

Subject of This Months Meeting:

Methods of Varoa Control

Wellington Beekeepers Association Inc.

Newsletter - Sep 2011

**Next Meeting:
Wednesday 7th September 2011
Main Hall, Ground Floor,
Moorefield Rd, Johnsonville Community Centre.**

7.00pm Beginners meeting

7.30pm – Main Meeting

Return address PO Box 11- 089 Manners Street Wellington (ph 04 565 0164)



WELLINGTON BEEKEEPERS ASSOCIATION



Meetings Johnsonville
Community Centre
Main Hall, Ground Floor,
Moorefield Road

1st Wednesday of the month
Main Meeting @ 7.30pm
Beginners Tuition @7.00pm

WHO TO TALK TO

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last week of each month,
except January. Members
contributions to be with editor **by**
20th month. Articles should be
submitted in **Microsoft Word**
document format please.

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**WELLINGTON BEEKEEPERS ASSOCIATION
AUGUST 2011 MEETING
3 AUGUST 2011**

Present: Richard Braczek, and 80 members

Apologies: Bill Bligh, Stephen Brewer, Amor Walter

Visitors: Ten.

Minutes of the Previous Meeting: Accepted, moved Andrew Beach, seconded Ken Breden

New President.

Richard Braczek, the new President, introduced himself.

Field day numbers

The wax dipping and equipment workshop at Wayne Wild's went well but some people left boxes to be dipped and forgot to pay. Please pay John Burnett or Wayne Wild. Wayne said this was a better sized group and easier to manage. Tony Coard gave a poignant thank you to the woman who very kindly pointed out that the wax dipper was on fire and cravenly begged her forgiveness for brushing it off when she first tried to point it out to him. Tony has now clad the dipper in metal and will make a lid.

If people want their boxes wax dipped in the future please give your (named) boxes to Wayne at the meeting or drop off to him. He will bring your boxes to the next meeting if they are ready. Wayne suggested people get going on box assembly now to prevent the usual rush.

General Business

Suggestions

Richard Braczek said he was keen to get feedback/suggestions from members to the committee regarding topics or activities they wish the club to run. There will be a survey on the club website for members to fill out or members can take a paper copy at the meeting. Please also update your phone and contact address on the website or paper copy. We will send a link out to everyone who gets an electronic newsletter.

Hives Activity?

There is good activity in Wellington hives. We are past the acute phase of varroa in Wellington but with resistance to Bayvarrol/Apistan mitacides increasing we will need to explore alternative methods of control. John Burnett and Luke Potion are offering an alternative treatment which is Formic acid. This will be demonstrated at the next meeting as a more natural method. Anyone wanting to do a demonstration on alternative treatments please contact the President to arrange.

Tonight's Topic - Wintering

An English video was shown demonstrating feeding sugar syrup and combining weak hives as preparation for wintering down. General tips in conjunction with the video:

- Ease Bayvarol or Apistan strips down gently between combs to avoid chopping your queen in half;
- When feeding colonies sugar syrup do so in the evening if possible and reduce their entrance to avoid robbing;
- It is best to put mouse-guards on entrances in winter;
- Bees do not stay in the hive all winter, when temperatures get above 10 degrees C they will go on 'cleansing flights' (visits to the powder room).

Bee Food

Frank Lindsay brought along some pussy willow shoots to plant as a good spring pollen source for bees. (Note: please go to extensive lengths to seek permission from councils, landowners, railways, roads boards etc before planting these, as they are a fantastic source of food for bees and grow very successfully just from a twig poked in the ground anywhere really and it is only polite to consult).

Newsletter

Apologies for the newsletter, there were problems for members trying to print it. It has been a bit light due to the dearth of material being submitted so please put in your jokes, recipes, articles, photos etc. Disaster stories are particularly appreciated as it makes us all feel better about our own, you can always sign them 'anon' if you feel you are not up to the brutal, merciless, unrelenting gentle ribbing from fellow members.

Field Days

Anyone interested in hosting a field day please let someone on the committee know. With club numbers high we may consider having concurrent field days in different locations. More than one or two hives on site is best but any are considered.

Diseasathon

Frank suggests this will probably occur around November. Members do inspection of other hives with Asure Quality permission to get first-hand experience of what various diseases look like in a hive.

Nucleus Colonies

John Burnett discussed with Frank the supply of full depth nucleus colonies for those who want them. Gary Milne in Otaki will supply them for \$135. Members bring empty 1 box hive including 4 or 5 frames with foundation. A hive should be labeled and include:

- A bottom board
- 4/5 frames with foundation
- A lid and an inner lid
- Strap it if desired.

We will arrange to truck hives to Foxton ($\frac{3}{4}$ depth) or Frank (full-depth) and establish the hive then arrange for them to be brought back. A show of hands was asked for: 12 people wanted full depth and 50 wanted $\frac{3}{4}$ nucleus hives.

We will arrange a central point for you to bring empty hives for collection, instructions will be provided before.

Books – Practical Beekeeping in NZ by Matheson and Reid

The updated version of this has just been released in NZ. The club put in a bulk order, many members have purchased them and there are only 20 copies still available from the club.

Queens

Orders will be taken next meeting, approximate cost \$25 for a mated queen.

Q & A's

Q. When will the swarm list be compiled?

A. Next meeting.

Q. When is the best time to re-queen?

A. Easiest in autumn but spring is O.K

Q. If all the nucs are in the same place won't we end up with a small genetic pool?

A. There are lots of beekeepers here who have kept bees for a long time in many locations and with a variety of queen sources so the genetic diversity is fine.

Q. Any packaged bees available?

A. Southern Sun Apiaries in Foxton have them.

Q. There have been some problems in the Lower Hutt distribution centre of the Post Office in delivering queens.

A. We will sort it out; hopefully it is a one off. It was suggested that you give a work address for delivery if possible; commercial addresses get the 1st deliveries instead of your bees being at the bottom of the pile in the van in uncertain temperatures and delivered at the end of the day.

Q. The magazines on the table, what are they?

A. They are the NZ Beekeeper Magazine put out monthly by the National Beekeepers Association of NZ. Our members can borrow copies and every registered beekeeper receives an April and October copy of this automatically. We suggest you consider joining the NBA and visiting their website.

The meeting concluded at 8.25pm.

Next meeting Wednesday 7th September 2011, Johnsonville Community Centre. New beekeepers at 7pm, regular meeting at 7.30pm.



The following article was first published in *Organic NZ* July/August 2011 and is reprinted with permission of Janet Luke and *Organic NZ*, www.organicnz.org

Top-bar beehives

Janet Luke outlines a sustainable method for backyard beekeeping

Previous articles in *Organic NZ* have highlighted the plight of bees, which are declining worldwide in alarming numbers due to unsustainable practices. Last year USA lost over half of their beehives. In Europe they are experiencing similar losses. Now we may be witnessing the same problems. The National Beekeepers Association of New Zealand is currently conducting a survey into increased bee losses.

Without bees pollinating our crops, we would be eating mostly bread, corn and rice. More beekeepers are needed, and backyard beekeepers could play an important role.

I started keeping bees in my urban garden four years ago due to their absence and to increase the pollination of my fruit and vegetables. They are fascinating to watch and a joy to have in your garden. Even the smallest townhouse garden or apartment could have a hive as it is the surrounding air space they use. Bees fare better in urban areas as they have year-round, varied nectar and pollen sources.

I researched different ways to keep bees and settled on a top-bar hive. This design has been around for hundreds of years and has recently become very popular with backyard beekeepers in America and the United Kingdom. The hive allows bees to live as they prefer to live in the wild. It consists of a long horizontal box with sloping sides and wooden bars along the top. The bees build their own comb from these top bars and fill the comb with bee babies or honey.

Is a top-bar hive for you?

As with any system there are pros and cons.

Advantages

- ÿ Low-tech option requiring little extra equipment.
- ÿ No heavy lifting of supers; great for women, the elderly, people in wheelchairs or with back injuries.
- ÿ No extra storage space required for equipment such as supers, frames, queen excluders or foundation wax.
- ÿ You can build it yourself from locally sourced timber.
- ÿ Warmer in winter and less condensation as hive built out of thick wood
- ÿ No need for foundation comb; bees can build their own to their own dimensions.
- ÿ More natural, less commercial. Bees construct and manage their hive they way they want to.
- ÿ Honey harvested as natural honeycomb.
- ÿ The mesh floor and smaller natural comb may reduce varroa numbers.
- ÿ Small round entrance holes make it easy for the bees to defend against wasps.
- ÿ The raised legs make it harder for mice and ants to enter the hive.

Disadvantages

- ÿ You get less honey from a top-bar hive (but still plenty to share with family and friends).
- ÿ Harder to move the hive as it does not easily stack.
- ÿ A new concept in New Zealand; difficult to gain advice from beekeeping clubs.
- ÿ You need to visit a top-bar hive more regularly – at least every three weeks in spring and summer.
- ÿ Combs are fragile and can break – it is a matter of learning how to handle them (watch this short YouTube video: <http://youtu.be/PFmvVRjzKZU>).

What I enjoy most about a top-bar hive is that it is so much less intrusive and more bee-friendly than a conventional Langstroth hive. There is no heavy lifting and the bees are not as disturbed, so do not become as aggressive when you open the hive. I find I do not require a smoker when handling my bees. If you would like bees to pollinate your edibles, would like some honey to share with family and friends and wish to keep healthy, happy bees in a much more sustainable and bee-focused way then consider buying or building your own top-bar hive.

Keep it legal and healthy

First, check your local bylaws. Most councils allow you to keep a hive in an urban setting; many allow two.

You have to register your hive with government agency Asurequality (around \$30 per year). It is very important to check your hive regularly for disease – in particular American foulbrood. You can do this yourself after attending a half-day workshop and sitting a simple test, or get someone from your local beekeeping club to do it for you. You need to complete an annual disease form stating if any disease has been found in your hive. This can all sound a bit daunting but is really a simple process.

Bees must be kept in movable frame hives so each side of the comb can be inspected for disease, and access to the hives must be maintained. Top-bar hives comply with this.

Check out these websites:

- ÿ The American Foulbrood Pest Management Strategy: www.afb.org.nz
- ÿ The National Beekeeping Association: www.nba.org.nz

Siting your hive

Getting the location of your hive right is important, especially in an urban setting. Place your hive so the bees' flight path does not cross a footpath or driveway, or is too close to your neighbour's boundary. When bees leave the hive they fly out and then up. Force the bees up quickly by facing the hive two metres from a tall fence or hedge. A flat-roofed shed or carport roof are other good options.

If possible position the hive where it will receive morning sun. Avoid damp gullies or under large shady trees.

Varroa mite

Varroa are tiny mites that live on bees and in the brood. They feed off the bees, weakening the colony and spreading viruses. The varroa mite was introduced by accident into New Zealand's North Island in 2000. Now it has spread to almost every part of the country. Unfortunately due to varroa, wild colonies of bees do not survive for more than a year. Bees now need us to manage their care and keep them free from diseases and varroa. Hives are treated for varroa in the spring and autumn. This costs around \$20 per hive each year.

A variety of commercial varroa treatments are available. The more organic ones include Thymovar and Apiguard (both thymol based), and ApiLife VAR (thymol, eucalyptus, camphor and menthol based).

Where to get your bees

Organising the hive is easy; coaxing 60,000-odd insects to take up residence is another matter!

- ÿ A long shot: place your top-bar in the garden and rub the insides with lemon balm. Any passing swarms may be attracted to the scent.
- ÿ Find a top friend: if any friend already keeps bees in a top-bar they could give you several bars of brood, honey, comb and workers. You can then buy a new queen for your colony.
- ÿ Put the word out: Inform your local beekeeping club that you can collect any swarms in your area.
- ÿ Chop to shape: You can buy a nuc (a small colony on conventional frames) but you will need to cut the bottom frame and wires so the frame will fit into the top-bar hive. Unfortunately you will need to sacrifice some comb and brood to do this.

Collecting a swarm

Spring is the best time to start beekeeping. This is when many bee colonies swarm. This is the bees' natural way to increase their numbers. Half the workers leave with the old queen to find a new home. When bees are swarming they are normally very docile as they have filled their tummies with honey for the journey. Collect the swarm in a box and then transfer this mass of bees (the queen will be in the middle somewhere) into your new top-bar hive. They will set about making new comb straight away.

Watch this YouTube video to learn how to put a newly-caught swarm into a top-bar hive: http://youtu.be/ON38_f89Uq0?hd=1

Janet Luke is a landscape architect with a passion for sustainable living. She runs greenurbanliving.co.nz, a website showing you ways to live more sustainably in the city, while having fun doing it.

Suppliers of varroa treatments and beekeeping equipment

- ÿ www.bees.co.nz
- ÿ www.symbiosis.co.nz
- ÿ www.ecroyd.com

Save Our Bees

Save Our Bees Charitable Trust has free top-bar hive plans, a list of people who can build your hive, and dates for free workshops. There is a backyard beekeeping forum, website links, a free e-booklet for getting started, information on keeping everything legal and about avoiding toxic honey. www.saveourbees.org.nz

By Ed. It is regretted that the photos that went with the above article were too large to be included.

MAF statement on top bar hives

Disclaimer: MAF is unable to provide legal advice on this matter and the information below should not be construed or relied on as such. MAF accepts no responsibility or liability to any person for any errors or omissions of fact or law or opinion expressed in the paragraphs below. The statement below represents MAF's general view. It is recommended that parties seek their own independent legal advice on this matter.

Hive types are regulated by clause 11 of the Biosecurity (National American Foulbrood Pest Management Strategy) Order 1998 (the strategy), which requires that bees be kept in moveable frame hives. The definition of 'moveable frame hive' in the strategy is reproduced below:

'Moveable-frame hive' means a beehive containing frames in which the combs are built, and where the frames may be separately and easily removed from the beehive for examination without causing damage to the combs."

The first part of the definition suggests top-bar hives are not compliant with the NPMS, as the hive must contain frames in which combs are built. This is not possible if a 'frame' consists only of a top bar.

However, the second part of the sentence reads "*and where the frames maybe separately and easily removed from the beehive for examination without causing damage to the combs*". This provides the rationale for the requirement to use moveable-frame hives.

The inspections referred to are within the context of a strategy that has the objective of reducing the incidence of American foulbrood, and which requires visual inspection of brood combs for disease symptoms.

Section 5 of the Interpretation Act 1999 (set out below) states that when

interpreting legislation (statute or regulations), one needs to do so in light of the purpose and text of the legislation. This is called the "purposive" approach; i.e., one does not just look at the dictionary meaning of the words but the context in which they are used. In other words, when interpreting the law, you have to consider the intent as well as the strict dictionary meaning of the words.

Interpretation Act 1999

5 Ascertaining meaning of legislation

(1) The meaning of an enactment must be ascertained from its text and in the light of its purpose.

Looking at the purpose of the American Foulbrood Strategy Order (clause 5), the primary purpose is to reduce the incidence of American foulbrood by specified percentages over a certain period of time. One of the secondary objectives of the strategy is to locate all beehives and ensure that each honeybee colony is inspected at least once a year for AFB.

The definition of "moveable frame hive" needs to be interpreted in light of these objectives of the strategy. It appears that the original intent behind the requirement to have moveable frames was to facilitate inspection for AFB, so the key consideration is that there should be no impediment to inspection.

Until this issue is determined by a court, MAF can not give a conclusive answer as to the legality of top-bar hives.

Ever have trouble moving your hives?

Club member Jeff Arthur spotted this website which may be of interest to WBA members:

The text is in German but the pictures will hopefully provide inspiration to someone in NZ with an interest in Beekeeping and Engineering.

Go to: <http://www.apilift.de/index.html>

Bee Rescue

Being new to Bee Club, our friends know our interest in the subject. This story from a non-beekeeper came up in conversation today:

About to throw some paper into the firebox of her wood burner, a friend of mine spied something small struggling in the ash. Unsure of what it was, she scooped it up in her hand and discovered a bee, completely exhausted and smothered in ash.

Realizing it would die with all that ash covering it, she quickly cast about for something to clean it with, that wouldn't harm the bee in the process. A fine spray of water seemed ideal, but there was nothing she had that would do.

Grabbing her water bottle, she poured some onto the lid of her wood box and grabbing a fine artist's paintbrush, she gently stroked water over the bee to remove the ash from its body and wings.

Where now to keep it safe while it recovered? The garden swing seat sounded a good idea, sitting out there in the sun, so she gently put the bee on it and stood back to watch. Up comes the cat – ah! Something to play with – great. So the bee was once again rescued and various places were selected for its recovery, but the cat doggedly followed her.

Finally, my friend stood out outside with the bee in her hand for about 10 minutes until the bee finally flew from her hand. It did three circles above the lawn and then flew up and away over the fence and into the sky.

Saving that beautiful little critter really made her day and, I think, shows us the admiration and concern that many in the general population have for the honey bee.

Contributed by Stewart Knowles.

The Food Bill – And How it Could Affect Bee Keepers

By Nigel Pinkerton

Currently any honey that is sold or traded must have been packed in a registered food premises. This is a significant compliance cost for small-time producers, as setting up a compliant extraction plant can cost tens, if not hundreds of thousands of dollars – not to mention the inspection fees.

Many hobbyists currently operate “under the radar”, selling or trading a bit of excess honey to friends and family. But current food hygiene regulations present a significant barrier to selling honey in any quantity – such as at community markets. The Food Bill, currently awaiting its second reading in parliament, could change that.

What is the Food Bill?

If passed into law, the Food Bill would replace the Food Act 1981. The Food Bill is the result of the domestic food review, which is only the second review of New Zealand's food sector in the last 30 years.

According to MAF Food Safety, the Food Bill "aims to provide an efficient, effective and risk-based food regulatory regime that manages food safety and suitability issues, improves business certainty and minimises compliance costs for business". The bill is also seen as a solution to the current inconsistent application of rules and duplication of bureaucratic process across New Zealand's 72 local authorities.

Rather than the current focus on "walls, floors and ceilings", the proposed regulatory regime will look at the entire process from food production to consumption. Food handlers and producers will be required to demonstrate that they are minimising risks at every stage of their process.

The Bill, if passed in its current form will introduce three levels of oversight:

- Food handler guidance
- National programs
- Food control plans

National programs are favored for industries that present a low to medium risk to consumers. There will be three levels of national programs that reflect the risk of the industry in question.

A pilot program, known as voluntary implementation, means some food producers already have the option of adopting one of the above provisions and being exempt from operating from a registered premises.

How will the Food Bill affect honey producers?

In the legislation as it currently stands, extractors and packers of honey will be subject to a level 1 national program. Level 1 reflects the fact that honey presents a relatively low risk to the consumer from a hygiene point of view (beekeepers will still have to comply with the 2010 tutin in honey standard).

The details of National Programmes are currently being considered by MAF so that they can be enacted once the Food Bill is passed into law. MAF advises that individuals and businesses that process honey for sale are likely to be required to register a standardised plan – effectively an agreement to operate to best-practise handling procedures. The level of direct regulatory oversight – and therefore cost – to individuals processing honey is likely to be relatively low.

There will be an annual registration and an initial verification inspection for any business processing honey for domestic sale. However, there will be no further verification checks unless an issue arises. The costs beyond the second year would therefore go down significantly for those in a national programme Level 1 to being only a re-registration charge. If an issue arises or a food business is

not complying, then further audit checks would be required and the cost passed onto the business.

Although honey processors will have to agree to operate from a "suitable facility", the current requirement to operate from a registered food premises will effectively be removed.

Hobbyist beekeepers who want to sell a bit of honey at the local market stand to gain the most from this legislation as the barriers to selling their honey will be lowered significantly. Commercial beekeepers also stand to save on compliance costs and probably won't mind the extra competition from small-time honey producers, unless sales at farmers markets form a large part of their current income.

Club Apiary

We are currently looking for a site to establish a club apiary. The site should meet the following criteria:

- Capable of supporting 5 or more hives
- Levelled ground able to accommodate about 4 or 5 beekeepers around each hive
- Full day sun or at least morning sun with shelter from prevailing wind
- Preferably located in either Wellington, Hutt or Porirua city or a nearby suburb to enable easy attendance by members
- Preferably private land so that public visibility and risk of interference/vandalism is non-existent or at least minimal
- Good access with car parking nearby for several vehicles
- Landowner/occupier permission for hives likely

If you know of a suitable site please let me or Tony Coard know. To reduce the set-up costs we would welcome donations of any unwanted hives in good condition. If you have anything that you think may be suitable please contact us.

John Burnet
Treasurer
Ph.232-7863

Tony Coard Describes The WBA Wax Dipper Evolution

Two years ago the WBA committee decided to get its own wax dipper. Andrew Beach [then president] got us a steel plate tank built. Initial idea was for an LPG fired portable unit, but I strongly urged us to "go electric". The result was Wayne Wild and I got the task to "get it to work".

Initial progress, welding a BSP barrel to take a "Dairy" Electric Element, welding 20mm x 20mm angle bars to stop element damage, glanding a temperature probe.

The control electronic unit that then built ,[could on reflection have been a domestic oven "dial/probe" thermometer], uses a solid state relay there are no contacts to arc.

Boiler Refractory High Temperature Glass fibre 50mm Insulation was obtained. Wax was obtained from a 4 meter deep hole dug at John Randels [South Karori].

This was all carted over to Waynes barn. We fired it up and got to 90 degrees WOW.

Cool down to skin over was only 2 hours. Next a 6mm ply outer with galvanised flashings and corners was added , then a ply top with 50mm insulation was built.

We got to 160 degrees , cool down to skin over 6 hours. Probe failure problems and we now hang a probe down from the top. Then we built pushers to submerge boxes in wax.

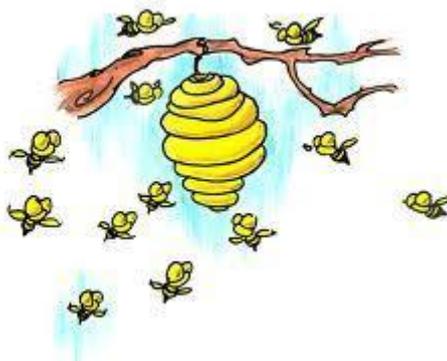
So it worked great, but then at our recent field day "assembly of wood ware" one of our observant female members pointed out to me "the dipper is on fire". So I told her "it always steams a lot" so I had a look OH UM a fire the ply rear panel was burning , easy to put out but a worry to me .

Alloy sheet was obtained and the sides were sheathed in alloy, now in boil over the metal flashing and side's tight fits stop wax saturating the side insulation. Heat up now 5 hours.

After much worrying I built a stainless steel lid with a 100mm cavity insulated with two R3.6 Batts obtained from my houses roof insulation. As I again obtained the stainless it is 1mm2 not 0.9mm so its a bit weighty, this is a welded, solid, self draining unit. I added wooden handles and stainless pushers to keep boxes under the wax took me nearly a whole Friday to obtain bits/design/build.

Now heat up is about 5 hours, but wax skin over time is 20 HOURS.

Wayne runs this WBA wax dipper in his barn providing us all with a service, a no chemical wood treatment that is as good as any. We pay \$3 per box this just covers power and replacement wax . So WBA Members use and enjoy this at cost service.



A LETTER.....

The playing field has changed. CONTROL OF VARROA "Green Book".

Wayne Wild and I tried the Oxalic acid trickle as per the "Green Book" Saturday 2 weeks ago. Last Sunday, post the snow we found carpets of dead bees outside of all 6 treated hives. I visited Frank and told him, "1kg sugar + 1 litre water and 75 grams Oxalic acid = 3.2%".

"No", Frank said.

"No?"

"Too much oxalic acid". We rechecked the "Green Book", as above. THEN IT HIT ME - 1000g sugar to 75g acid or 100 sugar to 7.5 acid is 7.5%. NOT 3.2%!

Frank [Sunday evening] emailed the author Michelle Taylor at Hort Research. Email received Monday evening "OH we have known about this and emailed the Oxalic acid importer, but no reply". WHERE IS THE BEEKEEPERS BEING INFORMED WHAT ABOUT MY RITES AS A CONSUMER paying \$50 for the book?

I am bloody mad and rattling the chains of Bio security / Ministry of Ag & Forestry. Now I am in process of a complaint under mis-use of chemicals against HortResearch.

Four of the hives are mine, BUT two are Wayne's and it hurts me to do this to Wayne. One of my hives looks lost the remaining hives are very much reduced in numbers of bees.

Where are all of our 'green organic' non chemical club members??

Has NO ONE TRIED ORGANIC MITE CONTROL??

By Tony Coard

Graeme Moody

It is with sadness we advise the death of one of our members Graeme Moody, who died in a surfing accident in Australia on 24 Aug. Graeme & his wife Bev had been keen members of the Club for several years and keep hives in the Wairarapa. Graeme will be remembered for his sunny smile, and positive outlook on everything.

Graeme was a well known sports broadcaster - for reaction and comments by many of his colleagues read the following link:

<http://www.stuff.co.nz/sport/5503262/Broadcaster-Graeme-Moody-dies-while-surfing#share>

The Club has extended its condolences to Bev and we hope that she will continue beekeeping with support from the Club if required.

**Wellington Beekeepers Association Library held by Editor
all titles are available for lending.**

For the love of Bees - Story of Bro Adam of Buckfest Abby - Lesley Bill,(HB, 1989 B/W illus.)

Practical Beekeeping Handbook for Australia & New Zealand. Ray Chapman Taylor & Ivo Davey
(PB
1988)

How to keep Bees & Sell honey - Walter T Kelley (PB 1978 B/W)

Diary of a Honey Bee - Bill Kerr (PB 1990 Colour) Children's introduction to Bees

NZ Standards Model General Bylaws - The Keeping of Animals, Poultry & Bees NZS 9201 SANZ (PB
1978 B/w photos, illus.)

Nectar & Pollen Sources of New Zealand - RS Walsh (PB 1978 B/W Illus/Photos)

Beekeeping the Gentle Craft - John F Adams (HB 1972 B/W illus)

Backyard Beekeeping - William Scott (PB 1977 B/W illus. photos) x 2 copies

Bees & Beekeeping - A V Pavord (HB 1970 B/W illus. photos)

Teach yourself Beekeeping - A N Scofield (PB 1971 B/W illus. photos)

Practical Beekeeping & Honey Production - D T Macfie (HB B/W illus)

Manual for NZ Beekeepers - W C Cotton (HB no illus. 1848 - 2 x 1976 reprints)

Elimination of AFB without Drugs - Mark Goodwin & Cliff Van Eaton (PB 1999 Colour Illus)

Beekeeping in New Zealand - NZ Dept Agriculture bulletin no. 267 9 HB 1961 B/W illus.
photos)
3 copies

The Dancing Bees - Karl Von Frisch (HB 1955 B/W Illus. photos)

Honey Cookbook - Peter Russel Clark (PB 1985 colour Illus)

The Complete Guide to Beekeeping - Roger A Morse (HB 1974 B/W illus. photos)

Honey - Natural Sweetness - Jill Norman (HB colour illus. photos)

Beehive - Source of Youth Vitality & Longevity - MS Landis (PB1982 no illus.)

A Box of Bees - Emily Dobson (PB 2005 - Poetry)

A Book of Bees - Sue Hubbell (PB 1988 B/W illus)

The ABC & XYZ of Bee Culture - A I & E R Root (HB 717pg B/W Illus. photos 2 copies - 1913 & 1975)

The Hive & the Honey Bee - Dadant & Sons (HB 1976 740pg B/W illus. photos 3 copies)

Sixty Years with Bees - Donald Sims (HB 1997 282pg Colour/BW illus. photos)

Anatomy of the Honey bee - R E Shodgrass (HB 1956 334pg B/W Illus)

Guide To Bees & Honey - Ted Hooper (HB 1976 260pg B/W illus. photos)