THE

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EDITOR-MANAGER . . . P. A. HILLARY

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News of General Interest

Honey Board Election

The annual election of one member of the Honey Board took place as usual early this month. The retiring member, Mr. L. F. Robins, of Temuka, was re-elected unopposed. This result is undoubtedly due to the enthusiastic support and confidence of the industry in the Government's honey marketing policy, and is a tribute to the administration of that policy by the Honey Section of the Internal Marketing Division of the Primary Products Marketing Department.

Many requests to accept nomination for the vacancy on the Honey Board were made to Mr. P. A. Hillary, of Auckland, a former member of the Board for the past six years, one request being from a branch of the National Beekeepers' Association. Mr. Hillary, whilst appreciating deeply these marks of confidence, declined nomination as he felt fully assured that the Government's policy in respect to honey marketing was in the best interests of the industry, and that any hasty disturbance of the primary personnel of the Honey Board might not be helpful to the Marketing Department in the initiation of the new honey marketing scheme.

The members of the Honey Board for the next twelve months are:—Messrs. W. Nelson, Chairman (Otorohanga), H. R. Penny (Okaiawa, Taranaki), and L. F. Robins (Temuka).

YOUR JOURNAL is much appreciated and I gladly renew my subscription herewith."—C.H.G.F., Nelson.

Personal

Mr. C. R. Paterson, of Oamaru, has been appointed an apiary instructor on the staff of the apiary division of the Department of Agriculture.

Southern Hawke's Bay

On November 14th beekeepers from surrounding districts met at the Takapau Town Hall, for the purpose of forming a branch of the "National" in the district. Mr. Westbrooke, apiary Instructor, and the President and Secretary of the Hawkes Bay Branch, attended from Hastings.

Mr. Westbrooke, who opened the meeting, explained the aim and objects of the Association.

Mr. W. T. N. Harwood was elected chairman.

Mr. A. Lowe, President of the Hawke's Bay Branch, delivered an address on co-operation.

All present joined the Association, the new members coming from as far north as Waipawa and from Dannevirke in the south.

It was decided that the new branch should be called the Southern Hawke's Bay Branch of the National.

The following members were elected to office:—President: Mr. W. T. N. Harward, of Takapau; Vice-President: Mr. A. F. Adrian, of Norsewood; Secretary: Mr. H. Pease, of Takapau. Committee: Messrs. J. L. Glenny (Onga Onga), J. N. Gillam (Dannevirke), H. H. Roseaker (Norsewood), F. T. Brewer (Dannevirke), and A. T. Fletcher (Onga Onga).

It was decided that a Field Day would be held early in December.

Hawke's Bay Branch

On November 26th, a very successful field day was held at Mr. N. Donkin's apiary, Havelock North. Mr. A. Lowe, President, welcomed the visitors to the apiary, and introduced Mr. Westbrooke, Apiary Instructor, who gave a very interesting talk to beginners, after which he explained the symptoms and treatment of foul brood and demonstrated the method of treatment. Mr. Westbrooke answered various questions in an interesting way.

Mr. W. J. C. Ashcroft demonstrated "supering up for the honey flow without the use of queen excluders," and clearly explained his method.

After all present had enjoyed a delicious afternoon tea, Mr. H. Shepherd demonstrated his method of "supering up for the honey flow, making use of queen excluders." The final demonstration was given by Mr. W. J. C. Ashcroft who showed how to brand a queen bee.

A hearty vote of thanks was passed to Mr. and Mrs. Donkin, for their generous hospitality.

A glass observation hive received much attention and a parcel of queens which had just arrived by post from the north for Mr. A. Lowe, were looked at with interest by those present.

Auckland Central Branch

A field day was held on December 9rd at the apiary of Mr. F. Johnston, Blockhouse Bay, under the auspices of the Auckland Central Branch of the N.B.A. Mr. J. R. Barber presided.

Mr. L. Riesterer, Apiary Instructor, gave a demonstration on the control of incipient disease in hives.

Mr. L. Winter, now official honey grader, to the Internal Marketing Organisation at Auckland, and formerly for 13 years an instructor at Hamilton, spoke of the need and importance for co-operation between beekeepers and the department in order to facilitate inspection and maintain the welfare of the bee colonies. He pointed out that he had been stationed until recently in one of the most productive honey areas in New Zealand, for in South Auckland registered members represented the ownership of about 26,000 hives.

Mr. J. Rentoul, manager of the Internal Marketing Department (honey division) dealt with various phases of policy on the marketing of honey and answered a number of questions.

To Our Subscribers

We have received nearly all the renewal subscriptions due to this journal, in addition to new ones. Many subscribers do not know when their year's subscription expires, and in order to give this information a blue cross will in future be marked on the left-hand corner of the wrapper on the journal. After the second cross has been marked, if the subscriber does not reply, it will be a matter of regret to have to cease sending the journal.

National Beekeepers' Assn. of New Zealand

An organisation for the Advancement of Beekeeping in New Zealand.

PRESIDENT: Mr. L. F. Robins, Denmark St., Temuka; VICE-PRESIDENT: Mr. E. A. Field, Foxton; EXECUTIVE: Messrs A. R. Bates (Kaponga), J. R. Barber (Richardson Road, Auckland), L. K. Griffin (Woodlands, Southland), and C. R. Paterson, (Corriedale, 4C, R.D., Oamaru).

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North Auckland: Mr. H. R. Holdaway, Whangarei.
Auckland Central: Mr H. Steinhert, 21 Victor Street, Avondale, Auckland.
South Auckland: Mr. A. H. Davies, Pukeroro R.D., Hamilton.
Taranaki: Mr T. R. Nicholns, 34 Caledonia Street, Hawera.
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Milton: Mr. J. Campbell, Park Road, Milton.
Central Otago: Mr W. J. Lennon, Omakau, Central Otago.
West Otago: Mr. A. G. Stuart, Kelso, Otago.
Clutha: Mr H. N. Goodman, Greenfield R.D., Balclutha.
Gore: Mr J. McMeekin, Otama, Gore-Knapdale R.D., Gore.
Southland: Mr. L. K. Griffin, Woodlands, Southland.

Honey Crop Prospects

Official Report

The Departmental reports received from Apiary Instructors at the first week in November are briefly:—

Auckland: The prospects are fair. The winter conditions were favourable, but a considerable amount of wind has been experienced during the spring. Colony strength is in good order.

Hamilton: The rainfall during October was only 1.18 in., as against the average for the month of 4.52 for Hamilton. Clover pastures are backward.

The dry conditions enabled the bees to work freely the straight willow, barberry, and native trees.

Hastings: Present indications give promise of good clover blossoming. Good rains have been experienced throughout the districts.

Palmerston North: Prospects continue to be favourable. Nectar secretion was restricted somewhat during the past month of rain and some squally intervals. Clover is not quite so forward as it was this time last year.

Christchurch: A severe winter has been experienced in this province. Low temperatures have ruled throughout, and the rainfall is several inches above last year.

Bees wintered exceptionally well, with few losses, and as brood rearing ceased as a result of the intense cold only a small quantity of honey was used. This left ample stores for spring requirements, and at the opening of the willow flow colonies were in a forward condition and, where weather conditions were favourable, stored a considerable quantity of honey. Swarming is not yet general, but if the present colony strength is maintained it will, no doubt, prove difficult to control.

The pastures are in excellent condition, and the prospects for the honey crop on the medium and light soil are good.

Dunedin: The weather during the past winter has been especially cold in the Dunedin districts, and much boisterous weather has been experienced during the early spring, accounting for big losses of field bees. Where adequate stores were provided bees have wintered well, but there have been big losses with those put down for winter with light stores. The conditions of hives are fully a fortnight later than normal.

Special Auckland Report

By Konini

The spring opened with fine, mild weather, and exceptionally good conditions prevailed. The colony strength rapidly increased, and the willow flows in September (weeping willow) and October (straight willow) gave a surplus to apiaries suitably located. Bush trees and shrubs, and hedges (barberry especally), were sources of supplies freely in November.

The pastures matured three weeks earlier than usual, and during the latter part of November, the clover provided a good flow. The dry weather caused the pastures to dry up and growth was restricted. Clover began to go off, and at the beginning of December the position looked serious. However, rains came freely after the end of November, and the pastures showed astonishing recovery. The rains were accompanied by cold gales, causing serious loss of field bees. The prospects for a crop are very uncertain, and in the Waikato very pessimistic opinions are entertained.

The Hauraki Plains fared badly, the buttercup making rank and vigorous growth. During the latter part of November the country, as far as the eye could reach, was one vivid blaze of gold, the greenness of the hedges standing out in vivid contrast. As a spectacle of beauty of colour I have never seen anything like it. Bees, however, secured quantities of dark, strongly-flavoured nectar—practically pure, and built up rapidly on this.

In other districts the buttercup was extremely luxuriant and depreciated the early clover honey.

Carbolic Mats Damage Honey

Definite Taint Proved

It is now generally recognised that it is not possible to use Phenol in taking honey off hives, without some degree of deterioration in the honey. It has been the opinion of some producers that Phenol can be used in such a way that no effect on the honey remains. Experiments have shown that this is not possible.

Six samples of honey taken off the hives with Phenol, which it was thought had not suffered any deterioration, were subjected to Government analysis with the following results:

No. 1: 18 parts of Phenol in 10,000,000
No. 2: 17 parts of Phenol in 10,000,000
No. 3: 15 parts of Phenol in 10,000,000
No. 4: 38 parts of Phenol in 10,000,000
No. 5: 16.5 parts of Phenol in 10,000,000
No. 6: 10 parts of Phenol in 10,000,000

These lines did not show any taint which could be directly attributed to Phenol but like other honeys taken off by this method, there was a strong suspicion that the natural flavour of the honey had been destroyed and that the flavour left was unsatisfactory, in that the honey had lost its taste of freshness.

Contamination Inescapable

It has been stated that, by using dry cloths for a very limited period, the bees can be removed from the honey supers without any deleterious result. On considering the matter, it will be recognised that the difference in using Phenol in this way is only one of degree. The action of Phenol in driving the bees from the hive is brought about by the volatilisation of the Phenol and its vapour must necessarily spread through the hive to have the desired effect. It will be obvious, therefore, that if noticeable contamination will result from the use of a larger quantity of Phenol, a certain amount of contamination will result from the use of any quantity. The best that can be gained by using a dry mat for a short period on the hive, is a minimum amount of contamination.

The amount of contamination would depend on the quantity of Phenol used, the length of time the mats were left on the hives, the atmospheric temperature (which would control the amount of volatilisation), the length of time the combs were left extracting before, and the amount of ventilation they receive.

It would not be safe for a user of Phenol to decide whether his honey was affected or not, as in using Phenol one's sensory organs become anaesthetised and anything in the way of a mild taint would not be recognised, nor would a depreciation in the flavour of the honey be detectable.

Unpleasant, Smoky Flavour

The first recognisable taint of Phenol is an unpleasant, smoky flavour. With a view to checking the reaction of Phenol in the analysis, check samples of honey taken from hives where Phenol had not been used were also subjected to analysis and no reaction that could be attributed to Phenol was obtained.

The fact that beekeepers generally recognise that crude Carbolic Acid can not be used for this purpose without seriously tainting the honey, confirms that the use of Phenol must also have the same effect, although with the use of the latter it would not be so pronounced and not so easily recognised.

The only legitimate use of Phenol in the honey industry is for driving bees out of the hive and for the treatment of foul brood.

A correspondent, signing his letter "Excluder," Waikato, writes regarding excluders and asks which is the best type to use. The name of the writer was not enclosed with the letter, and thus the letter cannot be accepted. Names must be signed to all correspondence. If a nom de plume is also used, the real name is not published.—Ed.

Development of Beekeeping

(Specially Written by John de Burgh Leake, London)

Earliest Beekeeping

The date at which man first commenced to keep bees is highly problematical. Apiculture was a flourishing industry as far back as history can be traced, and evidence is not lacking that, even in neolithic times, bees and their produce were diligently sought. In the very earliest records of mankind, the industry seems to have been already taken for granted, and, in certain countries, notably Egypt, the practice of apiculture is shown to have flourished about 4,000 B.C., and probably from a much earlier date.

We cannot say for sure how man came first to domesticate the honey bee. A plausible theory is that in some remote age it may have occurred to a more than normally enterprising bee hunter that it would be better to bring the bees close to his home and under his own control than to hunt vaguely through the forests whenever he wanted a supply of honey. He might, perhaps, have secured an open-air hive or the hollow log in which a swarm had settled, placed it down near his cave or other shelter, and thus unconsciously have earned the distinction of having become the first practical beekeeper.

Log "Gums" Still Used

In fact, a similar system of beekeeping exists to-day in certain parts of the world, including the U.S.A., where apiarists of the old school still keep bees in log "gums." That might well represent the second stage in apiculture — providing bees with domiciles almost identical to those they would choose of their own accord.

As soon as we enter the historical epoch, we are given precise knowledge of the types of hives employed. Virgil (B.C. 70) has left us complete descriptions of the hives of plaited osiers adorning the bee gardens of ancient Rome. These must have been rather similar to the straw skep, with which all Europeans are familiar, and which, with modifications of one sort or another, is used in many parts of the world. Hives of virgin cork, brick, pottery, reeds and almost every conceivable substance have from time to time been tried by man in his efforts to find the ideal home for his friend the bee. Convenience, no doubt, often dictated the choice, as it does to-day. A South African bee farmer once told me that his Kaffirs keep bees in discarded petrol tins, while one of the most popular hives in modern Ireland is the handy and native butter-box.

Movable Combs

The most vital point in the history of bee-hives is, of course, the change-over from a fixed comb to a movable comb system. Intensive modern apiculture is based on the movability and interchangeability of frames.

Who invented the system? Some say Francois Huber, the amazing blind bee student of Switzerland. Others suggest the Russian, Prokopovitch, as the apiarist rightly entitled to the distinction. Still more insist that the credit belongs to Dzierzon, the German clergyman, who certainly made a serviceable hive round about 1845. Ask any beekeeper hailing from the U.S.A., and he will probably maintain that Langstroth was the man responsible. In England I have heard the claims of Neighbour, one of the earliest of the British bee appliance manufacturers, advanced, while many Scots hold that the bar idea, which led to movable frames, was pioneered during the early nineteenth century by their compatriot Robert Kerr, of Stewarton, Scotland.

There is evidence indeed that hives fitted with bars that could, within limits, be moved, were used in Greece and other countries hundreds of years ago, so the argument regarding the inventor is really rather futile. Like many other inventions, the modern pattern hive is not the work of one mind, but the final result of many minds converging towards the same goal.

Work for the Month

Adding Supers

Beekeepers must be very alert in adding supers during December, as otherwise considerable quantities of honey will be lost. When the flow begins, the nectar comes in very rapidly. The bees need adequate storage room for the nectar which contains as much as 80 per cent. or more of water, of which over 60 per cent. has to be evaporated by the bees; therefore, if two supers of honey are expected as the average crop, more than two supers of space are required for the processing of the nectar.

At the same time, beekeepers must not put supers on until they are definitely needed, otherwise, if a cold, stormy period of weather is experienced, the bees and their brood-rearing receive a set-back. The practice of putting on about three supers of combs in the spring, or even leaving them on all winter, is decidedly harmful, and results in a low average crop. It is very much better to let the bees need a super before giving it.

A simple method of arriving at a decision in this matter is to have nine combs in the brood chamber if bees are wintered in one storey. As soon as bees are found, on a day of moderate temperatures, to be well occupying the space where a tenth frame is usually placed, it is time to put on a second storey.

If colonies are wintered in two storeys, the second storey should contain 9 combs. As soon as bees occupy the space of the absent tenth comb in fair numbers, it is time for another super, and so on with the next super

In hot weather the bees will gather in the space to reduce the temperature in the brood combs, and this gathering must not be taken as an indication of strength.

Removing the Crop

As soon as the combs of honey are fully capped they should be removed from the hive and empty combs given in their place. If the weather is fine, it is safe practice to remove honey that is **not less** than three-quarters capped. To take combs with less capping is sure to result in a thin honey that will ferment in a short time.

Combs of honey should be extracted the same day as taken off the hives. Not only does the honey extract more easily, but it strains more readily. If combs of honey are kept for days in a room, moisture is absorbed from the atmosphere until a point is reached at which fermentation is induced. Thus every day's exposure of honey, whether in combs or in tanks, increases the risks of fermentation.

Extracting

Commercial beekeepers have efficient equipment for their work, but the smaller producers, and especially the beginner who has increased his bees, need sufficient plant to cope with their crop. When these beekeepers have a definite number of colonies planned for the future, it is better to get equipment suitable to be used in the complete scheme.

For those with only a few colonies, a two-frame reversible extractor (second-hand) is quite sufficient. For those intending to run up to 50 colonies a four-frame reversible extractor is necessary.

Extractors should be firmly fastened to a strong floor, for the "pull" as the combs are whirled round is very severe. Anchor rods are provided (for this purpose) with extractors. If the extractor is placed on the floor of the room, a small pit should be built in the floor under the tap of the extractor large enough to take a bucket for emptying the extractor. This pit must be made bee-tight.

The combs must be carefully treated in the extractor to avoid damage. First, one brief spin should be given to take out sufficient honey to just lighten the comb. Then reverse, give a smart spin; reverse back to the first side, and give a long spin; re-

verse and give a long spin. This is sufficient in mild temperatures.

Newly-built combs should be kept separate, and given three short, gentle spins for a start to avoid damage.

Hive Work

Ventilation of the hives is necessary in hot weather. The whole front entrance should be kept free of obstructions, such as blocks, grass, etc. In localities that are very confined and hot, the broad-chamber should be raised from the bottom-board with ½-inch blocks.

When the flow is full on, it is unwise to disturb the colony unless absolutely necessary. If young queens are in the hives and laying well, and the colony has sufficient room and ventilation, swarming need not be feared. If queen-excluders are not used the case is different, as brood must be put down to create a compact brood-chamber and thus induce the queen to lay below and leave the supers for honey storage.

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