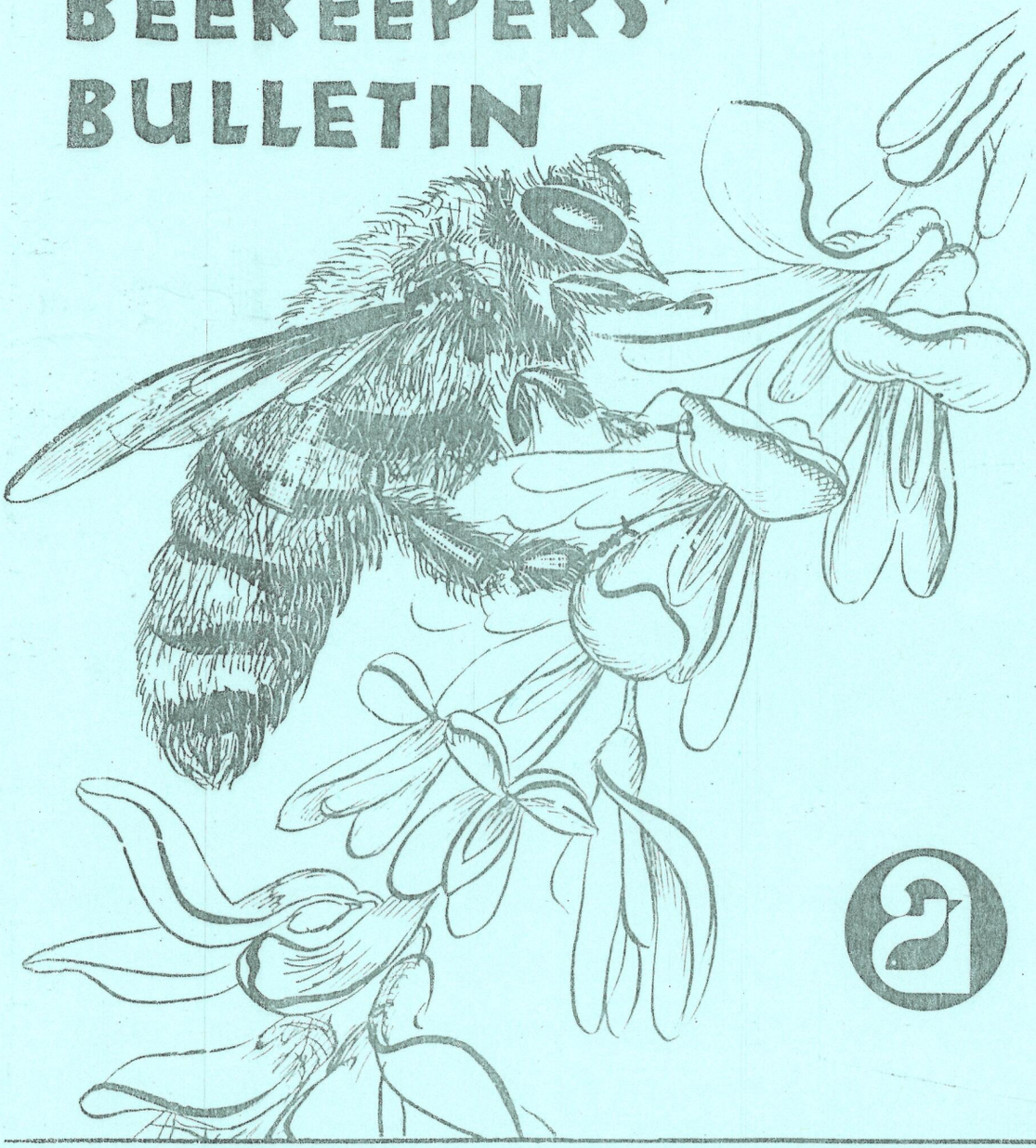
THE BEEKEEPERS' BULLETIN



Ministry of Agriculture and Fisheries
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Volume 2 Number 2
November 1980

After a somewhat disappointing early spring, the weather in October was a definite improvement. However, those "up north" can be thankful for even patchy weather; Coast beekeepers are wishing that someone had invented aqualungs and thermal underwear for bees. Queen rearing took a bit of a pasting, but never mind, there's always autumn.

The season still holds promise though, as we wait for the main flowerings to begin. Up here hawthorn turned it on again, and the hives were bringing in clover honey at the beginning of November. Have those boxes ready and waiting!

In this issue - rendering wax, feeding pollen, research report, something to get your local council to do for the beekeeping industry, sources of money, a day in the life of a legal eagle, an early Christmas present from the tax department, news and views from around the district, plus much, much, more.

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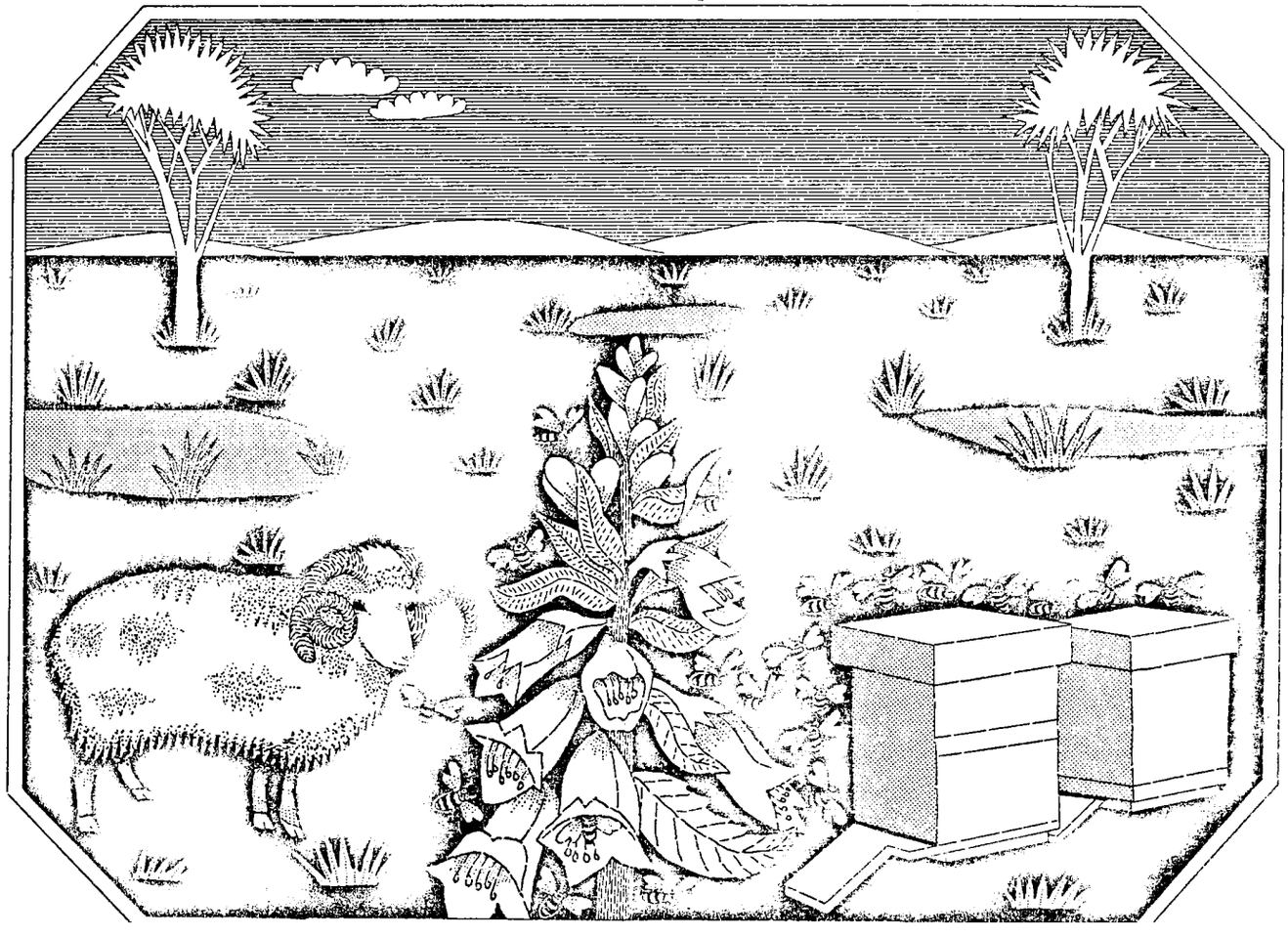
DIVERSITY IN ECOSYSTEMS

I was interested to read the feature article in the latest newsletter of the Nature Conservation Council, entitled "New Zealand conservation strategy - the value of diversity". An excerpt:

"Land is New Zealand's major resource and over half is used for agriculture. The recently published New Zealand Conservation Strategy discussion paper looks at aspects of agriculture that may become increasingly important over the next decade. As in the World Strategy, diversity is identified as a primary value. Maintaining genetic diversity may be essential to our future well-being and survival; landscape diversity has values that are often difficult to quantify; and diversity, we are reminded, makes for a stable environment. How do some present policies and practices measure up?"

The report cites various aspects of land diversity, such as the importance of peatlands and wetlands. "Bees play a vital role" is the heading of the second section, and the report discusses the value of bees in pollinating the legumes on which our pastoral industries depend, and orchard crops on which much of our horticultural industry relies.

"Weed eradication, cultivation, bush clearance and higher stocking rates ... contribute to losses of bees, as minor nectar and pollen sources disappear; another reason for preserving stands of remnant bush and establishing shelter belts and ornamental areas". It's good to see someone with sound ecological sense appreciating the importance of honey bees in maintaining diversity in our ecosystems, and the bees' dependence on diversity.



WAX RENDERING

During the recent Flock House course on business management for beekeepers, we were privileged to visit Tweedales' Apiaries at Taihape. The purpose of the visit was really to talk about bookkeeping and record keeping systems, but of course we were also shown around the business. One interesting item of plant is their wax melter.

The basic idea is not new, but this particular adaptation of it is the neatest that I have yet seen. Details of the system are shown in the accompanying drawing, but it simply consists of long cylinders which are well lagged. Two-hundred litre drums with the ends cut out and joined end to end serve well in other units that I have seen.

Combs to be melted out, or cappings (the Tweedales use a cappings spinner), are placed into the cylinder in supers with queen excluders nailed to the bottom. The Tweedales' system takes six supers in each cylinder. Steam is fed in at the bottom, and the wax runs into an old honey tank with warm water in the bottom.

The Tweedales processed the cappings from 40 tonnes of honey in two and a half civil-servant-length days, and can process about a thousand cull combs per day.

One of the members of the Flock House course was Keith Leadley from Hawke's Bay. On his return home he also manufactured one of these units, incorporating a few of his own ideas. Keith's version handles nine supers in a single cylinder, and has an internal steam pipe with $\frac{1}{4}$" holes (or 6 mm if you've made the break) to prevent cold spots at the end of the cylinder - one problem with the Tweedale unit.

Keith has connected his to a Bosca beekeepers boiler (see the "Beekeepers' Bulletin" Vol. 1 No. 3). He reports that each load of nine supers of cull combs takes about an hour to process, and that at the end of four civil service days he had 212 kg of wax to show for his efforts.

What about pressing, you may ask. Back to Taihape, where Stuart Tweedale tells of the Palmerston North beekeeper who was convinced that Stuart was throwing money away in the unpressed slumgum. The beekeeper collected two truckloads of the stuff from Taihape, and after eight hours' driving it was all back at Palmerston.

A morning spent sweating over a wax press produced about 5 kg of wax, so the slumgum was reloaded onto the truck and taken to the city dump. A lot of wasted effort for the beekeeper, but it does show how effective steam rendering can be.

TWEEDALE STEAM WAX MELTER

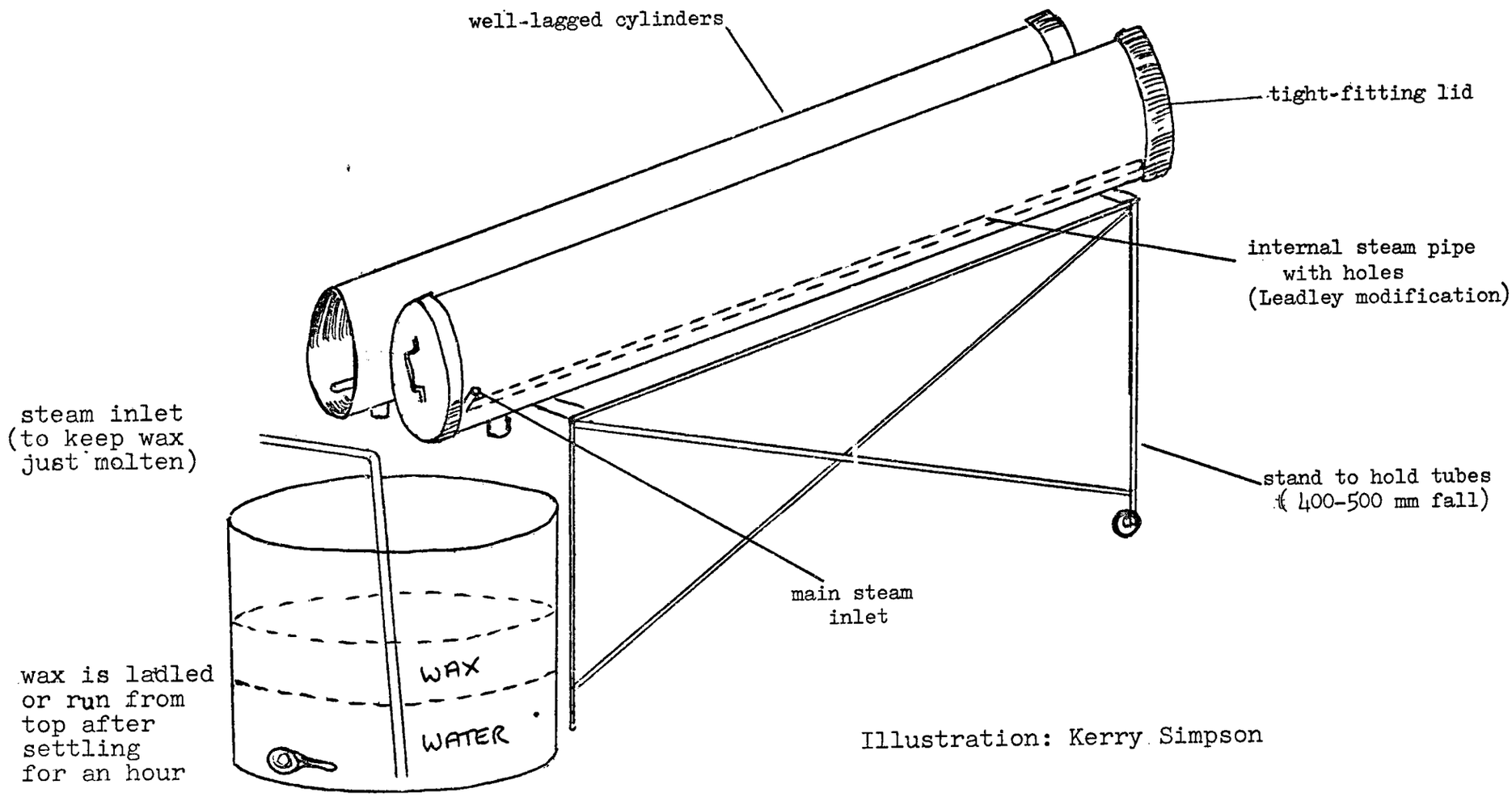
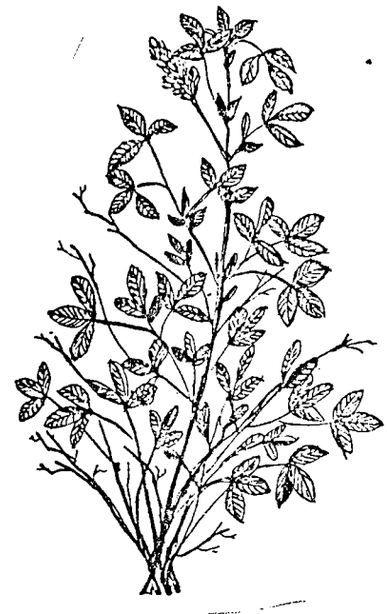


Illustration: Kerry Simpson

HERBS AS NECTAR AND POLLEN SOURCES



Bergamot Monarda didyma. A rich source of nectar in mid-summer.

Borage Borago officinalis. Flowers November-March, yielding a fawn pollen and a whitish honey. The "borage" or "blue borage" of the northern part of the South Island is actually vipers bugloss, Echium vulgare.

Dandelion Taraxacum officinale. Flowers early spring-autumn, freely yielding orange pollen, and a good source of medium amber honey.

Fennel Foeniculum vulgare. Fennel is found particularly on roadsides and in waste places, where it attains a height of two metres and bears masses of small, yellow flowers. In January and February nectar is yielded. The honey is extra light amber, heavy bodied and strong in flavour.

Foxglove Digitalis purpurea. The tall flower stalks bear white, purple, or yellow flowers from September to December. An abundance of white pollen is produced.

Hemlock Conium maculatum. A poisonous weed of the carrot family, which bears heads of white flowers. This is occasionally worked by bees for nectar.

Lavender Lavandula spp. The several species of lavender are freely worked by bees for nectar. The honey is amber in colour and has a distinctive flavour, bearing a slight tinge of lavender aroma.

Marjoram Origanum spp. During summer this herb is a good source of nectar. The honey is reported to be of good quality, with a distinctive flavour.

Melilot (sweet clover) Melilotus spp. Melilot is actually a legume closely related to lucerne and more distantly related to the clovers, but is included here because it can be used for culinary and medicinal purposes. Sweet clover is grown as a fodder and green manure crop, particularly in North America. It is freely worked by honey bees for copicus quantities of attractive nectar and abundant supplies of pollen. The honey produced is white in colour, with a distinctive taste.

Mints Mentha spp. The various species of mint are a good source of nectar during late summer and autumn. The honey is usually amber in colour and strong, though not objectionable, in flavour. Penny royal, Mentha pulegium, is a very abundant plant in many areas of the country. Nectar is secreted in January and February, giving a light-medium amber honey with a minty flavour.

Nettle (ongaonga) Urtica ferox. A native of New Zealand, the tree nettle is found in scrub and forest margins. It blooms from December to March and yields a fair quantity of pale nectar and whitish pollen. The honey is extra-light amber with a delicate flavour akin to that of thistle honey. Two species of introduced nettle Urtica dioica and U. urens, often used for culinary purposes, are also found in the country. It is not known if these yield nectar or pollen.

Rosemary Rosemarinus officinalus. A native of Mediterranean countries, rosemary is commonly grown in New Zealand for culinary and other purposes. It is well known as a free-yielding source of nectar.

Solidago (golden rod) Solidago spp. Of the eighty species of golden rod, all but three or four are native to North America. Their value as bee plants varies greatly with locality, climate, etc. but many are good nectar sources. Golden rod honey is generally heavy-bodied, amber, and with a strong flavour. As a herb, its uses include the treatment of wounds.

Sunflower Helianthus annuus. Sunflowers are grown mainly as a source of oil and whole seed. R.S. Walsh is of the opinion that sunflower "... may prove to be one of the few plants worthy of cultivation expressly as a bee plant". The pollen gathered varies from yellow to orange, and the honey produced is mild and amber. Flowering period is in the autumn.

Thyme Thymus vulgaris. A small shrub, thyme bears clusters of purplish flowers in late summer/autumn. The honey is medium-amber and has a characteristic minty flavour. Surplus thyme honey is mainly confined to Central Otago. Other Thymus species also yield nectar.

Yarrow (milfoil) Achillea millefolium is found in pastures and roadsides. It reaches a height of approximately 30 cm and bears heads of white flowers. Bees work yarrow for a creamy pollen.

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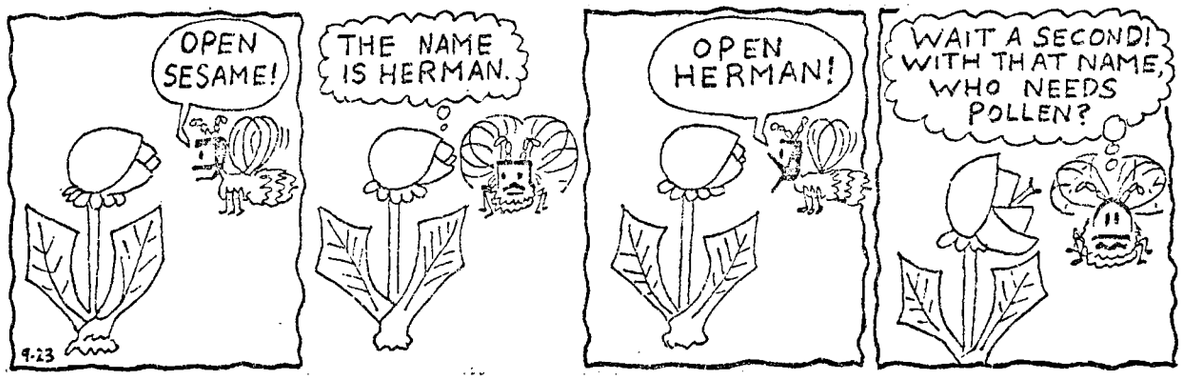
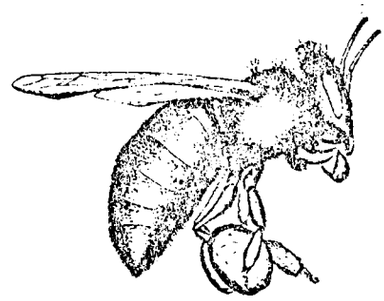




POLLEN FEEDING

Why bees need pollen.

Pollen is the source of almost all the components of honey bees' diet, with the exception of carbohydrates. The major constituent of pollen is protein, which is necessary for the structural elements of muscles, glands, and other tissues.

Honey bees use the protein portion of pollen mainly to provide the structural elements of muscles, glands, and other tissues. In newly emerged bees, protein accounts for nearly 13% of the fresh weight; this varies, to some extent, with the fluctuations in the pollen income of the colonies and with the pollen consumption of the nurse bees. The rearing of a single bee, from egg to adult, requires, on the average, between 120 and 145 milligrams of pollen.

Under normal conditions, growth in newly emerged worker bees begins as soon as they start to feed on pollen, with the resultant development of the brood food glands, fat bodies, and other organs. Some bees begin to eat pollen when they are only two hours old. By the age of four days, most young bees feed heavily on pollen; maximum consumption occurs when the bees are five days old. At this time, the activities of the young bees are centred on brood rearing. Both pollen consumption and the feeding of larvae diminish between the ages of eight and 13 days. Under abnormal conditions, such as when workers are forced to continue brood rearing activities beyond their usual life span, pollen consumption continues as well. As the bees become older and turn to other tasks within the colony, the glands producing the brood food retrogress, and the protein is transferred to the flight muscles, to the wax glands, and some protein is also stored in the fat body.

In bees, longevity is influenced by many factors, including genetic background, presence or absence of a queen, the quantity of brood in the colony, and the nutritional status of the worker bees. During the spring and early summer, i.e. a period of active colony growth, a relatively small number of workers support a large quantity of brood. Under these conditions the ability of the nurse bees to produce the protein-rich food given to the larvae is pushed to its maximum capacity. Brood food, a glandular secretion of worker bees, is produced at the expense of body proteins, which are not completely replenished, even with heavy consumption of pollen. Thus brood rearing, more than any other activity, shortens the lifespan of worker bees. By contrast, bees emerging in the autumn face a different situation. At this time of year brood rearing is being curtailed, and an abundance of nurse bees are available to feed the relatively few larvae. At the same time, large quantities of stored pollen in the hives permit the young workers to accumulate protein reserves in their tissues which are not, at this time, being seriously depleted by an excessive demand for brood food. This results in long-lived winter bees, many of which will live to see

the coming of spring. Both winter bees and summer bees may be produced at any time of the year by regulating the amount of brood to be fed, and the amount of pollen supplement available to the bees.

The above considerations are of particular importance, when preparing colonies for winter. By ensuring that colony populations consist primarily of well-fed winter bees, the beekeeper has done much to ensure their successful survival through the hard months ahead.

Several measures will help to increase the proportion of winter bees present in a colony.

1. The use of a strain of bees which curtails brood rearing in the autumn without the aid of the beekeeper.

2. Reduction of brood rearing through management, i.e. by confining the queen to a single brood chamber, containing only a few empty combs.

3. Ensuring an abundance of pollen reserves, by moving the colonies to an area of high pollen yield, or by placing combs well filled with pollen into the colonies to be wintered. (Note, only in cells that have been capped, or in which the pollen is covered with honey, will the pollen retain its full nutritional value). CAUTION: Combs of pollen, like those containing honey, can carry the spores of Bacillus larvae, which causes American foulbrood. BE SURE that the colony donating pollen is disease free!

4. By feeding pollen supplements.

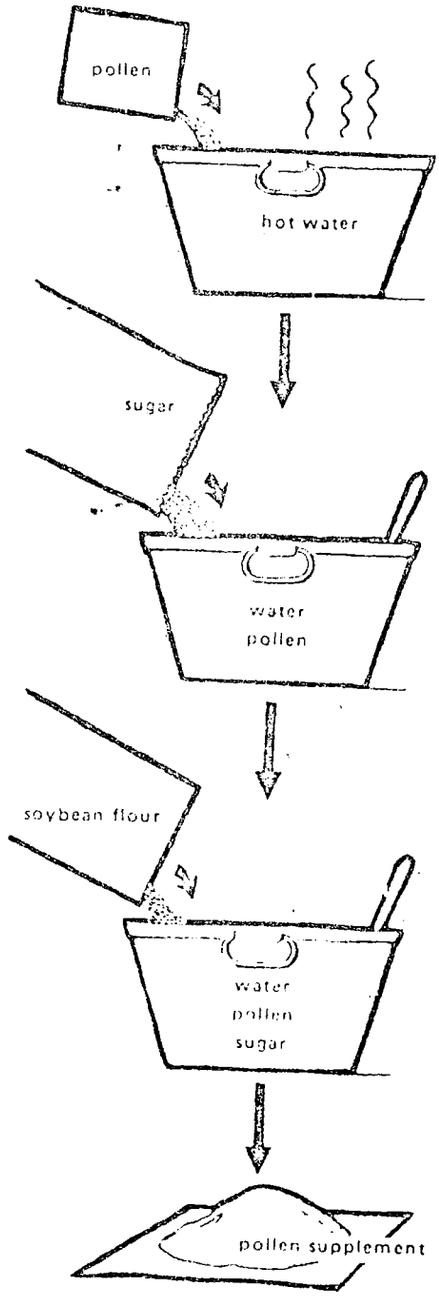
Pollen supplements

The use of pollen supplements has been attracting more attention lately in areas where pollen deficiency can be a problem. The best protein food for bees is of course pollen, but economic factors prevent the use of solely pollen for feeding bees. A small amount of pollen is usually supplemented with other materials, the mixture thus being called a pollen supplement. The term pollen substitute refers to a completely artificial protein diet for bees; i.e. one containing no pollen at all.

Pollen supplements have been used for many years, and materials employed have varied. For instance, in 1655 Samuel Hartlib recommended that dry meal or bean flour be added to "tostes of bread sopped in strong ale" as a cheap winter feed for bees. Modern practice is to reserve the ale for the beekeeper, and feed the bees on a mixture containing some or all of the following:

- soya bean flour
- brewer's yeast
- skim milk powder
- sugar
- water

There is a great variety of recipes available, and if you want to explore this in greater depth then I suggest that you read the chapter on pollen feeding in the Johanssons' book. One tried and true recipe is:



1. Mix one part pollen with four parts hot water, by weight.

2. When the pollen has softened, add eight parts by weight of sugar.

3. Add three parts of soya bean flower.

4. Knead the mixture into a dough. The consistency can be altered by addition of more flour or water.

5. Cakes about 1 cm thick and weighing about 0.5-0.75 kg are placed on squares of wax paper.

6. Spring feeding is carried out at approximately 10-14 day intervals to ensure a continuous supply of protein until natural pollen becomes available.

7. A strong colony may consume up to 5 kg of supplement in spring. It is important that the heavy brood rearing which results is not curtailed by the colony running out of supplement or honey stores.

* see page 16

8. There is considerable variation between colonies in the extent to which they will take up pollen supplement.

9. Brewer's yeast may replace part of the soya bean flour, i.e. step 3 becomes two parts soya bean flower and one of brewer's yeast. A diverse mixture is better than one containing fewer components.

10. The proportion of pollen in the mixture is not critical, but the more the better.

Constituents of recipes

Soya bean flour. This should be of the low-fat type, and very fine in texture. One suitable type is Staley I - 200, available from Healtheries (N.Z.) Ltd. at $38.00 per 45.36 kg bag or 84c/kg. Mauri DYC supply only whole fat soya bean flour, which is not suitable.

Brewer's yeast (Saccharomyces cerevisiae) is similar to baker's yeast, and is available from Mauri DYC as "DYC roller dried inactive food yeast". The unsalted product should be used, and it costs $20.80 per 10 kg bag, freight free on orders of five bags or more.

Pollen. If pollen is to be used only for bee feed, then it need not be dried. Empty pollen traps frequently to avoid deterioration of pollen, and place it straight into a deep freeze. It can be stored for several years with no loss in nutritional value. When removed from the freezer, it should be used immediately.

Addresses

Healtheries (N.Z.) Ltd., P.O. Box 11201, Auckland 5. Telephone 593 179

Mauri DYC Foods, C.P.O. Box 10, Auckland 1. Telephone 764 049.

And finally, some words on feeding pollen supplements from a paper by Ivor Forster:

"Beekeepers will learn to recognize a seasonal pattern that could result in pollen deficiencies only by studying conditions in their own districts. Undesirable colony symptoms that have no obvious explanation could well be suspected as due to pollen deficiencies (e.g. absence of essential amino acid), and trials should be made to see if they respond to the feeding of supplements. The effective use of pollen supplement must be treated as another skill in the art of beekeeping which requires considerable study if worthwhile practical results are to be obtained".

THE USE OF LEMON BALM FOR ATTRACTING SWARMS

Lemon balm (Melissa officinalis) has long been used for attracting honey bee swarms. The Greek writer Virgil mentions crushed balm as an attractant for swarms. The seventeenth century English herbalist John Parkinson wrote about its use by beekeepers in attracting swarms.

"It is also an herbe wherein bees doe much delight, as hath been found by experience of those that have kept great store; if the hives be rubbed on the inside with some thereof ... it draweth others by the smell thereof to resort thither".

The similarity between the scent of lemon balm extract and the Nassanov (orientation) pheromone of the honey bee was first noticed over 30 years ago by Karl van Frisch, the famous bee scientist. A recent paper in Bee World compares the analyses of Melissa oil and the Nassanov pheromone - there are several compounds in common, notably citral, geraniol and nerol.

The evolutionary significance of this is not really clear, but it seems that science is just confirming something that the herbalists have known for centuries!

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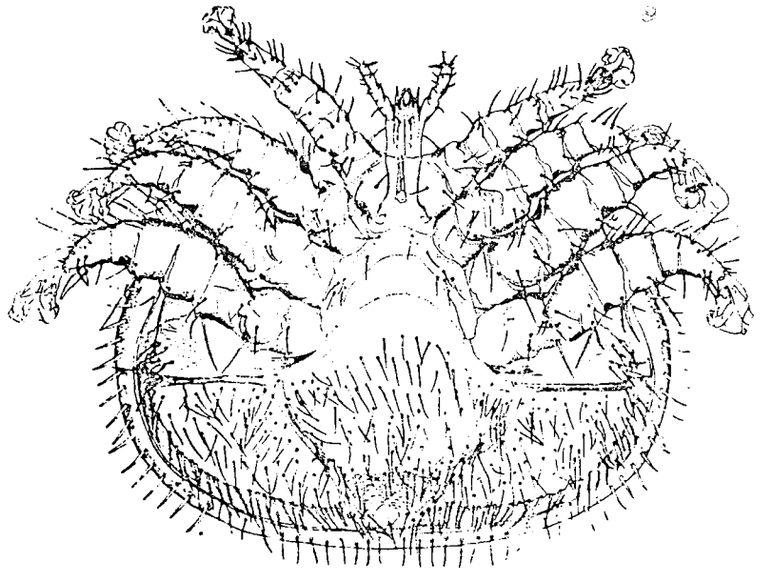

Line drawing of adult female Varroa jacobsonii, *ventral aspect* (×100).

VARROA, AGAIN

The survey of honey bee colonies in Maryland, mentioned in the last Beekeepers' Bulletin, has been completed without any evidence of Varroa being found. All the colonies (76) within a 5 km radius of where Varroa had apparently been collected were killed and examined in the laboratory. All colonies between 5 and 8 km from the collection site (164) were examined closely without the bees being killed. It was concluded that Varroa does not, in fact, occur in Maryland.

It is not known whether all the effects attributed to Varroa are caused by the mite alone, or whether it is working in conjunction with other agents such as viruses. Nevertheless, the Maryland scare again highlights the dangers of illegal importation of honey bees into New Zealand.

There are enough known pests in other countries that we don't want and probably others, not yet described to science, which we can

also do without. Remember that very few beekeepers in the western world had heard of Varroa until it was inadvertently imported to Europe some years ago. It would be sad indeed, if through endeavouring to "improve" our beekeeping industry, an illegal importer in fact destroyed it.

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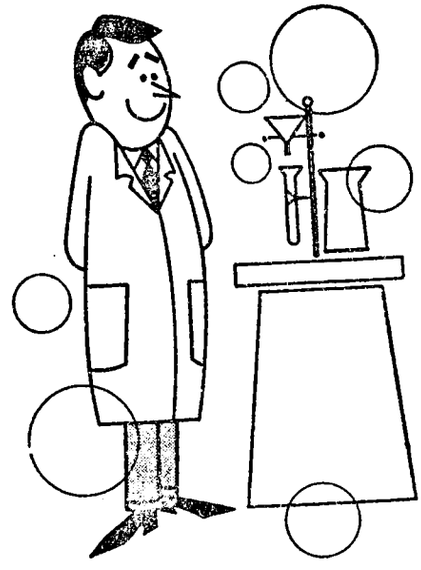
RESEARCH FUNDS - AUSTRALIAN STYLE



With all the discussion going on about disposal of honey industry funds, it is interesting to see the setting up in Australia of a "Honey Research Trust Account". The Australians don't have any nest eggs, but are funding the research by way of a levy.

An industry research levy of 0.25c/kg is paid on all honey sales, with the money going into the research account. Grants from this account are approved by the Minister for Primary Industry after recommendations from a committee which has one representative from each of the Department of Primary Industry (similar to our MAF), Australian Agricultural Council, CSIRO (similar to our DSIR), Australian Honey Board, and their equivalent of the NBA.

The new scheme is expected to raise about $50 000 per year, which is subsidised by the government on a 1:1 basis. The expanded programme will enable additional research on problems facing the beekeeping industry, and in particular into bee diseases.

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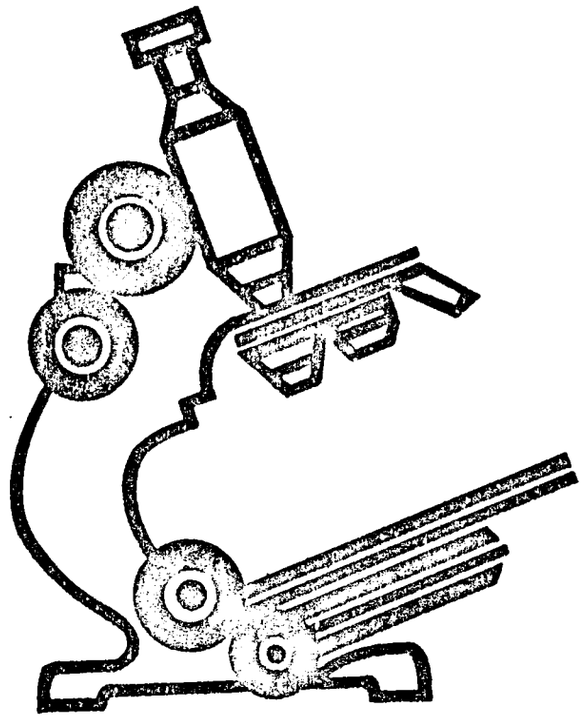
RESEARCH REPORT

Workers at the University of Wisconsin studied the effects that moving honey bee colonies had on their subsequent production. Colonies that were moved at night into new territory had smaller weight increases than undisturbed colonies, during the seven-day period following shifting.

Colonies which were moved out and back in the same night showed no such reduction in nectar storage. This indicates that the difference is probably due to the bees' need to reorientate to new pasture, rather than the effect of simply shifting the hives.



Colonies moved in late autumn showed a significantly greater winter consumption of stores than those not disturbed, and those shifted twice showed still greater consumption. Each move resulted in an additional consumption of 4-5 kg of stores per colony between October and April (northern hemisphere).

Reference: Moeller, F.E. 1975. Effect of moving honey bee colonies on their subsequent production and consumption of honey. Journal of Apicultural Research 14 (3/4): 127-130.

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The borough of Taupo has done some thinking which is a little radical by New Zealand standards. The council has suggested that areas of "waste" land, gullies, and land to be used for water and soil conservation, be utilised on a multi-purpose basis.

Their proposal is that such areas be planted with species of trees or shrubs which perform several functions; erosion control, bee fodder, shelter, and perhaps even provide stock feed, timber or biomass for energy.

Every local authority area contains land which could be suitable for such plantings: riparian strips retired by the catchment board, reserve gullies in boroughs which are currently infested with weeds and rodents, steep land which is unproductive from a grasslands point of view, airport approaches and reserves, and other land of a similar nature.

The Taupo borough has come to the realisation that if this land must be retired, then it can be done in such a way as to get other benefits from it too. Planting nectar and pollen sources gives a crop which is harvested without altering the landscape in any way, and is an earner of overseas exchange. It also results in more aesthetically pleasing surroundings, directly as well as through the increase in bird life.

The borough council called a meeting of people from Lands and Survey, catchment board, a local beekeeper and MAF apicultural and farm

advisers. A list of tree and shrubs suitable for erosion control, shelter and bee fodder was drawn up by MAF and catchment board staff and is now available through MAF apicultural staff.

Taupo borough have advised other local authorities of their programme, through the New Zealand Counties Association. The information is contained in the association's circular No. 1922, of 20/8/80. Perhaps the time is right for NBA branches to contact their local authorities, and work together with MAF in drawing up a plantings list suitable for each area.

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REGIONAL DEVELOPMENT ASSISTANCE

Some beekeepers have already had dealings with Regional Development Councils, but their assistance to beekeepers may be news to others. The regional development programme is a scheme set up by the Department of Trade and Industry to foster development in areas of slow growth and "priority" areas. It's actually easier to find a "priority" area than it is to find a "normal" area - for instance in the South Island only Nelson province and northern and central Canterbury do not qualify for regional development assistance.

The Department of Trade and Industry has recently decided to make beekeeping and honey processing projects eligible for regional

development assistance. The different schemes are set out below, but the important thing is that formal contact must be established with the Regional Development Council before any work has begun. Retrospective applications cannot be considered. Your contacts are:

Mr Rex Harrison
Duncan Hardie Building
Mackay Street
Greymouth

Telephone 6334

Mr Laurie Duckworth
P.O. Box 652
Blenheim

Telephone 83 731 (pvte)

1. Small project grants may be made to small companies (fixed assets less than $50 000, annual sales less than $150 000) which are beginning a development project involving expenditure of up to $30 000 on plant, buildings, beehives, etc. A grant (i.e. gift) of up to $15 000 is possible.

2. Regional development suspensory loans may be made on plant, equipment or buildings. They are particularly applicable to ventures where honey is "processed" or packed. Suspensory loans become grants after five years.

3. Pioneer status suspensory loans are granted to enterprises which introduce a new activity to the region, or new processes of technology to existing activities. A suspensory loan of up to 10% of development expenditure (up to a maximum of $50 000) may be made, convertible to a grant after five years.

4. Investigation and establishment grants may be made to assist with the costs of investigating and setting up new projects in slow-growth areas. It is this scheme which has the requirement that extra jobs must be created by the project; at least 10 full time positions. However, this requirement may be altered in certain cases.

If you live in Marlborough or on the Coast and are contemplating expansion or development, then be sure to contact your regional development officer first.

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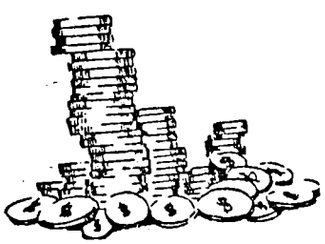

A recently published bulletin of interest to beekeepers is "Rural Industry Incentives 1980-81". This is the current year's edition of what was formerly called "Assistance and Incentives for Farmers". The changed title indicates that all primary producers benefit, not just "farmers" in the traditional sense.

It contains details of incentives, loans, grants, taxation relief and other forms of assistance which are available to the agricultural community. Obtain a copy from your nearest MAF office and find out what you're entitled to.

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BRAND YOUR HIVES

Each time I raise the subject, it is supposed to be for the last time. However, at the risk of repeating myself, I'll say that branding is good for three reasons; to deter potential thieves, to identify gear that has been stolen, and to fulfil your legal obligation to identify your apiaries with your code number.

Branding hives does not make them unsalable, as any branded gear can be mentioned in a "bill of sale" or "affadavit of title". More about that later on in this issue.

A very neat stainless steel brand is being made by L.W. Jesson, 149 Springs Road, Hornby or P.O. Box 6051, Upper Riccarton, Christchurch 4. Telephone 498 601. It is designed to fit onto a blowtorch, and only takes two minutes to heat up from cold. When hot, rapid branding is possible. It can be sold complete with a large Rockgas bottle and burner, which will do up to 20 000 brands per filling. The brand heads can also be bought separately for $68.

You can catch up on that backlog of work by taking the brand and gas torch out into the yards to do supers, lids and bottom boards. In the workshop, it can be used on replacement gear as it is made up. The unit is easily attached to a drill press to brand frames and ends of supers before assembly.

The size of the brand is shown, and they are made with one letter and up to three letters. If making your own, remember that the size shown (12 mm) or up to 20 mm means that frames can be done as well as supers. The edge of the letters should be V-shaped, not rounded.

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A book well worth obtaining is "Some important operations in bee management" by T.S.K. & M.P. Johansson. Those of you who met Toge Johansson during his visit here last year were no doubt impressed by his common-sense approach to the practical aspects of beekeeping, coupled with his wealth of scientific knowledge.

The book is made up of ten chapters, each dealing with a subject of great importance to the beekeeper in getting the best return from his bees. The Johanssons have researched each subject very thoroughly and extracted directions for beekeepers, based on scientific research. The book is intended for an international readership, including New Zealand, and not just for North Americans.

Chapter headings include; establishing and using nuclei, wintering, queen rearing, sugar feeding and pollen feeding. The book is available from the IBRA, Gerrards Cross, Bucks, SL9 ONR, England. 145 pages, price £3.25/$6.50 post free.

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For tax purposes, beehives are treated as a capital asset. We are all familiar with the phrase "As hives are fully maintained by repairs and maintenance, no depreciation is allowed".

The Inland Revenue Department has recently advised that "following a legal decision, hives are regarded as plant for the purposes of first year depreciation, and this may be claimed by commercial beekeepers on new or second-hand hives. The rate is 25% and is claimed in the year of purchase only".

This means that 25% first year depreciation is allowed when hives are purchased, and then repairs and maintenance are tax deductible in subsequent years. Beekeepers can thus get the best of both worlds. Your accountant may not be aware of this, so check it out.

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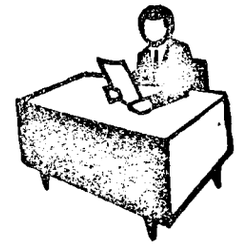
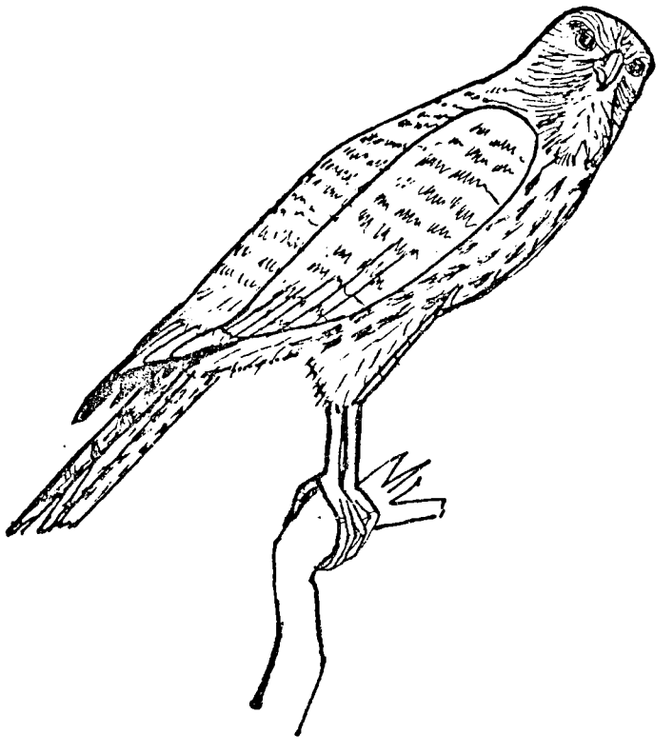
LEGAL EAGLES



Talking about branding brings to mind the small amount of paperwork which should be associated with buying and selling hives. This is necessary to assist with the MAF's disease control programme, and protect you as a buyer.

1. Permit to sell. A person wishing to sell hives is required by law to have a permit to do so issued by MAF. It does <u>not</u> guarantee that the hive is disease-free, but does authorise the sale or transfer of ownership, shows the buyer that the vendor is registered, and shows that MAF has been notified of the change.



2. Receipt. The bare minimum as far as the buyer is concerned, at least this shows that money has changed hands. However, this is not adequate on its own, and I suggest that you draw up a bill of sale.

3. Bill of sale. This provides proof of ownership

   - in case of re-sale
   - in case of theft
   - in case hives were branded by the previous owner
   - it will also be necessary if hives are part of security for a loan

A bill of sale is quite simple to draw up, and should contain the following:

- the name and address of the vendor and buyer
- the date of transaction
- a statement that the vendor owns the items in question
- a statement that the vendor transfers ownership to the buyer
- a usable and specific description of the goods being transferred
- the purchase price, terms of payment, penalty clauses etc.
- terms of delivery, if applicable
- any other penalty clauses if desired
- signature of the vendor (and a witness)

If hives are purchased during winter, it is common to obtain a money-back guarantee on any BL that shows up before the end of September.

4. Affadavit of title. If you really want to go about this matter in a legally water-tight fashion, then the next step up (and the only one that really protects you when the chips are down) is an affadavit of title.

   This really contains the same material as a bill of sale, with a few extra points. Remember that if, for instance, you purchase a car that is really owned to some extent by a hire-purchase company, then you can lose the car if it is repossessed. The only recourse is to sue the vendor, but this is a lengthy and costly process.

An affadavit of title contains the statement that the vendor is the lawful owner of the hives, and that they are free from any encumberances, mortgages, etc. This is witnessed by a Notary Public or Justice of the Peace. Your solicitor will no doubt be able to arrange these things for you if necessary.

I have come across several cases where farmers purchase a farm and consider that the beehives on the land at the date of purchase belong to them. This is not so. New Zealand legal opinion, although not tested in court, is that beehives are not a permanent feature of the farm (fences and yards are), and as they are not on the list of chattels sold by the former owner, they are not part of the purchase agreement.

Things are not so clear-cut in other countries, however. One Canadian beekeeper lost 300 hives recently when a new farmer bought a property from a deceased estate. The new owner claimed the hives, and won the subsequent court case over the issue. The beekeeper now draws up "colony ownership agreements" which are signed by landowners, recognizing that they have no claim over the hives.

I'm sure that Kiwi beekeepers would tackle such a situation in a different way, in the dead of night, but it is fortunate that we haven't reached the state of obsessive litigation which prevails in some countries.

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MARLBOROUGH BRANCH, NBA

Beekeeping is on the increase in Marlborough, a fact that was never more apparent than on the 29th of October.

Several beekeepers interested in farming a local branch of the NBA called a meeting for that evening, and some 60 invitations sent out resulted in 40 people attending the meeting and another half a dozen or so apologies.

The "commercial" and "semi-commercial" beekeepers want to work together, and present a united voice on any matters that may affect them. "Hobbyists" want a forum for the exchange of ideas and experiences, and the two groups will gain from each other. It was encouraging to see the response at the meeting, and I'm sure that this augurs well for the development of our industry in an area with such vast beekeeping potential.

Any who were not there but are interested in the association, could contact

Mr Haikai Tane
Ferny Gair
R.D. 6
Blenheim

He is on the steering committee which is discussing the practical details of setting up the branch.

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MELTING HONEY

Another way of melting small quantities of honey is by placing 60 lb tins into a water bath. The bath should be fitted with one or two hot water cylinder elements coupled to a thermostat, and should have a lid to reduce heat loss. There are quite a few of these units around the country, and most can take about 6-10 tins. Water at a temperature of 70°C should melt out tins in about 12 hours.

Also commonly used is an old refrigerator heated with two light bulbs at the bottom. This must also be thermostatically controlled, and 100 W bulbs should be ample.

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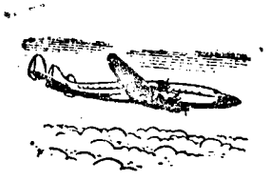

Two visitors to the district in September/October were Paul Osilis and Joachim Waugla of the Papua New Guinea Department of Primary Industries (equivalent to our MAF). They have been working for about three years on the beekeeping project there, set up under New Zealand's bilateral aid programme and headed by Gavin MacKenzie.

Both Paul and Joachim are in charge of a unit or "farm", each of about 400-500 hives. They have people working for them who being trained for two years, and if they show an aptitude for beekeeping they are given 100 hives of their own at the end of this time. The department keeps an eye on them, and if they manage alright on their own they may receive loan money for expansion.

PNG has no traditional beekeeping culture, and the beekeeping project is establishing a new industry in this interesting new nation. Joachim and Paul are very competant beekeepers, but came to this country primarily to become familiar with field diagnosis of American foulbrood, which PNG is fortunately free of.

They have also spent a short period in Australia learning about European foulbrood, which they also do not have. It is important to have officers in PNG who are trained in the diagnosis of these diseases, in case they ever gained entry to that country.

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BEES AND ELECTRIC FIELDS

More on the behaviour of bees exposed to high electric fields. Work at a German university, reported in the latest Apicultural Abstracts, involved exposing nucleus colonies to electric fields similar to that found under the 765 kV lines studied in the Californian report, mentioned in the last "Bulletin".

Similar effects were observed, particularly aggressiveness and increased use of propolis.

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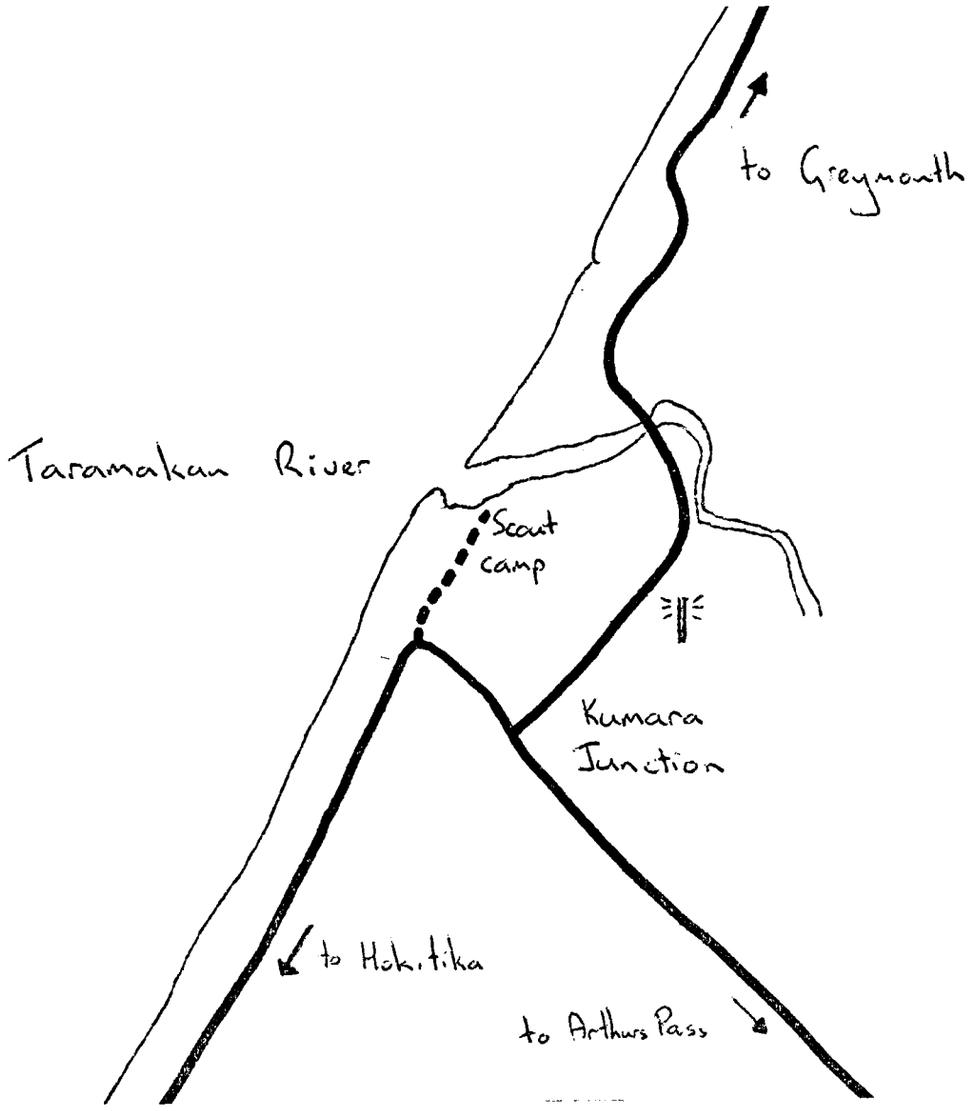
WEST COAST FIELD DAY

The West Coast branch of the NBA will be holding this year's field day on:

Saturday 22 November

The venue will be the Scout campsite at the Taramakau river mouth; turn off at the Serpentine hill, approximately 20 km south of Greymouth (see map).



Speakers will include representatives of the NBA, HMA and new honey co-operative. Ralp Glasson will speak on the process of setting up an extracting facility. Grahame Walton of MAF (Wellington) will speak on recent changes to the Apiaries Act and Honey Export Regulations. There will also be discussions and demonstrations on increasing hive numbers, making spring and autumn nucs, etc. Rex Harrison, Executive Officer of the West Coast Regional Development Council will speak on types of loans and finance available through the council.

There will be a competition for the most useful beekeeping gadget. Bring your family, your lunch, your entry (entries) for the competition, but most of all, be there! The day kicks off at around 10 a.m.

(A.G. Matheson)
APICULTURAL ADVISORY OFFICER

P.S. Please send your apiary inspection return in, if you haven't already done so. They were due on the 7th, and reminders are going out shortly.