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West Maitland, N.S.W.: E. Tipper, April 28, 1903

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HE AUSTRALIAN
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THLY JOURNAL, DEVOTED TO BEE-KEEPING.
blished by E. TIPPER, West Maitland; Apiary, Willow Tree, N.S.W.
the Australian Colonies, New Zealand, & Cape of Good Hope.

1 APRIL 28, 1903. PER COPY, 6D.
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N. S. W. BEE-FARMERS' ASSOCIATION.

OFFICERS:—

President:

Hassell Hall, M. A.

Vice-Presidents:

F. W. Penberthy, T. Bradley.

— Eather

Secretary & Treasurer.

E. Tipper, J.P., Willow Tree.

Committee:

Messrs. E. J. Rien, J. Pennington, F. Bolton, J. R. W. Gaggin, G. Packham, E. Dowling, J. R. Irvine, F. Gersback, J. Anderson, W. Gee, P. Riddell, W. E. Bagot, W. Niven.

RULES & OBJECTS.

1. The careful watching of the interests of the industry.
2. To arrange for combined action in exporting honey to relieve local glut when necessary.
3. To advise members as to suitable localities for establishing apiaries.
4. Any beekeeper can become a member on approval of committee, subscription 2/6 per annum.
5. That every member with more than 50 hives shall be allowed an extra vote for every additional 50 effective hives.
6. No member be eligible for office who has less than 50 effective hives, or his subscription is in arrear.
7. The Association to consist of a central body and district branches affiliated with it.
8. The principal officers be such as will undertake to meet each other in committee at least once in twelve months.
9. The officers shall consist of President, Vice-President, Treasurer and Secretary, and Executive Committee.
10. After the first election of officers, arrangements to be made by the Secretary to call for nominations for office-bearers, and issue ballot papers prior to the next annual meeting.
11. Supply dealers or commission agents cannot become members.
12. Members unable to attend meetings or conventions can authorise or nominate any member they know will be present to vote for them on any subject brought forward. Such vote or votes to be in addition to the member's present own vote.

Printed and Published by E. Tipper, proprietor, High Street, West Maitland, N.S.W.

Registered at the General Post Office Sydney for Transmission through post as a Newspaper.

E. TIPPER,
EDITOR & PUBLISHER,
WEST MAITLAND & WILLOW TREE.

THE AUSTRALIAN BEE BULLETIN.

A MONTHLY JOURNAL
Devoted to Beekeeping —
Circulated throughout the Commonwealth of Australia — New Zealand & Cape of Good Hope

MAITLAND, N.S.W.—APRIL 28, 1903.

The following is a list of advertisers in our present issue :—

Supply Dealers.

R. K. Allport, Chuter St., North Sydney.
A. Hordern & Sons, Haymarket, Sydney.
The W. T. Falconer Manufacturing Co:, Jamestown, N.Y., U.S.A.

Queen Raisers.

W. Abram, Beecroft.
Jas. McFarlane, Lyndhurst, Victoria.
J. W. Miner, Ronda, N.C., U.S.A.
R. H. Jervis, Moss Vale, N.S.W.

Honey Tins.

Chown Bros. and Mullholland, Ltd., Thomas St., Ultimo, Sydney.
W. L Davey, Plenty Rd, South Preston Victoria.

Miscellaneous.

A. Hordern & Sons, Haymarket only, Sydney.
Allen & Co, 242 Sussex street, Sydney
P. J. Moy & Co., 161 Sussex St, Sydney

THIS issue commences the twelfth year of the existence of the *A. Bee Bulletin.* We cannot do better than reprint the remarks we made at the commencement of last years' issue:— To those who kept the numbers and volumes as they evolved year by year, and have them bound in their book shelves, it must be, as with us, a great source of pleasure and instruction to occasionally peruse them, and refresh the memory with ideas and information apparently forgotten, also to mark in what way the industry has developed. First, the wonderful tales by enthusiastic lecturers, backed by enterprising supply dealers, then the revulsion against paid Government servants competing against struggling men, or men who derived their greatest support from the labor and money they had expended on the industry; then the great hopes of the English market, the efforts of the Export Board. The successive bad seasons, successive inventions or discoveries, or new ideas, that promised to revolutionise the industry—and didn't, and are now forgotten, or nearly so. Do you blame us if we have a feeling of pride we have travelled so far? We will tell our readers what we think is the reason. We have always given every side—the bad and the good. Has it been a money-making concern? We answer with an emphatic NO. As representing a comparatively small industry the Sydney general advertisers will not patronise the A.B.B., and there are many subscribers who are much in arrears. That it has paid the actual expense of printing, leaving a small margin for

editorial work, is all that it has done. We are not supply dealers, and so get no advertising gain thereby. The A.B.B. relies on subscriptions and advertisements alone.

The past year has been a chequered one. A few have done well, others nothing at all. None of us can control the seasons. We may plan our best, and so avert much evil, and secure much good, but the great Lord of Nature who does all things well, is the ruling power, and we must quietly submit to his ruling.

We conclude by again thanking our many friends for their past favors, and trust to have a continuance of same, promising if possible to do better for them to do so, and wish every member of the industry every prosperity and success.

Indigo is said to be good for bee-stings or any insect poisoning.

Mr. Penberthy believes that if we breed from bees that are acclimatised, we shall keep out spring dwindling.

It is said that when the eyes are tired from long study and reading, a little honey rubbed on the lids at night will relieve them. Try it?

There was a good display of honey at the Maitland Show, but not near as much as in former years. Mr. Munday had some splendid samples of wax, and there was a fair display of bee appliances.

During the late slump in prices of honey in Sydney, a Melbourne firm purchased a large quantity and took it to Melbourne. As the Sydney market began to harden, much of it was again brought back.

Owing to being away in Sydney during the Bee Farmers' Convention and after, we had to let the answering of our correspondence in abeyance for a time. We trust our many correspondents will accept this apology for any remissness.

We acknowledge receipt of grand Federal Capital Sites number of the *Farmer and Grazier*. It contains numerous splendid views of the different towns competing to be the capital city of the Federal colonies. The price is 1/-, but it is well worth it.

Hives painted red in winter or early spring draw the sun's heat, and thus brings the swarms on earlier and stronger by the encouragement of earlier brood rearing, and better preparedness for the first spring honey or pollen gathering. In summer paint white to minimise the heat of the sun's rays.

We keep a bag of lime, and when we see the ants getting the upper hand, throw a shovel or two about the hive. *Or* make a hole in centre of nest, pour in bi-sulphate of carbon, and cover with a large dish. The fumes descend and destroy the larvæ, *Or*, in winter time, put a lot of straw or rubbish on nest, then stir up the ants, and set fire to the straw, this destroys the ants that look after the ant larvæ in cold weather, and so gets rid of them.

While away from home after the Convention, we visited several farmers and apiaries, both in the Hunter and Hawkesbury rivers. What a wonderful change there was from the country on the upper parts of the Hunter. Grass flourishing luxuriously, beautiful running streams, and horses and cattle in splendid order, while in the district we had left, the little grass that had started some few weeks ago, was shrivelling up, and the country looked quite bare. In most of the apiaries there were reports of decrease of numbers, mostly attributed to want of pollen.

While in Sydney, and visiting several farms both on the Hunter and Hawkesbury, in addition to conversation at the Convention, the peculiar ways of different commission agents was the theme of discussion. While some thought their competition among themselves was the producers best friend, their coalition, if such was a fact, was the producers' bane. It is a matter which beekeepers should seriously consider over before the next convention.

The Royal Agricultural Society's Show this year had the best recorded attendance yet. On Good Friday there were 60,000 persons present. The honey section was very nice. Mr. Abrams again secured champion prize for trophy, also other prizes for honey, bees, &c. Mr. Trehair had a very nice display—non competitive. Among other contributors were Messrs. Roberts and Seebrook. Messrs. Hordern had a splendid display of apiculture supplies, which were well conned by the general public.

N.S.W.
BEE FARMERS ASSOCIATION.

ANNUAL MEETING.

The annual meeting of above took place at Tattersall's Chambers, Hunter-street, Sydney, on Wednesday, April 15. Present:—Messrs. H. Hall in the chair, E. Tipper, Hon. Sec., Penberthy, Donnelly, Ager, Shawyer, Gee, Handcock, and Kerr.

After some interesting and instructive conversation on various matters, the annual report as follows was read and adopted on the motion of Mr. Eager, seconded by Mr. Gee:—

Annual Report.

For the past twelve months no matter of great importance has taken place in connection with the industry. The effort of Federation. in opening the ports of the colony to each other, has equalised prices realised, and either that or the failure of the honey flow in many parts through the drought, or the high prices of butter, caused a good rise in the price of butter up till the end of December. Some parts being blessed with a good flow, and all wishing to avail themselves of the good prices quoted. a rush of honey was made into Sydney, causing a slump in prices, from which they have scarcely started to recover, but which it is confidently hoped they will before the winter sets in.

There being no need of special meetings during the year, none was called.

The carriage of empty tins free by rail, which was granted by the Railway Commissioners after ast convention, was disputed during the year by the authorities at Darling Harbour, but after some correspondence had taken place, (copies of all of which I have here) the matter was satisfactorily cleared up. Let us remember that there are interests still existing, whose aim is greatly to increase the number of beekeepers in the colony. Such increase means greater increase of honey and lower prices, especially in the face of the small chance there is of honey exportations Your interests lies in combating such, and supporting the N.S.W. Bee Farmers' Association and the *A. Bee Bulletin.* Who should control the industry? Government officials supply dealers, or those who are endeavouring to get a living by honey raising?

The subscription to become a member of this association is only 2/6 per annum.

There are several matters of very great importance to the industry to be brought before you this afternoon, and you are most earnestly requested to give them your best attention and consideration.

E. TIPPER, Hon Sec.

F. W. Pemberthy, Vice-Chairman.

Also the balance-sheet, which showed a deficiency of £2 15s 6d. This was subsequently reduced by subscriptions being paid, 30/- to 22/6.

Correspondence and printing were received and read from Messrs. P. Riddell, W. Handcock, H. Stacey, J. Anderson, J. Pennington, J. E. Taylor, J. W. Irvine, S. T. Main.

The following suggestion of Mr. Donnelly was then considered:

You beekeepers who are near the railway are having the benefit of getting your empty tins up free, the only necessity being a declaration that the tins shall be returned full. I wish we, who are connected only by boat to the market, could get our tins up in those conditions.

The following motion was carried on the motion of Mr. Donnelly, seconded by Mr. Pemberthy:

"That a deputation wait on the Shipping Companies and ask them to make such concessions."

A suggestion "Would regular periodical public auction sales of honey, under the auspices of the Association, be better than the present system of sending it to the Commission agents." Lapsed.

In conversation it was suggested that in years of plenty and low prices, those who could, should hold their honey back for poor years and better prices.

The suggestion that the Federal Government be approached and urged to assist beekeeping by giving a bonus on all honey exported from the colonies.

This was thought best to be held over for the present.

In the matter of the suggestion of Mr. Bradley—

That a fall of ¼d. per lb means a fall of £2 6s 8d in the ton, and where is the article of daily consumption, that its smallest fall in one day even, is £2 6s 8d per ton, or 12½ per cent? Take butter for instance, that is, aay 1/- per lb generally, now take honey at 2d per lb, a fall of ¼d in the lb of butter, and the same sum in honey, and the difference would be as 1s 9⅓d is to £2 6s 8d. If the comparison was carried out in its entirety, you will find that a fall of ¼ per cent in honey, or £2 6s 8d, would mean about £14 in butter. The whole matter should be gone into.

It was resolved on the motion of Mr. Shawyer, seconded by Mr. Gee—

"That the association communicate with the newspapers and the commission agents, asking them to quote prices of honey in smaller fractions than plain farthings, if necessary"

Mr. H. Hall referred to the shipments of honey to England some two years since, in which a number of beekeepers lost heavily, some having to pay nearly as much as £10, in addition to shortage at end of voyage, instead of getting substantial returns for the honey sent. After a lot of correspondence and trouble he had succeeded in getting a promise that the exporting agents would pay half such losses. A vote of thanks was accorded Mr. Hall for his efforts in the matter.

The following officers were elected for the coming year:—President, Mr. H. Hall; vice-presidents, Messrs. Penberthy and Bradley; secretary and treasurer, Mr. E. Tipper; committee, Messrs. Rien, Gaggin, Irvine, Anderson, Ager, Gee, Shawyer, Stacey, Donnelly, Niven, Kerr and Pennington.

Mr. J. J. Wilson, secretary of the New South Wales Chamber of Commerce now addressed the meeting on the advantages of affiliation with that body, urging that by this affiliation any matters desired by this association would have the greatly added force of the much larger one at its back to urge on its accomplishments, whether parliamentary or otherwise. There would be the free use of the society's rooms for meetings, and alternately it was hoped a general club and rendezvous for members. The fee was £2 2s.

It was felt as there was a deficiency already in the funds, it could not be done. Ultimately eight members contributed 2/6 each, and Mr. Donnelly kindly lent the balance £1 2s 6d. [We shall be very pleased to receive contributions from members to repay this £1 2s 6d.

In the evening we attended a meeting of the Chamber of Commerce. There were delegates from all parts of the colony. C. H. Dight, Esq., was in the chair. Among those present were the Hon. Mr. Kidd, minister for Agriculture, Mr. Bennett, and several other members of Parliament. Several very important matters were spoken of as belonging to the future work of the association, such as reducing the number of shows and amalgamation of present societies, so as to hold large shows alternately in turns, where only small shows could at present be held; single judging, free passes per rail for judge, etc. The meeting concluded by the election of officers.

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On next day the following members waited on the North Coast Shipping Co., also the Illawarra Shipping Co., Messrs. Hall, Tipper, Penberthy, Donnelly, Handcock, and Eager, respecting the shipment of new tins free. Mr. Jackson, manager of the Illawarra Steam Co., most readily granted the request, and was most heartily thanked by the deputation. Mr. Allan, on behalf of the North Coast Shipping Co., said that owing to much opposition, and the chance that there was no dependence on the tins being returned full from his company, could not accede. They would charge the sixpence per case still, but would allow that sixpence off the freight of honey returning, on showing of the receipt of the money found for the empty tins. It was

felt his reasons were very reasonable, and then he was warmly thanked.

Several of the leading commission agents and editors were called on and requested to make the quotations for honey in smaller fractions, than farthings if necessary, and all readily agreed to do so.

On the following day, (Friday) at the invitation of Mr. Miller, the secretary of the N.S.W. Chamber of Agriculture, the members of the Bee-Farmers Association, accompanied by members of the other society to the number of some 100, enjoyed a free ride per rail to the Hawkesbury Agricultural College, where, after a liberal luncheon prepared by the college cuisine, Mr. Potts, the principal, led them round the various departments, and a very pleasant outing was enjoyed by all. The apiary, however, was a source of great disappointment. Several of the hives, by having blankets cross-way and ends hanging over, looked as if it was done intentionally to create foul brood.

We cannot conclude this report other than by urging on all beekeepers who value their interests, that it is their duty to join and assist the N.S.W. Beekeepers Association.

Temperature of the Hive.

Controversies about bees hibernating in the hive in winter arise from time to time. Bee-Keepers occasionally meet with instances of bees wintering safely in snow banks—the skep or box surrounded by snow for four or five months - and the bee-keeper thinks that the bees must have been hibernating. Many bee-keepers have doubts about bees wintering alive in snow and declare that bees do not hibernate. It is never safe to be too certain about anything, but I think we can safely declare that bees do hibernate. There never was a bee, either worker or queen, that continued active throughout the winter in a hive in a temperate climate unless there were inactive hibernating bees to protect it from the cold. The conditions of hibernating animals in winter, when in the dormant state, have been carefully observed and are as follows: —A low temperature; temperature of the animals slightly above their surroundings; loss of irritability and motion; a greatly diminished respiration and a corresponding decrease of circulation. These are the conditions; and the bees on the outside of clusters in winter are, in every particular, in the same condition as animals hibernating from cold. A bee may be frozen in ice for weeks, and still not be dead, but the bee is not hibernating, while the bee at the freezing temperature in air for over a day, if not dead, must be hibernating. A portion of the bees in a colony must hibernate and remain motionless if the other portion are to continue active during the winter. In a colony, the proportion of bees hibernating to the active bees varies with the climate, and also with the size of the clusters. The larger the clusters the smaller in proportion, will be the number of hibernating bees.

The Rev. Mr. Raynor noticed that colonies with bees raised late in the fall did not winter well, and several beekeepers after him noticed some defect in bees raised late in the season. It is just possible, however, that young bees do not hibernate well (as a rule young animals do not), and that a preponderance of young bees in winter is a disadvantage as a preponderence of old bees in spring is a disadvantage.

Bees are bad conductors of heat, but they are good absorbers and radiators of heat, and if they had no means of preventing radiation they could not keep their heat within their clusters. Tyndall discovered in his researches on heat that air mixed with aqueous vapour intercepted the passage of heat-rays to a marvellous extent. Air saturated with aqueous vapour is a hundred times more resistant to the passage of heat-rays than dry air.

The active bees in the cluster give off aqueous vapour and carbonic acid gas freely, as products of respiration or combustion; the bees make use of these products to preserve their heat, and they condense the aqueous vapour to furnish them with water to raise brood.

The warm, moist air from the active bees rises to the top of the cluster, but the bees do not allow the aqueous vapour or heat to escape. The cold bees in the top of the cluster condense the aqueous vapour and get warmed by the condensation. A pound of water in vapour gives back its thousand units of heat when it returns to water. The wet bees carry back the condensed vapour into the cluster and the so-called latent heat of the vapour is absorbed by the bees. Langstroth always found the bees wet in their winter clusters, and he thought it an evil, but when we come to see what the bees are doing, we find that the water is a necessity and that bees could not raise brood without it.

Bees place their honey for winter stores above their clusters as the active bees in the cluster can readily get out and in at the top, but by no possible efforts could they make their way through the closely packed lethargic bees at the bottom of the cluster. When the active bees relieve the hibernating bees the active bees pour out in numbers and surround the torpid bees, and by transferring their heat to the cold bees enable them to move into the cluster.

Some preparation by the bees, filling themselves with honey, is necessary when going into the dormant state, and some properties in the cluster favorable to hibernation must exist to keep the dormant bees alive. If all the bees in the cluster became torpid from want of food the bees will soon die, but if there is food for all, and a portion of the bees form a heat centre in the cluster, and keep giving off their products of respiration, the whole cluster of bees will keep alive and survive the winter. The heat given off by the active bees cannot reach the dormant bees at the bottom of the cluster, but the respiratory products can reach all the bees in the cluster and prevent their loss by radiation—as the odours of flowers protect the flowers from loss of heat. When bees condense their aqueous vapour in the cluster the remaining respiratory product (carbonic acid gas), must descend, being much heavier than air, and it also prevents radiation, and will protect the bees at the bottom of the cluster from loss of heat.

Queenless colonies sometimes winter with but little loss of bees, and in spring may be strong in numbers. If a queen with sealed brood be given to colonies in this condition they have been known to make strong stocks in summer. Should a queen, however, be given without sealed brood or young bees the queen would be of no use to the old bees, even should they accept her, which would be exceedingly doubtful. It is therefore evident that it is the brood raised in winter that is the important factor in building up colonies in the spring and that a colony raising no brood in the winter will gradually die out in the spring.

The bees will always raise brood in season and out of season, if their means will allow, in efforts to make the birth rate as high as possible above the death rate. They know something about the decline of empires. They built their empires before man appeared, and for aught we know to the contrary will continue building empires after man has disappeared. The bees and flowers were among the first to come and they will be among the last to go.

The so-called spring dwindling in colonies is owing to the bees not being able to raise brood, hence, to beekeepers the importance of knowing how to assist the bees in keeping up their population. The bees have no difficulty in keeping up their population in summer, the great difficulty is in winter and spring.

To raise brood in clusters the brood-raising area in the cluster requires to be protected by a wall of packed bees, and

the wall has to be thicker as the temperature is lower. If we assume that in our climate, in winter, a two-inch wall of bees is necessary to surround a brood-raising area, then a four-inch cluster will raise no brood. A six-inch cluster will give brood area of four inches and four clusters sixteen inches. A twelve-inch cluster will take the bees of four six-inch clusters and will have only half the radiating area of the four clusters, but it will have sixty-four inches of brood-raising area; four times more than all the six-inch clusters, and sixteen times more than one six-inch cluster. Raising brood takes no heat from the bees. Wherever non-living matter, throughout nature, is being changed into living matter, heat is eliminated. When active growth is taking place in the chick in the egg heat is given off, and the incubator has only to prevent the too great loss of heat given off. When an insect larva commences to eat it commences to give off heat, and the more larvæ the bees can keep growing in their cluster the warmer will be the cluster—the more nutrition and growth is going on in the cluster. A cluster fifteen inches in diameter equals in volume nine five-inch clusters, but the brood-raising area, or the heat generating area, is over thirteen times greater in the large cluster than it is in all the small clusters combined. The advantages of the large cluster must be apparent and they are facts which are not easily forgotten.

Dadant gave as one of his reasons for adopting a large hive, that at the commencement of his beekeeping career there was a case of a colony of bees in a large box (three times larger than the common hive), which he found upon inquiry had never been known to have been without bees for twenty years, although numerous colonies in small boxes adjoining could only exist for short periods. It was evident that the large colony escaped from whatever ills destroyed the small colonies, and Mr. Dadant, in all his experience as one of the most successful apiarians of his day, never found that he had made any mistake in adopting a large hive. He never went into the hive-making business with a view to selling and trading in hives.

It is not the bees, but the beekeepers that want small hives. Dr. Gandy says that if we put barrels and kegs to catch absconding swarms the barrels will be the first occupied. Swarming is mostly an effort of the bees to find a larger home, and the only way to lessen swarming is to give the bees a larger hive. Bees in temperate climes will never be able to compete with bees in tropical climates until they get more room to work.—A.W. Smyth, M.D., Donemana, in *Irish Bee Journal.*

Export of Honey.

Lapstone Apiary,
Emu Plains,
21st April, 1903.

Dear Sir,

In regard to the losses on our late shipment of honey to London, I beg to say that I have been engaged for some time in correspondence with the Farmer's Co-op. Co., with a view to getting them to enforce our claims upon the English agents for a return on the full weights sent, and for a satisfactory price to cover advance and expenses. In this effort, after some correspondence, the company has failed to secure any satisfaction, and has in consequence, discontinued business relations with the English firm.

On my urging that the company should share the loss occasioned by the unsatisfactory action of the agents they had employed, I received the following letter from the general Manager :—

Farmers & Settlers Co-op. Soc.,
343—345, Sussex-Street,
Sydney.

Mr. W. H. Hall,
Emu Plains,

Dear Sir,—Referring to the conversation with our Mr. Digby this morning :

Providing that all the shippers agreed to pay half of the losses, I would take upon myself to accept such payment in full, provided always that the payments were made promptly. Of course I make this offer without prejudice, and it must be distinctly understood that there would be no half-heartedness about the business, that the money would have to be paid by everyone alike. I make this offer in all good faith and with the proviso already named.

Yours faithfully,
R. J. Fairbairn,
General Manager.

Since the above letter came to hand the general Manager, while refusing to extend the offer to individuals in writing has verbally accepted my own offer, to pay half the loss incurred in my own shipment, in full settlement of the company's claim upon myself, and has expressed his willingness to deal with individual offers from other shippers as they come to hand.

As the company's offer appears to me to be a reasonable, if not generous compromise, may I suggest the advisability of your making a similar offer to the general Manager (without prejudice) in regard to your own loss.

May I also point out that the company's offer being made without prejudice, the general Manager not unreasonably reserves the right to enforce the full legal claim upon those shippers who do not accept the offer.

I may say that I have taken this action voluntarily, because I am myself one of the largest losers under the shipment, and because of a desire as President of the Bee Farmers Association, to help those who are in a like position.

May I hope that if a beekeeper, you will see your way to join the Bee Farmers Association, and forward the annual subscription 2/6, to our Secretary, Mr. E. Tipper, Willow Tree.

Trusting that the action I have taken may be of some service to you.

Yours sincerely,
W. Hessel Hall, M.A.
President N.S.W. B. F. Asstn.

PRICES OF HONEY.

Melbourne Australasian—Queen Victoria Market, 4d to 5d.

Barrow Bros—Prime clear garden honey in fair demand, from 3¼d to 3¼d; medium qualities dull of sale, from 2½d. to 3d. Beeswax, 1s to 1s ½d.

Leader—Honey—Prime clear garden lots had quittance at from 3d to 3½d, cloudy being on offer at from 2d. Beeswax—Sales were effected at from 1s to 1s 1d, the latter for prime clear.

Maitland Mercury—2½d to 3d.

Tamworth News—Farmers' & Settlers' Co-operative Society—Primest 3½d, good 3d, medium 2½d.

S. M. Herald—Honey—Choice 3¾d, good to 3¼d, inferior from 2½d, for tins containing 60lb. Beeswax 1s 1d, extra choice 1s 2d lb.

See that your neighbouring beekeeper gets the A.B.B.

PREVENTION OF SWARMING; COMB-HONEY PRODUCTION.

The Veteran of the Brushed-Swarm Method Tells How his Method Differs from those Recently Spoken of in the Bee Journals; the Caged-Queen Plan of Preventing Swarming.

BY L. STACHELHAUSEN.

In the last few months I have found in *Gleanings* nearly 30 articles about brushed swarms. Nearly all of the writers criticise or recommend brushed, shook, or forced swarms for increase in place of natural swarms. Only three of the writers seem to pay any attention to my method, described in *Gleanings* for Nov. 1, 1900, which designs to *prevent all swarming and all increase.* We see that both manipulations are just opposite; they are similar only in this respect, that in both cases the bees are shaken or brushed from the combs. This shaking of bees from the combs is one of the most common and regular operations in the apiary—nearly as much so as smoking the bees. If we need a single brood comb for any purpose we shake the bees from it. If we sell bees by the pound we shake and brush them through a funnel from the combs into a box. In artificial swarming we shake. Before the invention of the bee-escape we had to shake and brush the bees from the honey-combs for extracting; and for a few years we have jounced the whole super, *a la* Martin, and that is a wholesale shaking.

That artificial swarms can be made by shaking and brushing the bees from the brood-combs, I have known at least since 1878. In 1883 I worked an out-apiary for comb honey, and controlled swarming to my full satisfaction by shaking the bees on starters; that is by artificial swarming, and had a good honey crop too. It is only about four years that I have experimented to *prevent* swarming entirely by this manipulation of shaking and brushing. I caught the idea by scientific speculation, and the whole thing was new to the bee-keepers when I published my article in Nov., 1900, and it is still not understood as yet, as so many prominent bee-keepers do not see the difference between my method and the forced swarm for increase. That these forced swarms, known more than twenty years, have gained more attention, I was glad to observe; but it seems to me this is a very slow progress, as, for instance, Doolittle recommended the plan repeatedly in *Gleanings.*

My method of preventing swarms is something quite different. In the spring, and before the honey-flow, we can generally prevent swarming by the use of very large hives, and our colonies develop in them to an admirable strength. When the honey-flow commences, I remove *all* the brood, because the young bees, which would hatch every day in large numbers, would not find enough young larvæ to be nourished, and this causes an extension of the brood, and, in consequence, the swarming fever. A surplus of young bees compared with the number of young larvæ in the hive, will soon cause swarming under favorable conditions. This is not merely theory, but it can be proven by experiment.

This brood taken away *must* be given back to the colony as soon as it is changed to bees of such an age that they will not cause swarming any more, and will be able to help in gathering honey.

This giving back *all* the bees when they are ready for doing field work is the main point in my management. It can be done in different ways—either by shaking the bees from the brood-combs twice in front of the main colony, or by moving the hive with the brood-combs, and so, *a la* Heddon, drawing the bees from it to the main colony, at last by shaking all the bees 21 days afterward from the now empty combs in front of the main colony. Of course, this shaking can be done only once, and earlier—for instance, on the tenth day, and the capped brood-combs used elsewhere. This is something between the two manipulations.

When all the brood is removed, the brood-chamber is contracted, and starters are given. This forces the bees up into sections and causes them to work there at once. I think this is the best possible condition of a colony for storing honey in the sections.

The difference between a forced swarm and my method is that, by forming a swarm, we divide the colony *permanently*, giving to one part nearly all the bees and the queen; to the other part, only a few bees and all the brood.

By my method for producing comb honey, and at the same time preventing swarming and increase, I remove the brood and a few bees *temporarily* only. The idea is to remove the young bees and give them employment in a separate hive till they are old enough to do field work in the main colony. We see that, by this method, the field force of a colony is not diminished at all.

The only objection worth mentioning is that the colony has to build a set of new combs, and this will take some work and some honey. I am of the opinion that a colony during a good honey-flow produces wax arbitrarily, especially if little or no brood is present—that is, if the colony is in the condition of a swarm. The production of wax will consume some honey; but this is more than balanced by the multiplied vigor of the swarm. This is of so much value that sometimes during a short honey-flow we may get a considerable amount of surplus honey from strong swarms, while other colonies not divided would give no surplus at all, but would raise a number of useless consumers. That a swarm hived on starters will give more surplus honey in sections than a swarm hived on empty combs is proven by experiments conducted by Hutchinson about 20 years ago. Under some circumstances foundation may be preferrable; but to give empty combs to a forced or natural swarm is a mistake at all times, if comb honey in sections is desired.

Another method of preventing swarms is to remove or cage the queen and to cut out the queen-cells at the right time once or twice, and at last introduce or liberate another or the same queen. Compared with my plan I see some objections, and the plan has not found many followers, so far as I know. As soon as the queen is removed or caged, the swarming impulse is started at once, and can be lessened afterward only by weakening the colony considerably. With my method the swarming impulse is *prevented* in the main colony, or checked at once, if queen-cells should have been started, when the colony is shaken from the combs.

The swarming impulse dominates in the hive with the brood-combs; but here it is no disadvantage, because this colony can't swarm before a young queen will hatch.

Again, colonies in this condition will not work with the same vigor as a swarm. In the third place, finding the queen and caging her takes more time with these strong colonies than shaking the bees and the queen from the combs, to say nothing about hunting up queen-cells and cutting them out. Fourth, as the laying of eggs is discontinued as long as the queen is removed or caged, the colony will get weak at a certain time, and this is an objection if the honey-flow is of long duration or if a second honey-flow is to be expected later, as is the case in my locality. — *Gleanings.*

Granulation of Honey.

CAN IT BE PREVENTED?

Sometimes honey of the same batch, bottled at the same time, behaves differently in the glass jars in which it is stored, and I personally have frequently been asked by well-known apiculturists to attribute a reason for this peculiarity. To any one well versed in the laws of crystallography it is very easily accounted for, and I think a few facts explained on the crystallography of chemicals will materially assist the bee-keeper in digesting the real causes. It is a peculiar fact that a crystal of a pure substance is

always of the same composition; by this I mean to say that the elements have combined to form a compound in definite proportions, and, consequently, perfect crystallography is a good test of its chemical purity. I only make use of this point to make clear that honey is undoubtedly of a peculiarly complex composition, containing, as it does, many sugars. This is, perhaps, gradually brought about from the time it is gathered by the bee from the nectariferous gland of the flower to the completion of its ripening as honey. Possibly when gathered it is of a highly complex nature, but it is certain that it becomes more so as it comes in contact with the acids which are natural to the bee, so that when we speak of the crystallisation of honey we must not be under the impression that honey is an element or simple substance, and that it, as a whole, has become crystallised, but be satisfied that it is composed of a number of sugars, and that one or more of these sugars have become crystallised and lie deposited in a solution of less crystallisable sugars natural to the honey. Thus if we carefully examine under the best of conditions these crystals with the aid of a microscope, we should detect shapes indicative of certain sugars.

The occasional crystallisation of one jar of honey which granulates, while the others remain bright and liquid, is accounted for by the fact that the bottle either contains a small portion of grit, or is slightly rough or irregular in some particular part of the inside, which lends a starting point of crystallisation to the sugars which are contained in the honey in what we will term a state of supersaturation. An experiment (on crystallisation), using sulphate of soda for the purpose, most beautifully illustrates this theory. If we take a quantity of sulphate of soda, dissolve it in a minimum quantity of hot water, and whilst warm, tie over the neck of the vessel in which it is contained a parchment paper and allow it to cool, we can at any moment cause the solution to crystallise by the puncturing of the paper with a needle, or, by keeping the bottle air-tight we can retain it in solution form. Again, we can make solutions of chemicals and can manipulate them without any signs of separation, but the introduction of a further small crystal of the same or some other substance will spontaneously cause the crystallisation of the whole, and I feel assured that the granulation of honey can be accelerated by the addition of a very small crystal of the ordinary cane sugar.

The granulation of honey depends largely upon the sugars of which it is composed. For instance, I have found clover honeys granulate very much quicker than honey from other sources, possibly due to the composition of the sugars or to the quantity of acid contained therein. It is certain that granulation is controlled by the amount of acid it contains, which practically changes the crystallisable sugars into glucose, which is, practically speaking, uncrystallisable, and I think it is quite possible, by the careful heating of honey, together with, perhaps, a little more formic acid, to render honey absolutely uncrystallisable. I have found this so using hydrochloric acid, but as yet have not experimented with formic acid, which should be the acid used, as it is that which is natural to the bee.

I wish it to be clearly understood that I am not advocating the heating of honey with the object of keeping it liquid, as personally I am a great disbeliever in the application of unnecessary heat, as it invariably brings about undesirable changes, and in the above case it is very certain that the composition of the sugars previously mentioned is partly or wholly changed according to the heating and other conditions.—*Beekeepers Record.*

Various Methods Of Rearing Good Queen-Bees.

The statement has been made by Dr. Gallup that really good queens can be reared in strong colonies only, and from

embryo queen-cells. Mr. Alley claims the best queen he ever owned was reared in a small nucleus, and advocates the nucleus method as the only right method for queen-rearing. Mr. Doolittle, who, I suppose, is as able in the business as either Dr. Gallup or Mr. Alley, claims better results by the dipped-cup method; and either one boasted of his own success in producing the best queens; and their articles have a tendency to make us poor honey-producers believe that queens reared by their plans are the only ones good for anything.

I do not blame them for speaking a good word for their own business, but after trying the three different methods in question, I have found out that for the honey-producer the best and cheapest queens can be reared by the Gallup plan. I do not mean to say that every queen reared under the swarming or supersedure impulse is perfect. O, no! But I mean to say if the very best stock is used for the purpose, and an abundance of stores being on hand or supplied, the result will be a success. I will pay $25. to any queen-breeder who can rear a better queen by either the Doolittle or the Alley plan (from either his or my stock, if he so desires) than I can, or the bees themselves, according to the Gallup or natural way. What is the use of talking or writing? The "proof of the pudding lies in the eating." After having bought dozens of queens from different breeders, together with hundreds of colonies of bees, and carefully noting the difference in the amount of honey they gather, I ought to know whereof I speak, and, which is the best queen? Now, I wish to say right here, that it is not color, or any other quality, excepting the amount of honey, and consequently the amount of money received, per colony. I have had colonies of bees gather 8 supers of 28 sections each in one season; and in 1898 I had 38 colonies averge 100 pounds of comb honey to the colony, together with doubling their number in increase. How's that for naturally-reared queens?

Now I wish to give the beginner, and those not so much advanced as the professional queen-breeders, a simple method by which they can rear as good a queen as there is in the land. The method is as follows:

Rear a few queens under the swarming impulse—from eight to a dozen of the very best stock you have, marking in your diary or on the number-tag of each queen the number of the mother she was reared from. The following season test as to their honey-gathering qualities, and after having found which ones are the best and most uniform, rear from their mother the supply for your yard as follows:

Early in the spring, if the particular colony in question should for some cause or other not be very strong, make it so. Coax and crowd the colony to start to swarming. When the queen-cells are begun in the colony, put a queen-excluding sheet under the entire hive. Now watch for the queen-cells to become ripe, and take out the ripe queen-cells as fast as they become ripe. I have taken as many as 50 queen-cells from a single colony by this plan. More queen-cells will be built if a brood-comb be cut in two lengthwise about half way The brood-comb should be an old one—a black one if it can be had—as the bees do not like to build it down as they will a new one, but will start a lot of queen-cells on the lower edge. In this way you can keep on rearing queens as long as the colony insists on swarming, and good ones.

Never select a queen for breeding that has simply a large force of bees and 10 or 15 combs of brood, for that is no evidence of her being a good one. The only test that I know of is the amount of honey they have gathered, and if comb honey is desired the whiteness and the plumpness of their sections.

I have had large colonies in the spring that promised to outstrip everything, but proved worthless in the end as honey-gatherers. But the longevity of a queen

is an important factor, and Dr. Gallup is right when he says it takes 2 years to test a queen. But for a breeder it takes 3 years; and if the queen should be dead before her daughters are tested, she would be of no use; but if the queens are reared rightly, they will nearly all live 3 years, a good many 4, and a very few five; at least such is my experience.

Of course, I allow my queens to lay to their full capacity, using 40 to 50 combs during the height of the season, and that may have something to do with shortening their lives. I am using the 10-frame Langstroth hive, and have to tier them up 4 and 5 stories high, and I wish now that I had a 12-frame hive, as 5 stories are too high for convenience, and 4 are not high enough to accommodate the most of my queens.—A. C. F. Bartz. in *American Bee Journal.*—

Importance of Good Queens.

With regard to queens, almost the whole success, and, indeed, existence of bees may be said to centre in the queen —or mother bee—heading the stock; as it is entirely on her egg-laying powers that they have to depend for increase; and, therefore, according to the measure of her prolificness the colony will prosper. Her powers as an egg-layer are often truly marvellous, for a first class queen, heading a strong colony, can lay about 2,000 or 3,000 eggs a day in the height of the season, and keep this up for several of the summer months at the rate of 60,000 a month. A good queen may lay 1,000,000 eggs during her life. But far too many fail to approach even half of these numbers, and this simple fact should give force and point to the contention so often reiterated in our pages that so much of the success and prosperity of a colony depends on the queen heading them.

Seeing, then, how much of ultimate success or failure centres on the queen-bee, it becomes everyone who wishes to be an up-to-date bee-keeper to see that this all-important member of every colony is of the best. Any accident happening to the queen, and in a few months the stock dies out. If she is suffering from any physical defect or deformity, the same goal is reached, though the process may be lengthened. If she is of an inferior type, her fecundity does not keep pace with the exhausting "wear and tear," especially during the busy season of the year, when every month or so sees a complete renewal of bee-life—though in the season of repose this may extend over six or eight months. Queens, too, wear out with hard work, and are at their best during their first two seasons, after which they begin to fail, particularly where any stimulative feeding has helped to exhaust their laying powers prematurely. It has therefore, become recognised as one of the most important rules in modern bee-keeping that only *young* queens should be kept, and many advanced bee-men make it a point to renew them after their second season. Any one who has had experience of the admirable work performed by a really good first-class queen, and has seen the excellent results her progeny has secured at the end of the honey season, will never again content himself with inferior queens. Frequently it pays well in the north to secure one or more southern queens during a season, the infusion of new blood adding fresh energy and vitality to the home strain. But under modern management the veriest tyro can raise as many queens as he may require with little trouble, and at no expense, from eggs laid by the best and most prolific mother-bees of his own stocks.—*british Bee Journal.*

REMOVING BEES.

"When at Matamata I used frequently to shift bees about from place to place. On one occasion I had about 40 very strong colonies in two-storey hives on a four-horse waggon. They were well secured, and had travelled alright for nearly five miles, when a sack of potatoes the driver had thoughtlessly put on the waggon rolled down between the hives,

jamming them over, and forcing the covers up. Out poured the bees in great numbers, frightening the driver, who jumped off his waggon and began to strike at them right and left. This infuriated the bees, and they went for both him and the horses. I got on to the waggon to close the hives, but the sack of potatoes was so firmly wedged in that I was some time removing it. All this time the bees had been boiling out of 3 or 4 hives, the poor horses were rearing, plunging, screaming, and galloping away by fits and starts, while the driver hung to the polers like a demon. I had all I could do to hang on above, but at last, during a gallop, was thrown off on the off-side just clear of the wheels. At the same moment the leaders swung round on the near side, and were thrown nearly under the waggon. As soon as I could I cut them adrift, and away they went as hard as they could go, and then I went to the assistance of the driver, who was hanging on to the poor polers, while they reared, and plunged, and screamed like human beings. Both the horses and the driver were being fearfully stung, and I did my best to kill the bees on the heads of both horses with the flat of both hands. At last the driver managed to cut the polers adrift, and away they went with the bees after them. We could see the horses in the distance rolling in a frantic manner to get clear of their enemies. Most of the harness was ruined."

"How did the driver get on?"

"He had been fearfully stung about the head and face, and after the excitement was over he nearly collapsed. I got him down to the nearest cookhouse, and then rode as hard as I could to my house and got him some brandy, which gradually brought him round; but he had to lay up for a day or two."

"What about yourself and the horses?"

"The horses, to my surprise, gradually recovered, and as for myself, I really cannot remember that I was much the worse from the affray, so I could not have been very badly hurt; the excitement, however, while it was on, must have been terrible."—Mr. Hopkins in *New Zealand Farmer*.

HONEY VINEGAR.

The season is now at hand when bee-keepers and others can make themselves a supply of excellent vinegar at very little cost. All that is needed is a good sound oak cask, and a few pounds of honey—any scrap or rough honey will do. Set the cask in a nice warm place—a sunny verandah will do, out of the rain; let it be hung up. Then bore an inch auger hole in each end on the upper part in a line with the bung hole. Supposing it to be an 18gal. cask, you will need 18lb of honey Mix this well in three or four gallons of water, put it into the cask, and fill up with water. Take a piece of mosquito netting over each end hole, and the bung hole, to keep out flies, etc. A current of air will constantly rush through the end holes, and up through the bung hole, which will soon have the effect of turning the liquid, and by the end of the warm weather there should be a cask of fine vinegar—it makes the best of pickling vinegar.—*Apis in N. Z. Farmer*.

CAPPINGS.

From American and other Bee Journals.

By the way, why do people send to Italy for queens? Do those people expect to get better queens than American breeders can rear? Why, one man in California wrote me in August that he bought 8 queens from a dealer in Italy, and not one of them filled out two frames with brood.—Writer in *Exchange*.

My daughter reported a swarm. I went out and looked to see where it had come from, and soon I found the hive with the queen in front dead, with about 100 meat-eating ants stinging her and trying to move her to their nest. I still believe in clipping all queens, but scald

your ant-nests before swarming-time.—*Exchange.*

Mr. J. H. Martin, a well-known writer in *Gleanings* died in Cuba in December.

Very often in the fall of the year bees will gather honey from some fall flower, which, before it is ripened, or is in the process of ripening, gives out a sort of sickening odor from the entrance of all hives in which such honey is stored. It is well known that the process of ripening eliminates the bad taste of a good many different brands of honey. For example, the nectar from the flower of onions is very offensive; but after it has been thoroughly ripened by the bees the offensive odor is practically gone, and the honey is not unpleasant. — *Gleanings.*

The Double Hive, or what is called in England the Wells system – a hive with two compartments side by side, with a perforated separating wall, allowing the workers, but not the queen, to pass from one side to the other has now been on trial for several years, and while some speak well of it, the testimony in general has not been such as to warrant its general adoption. One objection is, that when the colony on one side swarms, the colony on the other side is excited to swarming, whatever its condition may be. Another objection is, that when one side becomes queenless it is likely to remain so, the presence of a queen on the other side preventing the bees from feeling their queenlessness sufficiently to rear a new queen. – *Exchange.*

The best smoker fuel and the handiest to use is apple-tree bark, cut from live trees.

At the annual meeting of the Devon (England) Beekeeper's Association, Colonel Walker, remarked that, considering the season, Devonshire had not done badly in the matter of honey, and that there was this advantage in a short crop, that it became easy to dispose of it. There had been as usual during the past year a great deal of foreign honey imported. Great Britain stood alone in allowing such an import to come in free. The United States imposed a duty of 1s. per imperial gallon; Belgium, ¾d. per lb. on natural honey, and 2½d. on artificial; Germany, 2d. per lb. on natural and artificial honey alike; and so on through many other countries. It was worth while to pause for a moment over these Continental duties. If the two last named countries were so anxious to protect the home production of their "artificial" honey, what became of the produce? Did they joyfully consume it themselves, or was it just possible that this delightful compound figured in the £27,116 paid last year for honey imported into the United Kingdom, and had taken its place on the breakfast tables of a too confiding British public? He had his own opinion. There was more to be thought of when buying honey than the bottle and a gaudy label, and it would be a good thing for British beekeepers if the public could be got to realise the suggestion.— *Beekeeper's Record.*

In winter time those stocks will be best off which require no attention at all; all others must be handled with as little disturbance as possible. One of the worst habits a beekeeper can acquire is that of constantly pulling bees about whenever the slightest excuse offers itself. Sometimes, of course, an inspection is imperative, and should not be delayed if at all possible. When any unusual appearance is noticed in a particular hive, say when a quantity of dead bees are seen on the floorboard, or no bees at all show themselves when other stocks are busy, an immediate examination must be made and the necessary steps taken. So long, however, as the bees are seen flying when occasion offers, all may be assumed to be going on well, and the less the bees are interfered with the better. — *Beekeepers' Record.*

For shipping purposes I would put color first in quality, flavor second, and body third. Honey must be attractive and catch the eye, and there is a pretty general idea abroad that lightness in color is a sure indication of superior quality, and we must please the eye. Now, if we can combine the richest

flavor and firmest body with the lightest color—almost or quite water-white, if you wish—we will have the ideal honey. In actual practice, how many get that? You who have been selling honey of different shades direct to consumers may answer that question. Why should not a fine-flavored honey, which is a rich straw-color, or an amber color, stand ahead of a water-white which is lacking in flavor?

At the Farmers' Institute, Ontario, Farmers were asking questions about bacon, poultry, beef, cheese. There is coming to be as great a demand for information about honey. All these other industries were but a short time ago in their infancy. When they began to bloom, people feared over-production, but the demand has increased with the supply. A few years ago Canadian pork could not compete with Irish or Danish pork, but Canadians combined and forced in a good article. Jno. Bull is conservative, yet when he got a taste of Canadian "pea-fed" bacon, his appetite for it increased at the rate of one million dollars' worth per year. We supply 70 per cent of the cheese on the English market. Twenty-five million dollars is spent by England for Canadian cheese, and it comes mostly from Ontario.—*American Bee Journal.*

Honey-Muffins.—Two eggs, 2 cupfuls flour, ¾ cupful extracted honey, ¾ cupful milk, 1¼ tablespoonfuls butter, 1¾ teaspoonfuls baking powder, ½ teaspoonful salt. Separate the eggs. Beat the yolks until thick, melt the butter, add it and stir in the honey, milk and salt. Sift in the flour, beating until smooth. Then fold in the whites of eggs, which have been beaten stiff. Add the baking powder at the same time. Bake in muffin-rings set on a griddle. When done, drop a bit of butter on top of each, sprinkle with pulverized sugar, and serve; or, omitting the sugar, pass extracted honey with them. For special occasions a delicious sauce is made from honey and almonds, two tablespoonfuls of finely shredded blanched almonds being mixed in each cupful of honey.—The Delineator.

We once heard an intelligent child complain that "all the nicest things to eat seem to be unwholesome." If that child, now of larger growth, should happen to alight upon the report of a lecture delivered lately before the South-West London Medical Society, by Dr. Robert Hutchinson, he will rejoice greatly, for the lecturer demonstrated that many nice things have a very great dietetic value. He condemned many of the much-belauded patent foods, and showed that upon analysis, they compared very unfavorably with meat, eggs, milk, and sugar. "A pound of honey at ninepence," he said, "is a better source of sugar than a pound of malt extract at three shillings." And, speaking of cod liver oil as a means of administering fat, he remarked: "In cream you get a more valuable substance, because ordinary cream contains more than 50 per cent of fat, and butter fat is as easily digested and absorbed as the fat of cod-liver oil, besides being much more palatable and considerably cheaper. The lecturer also spoke highly of the value of chocolate and Everton coffee, because in both you get a combination of fat and sugar without water., Unfortunately it is difficult to make people believe in the great value of a diet within their reach. They will turn away from such commonplace things as milk and eggs, and go to any amount of trouble to procure costly preparations having only a tithe of their value as food. The lecturer's good opinion of cream, honey, chocolate, and coffee will be received with enthusiasm by the rising generation, if not by their elders.—*Chambers' Journal.*

Total honey imports into Great Britain for the year 1902: January £724, February £247. March £2,598. April £4,431. May £3,622. June £4,294. July £5,553. August £3,179. September £803. October £625. November £761. December £279. Total value, £27,116.

The past honey season in Scotland has been the worst for many years.

Publications Received.

Syllabus of the local examinations in Music conducted by the Melbourne University Conservatarium Examination Board, 1903—1904.

One more added to an Exchange list. "The Modern Farmer and Busy Bee," published at St. Joseph, Mo., U.S.A. It is a very readable, well got up journal, not a great deal of bee news however. The motto on first page is "Little but Good."

RYLSTONE.

W. Taylor.

In your last issue appears some information re-beekeeping supplied by Mr. Bolton, which, to the amateur beekeeper seems extraordinary. The information however, is incomplete from the fact that the working expenses incurred in obtaining these extraordinary results is not given. Another matter that strikes the reader is the number of swarms that issued compared with the increase of colonies during the five years record. The number of swarms that issued is given as 1901, whereas the increase in colonies as stated is 284. It would be interesting to know what became of the balance of the swarms, were they doubled up with the other colonies or disposed of by sale? Noting that bee paralysis is prevalent in the colonies of some of your correspondents, will you permit me to give my account of a case treated during last spring. The colony referred to was badly affected, and becoming very weak from its effects, I was expecting its total loss. Reading in the *Melbourne Leader* that formic acid was a cure for foul brood, I decided to try its effect on paralysis; before doing so, however I wrote to an experienced practical beekeeper informing him of my projected experiment, his reply was "its no use, the only cure is to re-queen." Undeterred however, by his discouraging reply, I proceeded with the treatment proposed. The treatment was honey syrup and formic acid, in the proportion of one ounce of acid to half a gallon of syrup, the syrup poured into an empty comb taken from the hive; this was done twice. The bees badly affected died off very quickly, but in about a week after the second dose the disease had quite disappeared. Although the last season here has been a bad one, that colony has built up wonderfully strong, giving me over 60 lbs of extracted honey, and is now going into winter with plenty of honey and its two stories full of bees. As this treatment can be carried out with very little expense and trouble, perhaps some of your correspondents will give it a trial.

VICTORIAN APIARISTS' ASSOCIATION.

ANNUAL MEETING.

The members, friends and sympathisers of this Association will kindly bear in mind that our annual meeting will be held on the holiday set apart for Prince of Wales Birthday, June 8th, 1903. Full particulars will be given in the issue for May. In the meantime intending delegates and others are kindly invited to send in any questions they may wish to be answered at the conference, and also state what subjects they are willing to read a paper about, etc. To the members I say —the subject of timber conservation etc., must be strongly, fervently and persistently brought before the Government of the day. To do this properly members who attend the conference must be prepared to present a strong cause and a strong front to the powers that be, a straggling deputation of twos and threes has always been our weakness. Deputations will, where possible, be arranged before the Conference meets, so that definite plans of action may be acted upon, what shall be said, who shall be speakers and so on. If deputations are properly carried out and a representative body of beekeepers are present to endorse the remarks of their representative, good will certainly result. But let us have no more farcical deputations ending in a fiasco, let

us one and all make it our business to be there (and drive the nail of our rightful contentions well home, so that it will hold good for years to come), instead of doing "a get home as hard as you can get" sort of scoot, and leaving about three members to do the rest and fight the timber destroyers almost single handed for your benefit. It is not fair to your officers, and results in a weak deputation, and therefore a weak representation of your interests. Do not forgot that Unity is Strength.

Write to the Secretary or Correspondent for railway vouchers for cheap fares early, and look out for next issue.

W. L. DAVEY,
Secretary V.A.A.
Plenty Rd., South Preston, Vic.

"THE NEW DISEASE."

No doubt someone would like a "Department of Agriculture," himself at the head of it, and an army of inspectors, going about the country (at the expense of beekeepers of course, another class tax), opening up hives in winter, causing chilled brood, paralysis, dysentery, it would be so much safer to go round then, because the bees would be in a dormant state and not likely to sting. I cannot see what the Government would do then that they cannot do now, if they had a competent man in the "Department of Agriculture," beekeepers would be only too glad to report anything wrong, send samples of bees and brood, and invite inspection. Judging by the articles I have read in the *Agricultural Gazette* I doubt if much would be gained by such a course at present. "Hitter is quite right in saying "want of confidence, the other fellow may get a good fat billet,"—that is it exactly. What guarantee have we that competent men would be appointed. The only qualification necessary would be holding a recommendation from a labour member. The country is already overridden with inspectors, every one of whom is supported by a class of tax; thus, we have "Rabbit Inspectors," who are "running in" unfortunate farmers for not keeping down rabbits, while they are trying to put in crops to keep their families from starving. In every case brought before the court, men proved they were doing all they could; one proved he spent £75 the previous month and had a gang of men doing nothing else. Then the "Stock Inspector" who orders a man to kill a beast for which he had just given £30; the man offered to do so if the Inspector would consent to a post mortem examination and compensate him if the beast proved to be healthy. The answer was a summons, and an order to destroy the beast at once. Then the "Dairy Inspector," who orders all sorts of ridiculous alterations. In one case the man so ordered flatly refused to do it, and wrote to the council to that affect. They sent a competent man to inspect, and then published the following —"The Government are sending men into the country to inspect dairies who know no more about the business than it does about them." Then the "Shearer's Inspector," who orders buildings to be pulled down, rebuilt for the Shearers who come along. If it is a fine night they sleep out in the open under a tree, because it is cooler and they prefer to do so. If a wet night sleep on the floor of the wool shed. Then the "Timber Inspector," who orders farmers, who are trying to earn enough money to put in the crops by cutting timber, not to cart any to the mills until he returns and brands it, though the teams are idle, awaiting his pleasure, and being fed at ruinous expense. If rain falls the bush will be so soft that the timber cannot be drawn at all. Men who live on the coast know nothing about all this, and do not see any objection to a "Bee Inspector," but men on the land, who are already taxed and harassed to death by inspectors, do not want any more. If you want a "Diseases in Bees Bill" let it be confined in its operations to the Eastern Divison, the interior is so overrun with

inspectors that people are looking for a way out—N. Zealand, S. Africa, Argentine, anywhere out of this overgoverned country. I read a letter in the *Argus* a short time ago stating it was "surprising how many Australians were to be seen in the Argentine"; not at all "Surprising" to those who know what they have to put up with here. The "New disease" is chilled brood, caused by excessive heat, a dust storm, and sudden fall of 50 or even 80 degrees, in December from 110 Degrees to A FROST. Bees are not prepared for such sudden changes. I found the outlying brood chilled, it would probably develop into foul brood if left alone. It would not cost much to have a man competent to make a microscopical examination in the Agricultural Department, and he could be paid out of revenue, instead of by another class tax on the already overtaxed man on the land.—G. W. Commins in *Aus. Beekeeper.*

DEFECTIVE QUEENS.

I was much interested in "An English Letter" from Mr. John Hewitt, in your February number, and although I cannot say that he has correctly gauged the cause of your trouble, Spring Dwindling, when he says it is nothing more than lack of vitality, caused through the way queens are reared by so-called modern methods. I do think he has broached a subject well worth considering, and what is at the bottom of a good deal of our beekeepers troubles. After a fairly extensive experience of queen-rearing (I had for several years 60 full colonies and over 100 nuclei devoted to queen-rearing alone) I feel that I can speak with some confidence on the matter.

With regard to Mr. Hewitt's method of rearing queens by forcing swarms, I cannot say anything for or against, but when he declares that good robust queens cannot be reared by any other method I must differ with him. My method, when I was in the height of it, was on the Alley plan, as detailed in my book, and I am sure I raised as fine queens as was possible under the swarming, Doolittle or any other method. The raising of good, bad, or indifferent queens, is in my opinion dependant more upon the individual, than upon the method employed, and herein lies the crux of the question. A conscientious queen breeder will look more to the quality of the queens he breeds than the number he can bring forth. On the other hand a careless or unscrupulous breeder will reverse this order, and make number his first aim. I used to consider 8, 10, or 12 cells at most, sufficient for an extra strong colony to mature. I have frequently had from 40 to 50 cells built in a strong colony and never less than 20, but when sufficiently advanced to see which was going to be the finest cells, all but 8, 10, or 12, as the case might be were destroyed. Queens raised in this manner were the finest I have ever seen. Such queens were honestly worth at that time 15s. each, and are at the least worth 10s each to-day. But what do we find? Tested queens advertised at little more than half that, and untested at 2/6 each. —I am speaking now of Australia. Can it be expected by anyone but a novice, that queens can be conscientiously raised and sold at a profit at that price? I maintain they cannot. On the other hand, if a breeder goes in for quantity instead of quality, he can make a large profit at those prices, but the purchasers will be the sufferers. I have no doubt that immense numbers of inferior queens are sent out every season, and I am equally certain that a good deal of our beekeepers' troubles are due, as Mr. Hewitt says, to the low vitality of our breeding stock. I am out of business now, and therefore have no axe to grind in the foregoing.

I. HOPKINS, Auckland, N.Z.

Ruberoid is strongly recommended by some beekeepers for placing on top of frames for winter warmth.

CORRESPONDENCE.

W. S., Port Douglas, Q.—The bees are not doing well up here this season. We have 16 colonies, and since the commencement of this season, all the honey we got was 120lbs. We are having splendid wet weather this year, the best we have ever had for seven or eight years, and now think we are going to have good seasons. All the creeks and rivers have been flooded at intervals during this year. The A.B.B. arrives here very regularly, and we think it a very good little paper.

H. S., Goulbourn, N.S.W., April 6th.—Enclosed find 5/-, one years' subscription to your useful little paper. Though only a beginner, I have had splendid luck so far, having taking 30lbs of fine honey, and left a good supply for the bees during the winter from one hive, and my, how the kids do go for it! I am surprised more people don't go in for a hive or two, especially people living in the country.

J. B. B., Cameron's Creek, near Armidale.—My bees are working on stringy bark at the present time. I am rearing some Autumn Queens which I find make splendid queens; I have made a new queen cell protector, and if they turn out as well as I expect I will send you one.

W. F., Bungowannah, March 22nd.—Enclosed you will find postal note for 2/6, being my subscription to the N.S.W. Bee-Farmer's Association. I will not be able to attend the annual meeting, but do not send proxy paper as I do not know any one sufficiently to entrust them with my vote. I beg to differ from you in regard to paragraph in the annual report in which you state that the increase of beekeepers and increased supply of honey means lower prices. I am quite confident that if we produced a ton for every pound now produced we would get a better price for it. Were we in a position to make large and regular shipments of uniform quality, we would be sure of a good price. But under present conditions no british retailer will take it in hand because there is no certainty of supply. I am strongly opposed to the suggestion of approaching the Federal Government to beg for a bonus on all honey exported. Surely the beekeepers of N.S.W. have not sunk so low as to beg for charity. If the industry cannot stand without being propped up at the expense of the poor taxpayer, it should be abandoned.

[Our correspondent is evidently very deficient in his reading up the state of things throughout the world in the honey line, and also the past 10 years history of the honey trade in N.S.W., and his politics also are very weak. A bonus is not a new thing; he should look up what it has done with other industries in other countries—particularly beet sugar. If the poor taxpayer is as he takes it, at the expense of it, it will put much more in return in his pocket.]

J. F., Chatsworth, March 23rd.—The bees have not done very well this season so far, did well last season, sold at 4d per pound.

We are sorry to record the death of Mr. G. R. Woodbridge of Young. A letter to us from his mother says:—He underwent an operation for appendicitis, and died on the 11th inst. The poor fellow made a perfect study of his bees, taking the deepest interest in them, but God called him up higher.

W. E. B., Richmond River, March 11.—The season up this way has only been a fair one, the weather being drier than usual.

G. T. A., Tatura, Vic., March 21st.—This has been a splendid honey season around here from the lucerne and grey-box, but through illness I have been unable to extract. My hives are all full, even some which have two ten-framed supers. I have never noticed in the A.B.B. any remarks as regards a froth which rises to the surface of honey after extracting. Customers complain of it, and I am compelled to put in a tank and skim it off when it rises, instead of straining it right into the honey tins.

Can you tell me what it is and the cause of it?

[Leave it settle, it will all rise to the top. The honey beneath it will be clear enough; use the scum yourself or put by for feeding.]

C. G. R., Harvey, March 14.—Took 15 hives through the winter which I increased in spring to 28, from which I got 70lbs per hive for my first flow, principally Christmas Tree. The second flow (Redgum) has now started, and seems to promise well.

J. B. B., Armidale. I am well pleased with the A.B.B., it is very much improved since I first took it some 11 years ago. With best wishes to the many kind beekeepers, my brothers, who write through your paper.

E. J. R., Wyee.—I enclose my voting papers as it is uncertain whether I can be present this time. I intend to try and get down, but things are so unsettled that I do not know if I can manage. We have had another poor year, and there seems no prospect of any more. I got about 1½ tons from 50 hives, but the bloodwood has not flowered at all about here, and the white gum indifferent. I expect a good honey flow at Wiseman's Ferry in a few weeks, the peppermint is loaded with buds. I have not entered any names on paper, you can do that; I think we might as well keep these we have, though I am against the Presidents' seat being held by same person, year after year, as it makes the Association too individual, if I may use the word so. Of course I have nothing whatever against the present occupant of the chair, as he is, I believe, the best man we have, but the principle of the thing is bad, except in isolated cases. I hope things are going well with you, and that you have had a good honey harvest. We are having plenty of rain, more than we want, a pity they cannot get some of it in the back country. I do not think regular sales would do unless we had full control of market, the better plan would be to arrange with some firm as Allan & Co. to take all Association honey and deal with it, guaranteeing to send them all if it could be done, but I am afraid it would not be easy.

M. C. Y.—The season with me has been a fair one, the bees harvested a little over three tons.

W. B. McI., Lyndock, Vic., April 7th.—According to accounts in the "A.B.B." beekeepers have been faring as bad as we are, for we all were disappointed in this last season's honey crop and losses in colonies, which was heavy last winter and spring; although we had a fair honey flow in summer. But our prospect for next year looks poor, the trees having suffered from the drought, although we are in the wet area of South Australia.

N. M., East Milton April 18.—Enclosed please find postal note for 2/6 as payment for membership to N.S.W. Bee Farmers' Association. Could you inform me through the A.B.B. which is the best strain of bees as honey gatherers, and whether you could advise me to get a strain of the Holyland bees.

[The dark Italians are the best.]

E. P., Lochnagar, Q., April 11th.—I am sorry to say that I have lost all my bees. This I think was owing to the drought and lack of pollen, but now the seasons seem to have taken a change for better. I wish to know the most favourable time to re-stock, and the best mode of doing so.

[Buy a few swarms in the spring.]

H. H. L., Frankston, Vic.—It has been a remarkable summer for rain here. Fruit trees are showing buds, and some out in full bloom, a bad look out for fruit next season.

R. P., Springdale, Ap. 18.—Bees in this district have done nothing this year; mine all died off in early spring. I may at some future date, be trying to keep a few hives of bees and will again become a subscriber, as I find much useful information in the A.B.B., but at present I am not much at home, and have no one to give them the care they require.

Doolittle considers combs 25 years old as valuable as ever.

We acknowledge receipt of the catalogue of bee goods of the W. T. Falconer Manufacturing Co. As usual it is very complete, and the prices quoted are well worth looking over.

We are asked to call the attention of holders of honey to the advertisement of Messrs. F. J. Baker & Co., elsewhere.

As a rule the dark Italian bees are to be preferred to the light; they are hardier and less liable to disease.

Insects and seeds new to a country, are much more liable to disease than those well acclimatised. In their original countries diseases have long since had their antagonistic microbes, which prevented such diseases becoming a plague. In their new habitant such antagonistic microbes have not had time to develop. Hence diseases which destroy wholesale in the new countries are little thought of in the old, though known to exist for thousands of years. It is the same with fruit as with insects.

A Utah apiarist declares that i fa Foul Brood Bill is passed there, he will on his next trip, scatter foul brood honey from one end of the State to the other.

Defence of the Kingbird.—When the hawk appears the king calls to his mate and rushes to the attack with the directness of Schley's ships, and almost with the swiftness of a shell from the Brooklyn. They attack on opposite sides, and each tries to rise above the other—the female distracts the attention of the enemy while eluding blows from beak and talons by sudden turns and quick rushes to get in. But woe to the hawk that delays to strike at her—her mate has rushed above and then down—he clutches the feathers at the base of the skull and strikes straight for the eyes while beating with his wings to confuse and distract. Then the hawk takes to headlong flight, and will drive through thick trees to free himself, or, blinded by the wings, will sometimes kill himself by striking against an object in the way. Let the farmer recognise the kingbird as his friend, and give him the toll of a few bees gladly—he has earned them.—*Florida Times-Union.*

[We often see birds in Australia act the same way, both to the hawk and the crow.]

"If combs containing much pollen are to be rendered for wax it should be done by means of boiling water, as the water in agitation from boiling dissolves the pollen as well as to liquefy the wax, thus allowing the wax to escape without being absorbed by the pollen."

Weed-Process Comb Foundation.

"What is your experience with Weed-process foundation?"

Mr. Chrysler—I have not used it

W. J. Brown—It is no advantage.

Jas. Armstrong—For the brood-chamber I would not use anything else. There are more sheets of the foundation per pound, and it is stronger.

Mr. Holtermann—The objection raised to section foundation is that the bees do not work on it so readily. Pressure in milling it makes it harder.

C. W. Post—It is good when properly manipulated.

W. J. Craig—The hardness depends on the wax used. Wax from cappings is much harder than that from old combs.

Several members said they found the bees prefer old-process foundation. Some maintain the contrary.—*American Bee Journal.*

BEEKEEPERS READ THIS!

At the Chamber of Agriculture's Conference a paper by Mr. E. Tipper was read, the gist of which was that our good and strong honies, the boxes and the ironbarks (no inferior) should be encouraged to be exported by a bonus. There are millions of hives in all the thickly populated countries, the honies procured from which are mostly derived from agricultural lands. Our strong honies, if at first put on their markets cheaply by means of a bonus, would gradually force

their way, and become as popular and as high priced as the Narboune and other famous honies, that have done so before. Only such should be bonused. How much more are the boxes and ironbark honey appreciated by our own people to the coastal and agricultural honies. We will publish the article in full in next issue. Meanwhile we will ask bee-keepers to well think the matter out.

WESTERN AUSTRALIA.

MR. J. B. KLINE, Guildford, Saddler and Harness Maker, and Secretary of the Western Australian Beekeepers' Association, is Agent for the "A. BEE BULLETIN," and is authorised to receive Subscriptions and Advertisements for same.

E. TIPPER,
"A. Bee Bulletin."

You cannot do better than get your Printing done at the "Bee Bulletin" Printing Office. Honey Labels a specialty.

IMPORTANT.

WANTED 50 SWARMS OR PART OF BEES (ANY SORT) IMMEDIATELY Will give £27 10s. Must be free from disease and carefully packed.

E. HARPER,
Post Office, Newtown,
Near Sydney.

To Members of N.S.W. Bee Farmers' Association.

IN order to enable the above Association to to affiliate with the N.S.W. CHAMBER of AGRICULTURE, there not being sufficient funds to do so, one member kindly advanced £1 2s 6d. Will some members kindly forward 2/6 each to recoup same.

E. TIPPER,
Hon. Sec.