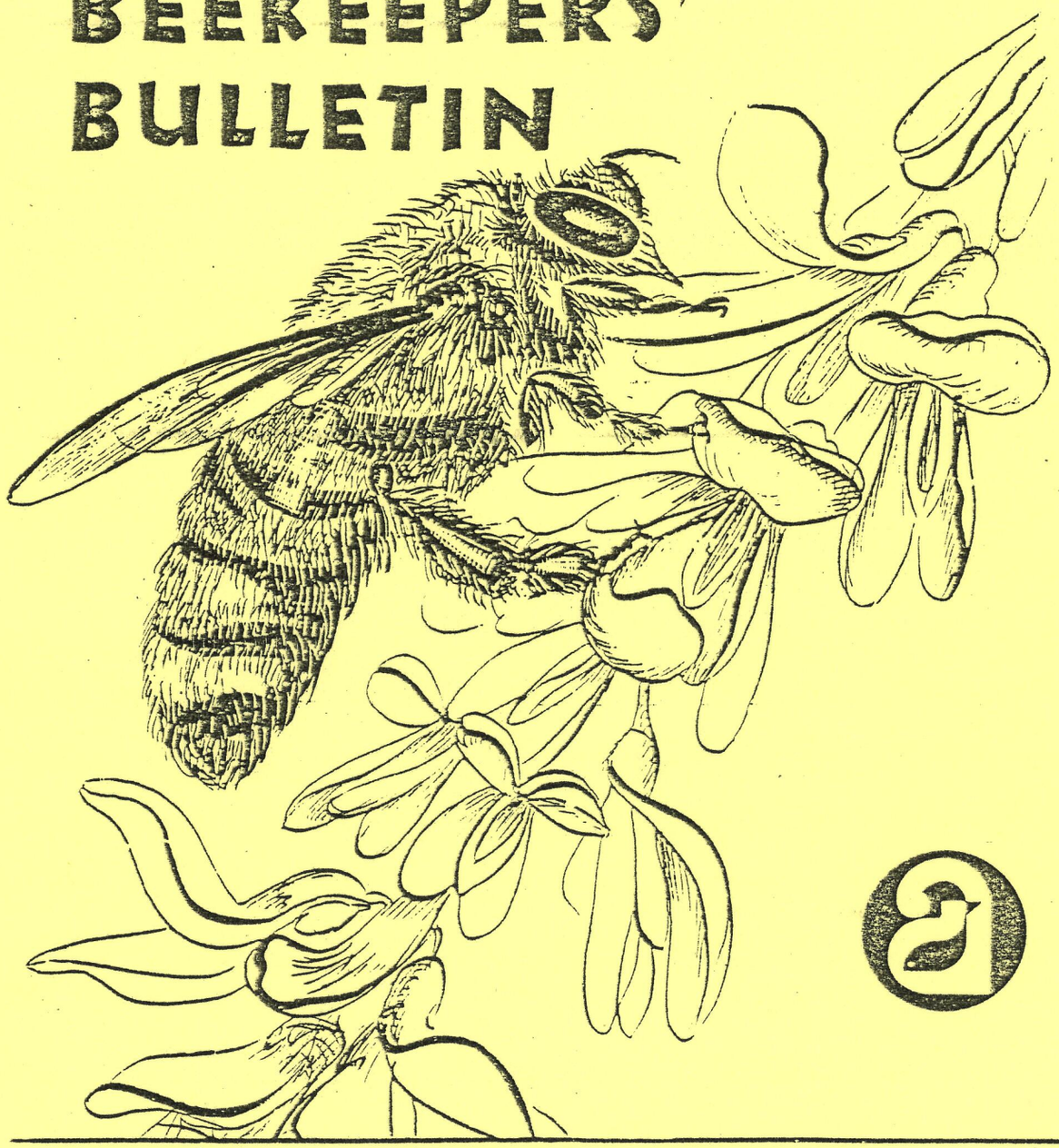
THE BEEKEEPERS' BULLETIN



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It seems that most of the region has experienced a satisfactory crop, except for Nelson which once again is proving its reputation as a poor honey-producing area. Over the whole country it could be an average or slightly better year, with some areas (like Hawkes Bay) booming but others quite ordinary.

World demand for white honey is high, with the Canadian crop down at least 25% on last year's and the US crop even lower than last year's record low. Most of the decline is in white-honey areas, such as the US midwest (because of drought and grasshopper infestations) and Saskatchewan (red clover infested with weevil : 10 - 16 kg per hive average). The North American price for this honey is at least $NZ 2.00/kg because of the shortage.

Back at home, it seems that chalkbrood is being found over quite a wide area. It has been reported from Motueka/Riwaka, Golden Bay and Karamea, and will no doubt soon be found in other areas. This disease can be kept as a minor problem if the right precautions are taken. See the article in this issue, and re-read your colour brood diseases Aglink.

It was good to once again see a full attendance at the Rotoiti beekeepers' weekend. Those who didn't go missed out on a lot of valuable contact with other beekeepers, as well as informative sessions on bad backs, GST, venom allergies, autumn requeening, stress, cooking with honey, and other topics. Congratulations to the organizers on a good effort.

You should by now be taking extra precautions with truck loading. From 1 February the MOT is enforcing a new truck loading code - the load doesn't have to be nearly falling off before you can get copped. The maximum fine is now $2,000 but the cost can be higher for others - an eleven-year old girl was recently killed in Nelson when her bike became entangled in a loose rope dangling from a passing truck. Invest some time in making your loads safe, and spend $9.95 (plus $1.05 p & p) in a copy of the new "Truck loading code", from Mail Orders, Government Printing Office, Private Bag, Wellington.

In this issue : results of the kiwifruit pollination hive survey, disease news, preventing a bad back, antibacterial properties of honey, getting the most from your accountant, and .... the biggest bee in the world (perhaps it can be used to pollinate sunflowers in one visit).

> The first ninety percent of the task takes ten percent of the time, and the last ten percent takes the other ninety percent.

KIWIFRUIT POLLINATION SURVEY

Here are a few observations from the MAF survey of kiwifruit pollination hives. I'll be talking to the Nelson NBA branch (and the Nelson KF growers' association) in more detail about the results.

Overall I was quite pleased with what the survey teams saw. It was obvious that most beekeepers were making a good effort to provide growers with their money's worth. The MAF proposal for minimum standard hives hadn't been made in time for beekeepers to really act on, and most beekeepers seemed to be trying hard to reach the (rather vague) standard promoted by the NBA registered pollinators scheme.

Averaging the results of all the hives surveyed gives the following results:

	Overall	Scheme members	Non-members
Bees (FD frames)	13.2	14.0	11.4
Brood (cm^2)	8178	8941	6970

The average looks good, but it's also important to see how many of the colonies were weaker than desirable. It's each colony's strength that's important, rather than the average.

Members of the NBA registered pollinators scheme undertook to supply hives that met the following criteria:

- at least 6 full-depth brood frames (or equivalent)
- the hive to have brood at all stages of development and room for expansion.

I took six full-depth brood frames to be 6 "good" frames of brood, which contain brood in 60% of the total area. That's 1 050 cm^2 per frame or 6 300 cm^2 in total.

In comparing the survey findings with this standard, a fairly marked difference showed up between the standard of hives supplied by members of the registered pollinators scheme and those belonging to non-members.

Results of kiwifruit pollination hive survey, Nelson, 1985.

	Total	Scheme members	Non-members
Beekeepers surveyed	18	14	4
Properties visited	38	28	10
Hives measured	172	111	61
Satisfactory hives : number	131	90	41
: %	76%	81%	67%
Unsatisfactory hives : number	41	21	20
: %	24%	19%	33%

For the non-members of the scheme, not only was the average lower than for members, but there was also a higher proportion of hives with insufficient brood.

The most common problem overall? It seemed to be insufficient brood present, because of a failing or failed queen. Some swarming also caused the same thing, but usually it was due to a queen just quietly pegging out.

This can be overcome by requeening MORE OFTEN, on a SYSTEMATIC basis. More often means annually, or no less often than 18 months apart. Systematic means the queen is replaced even if there are no signs of queen failure (at the time).

Other trends from the survey were:

Laying rate.

Brood patterns were generally good, apart from the hives with queen failure or problems. Some patchiness was present, due to changeable weather conditions. Hives with good queens present mostly had enough room to allow full laying, and thus a high proportion of the brood was unsealed.

Stores

Usually adequate honey stores, though some hives were light.

Dead bees

Almost all hives had the small number of dead bees that results from shifting. There were only one or two cases with a greater number of dead bees observable, indicating that bee poisoning was not a significant problem in Nelson during the 1985 kiwifruit pollination season.

Hive location

Hives were mostly well-positioned, to maximise sunlight and shelter. There were only a few cases of poor hive placement (under vines or shelter belts).

Seventy percent of properties had hives in groups, and only 30% placed singly.

Floral competition

Very little was present in the orchards. Timely mowing of orchard ground cover was widely carried out.

Timing

This was the most deficient aspect of grower practice. Hives were often brought in before the recommended 15-20% of female flowering.

And the worst parts of the survey? There were a few times when my enthusaism was dampened, like:

- finding AFB in pollination hives, including one that was quite "rotten";
- discovering the few hives that were broodless, or queenless, or which had one frame of bees;
- dealing with hives that made African bees seem quiet;

- having to work in orchards that didn't get good radio reception for the cricket.

For the future, I suggest the following:

NBA branches and pollination associations.

1. The minimum standard for kiwifruit pollination should be made more detailed where necessary, at least to specify bee strength as well as brood area. The MAF quidelines (discussed in the last *Beekeepers' Bulletin* and in the autumn *New Zealand Beekeeper*) are suggested for adoption.

2. Branches and associations should continue to work with MAF to make members aware of these standards and how to implement them.

Beekeepers.

1. Improve quality control or checking procedures, to ensure that weak hives are not put out accidentally.

2. Increase the frequency of routine requeening of pollination hives.

3. Develop better programmes for monitoring the buildup of pollination hives.

Growers.

1. Ensure that hives are not shifted in before 15-20% of female flower. Split deliveries may assist with timing when floral development is erratic and spread out.

-ooOoo-

MITES NOW IN CALIFORNIA

The honey bee tracheal mite ("acarine") has now been found in California, in bees that had been in South Dakota for the honey flow. With acarine and Africans, and the shipping season to Canada not very far away, the Californians sure have their hands full.

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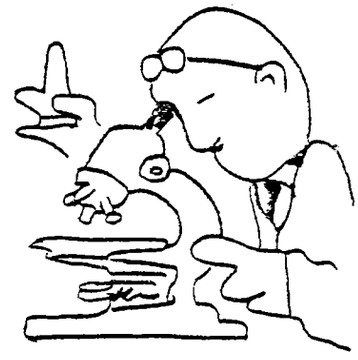
KASHMIR BEE VIRUS OR BEE VIRUS K



As you will have seen in the December (oops, Summer) *New Zealand Beekeeper*, Dr Denis Anderson has found this disease in New Zealand. So what you say! Indeed. The virus has no recognisable field symptoms and seems to be a bit like the common cold (not like herpes, as the newspaper suggested). It just sits there in the gut of apparently healthy bees until conditions are right for it to become a problem. We are finding it frequently in association with AFB.

The main problem is on the exporting front. Canada and the UK refused to import queen bees from Australia because of the K virus there. Until recently, it had only been found in Australia and Kashmir and was supposed to be "exotic".

We're importing dead bees from around the world (under strict quarantine of course) to see how widespread the virus is. So far we have found it in Canadian bees, so the Canadians aren't worried about it being in our bees. Denis is now looking for it in samples from the UK.

-ooOoo-

MELLITIPHIS

The Canadians might not be worried about bee virus K, but one or two are making a bit of fuss about *Mellitiphis*. That's the small mite that's been found in our hives, and gets caught up in export shipments of queens.

We urgently need specimens of this mite, so we can learn more about its life cycle and behaviour.

If you see any, please capture some in a small jar or bottle along with some dry burr comb, and send to me. This will greatly help our queen export prospects in North America.

-ooOoo-

PESTICIDE ANALYSIS

Routine pesticide analyses will cost $50 per sample, if requested by the beekeeper or grower. That may seem like a lot, but the real cost would be around $300 - 400. Just one of the machines they use costs a cool half million!

-ooOoo-

TRADE TABLE

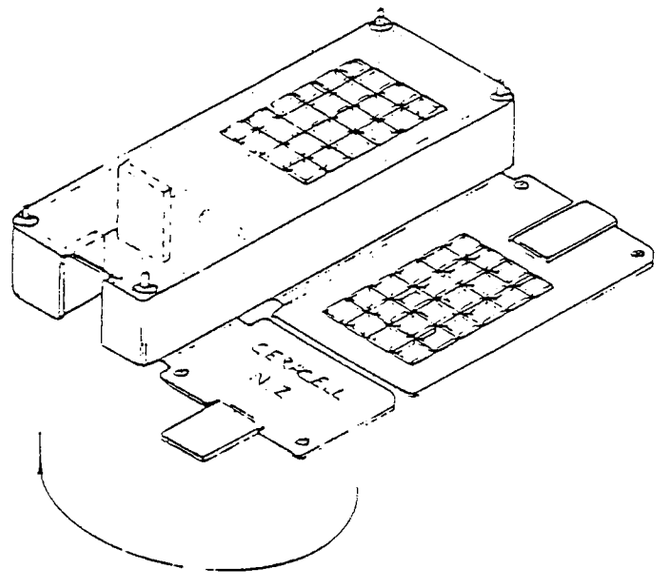
Ceracell Bee Supplies are now making a new one-piece queen introduction cage. It's made from polypropylene, a boilable and tough plastic. That's a plus if you want to re-use cages.

The cage has separate trap doors for the candy area and the bee holding area.

Price:

1 - 999	$0.22 each
1000 +	$0.20 each

Ceracell Bee Supplies
P O Box 58114
Auckland



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Waitui Apiaries has up to 200 hives for sale, in large or small lots. They're 4-high, mainly three quarter depth, and in good nick. Price $130. Contact Rex Bolwell, phone Motueka 87 477.

-ooOoo-

MACHINERY

MacDonald Machinery Ltd, P O Box 12 095, Penrose, Auckland, puts out an amazingly comprehensive newsletter about their supply of new and used machinery. It's worth a look for those hard-to-get parts.

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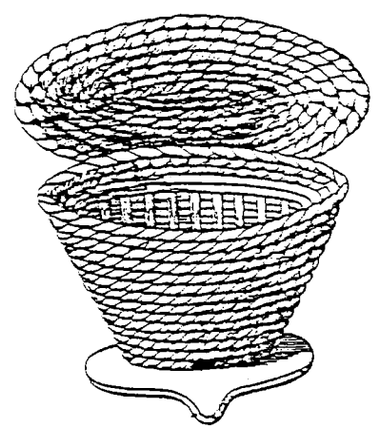


SUGAR SNIPPETS

The world price of sugar is about $NZ 130 per tonne. I know you pay a "wee bit" more than that but fear not - the Government's deregulation wand has touched the sugar industry as well. This will bring the price of sugar down and reduce your feeding costs (though it will make jam and golden syrup cheaper too).

In the short term, though:

- the refinery will sell a single pallet load of sugar if pushed.

- long term contracts with Fiji and Australia are not being renegotiated, as the spot market is much cheaper due to depressed world prices. However, we will still buy most of our sugar from these two countries.

- it is, or will be, possible to import your own refined white sugar. You always could import raw sugar.

-ooOoo-

CHALKBROOD

Most of you probably know from the press releases that chalkbrood (CB) has been found in Canterbury. Two years ago I saw a couple of cases in Marlborough, and just recently another case at Motueka.

I'm sure that CB is going to show up in most other areas sooner or later. It's not a disease that we should be panicking about, because its effects aren't very serious provided beekeepers make the right management decisions.

Our observations on CB show that:

* Black bees are more susceptible than yellow Italians.

* The disease comes and goes.

* CB should not be too serious provided you buy or select queens showing some resistance to the disease, and make up extra nuclei to patch up any colonies that do show high levels of infection.

* Some spread of the disease may be by contaminated water or flowers.

To minimise the effects of CB, take steps to prevent it becoming serious. You should:

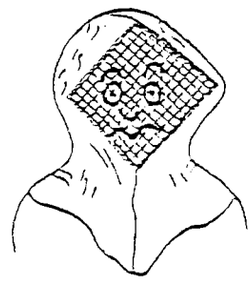
* make sure that apiary sites are sunny, sheltered, and provided with good air drainage.

* reduce drifting between hives by using correct hive placement.

* provide hives with good top ventilation to minimise dampness.

* breed queens for resistance to CB.

* keep colonies strong to avoid chilling of brood.



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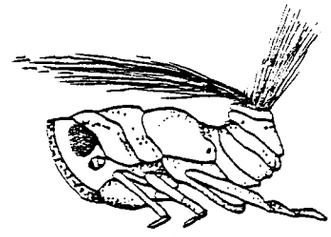
Did you know that once every 24 hours day breaks without falling and night falls without breaking

-ooOoo-

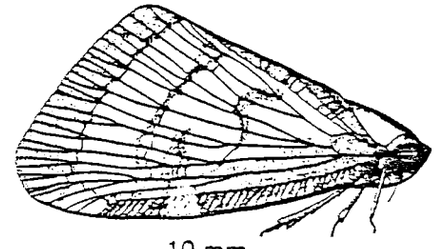
TOXIC HONEY

It's now the danger period for toxic honey production. If you're in an area with lots of tutu, such as Golden Bay or the Sounds, then you should be taking precautions.

Aglink FPP 827 has the details - it's available from your nearest MAF office.



Vine hopper nymph.



Vine hopper adult.

KIWIFRUIT GETS A NEW IMAGE

Scientists used to refer to kiwifruit as *Actinidia chinensis*, because of the plant's Chinese origins. Now the taxonomists have done some reshuffling, and the plant is officially delicious : it's now known as *Actinidia deliciosa*.

-ooOoo-

OH, MY ACHING BACK!

This is the title of an article I saw recently in a Florida beekeeping newsletter called "Apis". It has some very timely reminders for us, in the middle of a honey season, from a safety specialist called Dr Bill Becker.

Beekeeping is literally back-breaking work. It is ironical that people doing heavy physical work like beekeeping are not the ones most likely to suffer backaches; it is the inactive person who is more at risk. This does not mean that beekeepers can be complacent, though, because their work depends more on their back being in good shape than do many other activities.

According to Dr. Becker, studies indicate the majority of lower back pain is caused by degeneration of spinal discs. These discs are round pads found between vertebrae, that serve as cushions and provide space for nerves to exit from the spinal column. Discs wear out with age or abuse, most frequently at the base of the spine. If a disc becomes too thin and a vertebra slips, nerves can be pinched, resulting in lower back pain or a shooting pain down the leg.

Discs are like tyres; the more used and abused, the more rapidly they wear out. Improper moves may cause a sharp pain which might disappear in a few minutes, hours or days. To some this happens only a few times during their lifetime; others must endure such pain on a regular basis. These pains are most frequent in individuals in their thirties and forties, becoming less severe but more persistent in later years.

Lower back pain cannot be cured, but is manageable with proper treatment and behaviour. Dr. Becker cautions that those with "bad" backs must avoid macho or defeatist attitudes. To help prevent and reduce back pain, he recommends the following:

1. Don't become inactive; it is important to maintain good physical condition.

2. Learn as much as possible about the subject of back pain. Ignorance promotes fear, intelligence promotes the healing process.

3. Redesign your work station and activities to reduce or eliminate movements or loads that place undue strain on the back.

4. Follow a programme of loosening-up exercises before placing stress on the back.*** (This is especially important after you've been sitting in the truck for a long period.)

5. Avoid lifting above your waist; absolutely avoid lifting a weight above your head.***

6. Avoid prolonged work in a bent-over position.***

7. Lift with the legs, not the back. Keep the load close to the body, avoid twisting while either lifting or carrying and keep your back straight.***

Fortunately most beekeepers are not often faced with inactivity. But other recommendations, especially those followed by ***, must be taken seriously. Failure to follow these suggestions can lead to creation and aggravation of a "bad" back to a point where there is no cure, except retirement from keeping bees.

-ooOoo-

Three chaps hard of hearing were together in a railway compartment.

"Is the next station Wembley?" asked the first.

"No, it's Thursday," said the second.

"So am I," said the third, "lets all get out and have a drink!"

-ooOoo-

NEW HONEY EXPORTER

Hororata Honey Exports and Wilson Neill have joined forces to aid their exporting programme. Addresses are still:

P O Box 12
Hororata

Phone (051) 668 760

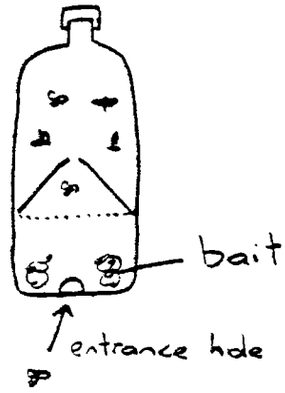
P O Box 958
Dunedin

Phone (024) 776 921

WASP BAITING

Here's a novel and cheap way of getting wasps to take insecticide back to their own nest. It was devised by a Mr Hume of Roxburgh.

Take a plastic soft drink bottle and modify it as shown in the diagram. Place some meat or fruit in the bottom, and wasps will collect in the top part. Each afternoon remove the cap and liberally dust the wasps with an insecticide (eg carbaryl, maldison), and release the wasps. They then fly home covered in insecticide while you wash the trap out and reset. Simple, isn't it? Worth a try anyway.



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The secret to eternal youth
is to lie about your age

-ooOoo-

ISOLATION IS NICE SOMETIMES

It's rumoured in England that 100 beehives were moved into a Suffolk orchard for pollination - from Holland! Beekeepers and MAFF officials are very concerned, as Holland already has the parastic mite *Varroa*.

Any they're going to build a tunnel to make it easier?

-ooOoo-

BELIEVE IT OR NOT

From the latest (December 1985) New South Wales "Bee News": "Honey packers have raised prices to a top of 90c ($NZ 1.23) per kilogram, with an average price of about 85c ($NZ 1.16).

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WASPS

An interesting study has just been completed in England on two species of social wasp that we have in New Zealand - the German wasp (*Vespula germanica)* and the common wasp (*Vespula vulgaris*).

It was found that:

- the abundance of each species varies a lot between years, with a two-year cycle and possibly a seven-year one as well.
- exceptional years of abundance and scarcity tend to occur in pairs.
- spring queens are scarce following a summer of exceptional abundance.
- the reverse is true : spring queens are abundant following a summer of scarcity.

These factors are caused by the species having an internally-balancing mechanism to regulate abundance, but one which over-compensates for unusually high or low populations. The picture is complicated by the effects of summer and autumn weather on the internal equilibrium system.

Archer, M.E. 1985. Population dynamics of the social wasps *Vespula vulgaris* and *Vespula germanica* in England. *Journal of Animal Ecology* 54(2) : 473-485.

-ooOoo-

HONEY EXPORTS

Honey exports for year to end of June 1985:

Category	Amount (kg)	Value ($NZ f.o.b.)	Largest Customer
Bulk honey	829 767	1 646 012	West Germany
Retail packs	175 091	552 493	Australia
Comb honey	258 450	1 621 987	Saudi Arabia
Honeydew	661 264	1 336 385	West Germany
Total for 1985 (1984)	1 924 572 (824 861)	5 156 877 (2 368 094)	

Source : Departments of Statistics and Trade & Industry

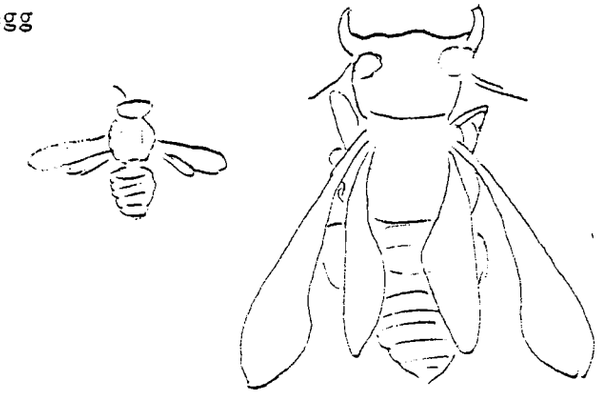
-ooOoo-

THE WORLD'S LARGEST BEE REDISCOVERED

This is not a story from Ripley's *Believe it or not*, but rather is from the reputable journal *Bee World*. The world's largest bee, *Chalicodoma pluto*, was though to be extinct until it was recently discovered to be alive and well and living in the North Moluccas islands of Indonesia. The bee had only been known from two specimens collected in 1859 by the famous naturalist Alfred Russell Wallace.

The female reaches an amazing 39 mm in length - the drawing shows what that looks like next to a honey bee. Females have huge mouth parts, with which they dig out wood and use it to make cells and tunnels. The bee is only found nesting in association with one particular termite species.

The record-breaking statistics of *C. pluto* are not confined to the adult - even the egg is large, at 9 mm long.



Bee World 66(4) : 129-130 (1985)

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SNIPPETS FROM THE NBA EXECUTIVE

* There are 83 beekeepers enrolled in the BOP distance education programme run by Nick Wallingford.

* The 1 kg plastic pack has been gazetted by the Labour Department and you can legally use it from 1 March 1986. The Executive is trying to have a 750 g pack approved but wheels grind very slowly in this regard.

* A pamphlet has been designed for MAF agricultural quarantine officers to give to incoming passengers who have honey or other bee products confiscated.

* Executive and MAF are holding another workshop at Flock House in May, to review the industry plan and to write new objectives and action plans for the next 18 months.

* A committee has been set up to investigate market research opportunities and requests for assistance have been sent out to all the universities. Favourable replies have been received from four of them.

-ooOoo-

HONEY RESEARCH

Over the past couple of years I've collected quite a few honey samples from you, for analysis at Waikato University. The researchers there have come up with some interesting facts.

They've been looking mainly at the antibacterial properties of honey. Manuka and kanuka have a much stronger antibacterial action than any of the other honeys tested. The table shows some of the results obtained.

Antibacterial activity of some honeys

Floral source	Number of samples	Geographical source	Antibacterial activity Strength: 1/4	1/8	1/16
Kanuka	2	Northland	5.75	4	2.25
Manuka	13	North Island	5.1	3.7	2.8
Kamahi	4	North & South Island	0	0	0
Clover plus	12	North Island	trace	0	0
Rata	1	Haast Pass	0	0	0
Vipers bugloss	1	Otematata	0	0	0

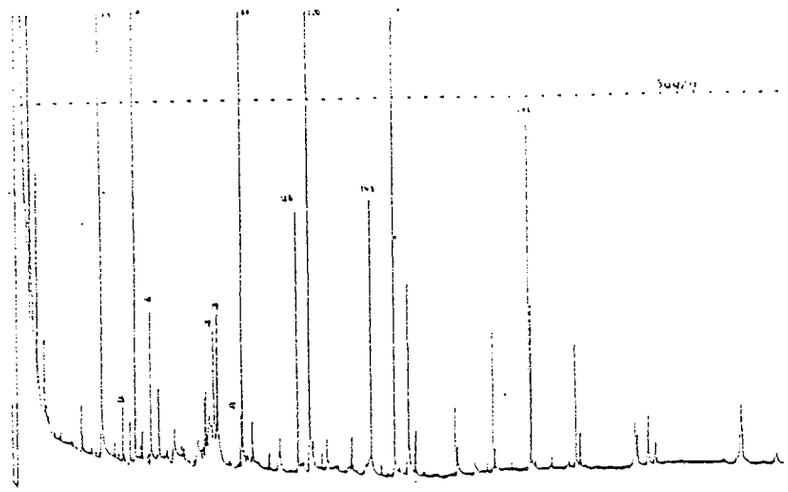
The extra components in manuka and kanuka honeys that aren't present in other honeys are:

* syringic acid methyl ester
* 2-methoxyacetophenone
* 2-methoxybenzoic acid
* 2-hydroxy-3-phenylpropionic acid

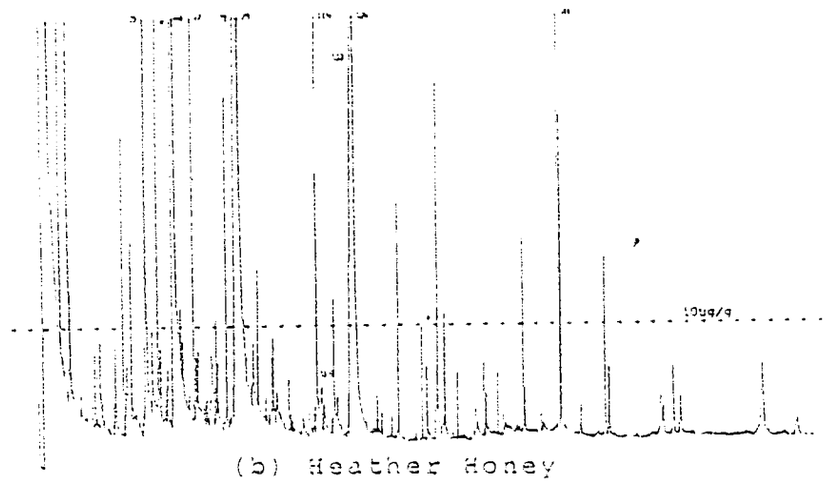
So now you know! Individually none of these is particularly effective against bacteria, but when combined in the concentrations found in honey they are.

Your co-operation in providing samples is much appreciated, and has allowed this work to be carried out. But now there's something much more exciting coming up, which will require even more samples.

One of the students, Seng To Tan, has found in the course of his work that each floral type of honey is unique when analysed by gas chromotograph. This means the floral source of honeys can be determined much more accurately than by pollen analysis. Two honey "fingerprints" are shown - believe me, an expert can distinguish them.



(a) Clover Honey



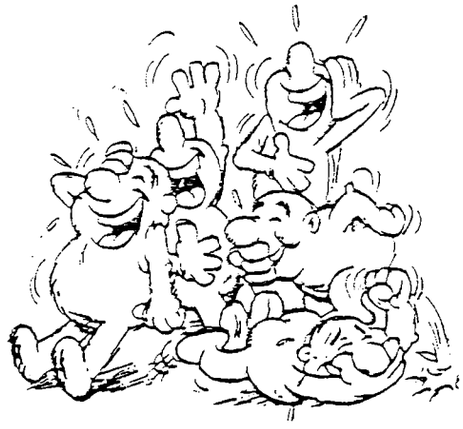
(b) Heather Honey

Tan plans to go on and do his Ph. D. in this area, and to assist we require multiple (10 or more) different 50-gram samples of each floral type from different sources. I'll be carrying a box of sample jars around with me over the next few months.

I hope you'll be willing to donate samples for this study. We have a unique opportunity to lead the world in this research, and to develop a technique that could make pollen analyses obsolete.

-ooOoo-

If you keep your head while all those around you are losing theirs, you haven't realised the gravity of the situation



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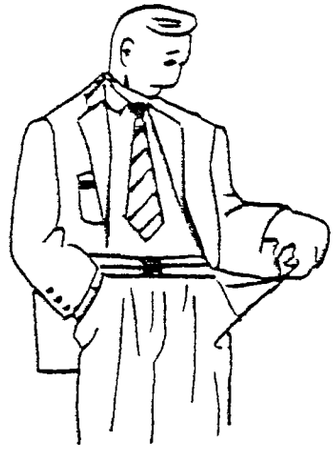
IBRA BOOKS

I've just received copies of the latest (1986/87) book selection from the International Bee Research Association. There's a big range of books included on beekeeping and related subjects. Contact me if you want to order one, or if you just want to find out what's available on a subject.

-ooOoo-

GETTING THE MOST OUT OF YOUR ACCOUNTANT



You have to be a shrewd business operator, as well as a good beekeeper, to stay in business today. The time of casual, "way of life" beekeeping is past us, for better or for worse.

This means the accountant's role has changed too. Now they are no longer bookkeepers, though they still "do the books". Rapid developments in the use of computers has taken them away from the "books" and put them in the position of financial advisers.

Good accountants are now financial and investment advisers, tax and estate planning consultants, and above all "ideas" people. They should have a broad knowledge of all aspects of taxation including income tax, estate and gift duty, and of the increasingly large range of indirect taxes.

To be effective your accountant should have a good knowledge of farming, and be reasonably familiar with beekeeping. Perhaps you should invite him or her to the next field day (not necessarily to speak), or just to come out on the bees one weekend.

By using your accountant as an adviser, you can benefit from bouncing ideas off him/her as well as having more detailed discussions on the way the business is going. Just as your MAF adviser can't run your bees for you, your accountant can't run the business, but they can be intelligently used for advice or even independent confirmation that old ideas and methods are still valid and workable.

Remember to consult your accountant before finalising any major expenditure of capital, and before any decisions to make a major change in the structure of the farming operation, such as admitting a son or daughter into partnership, or retirement.

Too often accountants are confronted with a fait accompli and then berated by the client because there is a tax disaster. Pre-planning, asking a few questions, and thinking up a different method of structuring a major change could in many cases have avoided those disasters.

Accountants - particularly good ones - are not cheap and there is no point in spending half an hour of their time (which is your money) discussing the purchase of a new bee blower. But if you are contemplating a major item of expenditure or a significant change in your method or structure of your farming business, the intelligent use of a good accountant can pay handsome dividends.

-ooOoo-

In the middle of this busy season take time to smell flowers

(but try not to inhale a bee!)

-ooOoo-

That's all from me - happy extracting!

Andrew Matheson

Andrew Matheson

Numbers of registered hives in New Zealand

(1967 - 1985)