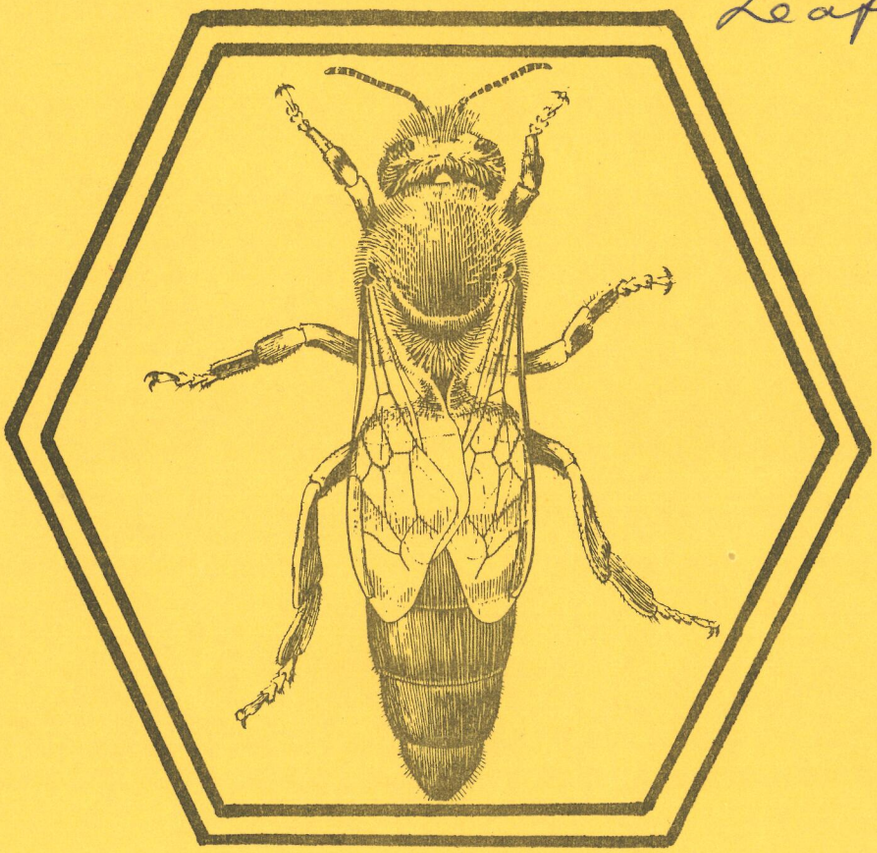
A.A.O.

NO. 15 DECEMBER 1980

Leaflets.



The Southern Beekeeper

Ministry of Agriculture
and Fisheries
Box 378
GORE
Phone: 7017 Gore

Apiary Instructor
Cliff Van Eaton
5 Irk Street
GORE
Phone: 84872 Gore

A Letter From The Guest Editor

As you may know, Mr Trevor Bryant, the writer whose words usually grace these pages, is halfway through his year long exchange to Canada. He and his wife, Judith, are at present settling in for the long, cold priarie winter in Edmonton, with hopes for a white Christmas to make it all worthwhile.

I, on the otherhand, have the good fortune to be able to miss the northern winter entirely, filling in as Apiary Instructor for the Gore district. For those of you who haven't met me, let me introduce myself.

My name is Cliff Van Eaton, and I am on leave from my position with the British Columbia Ministry of Agriculture. British Columbia is Canada's western-most province; the land of the Rockies, the totem pole, and the hardworking lumberjack. It can also be a good place for bees. The northeast corner of British Columbia includes parts of the Peace River district, famous for its large honey crops.

My work back home includes many of the activities associated with an Apiary Officer. I carry out inspections, disease analysis, and do some advisory work. I am also, however, a researcher for our Honeybee Stock Improvement Project, and much of my time is spent on bee breeding and artificial insemination for the programme.

Coming to New Zealand has been a dream-come-true for me. Honeybee queens produced in New Zealand are known throughout the world and your beekeeping practices are held in high regard. So I am delighted to be able to come to your country and learn about your beekeeping first-hand.

But first, and foremost, my duty here is to provide apiary services to all of you. Please feel free to contact me regarding any bee related problem you might have during these next few months. And if I don't know the answer, I'm sure to find someone that will. So don't be afraid to call or stop by!

And now, on with the Newsletter. But before I close, I would like to take this opportunity, along with Trevor and Judith, to wish all readers a very Merry Christmas (white or otherwise!) and a prosperous New Year

WEATHER

Southland	September	October	November
Sunshine Hours	104.4	152	132
Rainfall	53.5 mm	49.2 mm	154.8 mm
Average Temperature	9.2°	11°	9.7°
Lowest Temperature	-0.7 11th	-0.9 5th	-0.7 10th
Otago			
Sunshine Hours (average daily)	3.7	5.4	6.0
Rainfall	53.7 mm	56.1 mm	99.7 mm
Average Temperature	11.8°	11.7°	10.6°

BEES

The big story so far this year has been the month of November, with rain on 25 of the 30 days. Colonies were unable to forage at proper levels and stores of both pollen and honey were reduced. Considerable sugar syrup feeding has taken place in an effort to keep colonies at proper strength for the honey flow. Beekeepers should make an effort to check hives on a weekly basis to assure that proper stores (3 frames of honey; 1 frame of pollen) are present.

According to several sources, however, the potential for good honey production in the district this year still exists. It is felt that the crop will come in later than usual, but that adequate time is available for proper buildup to the flow.

oOo

A bee upon a briar-rose hung
And wild with pleasure such'd and kiss'd;
A flesh-fly near, with snout in dung,
Sneer'd 'What a Transcendentalist'!

Coventry Patmore - The Flesh-fly and the Bee

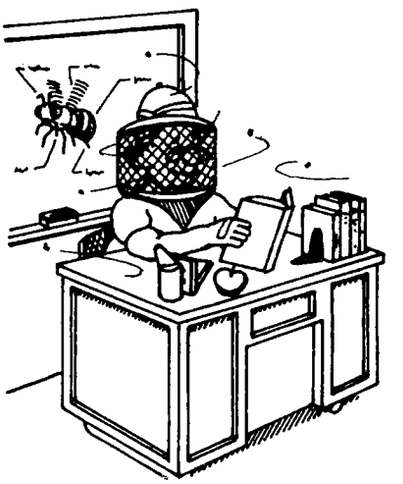
oOo

NOTES FROM THE REGISTRAR

Under the Apiaries Act, your Advisory Officer is charged with carrying out a number of procedures relating to Regulation and Inspection. Although time consuming, costly, and sometimes even nerve wracking, the system is our best defence against the spread of bee disease.

As you know, the annual inspection report form was due on 7th November 1980. At this writing (6th December) 30% of the hives in the district still haven't been reported on. Trevor's absence may have something to do with the low rate of return, but I'm sure everyone knows that they are all still obliged. So come on, help me out. I wouldn't want to send out nasty letters as Christmas greetings to any of you this year.

The incidence level of disease is quite low, so far this season. However, with the weather we've had in November, colonies have been under heavy stress, with many hives consuming stores up to the corners of the frames. Disease spores which could have been covered for several years may now be exposed, so make sure to give your colonies another thorough check.



Finally, a few words about buying and selling hives. Many people are not aware that by law, sellers of bees or used bee equipment require a Permit issued by the Ministry of Agriculture and Fisheries. The Permit is important because it makes the Apiary Officer aware of changes in location and new registration of hives. The Permit, however, does not guarantee that the hives are free of disease. In all sales transactions regarding honeybees and their gear, it is strictly a matter of "buyer beware".

It is therefore important that anyone purchasing bees make sure they have an adequate bill of sale. Such a document, though simple, provides proof of ownership in case of resale, theft, or when hives are used as security for a loan. A bill of sale can also provide some degree of protection against hives found contaminated with disease.
Make sure the bill of sale contains the following:-

a. Name and address of both parties.
b. Date of sale.
c. Statement of freehold ownership by vendor of items in question.
d. Statement of transfer of ownership to the buyer.
e. Specific description of all items to be sold.
f. Purchase price and method of payment.
g. Terms of deliver, if any.
h. Any penalty clauses, if desired.
i. Signature of the parties (including a witness).
j. If purchased in winter or spring, refund provisions for any AFB - diseased colony found at the spring inspection.

Kiwis are famous for being as good as their word. But with the price of bee equipment and bomb-fire treatment of disease, it pays to protect yourself. And if nothing else, a written contract makes things much easier for <u>everyone</u> involved.

oOo

So work the honey bees,
Creatures that by a rule in nature teach
The act of order to a peopled kingdom.

Shakespeare, <u>Henry V</u>

oOo

<u>RIDDING THE WILD HIVE</u>

Wild, or "feral" hives are a major cause of foulbrood infection in many districts of New Zealand. If weakened or killed by the disease, such hives provide a continuing source of centagion for established colonies in the area.

In an effort to educate farmers and property owners regarding this costly problem, Ministry of Agriculture and Fisheries Media Service has prepared a one page handout in its <u>AgLink</u> series entitled, "Honeybee Swarms and Feral Colonies: Eradication". The paper, written by Andrew Matheson, Apiculture Advisory Officer for the Nelson district, clearly outlines the threat posed by such hives, as well as providing several safe and simple methods for their elimination. Of special interest is the list of insecticides commonly available which are effective to do the job.

Copies of this publication will soon be available at most <u>AgLink</u> displays throughout New Zealand. If you do not see it, contact the Gore Office, Ministry of Agriculture and Fisheries.

Southland Field Day

As The Apiarist says, "a Southland Field Day needs no recommendation to anybody who has ever attended one". And this year's event will be no exception.

The Field Day has been scheduled for Saturday, 7th February 1981 at Tony Clissold's, Glass Bros Honey, Waikaka Valley, Gore. A full and informative session has been planned, and with the addition of a beekeeper coach tour from Canterbury, the day promises to be a memorable one, indeed.

EVERYONE'S INVITED. SO PLAN NOW TO ATTEND

BEE RESEARCH REPORT

Fishy Bees?

Pollen dearths are perhaps the greatest limiting factor for bees in our area. And the problem becomes tougher as more gorse hedge rows disappear. The answer is to feed supplements, but they can be costly and are difficult to obtain.

Now comes word of a surprising new twist in the search for a protein-rich bee feed. A Canadian researcher, Dr W T Chalmers, has found that fish meal, an inexpensive by-product of the herring industry, meets all the requirements of a first class pollen substitute. And the bees seem to find it palatable as well.

The paper contains a detailed comparison of the amino acids, vitamins and minerals of all traditional pollen substitutes as well as fish meal. In most cases fish meal stands heads above any other material. Formulations are currently under study and hopefully a recipe for patties will be perfected soon.

With a protein content of 75% and a supplier price of 25 cents/kg, who knows, fish meal might just prove to be the answer we need.

see Chalmers, W T Fish Meals as Pollen Protein Substitutes for Honeybees. Bee World Volume 61, Number 3 (1980) pp 89-96.

Inbreeding and The Honey Crop

When queen bees are too closely bred to drones in a honeybee stock, hives headed by those queens display a "spotty" characteristic in their brood. The spottiness results because a certain percentage of eggs laid are not viable and will not develop into worker brood. Nurse bees remove these eggs soon after hatching, and the empty cells must await another visit from the queen.

Beekeepers have known about this problem for years, but have been unsure of its influence on the overall performance of the hive. Now, from Professor Woyke in Poland, comes evidence that inbreeding has a marked affect on honey production. Dr Woyke and his associates conducted detailed studies of both brood production and hive population in colonies headed by queens with 0, 25%, and 50% inbreeding.

An analysis of weight gain during the honey flow and colony surplus was also made. The results showed that even in colonies with 25% inbreeding, almost 1/5 of the total honey crop was lost, while colonies with 50% inbreeding produced less than ⅓ the normal yield. The honey production also displayed an interesting seasonal variation, with 25% inbred colonies falling off sharply in fall flows, while 50% inbreed colonies did poorly throughout.

see Woyke, J. Affect of Sex Allele Homo-Heterozygosity on Honeybee Population and Honey Production. Journal of Apicultural Research. Volume 19, Number 1 (1980: pp 51 - 63).

Another Product of the Hive?

And finally, for those beekeepers who have considered diversifying their production of honeybee related products, there's this: doctors at a hospital in London have found significant improvements among patients with severe bee sting allergies after a series of injections with anti-bodies from beekeeper's blood! Anybody out there willing to roll up their sleeve!?!

Did you get another bee in your veil, Harv?

oOo

"According to the theory of aerodynamics, the bumble-bee is unable to fly. This is because the size, weight, and shape of his body in relation to the total wing span make flight impossible. But the bumble-bee, being ignorant of these scientific facts and possessing considerable determination, does fly - - and makes a little honey, too".

- Francis Clifford, The Naked Runner

oOo

New Chairman for the Honey Marketing Authority

A Southland district beekeeper has recently been named Chairman of the New Zealand Honey Marketing Authority. Mr Ivan Dickinson, Milton, was elected to the post at the 4th November meeting of the Board of Directors in Auckland, replacing Mr Percy Berry, of Havelock North. Mr Dickinson takes the helm at a time of great turmoil within the industry and I'm sure that all Southland beekeepers wish him well in his new role.

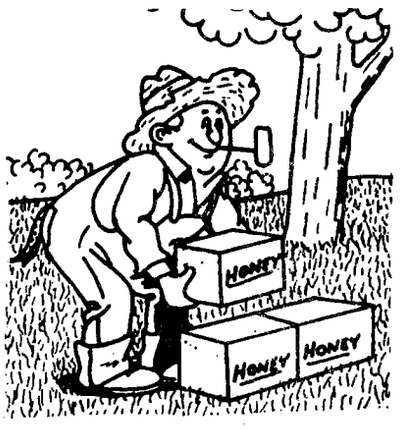
The problems of the Honey Marketing Authority have received considerable attention, of late, with various articles in the Newspapers and even a few questions in the House of Parliament. One recent article worth reading appears on the front page of the 24th November issue of both the Otago and Southland Farmer. The article makes very clear that the problems in the Honey Marketing Authority are of concern to more than just the 300-odd commercial beekeepers in the country. The larger producer boards (such as the Apple and Pear Boards) which control many aspects of primary production in New Zealand are keenly interested in the outcome of the Honey Marketing Authority situation as it may set precendents for all such boards in the future.

GRANTS AND INCENTIVES

With so many programmes, loans and allowances available from the various departments of government in New Zealand, it is certainly difficult to determine what might be applicable to you. There are at least two broad catergories of benefits, however, that could be of direct aid to commercial beekeepers.

The Regional Development Programme

This programme, under the Ministry of Trade and Industry, has been set up to encourage development in "priority" or slow growth areas. Both Otago and Southland are such priority regions. Councils have been established in each region with staff able to advise interested people on local conditions and the benefits of the programme.



Recently beekeeping and honey processing have been added to the list of projects eligible for assistance. The assistance can take one of several forms.

1. Small Project Grants - these are available to small enterprises such as beekeepers undertaking a development project involving maximum expenditure of $30,000. A grant of up to $15,000 is available to those who qualify.

2. Regional Development Suspensory Loan - an interest free loan based on capital investment (plant, equipment, or buildings) in a project, not to exceed $100,000. If the business continues for five years, the loan becomes an outright grant.

3. "Pioneer Status" Suspensory Loans - provided in addition to other assistance under the programme, to enterprises introducing activities new to a region, or new technology to existing activities.

   A loan of 10% of actual expenditure is made (up to $50,000) which also becomes a grant after 5 years.

4. South Island Electricity Rebates - available to new and expanding industry, with a 25% rebate on all or part of the cost of power. The rebate is granted for a five year term.

5. Investigation and Establishment Grants - grants to assist in commercial feasibility studies and initial establishment costs of new projects. A maximum of $10,000 applies.

Beekeepers interested in these loans and grants should contact their Regional Development Council well in advance of the start of work. Applications after the fact can't be accepted.

In Otago contact:-

Mr K V Robinson
Otago Regional Development Council
Cargill House
123 Princes Street
Box 1362
DUNEDIN

Phone 776 528

In Southland contact:-

Mr J A R Walker
Southland Regional Development Council
Don Street
INVERCARGILL

Box 84
OTAUTAU

Phone 89 860 (Invercargill)

RURAL INDUSTRY INCENTIVES

A second broad catergory of benefits of interest to beekeepers has been well summarized in a Ministry of Agriculture and Fisheries AG DATA publication entitled "Rural Industry Incentives 1980-81". A successor to the "Assistance and Incentives to Farmers" series, this new title takes into account the many primary producers not traditionally considered "farmers".

The booklet includes short descriptions on most of the grants, loans, and incentives available from the various Ministries and departments of the New Zealand Government, including the Rural Bank and Inland Revenue. A copy can be obtained from your nearest Ministry of Agriculture and Fisheries office or by contacting me at Gore.

It's your government, let it work for you!

oOo

Its a mightly poor bee
that doesn't make more honey than he wants.

- Traditional, Jamaica

oOo

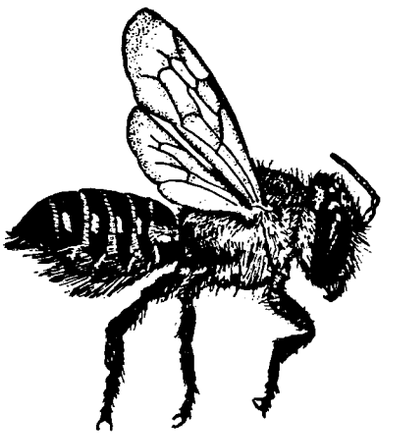
LEAFCUTTING BEES MADE AVAILABLE

A recent publication by the DSIR may be of interest to beekeepers, especially those in dry land areas of the district. Leafcutting Bee Life History, Allocation Details and Management Techniques by P E C Read and B J Donovan, has been prepared by the Entomology Division, DSIR, Lincoln to answer many of the questions asked about this interesting relative of the honeybee.

The Leafcutting Bee, Megachile rotundata, is essential to the pollination of lucerne (alfalfa) for seed. The honeybee, because of its softer body, is injured by the tripping of the lucerne blossom. The honeybee learns to either avoid lucerne or obtain nectar through the side of the flower, thus avoiding the tripping mechanism. In either case the honeybee just doesn't do the job.

Bumblebees readily pollinate lucerne, being larger and better able to take the blow. However, especially in New Zealand bumblebee populations are usually not large enough to insure consistently high seed set. During the 60's U.S. yields of lucerne seed averaged about 700 kg/ha. In sharp contrast, New Zealand yields averaged just 75 kg/ha.

With the development of New Zealand cultivars of lucerne, the problem of proper pollination became acute. It was with this in mind that the DSIR began importing leafcutting bees in 1971, leading to a base stock of 875,000 by 1976. Although further importations have been restricted due to disease problems in the U.S., the New Zealand stock represents an excellent disease free stock on which to breed.



Lucerne leafcutter bee.

Leafcutting bees are about two thirds the size of honeybees, black and white in colour, and although the females have a sting, they are not aggressive. A sting feels very much like a pin prick and so protective clothing is not needed.

Leafcutting bees are solitary, with each female constructing and provisioning its own nest. More important however, from the beekeeper's point of view, is the fact that they are "gregarious"; that is they make their nests in close proximity to each other.

To nest successfully, the females require tubes or straws which they pack with leafcuttings, pollen and nectar, and tiny eggs. Eggs hatch into larvae, pupate, and carry through the winter, hatching into adults and next spring.

In the wild, wheat straw is a favourite nesting site for leafcutting bees. But the beekeeper, by starting with a base number of pupa (or "cells"), and hives constructed of specially grooved boards, can easily culture and insect. With good management and a suitable climate beekeepers can expect to double the number of bees annually.

The affect of leafcutting bees on lucerne seed production is enormous. In the U.S. it is common practice for beekeepers to rent out their bees to seed producers for a share of the return. In New Zealand, as the value of the bee becomes more apparent to seed producers, demand for the bee will greatly increase. And because New Zealand retains a disease-free stock, export of cells to North America could become important in the future.

As Trevor Bryant points out, cells produced in Alberta, Canada (another disease-free area) are now selling at 3½ cents a piece.

New Zealand's own pollination requirements will require at least 250 million bees, 100 times the current number. To assist in this increase, the DSIR is making available base stocks of cells to interested persons willing to purchase the necessary equipment to manage and house the bees. Keepers of honeybees would seem to be prime candidates for the job.

Interested persons can obtain the free publication and application form for cells by writing to Peter Read, Entomology Division, DSIR, Lincoln, Private Bag, Christchurch.

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The various quotations throughout this Newsletter came from A Murmur of Bees, a fine collection of prose and verse edited by Amaret Scott. The book, and many, many others, are available on loan from the National Beekeeper's Association Library, now located at Milton. Any member of the Association can borrow from the library for a small fee. It's a great resource; something of which all New Zealand beekeepers can be proud!

For further information contact the Librarian, Mr John Heineman, 2 R D, Milton, Telephone 4614 Milton.

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Honey is the epic of love
The materialization of the infinite
The soul and the blood of flowers
Condensed through the spirit of others.

- Garcia Lorca