advice I can give to all beekeepers is to "Italianize." Don't wait for European foul-brood to reach your bees, but Italianize as soon as possible. You will be able to save considerable loss by doing so if you use Italian queens raised from vigorous stock. It is a very important point that some Italians seem to be more immune to the disease than others. I have used the golden bee with good results, but I cannot say that the three-banded or leather-coloured Italians will not do as well under the same conditions, provided they are of a vigorous strain. Vigour seems to count more than colour. The successful honey producer of the future must keep his queens young; that is, he must not keep his queens for more than two seasons for the best results, and I am not sure but it will pay to re-queen every year. It is very important when combating the disease to see that all queens are young. I have known several cases where the disease returned, apparently for no other reason than that the queen became old. In order to keep bees up to a high standard of vitality it requires strict attention to the re-queening part.

MORLEY PETTIT.

BUZZINGS IN BEE-TOWN.

By "CITIZEN."

These buzzings aren't made by one of the "know-all" crowd. They're just his thoughts and opinions he forms as he buzzes around on his daily toil, doing his little bit as he sees it, and willing to help and be helped in all matters pertaining to bee culture and any other culture, bar German "kultur." With that introduction, I'd like to ask "Critic" why he's so sure growing scum will not cause fermentation (p. 287). Surface scum may not do so, but I strongly suspect that scum imprisoned in the body of honey will start fermentation.

While on this subject I must express surprise at Bartlett-Miller's article (p. 290). He opens by telling us how annoyed he is at the opposition to scum, gives us a very interesting account of his experiments with the thermometer and microscope, showing clearly the application of heat is the best way to deal with scum (or bubbles), and finishes up by tilting at the graders for doing their duty (p. 284). There will be some buzzing among the export men when the numbers go up. I know I'm a sinner regarding weights, but I did my best to get 56 lbs. of honey in tins that the makers evidently thought were to weigh 56 lbs. gross.

Wet and windy weather has set in again, but conditions are not so bad as last year. I refer to the Wellington Province. I am treating more colonies than I care to think about for foulbrood by the Clayton method. I don't know if my bees are more obstinate than Mr. Clayton's, but some of them won't budge from the lower half of the frames. I'm thinking of gently spraying diluted carbolic between the frames. That ought to shift them. Caution: Don't get Calvert's No. 5 carbolic on your hands. Some strong stuff that!

I see tenders for the supply of honey amongst other things for the troopships have been called. It did not state the quantity, but I hope the authorities won't be stingy. Honey is a welcome change from the eternal jam one gets in camp is an expression I have heard from our soldiers.

MONEY IN BEES IN AUSTRALASIA.

A book bearing the above title, written by Mr. Tarlton-Rayment, a well-known contributor to bee journals, will be issued early in 1916. The sub-title of the volume is "A Practical Treatise on the Profitable Management of the Honey Bee in Australasia." Every phase of the industry is dealt with in the light of the author's long experience of the special conditions existing in Australasia, and the book will be a valuable one, in that it contains information proved to be eminently practicable by the successful results obtained through following the methods advised.

A large number of diagrams drawn by the author, and many other interesting and practical illustrations will appear in the book, making it particularly attractive. Announcement of publication, price, &c., will be made in these pages at a later date.

MORE SCUM.

By H. BARTLETT-MILLER, Kihikihi.

After reading the November issue of the Journal, I am more than ever convinced that my article upon scum under the microscope is correct, and that the letter of Mr. Stephen Anthony goes a long way, if, indeed, not all the way, to explain Major Norton's complaint re the scum upon honey after it is re-melted for bottling in England. Mr. Stephen Anthony has also let the cat out of the bag as to how a great deal of scum, NOT bubble scum, gets into our output—viz., by stirring for the purpose of hastening granulation without skimming. A felt jacket around the galvanised iron tanks is not altogether the foolish idea it appears to be at the mere mention.

Now, I feel convinced that we shall find that the white, milky froth seen upon the tops of our 56-lb. tins in the grading store is by no means the same kind of scum of which Major Norton complains. I am quite sure that the scum of which he complains is the aggregation of all the particles of refuse imprisoned in the honey by cold before granulation, and still more effectually after granulation, and which, except under a lens, would be invisible as scum in the grading store.

At the end of my article the Editor remarks: "See p. 284 for comment on last par. of this article." Now, I submit that the Major's letter refers to dirty scum, whereas my last par. states that England never turns a hair at such clean (mark the word clean!) scum. It is this kind of scum for which I am out to combat our inspectors returning honey to the producer on the score of "scum." I submit that honey not sufficiently strained or settled, and containing more or less foreign matter incorporated while going through the paddling process, would necessarily show quite a number of such particles among the scum on the honey at the grading depot.

Seeing that the 20 lbs. of scum at Bristol can be sold at 16/- per cwt. for confectionery, the thought arises in my mind that to be saleable at any price it must first of all be melted. Surely, then, since white scum this end melts down into a good quality of honey, the bare fact that the Bristol scum is worth only so low a figure is proof sufficient that the graders and Major Norton are complaining of two different things.

I submitted the idea of scum "growing" to a practical bee master, lately Professor of Chemistry at Sydney University. As chemists we both knew that even yeast will not develop in any sugar over a certain density, and until honey is sufficiently diluted with water to ferment no growth of any kind can by any possibility develop within or upon it—i.e., from the honey substance, and when discussing scum we are not talking about honey liquid enough to ferment.

If any beekeeper cares to send me a sample of any kind of scum or honey for examination for pollen grains or other matter, I will gladly send them a report, provided stamped envelope for reply be enclosed. By this means they will be assured on several matters that mayhap they are at present dubious about.

THE PLACE OF THE SCALE HIVE IN THE APIARY.

By JAS. ALLAN.

Seven or eight years ago the writer indulged in the luxury of a scale hive in his apiary. At that time it was a luxury, now it has come to be a necessity. The scales I use are a set of Fairbanks platform scales, weighing up to 500 lbs. I selected them because I had a set not doing much and immediately available. They suit the work very well. The platform is just the right size to accommodate a bottom-board. My honey house has a brick chimney built outside on the east end of the building, and the stand for the scales is in the chimney corner. They are thus not much exposed to the weather.

At first the use of the scales was confined to giving an indication of the amount of inflow of nectar each day, and was in fact only to satisfy curiosity. Gradually, however, its value as an indication of what was being done over the whole apiary became more apparent, and soon it established itself as a necessary and valuable part of the apiary equipment.

Let me try and point out some of the benefits that come from the use of the scale hive. First among them I place its power as an educating factor. The apiarist may see his bees flying at different times of the year, and in different directions, but he cannot tell to what purpose unless he can tip the beam. If at the end of a busy day he finds that good work has been done, well, he wants to know the source of it and all about it, and thus it adds a spur to find out more about the flora of his locality. Preconceived ideas with regard to the honey flow often get a rude shock from the scale hive. It has taught the writer, for instance, to expect his harvest in from a fortnight to three weeks, and that he is entitled to practically nothing that the bees gather outside of that time. The tendency of that knowledge is to sharpen one up as the time of expectation comes round. Another very decided benefit comes at time to fix up for winter. I used to be content with a ramble over the combs, and decided on appearances whether a hive was heavy enough to go through all right. Now I put the scales on to the apiary barrow, and wheel in behind each hive in turn, and, taking off the cover, lift it from the bottom-board on to the scales, register the weight, and mark it with a heavy pencil on the end of the hive. After that is done, well, it is not a case of guess—I simply know, and that is much better. When spring-time comes I repeat this, and thus have all the information as to where feeding will be necessary. Some will say that is a lot of labour. It is a day's work each time; but there is a lot of satisfaction in it, and after all it is much quicker, and not nearly so nippy as examining the colonies in late autumn to gauge by the eye how they stand. With us the scale has become a necessity, and I would not be without it, even if I had to sell half a dozen colonies to buy it.

MEETINGS.

A meeting of the directors of the New Zealand Co-operative Honey Producers' Association was held in Wanganui on Wednesday and Thursday, November 17th and 18th, when there were present: Mr. H. W. Gilling (Managing Director), Messrs. Ireland, Nicholas, Wedde, Brickell ,Pink, and the Secretary (Mr. F. C. Baines).

After the routine and general business had been disposed of, the question of the handling of sections came up for discussion, when it was resolved that the Association will handle section honey at its three depots during the coming season. The sections, however, must be graded by the producers, and the various grades packed in separate crates.

In order to more effectually handle the trade in honey for local consumption, it was decided to open two bottling depots in addition to the principal one at Normanby. In the Waikato a building has been leased a short distance from Hamilton, and the necessary plant is now being installed. This depot will be uder the supervision of Messrs. Davis, Hutchinson, and Trythall. Another bottling depot is to be opened shortly in or near Christchurch, under the supervision of Mr. Ireland and two others. As soon as suitable premises are secured the necessary plant will be installed here also. A commencement will be made early in the year to advertise our products in some of the principal towns of the Dominion. The advertising has been left in the hands of an advertising expert, and we expect good results will follow. It was decided to accept liquid honey at the bottling depots, and the standard density for it was fixed at 1.420. If honey is sent in below this figure, or is in any way out of condition, it will be re-conditioned at the cost of the supplier.

A report on the advertising campaign now being conducted in Great Britain by the Bristol and Dominions' Association was laid upon the table. This work will be prosecuted with increasing vigour during the coming season.

It was decided that the honey shall be subject to the same treatment in all three bottling depots.

Everything is now well on the way, and it only requires a good honey crop to make the success of the Company assured.

A well-attended meeting of the Poverty Bay Beekeepers' Association was held on the 20th November, Mr. Geo. Stevenson presiding. It was unanimously agreed to take advantage of the amendment to the Apiaries Act re local inspection, and have one or more of the members to apply for the position of local inspector. Mr. B. L. Scott stated that he had already applied, and his application was unanimously endorsed. Mr. Young said he also intended to apply for authority to work part of the district. At the meeting attention was drawn to the fact that a reference to the minutes of a meeting of the Association held on August 7th, 1909, showed the names of members appointed to meet the Hon. T. Mackenzie, Minister for Agriculture, re the appointment of local inspectors, but the movement was ridiculed by several outside the district. But it is a truth, as was remarked, "that all things come to him who waits."

MEAD, AND HOW TO MAKE IT.

Probably few people are aware how delicious, wholesome, and refreshing a beverage is to be obtained at comparatively little trouble and cost from honey. It is really surprising that a beverage, actually superior both as regards flavour and wholesomeness, to many of the light foreign wines imported into this country should not be more generally known and used.

From very ancient times mead was a favourite beverage, and is frequently mentioned by old writers under the name of Metheglin or Hydromel. It is possible that in these olden days a more excellent method of manufacture was practised than that in use in later times. It was certainly held in very high estimation, and its praises sung in no uncertain strain, while it is not improbable that as malt and other liquors gradually displaced it in general use that the art of producing it was to a great extent lost.

It appears to have been in use and greatly esteemed among the Grecians and Romans, and to have been for many centuries throughout Europe the beverage in general use. At the Court of the Ancient Welsh Princes it is said that the mead-maker took precedence of the physician, while by some nations it was held to be the nectar of heaven. In this country we know that it long formed the staple drink alike of prince and peasant.

The question, however, with which we are most concerned is by what method we can best produce a wine which, while offering the two-fold advantage of being both wholesome and economical, shall, at the same time, in excellence of quality and flavour rival the nectar of the ancients.

The best time of the year to commence operations is from November to January, as the process of fermentation is then completed during the summer months, when the temperature is the most suitable.

The most convenient receptacle is a cask, but it is of the greatest importance that this should be perfectly clean. As it must be quite free from mould inside, it will be best, in additon to the usual cleansing, to well scald it immediately before use, and then rinse out with antiseptic solution, such as bisulphite of lime, which can be obtained properly prepared from a chemist or brewery. A quart of the solution is sufficient for a nine-gallon cask. Rinse out well with hot water afterwards.

The following is a good recipe:—To every gallon of water add three to four pounds of honey. Boil for half an hour with the peel of a lemon to each gallon. When luke-warm (about 90 deg.) place it in a cask, add a little yeast, and to every five gallons 1oz. of phosphate of ammonia and cream of tartar. Place the cask on its side, and over the bung-hole, from which the cork must be left out, place a sand-bag to allow the carbonic acid gas to escape.—English Exchange.

HONEY VINEGAR.

A delicious honey vinegar may be made from the odds and ends and waste honey around an apiary. One of the peculiar qualities of this vinegar is that it does not tarnish cutlery or stain table linen, and it is, therefore, largely in demand in

homes where it is obtainable. Make as follows:—Take an ordinary beer or spirit cask with the head knocked off. Stand in a warm corner under a roof to keep off rain. The cask may be started when only partly full, and added to from day to day as opportunity offers through the season. The mixture should be about one pound of honey to a gallon of water. The washing water from extractors, tanks, and other utensils, and from cappings and old combs may be used. In fact, any honey which is of no other use may be converted into vinegar. It is well to cover the top of the cask with a piece of cheese cloth to keep out insects, leaving not less than two inches between the mixture and the cover. The vinegar is made by the action of the oxygen in the air converting the sugar in the honey into acetic acid. In two or three months, when fermentation has ceased, a large vinegar plant will be noticed on the top of the cask. Without moving the cask the vinegar should be drawn off near the bottom. The taste will disclose when it is ready for bottling.

Good Things from Everywhere.

"In the Multitude of Councillors there is Wisdom."

Send us some ideas. You may do the other fellow some good and benefit yourself by the exchange of experiences. Do not say you cannot write; it is the ideas which count.

Any Association is just what its members make it. To meet once a year, pay a few shillings in subscription, appoint a few luckless individuals on committees, and expect them to improve the conditions of the industry without paying them and without thanks, is a poor way to accomplish anything. What we want is more enthusiasm amongst the members.

Get your section honey off the hives just as soon as the flow of nectar slacks up to avoid propolis and travelstain. But sulphur it, supers and all, before storing. Otherwise better leave it on the hives until ready to scrape and case it. Better sulphur it then.

Sell your comb honey by the case, not by the pound. It is generally sold to the retailer by the case, and always retailed by the section, not by the pound. Your retailer, and sometimes the wholesaler, figures on making a profit on the weight, and an additional profit in selling by the section. Time that some of these profits stuck in the hands of the producer.

Master Roy Parrant has sent in three new subscribers to the Journal, and we had much pleasure in posting him a day or two ago Tickner Edwardes delightful little book "The Lore of the Honey Bee."

A large number of extractors, a quantity of foundation and other beekeepers' sundries were on board the ill-fated "Indian Monarch" when she was destroyed by fire and abandoned in mid-ocean a few days ago.

The Chief Librarian, General Assembly Library, Wellington, requires another copy of each of the first and second

issues of the Journal. Will some reader be good enough to send to Box 572, Dunedin, a spare copy of either or both July and August (1914) issues?

One of the causes which contributed to the low price of honey in the past has been that the producers sell at wholesale prices for relatively small quantities—that is, they will supply their neighbours with from one to ten pounds of honey at the same price as they will sell to a merchant in ton parcels. Calculate a little on the cost of the tins, the time taken to pack a ton of honey at the very lowest rate of wages now ruling (1/- per hour), and see how much profit there is in it at 4d. or even 5d. per lb. retail. It reminds one of a story told by the seller of incubators a short time ago. He used every argument in favour of his incubator, and when all else had failed he said: "Look at the saving of time," and the careful farmer replied, "What is time to a clucking hen?"

Query.—My bees have filled the super with honey which is too thick to extract, and I want it in pound sections. Is there any way of bluffing the bees into doing the job for me?—Beginner.

Comments on Passing Bee Events.

By CRITIC.

Page 281.—The Editor says: "It has been suggested by some correspondents that more prominence has been given to the scum question than the subject warrants." The statement of Major Norton (p. 284) goes to show that we must give this or any other question that is detrimental to the interests of our honey export trade every prominence until we discover and eliminate the cause. It is only by a thorough ventilation of such subjects that we can hope to bring to light some satisfactory means of overcoming difficulties. To my mind the most puzzling feature in connection with the so-called "scum" is its growth down below the surface of honey, for which no theory of air bubbles, &c., yet put forward accounts.

Page 282.—Mr. Hobbs seems to have misunderstood me, and concludes that I meant he should re-queen when the reigning queen is laying from 2,000 to 3,000 eggs a day. Not at all; my meaning is quite clear, and that is, instead of allowing his colonies to remain queenless for ten days, and then only giving them a queen cell, if he gave them a laying queen on removing the old queen, he would save the great loss of bees I suggested.

I am surprised that Mr. Hobbs should keep queens so long past their prime as to be only capable of laying in three weeks as many eggs as a fair queen will lay in a day. They should have been superseded long before they reached that stage. Mr. Hobbs' experience in introducing queens to hybrid colonies—that they "hardly ever" accept them—is, to say the least, most extraordinary—so extraordinary, in fact, that I think there must be some mistake. I may state that I must have introduced thousands of queens to hybrid colonies, and

that it has never once occurred to me that there was any more difficulty with them than with pure races, and I may further state that I have never heard of such complaint before.

Page 284.—Some of our honey exporters need to be much more careful in passing samples of honey in future if they wish to encourage the export trade. It should, however, not be considered surprising that a few matters need adjusting at the outset of the new conditions, but those responsible should take heed at once of Major Norton's statements of matters that require attention.

Page 285 (Defective Honey Tins).—The bursting of bulk honey tins may readily occur through the shrinkage of unseasoned timber in the cases. If cases are made of timber liable to shrink, and the tins nicely fit when first put in, they are bound to burst at the seams before they reach the Home market, however well they may be soldered.

Page 286.—I never could see any advantage in hurrying the granulation of honey by artificial means; therefore, never tried it. I am glad to see that Mr. Cotterell has given us his experience of the method advocated, which appears to have resulted rather detrimental to the honey so treated by him. It will be well for others to watch the results of such treatment.

Page 289.—The most encouraging item of news that has appeared for a long time past is the decision of the Department of Agriculture to depart from its hitherto go-as-you-please method of dealing with the greatest obstacle to progress—the box-hive man—who is to be prosecuted without notice for keeping his bees in other than moveable comb hives. Amen! I hope local inspectors will prove a success.

Pages 290-2.—Mr. Bartlett-Miller's efforts to solve the "scum" question are worthy of commendation. If, as previous investigations point to, and Mr. Bartlett-Miller's researches appear to confirm, the so-called clean scum is composed largely of air bubbles, then there can be little doubt that the application of heat to a mild extent while in the maturing tank up to the time of tinning will tend to cause such bubbles to rise to the surface and burst. It is to be hoped that Mr. Miller will continue his investigations with different grades of honey until he has proved beyond doubt the temperature honey should be at the time of tinning in order to eliminate all scum, and also whether such heat has any effect on the texture or granulation of it. Mr. Stephen Antony (page 295) has also rendered valuable information re "scum."

Pages 292-3.—Although, as we all know, the provisions of the Apiaries Act have not been administered nearly so strictly in this part as they should have been, I think "Get Busy's" strictures on the Department are rather harsh, and his comparison of ours with Californian inspection of apiaries a good deal overdrawn in favour of the latter. To confine myself to inspection: "Get Busy" thinks an inspector should go through every hive and examine every comb of brood the same as he says he has seen Inspector Wagner do. I have been wondering whether he has made a mistake. Now, I feel satisfied that it will take fully ten minutes from the time a person commences to examine a brood chamber of a normal

colony for disease—that is, from the time he administers smoke until he closes down the hive, especially when he goes on hour after hour at the same work. On this calculation the examination of 150 colonies would take exactly 25 hours, which, working from 8 a.m. to 5 p.m., with one hour for dinner (quite long enough for any man), would take three days one hour. "Get Busy" must have been tired as a looker-on when the job was finished.

It will no doubt surprise "Get Busy" when I suggest that three parts of the inspection of an apiary for disease should be done before the inspector opens a hive. If he is not up to this, then I should not put much faith in him as an inspector. For instance, going into an apiary for the first time, if an inspector should find it, together with the honey house and workshop, in good order, it would indicate at once that an intelligent and careful man was in charge, which a few minutes conversation would or would not confirm. If there was any doubt, then a pretty close examination should follow; but if the person was, as his apiary indicated, one who took the deepest interest in his bees, then he would at once say when asked whether he had disease or not among his bees. Whether or not, an examination of, say, 20 colonies in different positions in an apiary of 100 should give an inspector all the information he needs to instruct the owner regarding treatment, not of individual colonies, but to get rid of disease from his apiary as a whole.

SWARM CONTROL.

By J. ALLAN.

You will note that Mr. Jacobsen works his scheme with very strong colonies on the verge of preparation for swarming. To such colonies the spread of the brood would not be dangerous. I would prefer using ten frames in each super, and also not putting any brood into the third super, which goes in the centre above the excluder. It is best to make the centre super only empty combs, and thus have a clean cut-off between the queen in the bottom and the brood on top. Where there is brood just above the excluder, the queen is apt to treat the new position as an extension of that above, and sulk a little. This is especially noticeable in the Alexander method of swarming, where, when the brood is raised above the excluder, she will often sulk for days, but if a super of empty combs is put in the middle she will get to work at once. I like Mr. Jacobsen's method, though I am not sure it will do all he expects of it. It certainly is a great help in preventing swarming.—I am, etc.,

Correspondence.

(TO THE EDITOR.)

Sir,—"Critic's" criticism of my statement that bees can puncture the calyx of the foxglove, made me look up an old Nature Notebook. There I find the following interesting note, together with illustration made at same time:—"January 22nd, 1885. Watching bees make incised slots in the Corolla of a

Foxglove over the Ovary, also Mako-makos, slitting the corolla lower down to get at the nectar.'' This observation, please note, was before bumble bees were introduced into South Canterbury. I was a careful observer at the time, and remember well watching the gnawing operation, and that the holes were not made by the birds I was at the time convinced. Nor is it remarkable that they should do so, when we think of the dirty jobs we beekeepers sometimes give them in gnawing down old combs. What is remarkable is why their intelligence does not lead them the one step further needed to gnaw the skin of the ripe grape. The gnawing of the foxglove is probably an hereditary habit, resorted to only in a time of dearth, as all flowers with a calyx and a corolla are altered flowers, and in former ages may have had more available nectaries at their bases. Most petiolar glands at the base of blossoms that secrete nectar are looked upon as embryological relics of such former flowers, like the gill-slits that sometimes still appear in man. In fact, the presence of a petiole or a calyx would suggest to a Paleo-botanist that the plant had undergone in the course of ages great changes in its endeavour to coerce and keep pace with the spirit of the Universe to help it in the race of of life, and the presence of nectar at the base would still further the proof of its vestigial remains.

The following interesting letter in ''Gleanings'' of August 1st, by Mr. E. G. Baldwin, of Florida, makes my meaning clearer, though strangely he has missed the point when he says:—''No good could therefore possibly result,'' etc., for the falling off of the stamens with the corolla prevents self-fertilisation, and the ovary opening later assures cross-fertilisation, and is a fairly common contrivance of Nature towards this end; and, further, so long as vestigial remains are reproduced, that plant can ''revert.''

''Some Oddities in Natural Laws.''—''A few days ago, even before we were up, our attention was drawn to the south window of the bedroom at our home, where, through the open casement, was wafted to us the sound of humming bees. I arose to see the cause. On examination, it was at once clear to me that the bees were busy on a flowering shrub; the busy little workers were swarming over the plant, which is a jasmine (Jasminum officinale, to be exact). It is half shrub, half climber, covered much of the summer and fall with myriads of snow-white blossoms, each about half an inch in diameter at the outer edge of the petals. It is rather fragrant, though not nearly as fragrant as the star jessamine, with which it is sometimes confused. Now, we know that the petals of this jasmine are too long and narrow for bees to reach the honey at the base of the corolla; only butterflies, humming birds, etc., can reach the base of such deep petals. Consequently, we had not thought that honey bees would be attracted to the flowers at all. Imagine if you can our surprise on seeing the bees hovering about and walking on, not the blossoms, but on the bases or stubs (calyx or ovary of the blossom) left after the petals had fallen off! The white petals fall very early, leaving the vine full of the green bases or stubs, in the bottoms of which we could distinctly see a tiny drop of nectar showing. It was for this nectar that the bees were visiting the shrub.

They were tarrying lovingly over and dipping into the bases, not merely running over them as they sometimes do when in quest of pollen. They were getting honey, too, for their distended bodies showed that their visits were not in vain. The interesting thing to me was this: Why does Nature allow an apparent miscarriage of her plans? For the petals in this jasmine form a star-shaped tube, which, when it falls, carries away with it also the stamens that adhere closely to the inside of the petals, and so carries the pollinating elements of the blossom. No good could therefore possibly result to the blossoms from any visit of the bees after the petals were gone. The bees, we might almost say, were merely looters, taking what was left, but paying no toll of fertilisation to the plant for the nectar obtained. The blossoms would have been fertilised equally well without the visitation of the bees. Why is it so? Is it some slip in Nature, some abortive condition of a principle otherwise effective and efficient, world-wide in application! Our wonder is increased when we reflect that this shrub is not the only instance of such abortion, if such it be, of a wide principle. The cotton and the partridge pea of Northern Florida are both illustrations of a similar oddity. In these two plants it is not the blossoms that secrete the nectar, but small petiolar glands or leaves at the base of the blossoms.

Peel Forest. W. E. BARKER.

(TO THE EDITOR.)

Sir,—A very simple way to prevent swarming is to take as much brood as the strong colony can spare, and give it to the weaker. At the same time remove queen cells, if any, give more room to store honey; this method builds up the weak ones and takes care of the brood, and will nearly always prevent a strong colony from swarming. Of course, the queen must be a good one, not necessarily a young one; some queens are at their best in their third season, and better than a duffer in their fourth. I like to see a well-shaped, bright-coloured, active Italian queen; a short stumpy one, and pure Italians that are very dark, caused by a slight chill in the grub stage, are nearly always poor queens at any age. As it takes more patience than Job had to be a beekeeper, I do not think anyone ought to keep black bees when Italians are available.—I am, etc.,

A. BARRETT.

Wainui, November, 1915.

(TO THE EDITOR.)

Sir,—A contributor of yours, "Critic" by name, answers a question which you tacked on to the end of a few remarks I made concerning "scum." I just want to make it plain to "Critic" that I did not ask the question because I know the answer. But it is different to "Critic's." "Does growing scum cause fermentation?" "No, it does not," says your contributor. Yes, it does, because I've seen it and proved it, says

A. C. ASKEW.

Manakau, November, 1915.

(TO THE EDITOR.)

Sir,—I had hoped to have seen Mr. Aston's paper on "The Food Value of Honey," which was read to the Beekeepers' Conference in Wellington, appearing in the Journal in extenso, for I am under the impression that, as published in the Journal of Agriculture, it is somewhat condensed from what was originally read to the Conference. It almost gives one the impression, as at present published, that the author held a brief for sugar over honey, the former being the cheaper article of the two, the number of calories contained in each being approximately the same.

Now, Sir, I contend the "food value" of any article of diet does not necessarily depend upon the number of calories it contains, but on the number of those which can be assimilated by the individual consumer.

To those who have a perfect digestion, of course, it does not matter whether they eat sugar or honey. I would like to ask, however, how many people possess such a digestive apparatus within themselves? To a very large proportion of the population the "food value" of sugar, in the sense I have indicated, is of very little or even negative value, seeing a very large amount of the same is converted into acid and not tissue. This is without doubt one of the main causes of so much rheumatism prevailing. I have always been given to understand that starchy substances and cane sugar have to be converted into what is known as "grape sugar" before they can be assimilated. Honey, however, is already a form of grape sugar, hence the desirability of eating it instead of sugar.—I am, etc.,

VINDEX.

[The reason why this article has not been published is that it is to a large extent technical, and leaves one with the impression that butter and sugar are of greater food value than honey. Readers would not be particularly interested in its publication in extenso. "Vindex" hits the nail on the head when he says that honey can be assimilated at once, and therein lies its food value.—Editor.]

(TO THE EDITOR.)

Sir,—Beekeepers are keenly looking forward to someone being able to give them some definite method of treating the crop of honey, so as to have a nice fine grain, and also being clear of effloresceence. We take it for granted that for fine grain we must stir shortly before the honey candies; then to be free from froth we must tin while the honey is fairly warm. It seems to me, after reading the November Journal, that we must put up with one of the evils to enable us to secure the other. As the honey handling season is drawing near, perhaps "Critic" can suggest some way out of the difficulty.—I am, &c.,

P. M. McKAY.

Rockville, Collingwood.

[In next issue we will publish the method adopted by the Director of the H.P.A. at their recent meeting.—Editor.]

SUBSCRIPTIONS.

The following subscriptions have been received during the month:—Messrs. Jas. Allan, J. W. Annan, Louis Anderson, R. J. Bibby, F. Buck, T. Chave, J. C. Cooper, J. Collins, R. Curtis, A. Carroll, P. Darke, Chas. Fogden, H. W. Gilling, C. L. Grant, John Gracie, J. C. Gibb, P. B. Holmes, E. N. Honore, A. Ireland, P. James, C. A. Jacobsen, T. Le Comte, F. W. Lunt, D. H. Marsh, P. M. McKay, D. McLean, E. J. Nichol, R. H. Nelson, W. Parrant, Miss W. Poulton, Mrs. M. Palmer, Messrs. E. Parkin, Chas. Robinson, Jas. Sim, R. Scarlett, Robt. Stewart, Robt. Walker.

Right through the American States the beekeepers and supply dealers are engaged in an extensive honey advertising campaign. One of the cheapest and most successful of their methods is the use of stickers on all letters, papers, and parcels sent through the post. The National Beekeepers Association has imported thousands of these "Eat Honey" stickers, and invites every beekeeper to use them freely. Grocers would use a few hundred if they were asked. Will you help? The stickers are just like the heading, gummed ready for use, and printed in bright red on white. A parcel of 500 sent post free on receipt of twelve penny stamps. How many shall we send you?

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19,000 delivered to date. Who's next?

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