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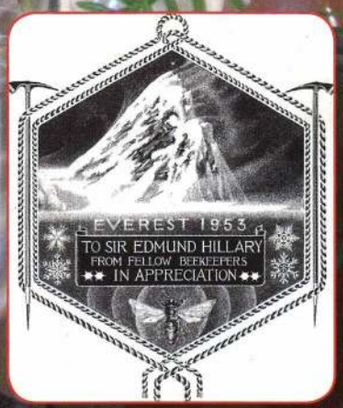

Sir Edmund Hillary 1919–2008
Beekeeper, Humanitarian, Icon

Tributes start on page 3.

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President's Report

Sir Edmund Hillary, 1919–2008

With the passing of Sir Edmund Hillary in January, New Zealand has lost one of its most iconic individuals. While he is revered as the first person to set foot on the summit of Mount Everest he was more than just a mountaineer. While I never had the privilege of meeting the man, he always came across as a person who exuded greatness despite his understated public persona.

Sir Edmund was an ordinary beekeeper from Tuakau who defined an era. The fact that Colonel John Hunt invited him to join the British expedition to attempt to climb Mount Everest must speak volumes of the man. The politics of the postwar period, and the decline of the British Empire, suggests that to invite a Kiwi to join a very British expedition would indicate a man of exceptional ability. It also speaks highly of the leadership qualities of Colonel Hunt, the expedition leader.

While the beekeeping community considers Sir Edmund Hillary as a famous person who was a beekeeper, his career in the industry was somewhat short. His enthusiasm for mountaineering overcame his desire to work in the family business and his brother Rex bore the lion's share of the work. Once he had climbed Everest, he left the beekeeping industry to pursue other more notable feats.

Much has been written about Sir Edmund. I found a number of quotations by Jan Morris, writing recently in the special issue of *Time* magazine, *The Time 100*. (Jan Morris, then James Morris, accompanied the British expedition as the *Times* correspondent.) Her statements epitomise the man. Sir Edmund also represented the ethos of all New Zealanders who have to fight above our weight to make our presence felt in a very large and harsh world.

"By conquering Everest, the beekeeper and the Sherpa affirmed the power of humble determination and won one for underdogs everywhere."

"It was a measure of the men [Hillary and Tenzing] that over the years they truly grew into the [heroic] condition. Perhaps they thought that just being the first to climb a hill was hardly a qualification for immortality; perhaps they instinctively realised destiny had another place for them. For they became, in the course of time, representatives not merely of their particular nations, but of half of humanity. Astronauts might justly claim that they were envoys of all humanity; Hillary and Tenzing, in a less spectacular way, came to stand for the small nations of the world, the young ones, the tucked away and the up-and-coming."

NBA Executive member Maureen Maxwell attended the state funeral for Sir Edmund as an official delegate of the NBA and also as a representative for all beekeepers in New Zealand. In the past Maureen had some involvement with the Hillary family, and it was felt that she would be the most appropriate person to represent the organisation.

Maureen attended the event wearing a nicely pressed half bee suit over her black dress. She commented to me afterwards that during the ceremony a bee was seen flying around the church. Its presence was noted and commented on by a number of other attendees. After the ceremony she was interviewed by a number of media organisations, as she was seen as a link to Sir Edmund's beekeeping past.

Appeal Court decision

In December the Appeal Court released its judgment regarding honey imports. The judgment was in our favour, which is a great decision and MAF have now quashed the import health standard. The pork industry has now followed suit and challenged MAF in relation to their issues with imported raw pork.

This decision has opened a very large can of worms for the Government. They see it as having a detrimental effect on their free trade paradigm and as expected have spat the dummy and are preparing to change the legislation to suit their ideological goals. We wait with interest

to see what they bring up. In the meantime, beekeepers should actively pursue and enhance their marketing strategies, especially in the export arena.

An interesting comment from a former government employee suggested that they had been made aware of the passenger organism issue and the likely consequences. They chose to ignore the warnings and now the chickens have come home to roost.

French beehives

Recently some used beehives originating from France were found to be for sale in Auckland (at a ridiculous price). Subsequent investigations found that these hives had been imported with a consignment of furniture. The beehives had been declared on the manifest so the importer had no intention of trying to deceive the authorities. Used beekeeping equipment is a prohibited import. However, the person or persons responsible for ensuring that prohibited items were seized and either re-exported or destroyed failed to do their job. One excuse proffered by MAF was that the manifest list was very large and the person failed to read it properly. Whatever the truth is, this is a clear case of improper work practice and the persons responsible should be sacked.

MAF/Biosecurity New Zealand has an extremely poor image with beekeepers, especially in the Auckland region, and they need to work smarter to restore confidence in their ability to do their job properly to protect our industry from exotic diseases and pests. This incident was totally preventable and luckily the container holding the beehives had been fumigated prior to leaving France and also on arrival in this country, which substantially reduced the risk to our beekeeping industry. The items were tracked down and seized awaiting destruction or to be re-exported.

The presence of these illegal beehives had apparently been noticed about three months prior to the NBA officially being notified by concerned Auckland beekeepers. This puts the Executive and Secretariat in a bit of a bind as we can't act unless we are informed quickly about these sorts of issues.

As a reminder to everyone, Section 44 of the Biosecurity Act requires that all individuals have a duty to report anything that they believe could be a risk organism to Biosecurity New Zealand.

SMR (Varroa Tolerance Project)

The SMR population bred by HortResearch has now been released on Great Mercury Island, which is great news. The media hype was a bit disappointing as it gave the impression that varroa-resistant stocks had been developed. Many people who are not involved in the beekeeping world think that the problems have been solved. This is clearly not the case and there is still much more work to be done.

Having done postgraduate studies in parasite ecology, I have become rather cynical about the ability of humans to be able to beat some of these very nasty organisms: parasites almost always win! While Dr Mark Goodwin and his team have done great work in producing these bees, the only real proof will be in the field. Despite many years of work overseas, with vastly greater resources than we have available here in New Zealand, there has been very slow progress in developing a truly varroa-resistant bee. To think that we can produce the silver bullet in a few short years with no substantial financial support is wishful thinking.

Here's a short lesson in parasite–host relationships to emphasise my point. Any organism has a certain energy budget to carry out its daily functions. It must partition this energy among the myriad physiological processes that run concurrently. If we introduce a parasite or multiple parasite species into the organism then it must develop some defence mechanism to deal with the problem, otherwise it is likely to be killed by the parasite.

To develop some defence mechanism means that something else in the host must be sacrificed to compensate, as there is only a fixed amount of energy available. For example, parasite-tolerant sheep produce less wool and are more prone to other diseases. However, the cost-benefit analysis is in favour of the increased parasite resistance trait. Anthelminthic-resistant worms have lower fitness than non-resistant strains, so in the absence of exposure to the chemical the proportion of resistant parasites in the population rapidly declines to very low levels. The same goes for pyrethroid-resistant varroa. Even parasites are not immune to these issues.

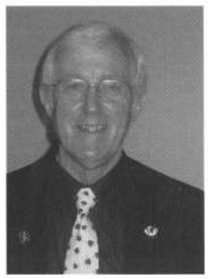
In natural systems a compromise state between host and parasites eventually develops. In managed systems this relationship is compromised by human influences. When varroa arrived in New Zealand, a logical solution was to let the varroa run rampant. In a few years a very small number of resistant colonies would have been found—problem solved! However, in the meantime every beekeeper in New Zealand would be out of business and food production and export earnings would be substantially reduced. This would not be a desirable outcome for obvious reasons, hence the need for chemical intervention to keep the bee populations at a viable level until such time as tolerant bees could be found and bred from.

Some tolerant lines of bees have been developed in experimental situations but they have been disastrous from a commercial standpoint. Again, a compromise must be reached: either a varroa-resistant bee that generates a financial loss or a varroa-susceptible bee that generates a profit. Somewhere there is the middle ground. There is no magic bullet.

- Frans Laas

A good start to 2008

Honey imports



We heard the good news from the Court of Appeal which found in favour of the NBA's case against the importation of honey from Australia. The Court directed the two parties (the NBA and MAF) to try to agree on the formal orders that should be made as a result of its judgment, and just prior to Christmas, MAF accepted that the proper response was for the import health standard to be quashed. Thus there is no immediate prospect of imports from Australia unless the Government amends the legislation. We appreciate the diligent work of our barrister David Boldt, who worked very hard to achieve this result for the industry.

Printing contracts

We are pleased to announce that South City Print has been awarded the contract to print *The New Zealand BeeKeeper* from the three expressions of interest that we received for this work. The team at South City Print have given great service over recent years and we look forward to continuing our work with them. We had the pleasure of meeting the staff when we visited their facilities during the Conference in Dunedin last July.

Hanton and Anderson Design & Print of Wanganui have been printing other stationery and supplies for the NBA and this arrangement will also continue. The latest editions of the *AFB Elimination Manual* and *Control of Varroa* are testimony to the quality of their work. If you want to order copies of these books, please use the order forms available on the NBA website under 'Publications' in the main menu.

Executive Council meeting

The Executive Council will meet in Wellington on Sunday 17 February. We are arranging a series of other meetings with Government departments and with politicians around this time. 2008 will be an important year and we want to make sure that the NBA's needs are recognised.

Subscriptions

We are now receiving annual subscriptions and encourage you to send yours in early to ensure your continued membership benefits. We are pleased with the support for research, which is also providing an indication of our members' areas of priority.

- Jim Edwards
Chief Executive Officer

NBA pays tribute to Sir Edmund

Northern region NBA Executive Member Maureen Maxwell represented the NBA at the state funeral for Sir Edmund Hillary, held in Auckland on Tuesday, 22 January 2008.

Before the funeral, Maureen reported, "As Sir Edmund is probably one of our most famous beekeepers, we felt it important to give official acknowledgement at this time of remembrance. We have also sent a floral tribute to his family at their home in Remuera, of bee-friendly wildflowers arranged in a lovely shiny new smoker. An engraved brass plate has been attached to the wooden section of the smoker with the words:

Sir Edmund Hillary
1919–2008
Always Remembered with
Respect & Admiration
from
The National Beekeepers'Assn.
of New Zealand Inc.

Floral tribute sent on behalf of the NBA to Sir Edmund's family, showing the engraved brass plaque. Photo: Maureen Maxwell.

Reflections on Sir Edmund Hillary

Following Edmund Hillary's ascent of Everest with Sherpa Tenzing, he visited Papakura School during my time there in 1954 to speak to the pupils.

I was subsequently aware of his previous beekeeping activities when I became aligned with the NBA during the early 1990s.

Pam and I last met Sir Ed at the luncheon for the launch of his book *View from the Summit*. I was returning early from the NBA Conference in Ashburton on the day that my father died in 1999. It turned out that Tom Scott, with whom I had flatted while a student at Massey, was a close friend of Sir Ed and was also attending the luncheon. We have framed photos of the event and signatures on a $5.00 note and in Sir Ed's book.

I visited Bhutan in 2003 and then in the Himalayan foothills of Northern India last December. In both places, people commented on Sir Ed when I said that I came from New Zealand.

- Jim Edwards
Chief Executive Officer

New Zealand's most famous beekeeper. A truly great man of strength, determination, vision and humility. A pragmatic and rugged leader who knew the power of working with nature.

Sir Edmund will continue to inspire us as to just what can be achieved one step at a time. Like bees in pollination, every person Sir Edmund touched was enriched by the experience.

Sir Edmund makes us proud to be Kiwis. He will always be remembered with respect and admiration. A great man at one with nature.

- Maureen Maxwell
BeesOnline
Executive member of the National Beekeepers' Association of New Zealand

I had the privilege of talking to John Hillary, son of Rex Hillary, Sir Ed's younger brother. According to John, Sir Ed left university aged about 18 to work with his father in beekeeping. They built up to about 1500 hives in the late 1940s, by which time Rex was working with them. They were very efficient operators, packing and selling all of their honey on the local market, and keeping the surplus in good years to tide them through lean years.

Jim and Pam Edwards meet Sir Ed at the launch of his book View from the Summit. *Photo supplied by Jim Edwards.*

Sir Ed did more "tramping than beekeeping" in the late 1940s, and the rest is history. Rex began to cut back on business in latter years, selling 350 hives in 1969 followed by another 450 hives in 1971.

- Bob Blair
Auckland Branch
NBA Life Member

Photographic credits for Sir Edmund Hillary tribute

Front cover

Top left: Sir Ed at the 1994 NBA conference, where he was named Beekeeper of the Year.

Centre: NBA's floral tribute sent to the family of Sir Ed. Photo: Maureen Maxwell.

Bottom right: This emblem comes from a bookplate produced by the International Bee Research Association (IBRA) for Sir Edmund Hillary to mark his ascent of IBRA. Sir Ed was for many years a member of IBRA. The bookplate was featured on the front cover of *The New Zealand BeeKeeper*, October 2003, and was kindly sent by IBRA Director Richard Jones.

Back cover

Top: Sir Ed at the 1994 NBA conference, where he was named Beekeeper of the Year. Pictured with Sir Ed are Bruce and Jenny McCusker and Steve Olds. Photo supplied by Frank Lindsay.

Right: Then NBA President Frances Trewby with Sir Ed (1994). Photo supplied by Frank Lindsay.

Bottom left: NBA Executive Member Maureen Maxwell dressed to attend Sir Edmund's funeral.

AFB NPMS matters

Rex Baynes and I met with MAF Biosecurity recently to discuss the status of the AFB NPMS. You should be aware that the NPMS has a finite term and remains in force until 30 September 2008. At present MAF have indicated that the strategy will continue on past that date and the delayed five-year review will be carried out. Since there are no major problems with the NPMS that the Government is aware of, they have decided to go down this path. This process is entirely driven by Government and the Management Agency has little input, other than to remind them to keep the process moving.

We also indicated that we felt that some fine tuning of the strategy needed to be carried out and put forward some of our suggestions to change some of the clauses to make it easier for the Management Agency to carry out its job.

We also expressed our deep concerns about MAF's refusal to support the strategy in the area of enforcement. This decision, and the compliance issues resulting from their inaction, have impacted on our ability to export to some markets. Now that the NZFSA has become involved more closely in the honey products verification and certification process, there are issues related to the veracity of the information on the NPMS database, as well as other compliance issues which also have the potential to kill off the export industry.

The world is changing quite rapidly and the database is being seen by other entities as a tool for purposes that were never envisaged. Discussion is needed on how the information on the database is used, and by whom. While there are many people who believe that the database should only be used for its original purpose, the changing reality dictates otherwise.

You should all have a good think about this major issue, and the Management Agency would be most interested in the views of the levy payers on this topic.

In October Rex and I visited AsureQuality in Hamilton to discuss the upgrading of the AFB NPMS database. The current structure of the database is somewhat antiquated and needs major revision. Many of the reports were structured for the old days when the Apiaries Act was in force.

The apiary information itself is stored on a relatively modern SQL database (Microsoft SQL Server 2000), which is capable of handling hundreds of simultaneous requests and deals in terabytes of data. The front end (the bit that we can see on the computer screen) is a bit outdated but still adequate.

We also discussed the principle of each beekeeper being able to log in to the database to correct/modify their information, and even do their ADR and disease reporting online. The ADR forms provided annually to some of our larger beekeeping outfits are enormous and a real pain to deal with. I have received a suggestion from one larger outfit wanting to change the way the ADR process is carried out.

While a range of added features are possible to enhance the management of the database, there is a considerable cost. I have created a number of reasonably complex databases in the past and I am aware that there is a considerable amount of time (money) required to make all the changes. With the advent of modern geographic information systems (GIS) technology, the database also needs to access a GIS application in order to streamline the requirements of our contractors to produce information for managing the NPMS.

- Frans Laas

Obituary: Stuart John Thomas, 51

Stuart John Thomas (John) was known as JT to his mates. John was heading out on Christmas Eve to work his beehives when he suffered a heart attack. Despite valiant efforts by his brother and other people, he subsequently died in hospital a few days later.

John had been a hobbyist beekeeper for as long as I can remember and had only become a full-time commercial beekeeper the season before. He was probably not well known amongst beekeepers outside the district but I doubt if there is any beekeeper in Hawke's Bay that he has not helped at some stage or other, filling in wherever an extra hand was needed no matter how busy he was.

He loved his hunting, his fishing and his bees. When I first met John I thought some of the stories he told stretched the truth just a little bit, but as I got to know him I came to believe almost all of them. He could talk bees and weather for hours with me and this gave both of our wives a well-needed rest.

Our love and support go out to his wife Denise and the rest of his family. Goodbye, my friend.

- John Berry

Keeping our bees buzzing

It was a summer's day some 20 years ago that a Dalmatian gentleman showed me his New Lynn garden in which he had a number of beehives. The sight of bees flying and the smell of honey maturing started my love of apiculture that has taken me all over New Zealand, and hopefully to other parts of the world as well.

I was granted my first New Zealand Sciences, Mathematics and Technology Teacher Fellowship for term one at the start of 2007. These fellowships are granted by the Royal Society of New Zealand to teachers who have something to offer in the subjects mentioned. Teachers are refreshed by this break and take back to the classroom the new knowledge gained to share with students, the wider school and community. My discipline was science and the objectives were to test bee palatability to ant and wasp bait, and to study the successes or shortcomings of varroa treatment and possible future treatment direction.

I was fortunate to be hosted by Landcare Research, based at the Tamaki Campus of the University of Auckland. Here I worked closely with scientists and was given access to their equipment and technology. These folk went out of their way to help me and made me most welcome.

Bait tests

The bait tests were interesting. Bees were subjected to bait under various conditions. The most exacting test was placing the hive and bees in a bee-proof gazebo and making daily observations to see if bees took to the bait. The bees were confined to the gazebo for up to five days, to see if these starved bees would eat the bait under a worst-case scenario.

After these tests I found myself wondering why we are trying to kill ants when so many ants are found beneath the hive lids or on the top of hive mats. I am also told that ants are rich in formic acid, which helps control varroa. Perhaps ants and bees are of mutual good and more research needs to be done in this area.

Landcare palatability testing for bees: Preparation of ant and wasp bait. Photo: Bryan Mason

Landcare palatability testing for bees: Wasp and ant bait placed in the bee flight path. Photo: Neil Furness

Varroa research

The varroa research took me to many commercial and amateur beekeepers in the Auckland area.

Some of the many things I noted were:

- remote computer observation of beehives and the behaviour of bees inside the hive, using a type of probe called BEESPEAK invented by Clyde Mitchell that connects the inside of a hive via probes to a computer. This allows the behaviour of the bees inside a hive to be monitored.
- some beekeepers say that varroa has had benefits, in that the more costly operations of running hives have seen many inept beekeepers no longer in operation and that there is more honey to be harvested because of the declining number of beekeepers
- concern about the greying of the beekeeping profession. More young people need to be encouraged to become beekeepers
- the need to do my research in other areas of New Zealand rather than just the wider Auckland area
- to visit areas like Marlborough who are preparing for the advent of varroa, as compared to Auckland which was unprepared when varroa 'struck'
- new hive designs meant to slow or inhibit the spread of varroa
- the pros and cons of synthetic chemical and organic treatment of varroa.

I attended the National Beekeepers' Association Conference in July 2007, where I learnt a lot from many experienced beekeepers and also saw the many facets of the industry. It was here that I met an expert on varroa from the United Kingdom (Mike Brown, the current head of the United Kingdom National Bee Unit, Central Science Laboratory), whom I hope to visit one day to observe their varroa and other bee operations. It should be very interesting to see how

they have managed this problem after 25 years and there may be pitfalls that we, with our shorter experience of varroa, can avoid because of the UK experience.

Observing other species of bees such as the African and Cape bee will be rewarding as well. These bees, of course, have the ability to groom themselves far better than our own. There must be other aspects of these bees that will be of interest. It is my intention to make contact with beekeepers there so as to further my research.

I found that my one-term involvement with varroa research was too short, so I decided to apply again for another fellowship for a longer period of time. Receiving a second fellowship does not happen very often, so I was surprised when awarded a two-term fellowship to continue my research into varroa. The Royal Society of New Zealand, like myself, must obviously think that this research into varroa is worthwhile.

I am glad for that summer's day 20 years ago when I was beguiled by those bees and the interest that has engulfed me since. I have found the bee fraternity friendly and helpful. I am a better beekeeper and teacher because of them. The Royal Society of New Zealand has made much of this possible for me.

I am grateful to so many.

- Neil Furness
Beekeeper
Senior Teacher
Head of Department of Health
Papatoetoe Intermediate School
New Zealand Sciences, Mathematics and Technology Fellow (funded by the New Zealand Government and administered by the Royal Society of New Zealand)

Landcare palatability testing for bees: Worst case bee palatability testing. Photo: Bryan Mason

Control of varroa using organic treatments – part 2

Natalie Page-Weir, Harlan Cox, Mark Goodwin, & Heather McBrydie

HortResearch, with support from the Sustainable Farming Fund (SFF), the National Beekeepers' Association (NBA), contributions from a number of beekeepers, and Zespri, is working with beekeepers to trial the efficacy of organic varroa control products. The purpose of this trial is to establish effective varroa control using organic treatments. The organic products being trialled are Apilife VAR®, Thymovar®, Apiguard®, and thymol crystals. Each of these products is being applied to both single and double brood box hives. This is the second in a series of articles that will be written as a means of sharing the information on use and efficacy of organic products to control varroa. *[Editor's note: Part 1 of this article was published in November 2007.]*

At the start of this trial all the beekeepers involved were asked to undertake a sugar shake of their hives. By doing a sugar shake before the treatment is applied, we can estimate the total number of mites in a hive. When the sugar shake is done again after the treatment is removed, we can compare the final mite number to the initial mite number, and thereby gauge how effective the varroa control treatment has been. The number of mites found in a sugar shake can also indicate if a hive needs to be re-treated. In this trial we are re-treating a hive if mite levels reach 40+ varroa per 300 bees.

A sugar shake involves tipping approximately 300 bees into a jar, attaching mesh to the top of the jar and adding some icing sugar through the mesh (Figure 1). The bees are rolled in the icing sugar and the jar is then inverted and shaken, allowing the icing sugar and any varroa to fall out (Figures 2 and 3). The number of mites that are shaken out can be used to give an estimate of the total mite numbers in the hive.

If the beekeepers find that mite numbers have increased during the treatment, we will know that the product may not be very effective at controlling varroa.

Most beekeepers found that they had between 0–5 mites after doing a sugar shake of bees from each hive. However, four hives had 15–25 mites after a sugar shake of approximately 300 bees. There are nine cooperating beekeepers, each contributing 20 hives to this trial.

After doing a sugar shake of each hive, organic treatments were applied by following the label instructions for each product. Each of the cooperating beekeepers has 20 hives involved in this trial. Four hives were treated with one of five treatments. Of the four hives treated with each product, two hives were single brood box hives, and two were double brood box hives. This will allow us to assess if some products are more effective at controlling varroa, dependent on hive size.

Feedback from the cooperating beekeepers suggested that they found the label instructions on the Apilife VAR® and Thymovar® packets difficult to follow. This was particularly the case when working out how much to put on a single versus a double brood box hive. Most beekeepers found that Apiguard® had the clearest label instructions, and was the easiest to apply.

The following are preliminary results only, as the data on post-treatment mite levels has not yet been collected from all the

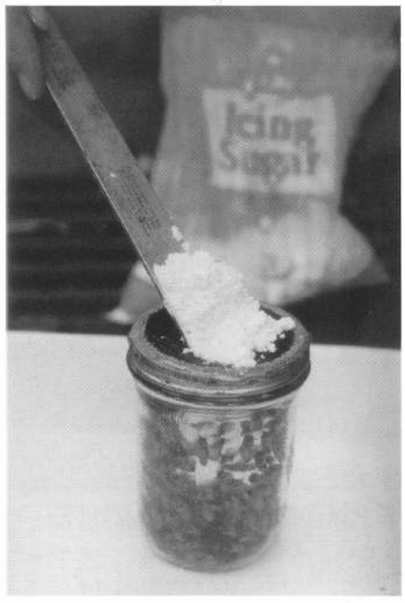


Figure 1. Rubbing a spoon of icing sugar through the wire mesh lid of a jar of honey bees.

Figure 2. Shaking varroa and icing sugar through the mesh lid on a jar of honey bees.

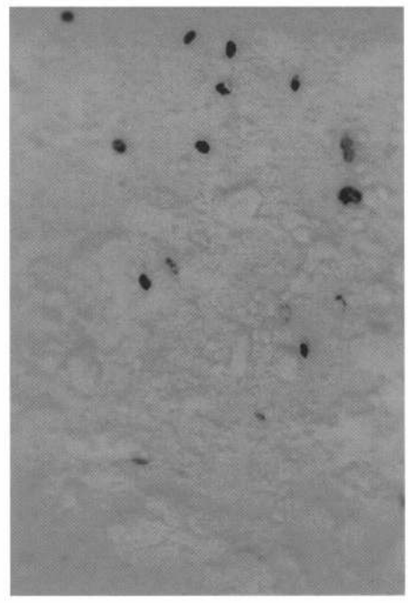


Figure 3. Varroa covered in icing sugar collected in a white tray after being shaken off honey bees.

beekeepers. The results from the post-treatment sugar shakes collected so far have indicated that all of the hives treated with synthetic chemicals (e.g. Apistan® or Bayvarol®) had no mites. Hives treated with Thymol crystals had on average two mites per 300 bees. Thymovar® hives had an average of 0.5 mites per 300 bees. The Apiguard® treated hives had an average of 1.5 mites per 300 bees, and hives treated with Apilife VAR® had an average of 2.75 mites per 300 bees.

Now that the treatments have been removed, honey supers have been put on the strong hives. Shortly we will assess how many frames of honey each hive brings in. By doing this we can see if the treatment that each hive received has an effect on honey collection.

Our thanks to the beekeepers taking part in this trial, for their generous use of hives, their time for counting mites and applying treatments. Thanks to Reuben Stanley for providing Apilife VAR®, Stuart Ecroyd of Ecroyd Beekeeping Supplies for providing the Thymovar®, and Trevor Cullen of Ceracell Beekeeping Supplies for providing the Apiguard® used in this trial.

A tip on shifting hives

If you only have a few hives to shift, go to the local bike shop and ask for some reject tubes. Cut out the valve and run the scissors around the inner circumference, making a large rubber band. Slip this over the hive to block the entrance, prior to shifting. With screened floors this can be done after dark the night before the shift. As there is plenty of fresh air, there's no rush the next day.

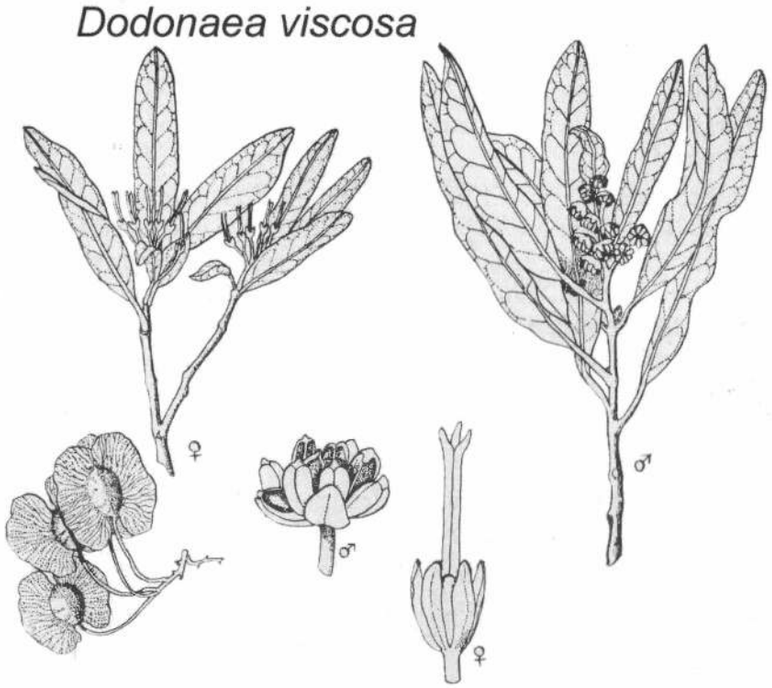
If you don't have screened floors, get up before sunrise to close and move. A little delay doesn't matter as there are always air gaps between boxes. If these gaps are large enough for bees to move through, block with another rubber band. When your band is too slack, just tie a simple knot to shorten.

- Ron Morison

Trees and Shrubs of New Zealand

Dodonaea viscosa

Maori Name: Ake-ake



The Ake-ake is a small hardwood tree five to 10 metres high with flaking reddish-brown bark, found throughout the Pacific. The willow-like leaves are between two and eight centimetres long, naturally green, although there is a cultivated bronze-leaved form now widely used as a garden species.

The flowers are in terminal panicles, and are green in colour—or bronze in the cultivated species. These flowers are worked by the bees from September to January for greenish-yellow pollen or a strongly flavoured light amber honey.

The wood of the Ake-ake was used by the Maori for their clubs and spears as it is very hard and durable.

The leaves were chewed for toothache, and a poultice of the leaves was used on boils and sores.

- Tony Lorimer

Richard Gasse writes from Germany

It's been almost a year now since I closed up my last hive while working in the beekeeping industry in New Zealand. I enjoyed my time around Lake Taupo and the experiences I had during the six-month stay proved to be very valuable for me.

During my studies at the University of Kassel I passed a course in beekeeping and worked for several beekeepers in my spare time. I'll never regret the decision to combine a university practice and my diploma thesis with a 'hands-on' job in New Zealand. I had organised to buy 20 hives together with a friend when I was still working in New Zealand. As soon as I got home I picked them up. Well, I felt really confident travelling with just 20 hives along the autobahn, having just shifted 80 hives every night in a 'slightly' more rough terrain using 4x4 trucks.

I shifted the colonies into an apple and cherry orchard next to where I live. Although I missed NZ standards when I only received $10 per hive, I felt quite proud doing my first pollination job. Looking after my hives was exciting and I enrolled in the local beekeeping club. Beekeepers in Germany keep an average of 10 hives; hence it was really beneficial for me to learn some of the practices of a 1500-hive enterprise. For example, I made up my nucs the way I learned it in New Zealand.

Whereas fellow beekeepers spend half a day to look after the same amount of colonies, it takes me about two hours without a rush. I'm not sure if this is just the difference between New Zealand and Germany: part of it might be because of my intention to keep bees commercially or at least semi-commercially. Thus we shifted the 20 hives quite a few times to harvest spring honey and honey from clover, linden tree, acacia and ling heather.

When the beekeeping season got a bit quieter I engaged in writing my thesis. I have to say writing scientific papers is not my favourite activity—I realised I just love working in the field a lot more. Nevertheless the good memories I still have of the beautiful countryside and the friendly Kiwis helped, as well as the lasting good contact to people of the industry to accomplish this work and finish my studies. Still, I know the study of the bees has only just begun…

From the colonies

Auckland Branch

Happy new year!

Waikato Branch

This is a real summer, so much so that another week without rain will kill the amazing honey flow. The weather experts tell us that a strengthening La Niña pattern could mean drier than usual conditions for the east of the South Island and the west of the North Island. Right now this seems to be the case. It does mean an abundance of pasture honey in the Waikato. Given the increased costs associated with this production, beekeepers will need to ensure that they receive a good price per kilogram.

I have received reports of a good bush (Rewarewa) crop, and a light to medium Tawari crop. However, the Manuka crop hasn't been as good, and there's been nil production from Kanuka.

I have observed a number of truckloads of honey being transported from the Coromandel area. It's good to see that in most cases loads were well covered and tied down.

The branch is hoping to have their first meeting of the year in February where there will be a number of issues to discuss, including the increasing costs (and rules) of compliance, and beekeeper ethics.

By the time I write my next report we will either be smiling because the rains replenished the ground, therefore resulting in a bumper crop, or we will be frazzled and frizzled. Fingers crossed!

- Pauline Bassett

Hawke's Bay Branch

Like most of the country, the weather has been very unsettled here for the last month. Some hives have a reasonable crop, but unless the weather settles I suspect the honey crop will be below average. Still it has not been as wet here as in some places. I was working bees the day after Boxing Day and there was fresh snow on the Ruahine ranges; a few days later it was 30°C.

I have hosted beekeepers from three different countries this year and have found it most enjoyable and educational. The only trouble is that although all of them had a good grasp of the English language, for some reason they have trouble understanding New Zild as she is spoke.

Good luck for the tail end of the season, and happy new year.

- John Berry

Southern North Island

As I write this, reports from Taranaki, Wanganui, Rangitikei and Manawatu all say that this honey flow season is turning out very well. Kamahi has flowered well, and Rewarewa flowed with good yields. Around my area pasture/clover honey is pouring in, so all we need is a reasonable price for the crop and commercial beekeepers will breathe easier for another year.

Manuka has been fickle around the coast. The very welcome showers gave a good growth spurt for farmers and pasture but slowed the Manuka honey flow. However, the inland areas are all producing good yields at present. All in all it is shaping up to be an excellent year.

Reports from pollination contractors have been positive with orchardists welcoming the good pollination of pears, kiwifruit and other crops. Many commercial beekeepers in our area find it difficult to juggle the requirements for kiwifruit pollination, which often overlaps with the start of the Manuka flow. The costs of half a box of Manuka or more lost, particularly if it is active, need to be taken into cost considerations for pollination. The later start of the inland areas has helped this year.

A number of commercial beekeepers have rung to discuss the costs of RMP audits and the bureaucracy that surrounds the inspections/audits. NZFSA seem to want to kill the golden goose with their charges. Government-imposed costs make it especially hard for the smaller beekeepers to maintain a profitable business.

Incidentally, a person from Wanganui reported to me last night that he had never seen so many bees flying across the road as he was travelling down via the Turangi–National Park route. A cloud of bees surrounded one truck and workers from Arataki as they worked the apiary. Needless to say, my friend did not stop. Hopefully those beekeepers who have hives up around Tongariro National Park all get good yields. It is hard to tell the bees not to fly across the road, disturbing motorists!

- Neil Farrer

Nelson Branch

At this time I cannot give a definite statement about a good or bad honey harvest in our area, as our honey tends to be rather late. But I can attest to a good prediction. Although some beekeepers have smiles on their faces, I would rather wait until the honey is in the drum.

But Nelson, Marlborough and Golden Bay have had ideal summer weather. Not only a lot of hot sunny days, but a few days of rain here and there, and often just before we declare that we are in a drought!

So, unusually, we are starting the year with the lawns green and needing mowing, the Manuka and Kanuka still in full flower, and the borage having a chance of survival in the high country.

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We expect that varroa will be widespread around Nelson following the movement of hives post pollination. We have just seen our first varroa in drone comb in our local hives this week. It was almost a relief to finally SEE it! We are sure that our autumnal 'palliative' treatment has kept the number low for us this season and now we can anticipate the influx of re-invasion. Once again, we appreciate the experience of North Island beekeepers and the education workshops that we have received that have helped us to be prepared for this new phase in beekeeping.

As I am writing, I have just heard the news of the passing of Sir Edmund Hillary, one of New Zealand's most famous beekeepers. He was an inspiration and icon who will never be forgotten in New Zealand history.

- Merle Moffitt

Canterbury Branch

Wishing everyone a great new year to come. Another year is behind us and the new beekeeping year is in full swing!

Down here in Canterbury the weather has again not failed to surprise and test us to the limit. December was very dry, the saving grace being the lack of nor'west winds during this period.

Another significant change is the amount of land under irrigation. It is truly amazing how much land use has changed due to irrigation in the last five years. As much as the average punter considers us lucky to have access to this 'boon', I am less than convinced it is of major benefit to Canterbury beekeeping. Sure it has guaranteed the first box, but the next couple of boxes are less than assured due to the cold ground. I think gone are the years of more than six tonne/100; maybe a more consistent lower than normal average. Irrigation has bought an increase in paid pollination, but at current prices for this service, you need a very sharp pencil and some creative accounting to convince yourself this a good income source. Time to start to think of adaptive strategies.

Anyway, hoping this year is better than last (always a positive thing to do).

- Brian Lancaster

10 storeys high in the Coromandel

Molly Hayward from the Coromandel sent a few photos of the bumper crop they're enjoying so far this season. Molly writes:

"The first picture is of Nick Stephenson with my brother Luke Hayward on his shoulders and me, standing next to him. Ten storeys high full of honey, they're pretty impressive!!

The other photos are of us all taking off honey, and this year's crew."

[Editor's note: thanks for sending these on, Molly, and may the rest of the season be as good!]

Letters to the editor

Thanks from the Auckland Branch

The Auckland Branch of the NBA gives a big thank you to the Waikato Branch, Russell Berry and Dr Mark Goodwin for leading the charge to start the legal challenges and providing the technical information that led to the stopping of importation of Australian and world honeys into New Zealand.

We, the beekeeping industry, must continue to oppose the likely imports of honey to protect our disease status. Our thanks again to Russell, Mark and the Waikato Branch.

- Auckland Branch, NBA

Border security: the French incursion

In October 2007 two used antique beehives were spotted in a retail premises in Auckland. AgriQuality was contacted and a subsequent telephone call to AgriQuality (AsureQuality) came with the assurance that Biosecurity New Zealand had dealt with the matter.

At a later date (6 December), a hobby beekeeper attempted to purchase an odd size of beeswax foundation from a beekeeping supply business with the explanation that it was for a used French beehive he was resurrecting.

Alarm bells went off and further calls to AsureQuality followed, along with a call to MAF Biosecurity. The person at MAF contacted had no prior knowledge of this incursion.

It then became clear that the hives had not been destroyed, but that they were to be allowed to be used as garden ornaments but were not permitted to be populated by bees. Who would have checked up on this remains a mystery. Perhaps a weekly visit by a MAF inspector to ensure the hives remained 'unpopulated' with the happy purchaser more than pleased to pay costs? Very expensive garden ornaments.

Ten days followed before we received any assurance that the hives had been either destroyed or re-exported, despite numerous telephone calls by concerned beekeepers in the Auckland region as to what was happening.

The Auckland branch of the NBA called an emergency meeting due to the lack of information and apparent total disinterest taken by Biosecurity New Zealand and the National Executive of the NBA.

The Auckland Branch viewed this incursion as a potential threat to the entire beekeeping and pollination industry. One has to ask whether MAF would have taken a similar approach to a suspected foot-and-mouth incursion.

There are lessons learnt from this breach of biosecurity:

1. do not contact AsureQuality, as it's not their domain
2. do contact Biosecurity New Zealand, and the further up the chain the better
3. keep a very accurate record of dates and names of people spoken to
4. just because officialdom has been contacted, do not assume action has been taken.

The Auckland branch thanks Carolyn Whyte for her action and fast response. There remain, however, unanswered questions:

1. How did used beehives slip through the Biosecurity New Zealand/Customs clearance system?
2. Was the manifest incorrect, or did Biosecurity/ Customs miss or not read an import entry?
3. Are the importers to be held responsible under the Biosecurity Act?
4. Is MAF to be held responsible under the Biosecurity Act?
5. As the MAF website currently specifies what has always been applied (i.e., personal beekeeping equipment as it is not eligible for import into New Zealand under any import health standard), why did MAF allow the importation of these hives?

The beekeeping industry eagerly awaits the answers to these questions. It would be reassuring for the entire association if the NBA President/Secretary and CEO had answers for these questions.

- Auckland NBA Branch Executive
William Morrall
Ian Browning

[Editor's note: The NBA Executive will respond in the March issue. Refer to the President's report on page 3 of this issue.]

New Year's resolution

With January well past by the time you read this, I wonder if you made a New Year's resolution? Mine would be to eliminate the increasing numbers of bureaucrats that blight our lives day after day. I don't know how it can be achieved, as they seem to be a protected species and also multiply like triffids.

I have just finished filling in a harvest declaration and felt that I was just wasting my time, as those in the NZFSA would not have a clue or interest in the origin of the honey unless a problem was found with it later on. The NZFSA seem very concerned about what we send out of the country, but I didn't hear that they had intended to check the proposed Australian honey on arrival as long as the correct boxes had been ticked.

Traceability is the key word nowadays. Obviously if you extract honey you should keep a record of where it came from, and who you sold it to. As long as you have that record, there is really little point in putting the details on a form to file away.

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My main concern is that instead of the bureaucrats working for us to help in production and marketing, it would appear that we are actually working for the bureaucrats. What I want to know is when do I get paid? Instead they charge me for the privilege of working for them. I thought serfdom had ceased centuries ago.

I get concerned that the NZFSA and Biosecurity New Zealand seem to accept conditions from overseas, such as the EU, as if from God. When they are told, for instance, that a queen bee from an ordinary hive is placed in an organically certified hive, then the honey in that hive is no longer organic. It seems strange that one queen that only lays eggs that we do not eat could have such an adverse effect on honey. Or should the bureaucrats working for us dispute such illogical reasoning with the instigators?

I am looking forward to a new year with the bureaucrats actually working for us, reducing the amount of non-productive paper work we are involved with and making everything much more user friendly, instead of complaining that we do not fill out the various forms correctly. It is difficult to think logically after a long hard day in the field, so no wonder mistakes are made over illogically prepared forms.

Looking forward to the rest of the season with good crops. Let's dream a little on what things could be like if the bureaucrats actually worked for us once again.

- Gary Jeffery

Apimedica & Apiquality – International Forum 2008

Dear Colleagues,

Apimondia, the Italian Beekeepers' Federation and the Honey Research Centre of the University of Rome "Tor Vergata" are pleased to invite you to the 2nd International Forum on Apitherapy "APIMEDICA and APIQUALITY 2008" in Villa Mondragone Congress Centre, Rome, Italy, from 9 to 12 June 2008.

The Forum aims at highlighting the health benefits of bee products by demonstrating their properties, the minimum number of bioactive compounds having a pharmacological activity, the reproducibility of their effect in the various diseases and the mechanism of action at biological level. Moreover, quality bee products should be residue-free.

In the first International Forum Apimedica 2006 several considerations were made on the relationship between apitherapy and official medicine and how they could complement each other rather than be rivals.

The "Apimedica and Apiquality" Forum falls in line with the focus that Apimondia has been pursuing in recent years and aims at the development and improvement of quality standards on apitherapy and bee products for the benefit of both beekeepers and the public at large. We would highly appreciate it if you could inform your members about the Forum with all the relevant details present on the websites *www.apimedica.org and www.apiquality.info.*

We also hope that your Association will organise a group of people to participate in the Forum. In this case you can obtain a special fee for registration and participation in technical tours for beekeepers.

Looking forward to working with you and your Association in the next future, we thank you again for your attention and remain.

Yours sincerely,
The Apimedica & Apiquality 2008 Organising Committee

[Editor's note: See the websites above for details relevant to commercial beekeepers, companies and researchers.]

Experienced Philippines beekeeper seeks work

Dear Sir/Madam:

Do you need a beekeeper who is hardworking and well-experienced in general beekeeping management such as pests and diseases control, colony production and hive construction? If you do, please consider me for the position.

I am presently managing my own bee farm here in Nagcarlan, Laguna, Philippines, tasked to perform wide variety of beekeeping function such as extracting honey, queen rearing, assessment of quality bee products, knowledge in equalizing and boosting of colonies and among others. I have been in beekeeping activities since 2003 and I have attended numerous training seminars. My other skills include driving light vehicles, motorbikes, and other livestock raising.

I am currently looking to apply my skills and experience in beekeeping in a more challenging environment and believe that you would benefit from my drive, enthusiasm and passion for this industry. I am confident that you will find me an asset to your company.

Looking forward to hear from you soon.

God bless and more power.

Yours faithfully,
Edwin P. Jovellano

[Editor's note: Mr Jovellano has included his resume and a number of official certificates that are available upon request to his email address: epjovellano@yahoo.com.ph]

About the Apiary

It's turning into a pretty good honey season in our area, with hot weather and dumps of rain once every week or so. First-time beekeepers who are smiling because of a good honey crop should be reminded that it's not always this good.

I normally start processing my honey in late January as soon as the Pohutukawa has finished flowering. Why Pohutukawa? When fresh, it runs from the frames like water but if left for a month, or if taken off and not extracted within four days, it begins to granulate in the frames. Once it sets solid in the frames, it can only be cut out with a honey plane. (The frames are scraped down to the mid-rib and the honey has to be slowly heated to liquefy it.) Beekeepers down south who are pollinating Canola for the first time are about to discover this.

However, this year we have been installing a new honey processing plant which has required a lot of alterations to our basement: installing drains, raising the floor, putting in new walls, power points and lighting, painting, etc. I've done most of the small things myself, and we are now working through our NZFSA pre-season checklist to get the plant up and working.

During the really nice days I have been out checking apiaries, putting extra supers on those hives where the bees are either hanging out or have capped the frames in the top super. Several hives had fallen over when the pallet underneath them had rotted and collapsed, and bees do not like to be disturbed after a hive has fallen over. Plenty of smoke and working slowly is called for to right the hive and to re-space and re-straighten individual frames. This is where plastic frames come into their own, as the mid-rib of the frames doesn't distort.

It's also a little surprising and disappointing to find that bees have filled three supers with honey and then swarmed. As of late January we are still hearing of hives swarming, which is rather unusual as once the honey flow starts the bees usually forget about swarming.

Honey extracting and processing

Because the summer has mostly been hot and dry, the moisture content in the honey I have checked so far is a low 17%. Usually it's nearer to 18.5%, as our bush areas tend to be more humid. Even though the honey looks to be low in moisture, it still pays to wait until it's almost fully capped before it is removed. If you are not sure, hold the comb flat and give the frame a quick jerk downwards. If any honey comes out, it's not mature and should not be taken.

Some beekeepers remove the honey supers and then put them in a hot room (35°C) to dry the frames a little. (Generally the outside frames have a higher moisture content than the middle frames.) Before I made alterations to the basement for the new extracting plant, my hot room held approximately 50

supers, with fans on the top of each stack to blow air through them. A dehumidifier could remove 10 litres in 24 hours, which equated to 1% moisture from the honey. (Some of this moisture came out of the supers but not a lot, as most of my supers are paraffin wax dipped.)

Honey coming off the hives is pure but can quickly become contaminated with dust if not covered when transporting it. In the honey house it can become further contaminated if dead bees or larvae are on or in the frames as they go through the extracting plant. Just dipping your finger into the honey to taste it can introduce pathogens. This is one of the reasons why HortResearch in previous years had to retest so many honey samples when they tested them for AFB. It used to be that about 70% were contaminated and needed multiple tests to get a result. In the last couple of years, with knowledge and proper sampling methods, this figure has reduced considerably, and so has the incidence of AFB.

Drum bungs are another potential sources of contamination, as is putting honey into an unsterilised container. Before re-using a bung, wash it. Don't use antibiotic soap to wash your hands, as you could pass this into your honey with constant hand washing.

Honey is a great product but it spreads easily to door handles and light switches; in fact, anywhere you put your hands. Before starting to extract, I have to double check that each pipe and honey gate is connected and secure. Honey flows without a sound, and I have in the past been happily extracting for half an hour only to find it has been flowing across the floor and into the drain instead of into the sump.

As a hobbyist, 'Mum' will only let you extract once in her kitchen. Honey spreads exponentially, and no amount of paper seems to contain it. Even the tiny droplets that come out of the extractor stick to the ceiling and will over time go black with mould; hence the need to wash and wipe everything down before and after extracting.

I don't intend to cover the actual process of extracting in this article, as it is well covered in books and on websites. (Some of my ramblings from past years still appear on the Wellington Beekeepers' Club website: www.beehive.co.nz.)

Simple plastic containers are available that you can convert into an extracting bin and strainer in the bottom. You don't always have to follow the book's advice when using a honey knife. They recommend an upwards saw motion but I found it was safer to cut downwards as it saved my thumb, which normally hangs over the edge of the frame, from spurting the red stuff when it got in the way of the knife. (Honey knives should be sharp, you know.)

Removing honey during the flow

Taking honey off while the flow continues is easy. The bees are so busy bringing in nectar that they hardly notice you. All that's required is a few puffs of smoke in the entrance and over the top of the frames when removing the roof. Supers can be left exposed in a stack beside the hive while you inspect the brood nest for disease, and during this time most of the field bees will leave the honey supers by themselves and return to the hive. A bee escape over the top is better as it will deter the odd robber bee that comes around while you have your nose in the hive.

Escape boards are ideal for hobby beekeepers, as they can be put on in the evening after you have inspected the hive. By the next morning, the majority of bees will have cleared the honey supers. Just give the frames a quick shake or brush to remove the remaining bees and you're off to extract the supers.

There are, however, exceptions. Escapes can become blocked by bees, or when using Porter bee escapes, if they are not set correctly. (A pencil width is recommended—just enough to stop a bee going back in against the springs.) If you do not use excluders, there may be frames with patches of drone brood in them. Bees normally won't leave brood, so remove these frames or put them below the bee escape.

If the hive is too full of bees, they won't move down through an escape board. The answer is to add another super between the brood area and the honey supers that you want to remove. This gives bees somewhere to go when leaving the honey supers. During cold nights the bees will go down without any extra attention.

Not all bees will leave the super if there is a crack (knothole, break or rot hole) large enough for a bee to get through in the corner or wall of a super. Some bees will remain behind to guard the crack to prevent robbing. If, however, the supers are left on too long (an extra couple of days), robber bees will force their way in and steal the honey. So it's important to seal any holes or cracks with cloth tape or foam plastic.

I remember a story told at the Wellington Beekeepers' Club a year or so ago. A beekeeper had taken off his honey supers and stored them in a lockable trailer. He sealed all the cracks but forgot about the keyhole. When he came back to remove and extract his honey, half of it had been removed, bee by bee, through the keyhole!

If you are going to use escapes, another tip is to use your hive tool to prise apart each honey super a few days before inspecting the hive. This breaks any brace comb the bees have built between supers, and allows them time to clean up the honey that leaks out. Otherwise you can end up with bees and escapes covered in honey if everything is done on the same day.

Removing honey after the flow

When the honey flow finishes, it's a different story. Bees are on the look out for any exposed honey and will start robbing,

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and the hive bees will defend to such an extent that you can end up with stinging bees everywhere. If you do leave honey exposed and robbing happens, close up the hive(s) and turn on the garden hose. If you're in an out apiary, block the hive entrances with a little wet grass and tell the landowner not to go near the hives for a few days. The grass will deter robbers and allow the bees to reorganise themselves.

Hive maintenance, including mite control

During these hot summer days, bees need water and lots of it. City bees become a nuisance at this time of the year when visiting swimming pools. Have a water supply on your property. A constantly dripping tap into a sand tray is far better than your bee visiting the neighbour's swimming pool.

February is also an important month for mite control. I'm doing mite counts for the rotating brood nest hives that I'm trialling. In my research I found that by the end of February the natural mite fall in all hives had gone up considerably. Although not noticeable in the field, some hives were beginning to collapse and were slowly being robbed. These bees were also bringing back mites and this skewed the actual count, doubling the mite fall.

The first outside observation you will see will be the odd fully formed drone bees that can't fly, heading out from a hive along the ground. This is called "crawling death". A few weeks later you will see more deformed bees: this time worker bees as well as drones, and also distorted brood will have been thrown out the hive entrance. Three or four weeks later, the hive will begin to collapse.

One hive collapse can mean that all hives within an apiary will get an influx of 200 mites per day. One month later, they will all begin to collapse.

I have learnt through experience that I have to get the honey off and treatments into the hives by the end of February. If your neighbour doesn't treat at the same time, all your good work can be wasted, as once the strips come out after two months you will start to get re-invasion. This is why a considerable number of my hives died from June onwards when varroa first arrived. And it doesn't have to be your neighbour: a feral hive collapsing can be the source of mite re-invasion.

The secret to success is constant monitoring of your hives.
And the final thing you should be thinking about in February is requeening your hives: setting them up for the next season with new queens. Most commercial beekeepers put in protected queen cells and let the new queen (when she emerges) take over the hive. This creates a short brood break, and if you time your mite treatment to coincide with the mating of the new queen you get a quick kill of nearly all of the mites. The strips can then be removed after one month's treatment (stored in a cool place) and then put back in again for another month in May to knock off the mites before winter really starts. Some beekeepers can get away with this, others can't. It depends upon how many hives are around you.
So February is very busy and important month in the beekeeping calendar. Enjoy the work.

Things to do this month

Check for AFB before removing any honey from hives. Extract honey, remove comb honey, rear autumn queens and introduce purchased queens. Produce nuclei to cover future winter losses. Control varroa mites.

Check for wasps. German wasps *(Vespula germanica)* are making a comeback, and these are the ones that attack our hives. Last year I lost 24 hives within a week to wasps. These were first losses since the early 1990s, so be alert to this danger.

- Frank Lindsay

Unjustified hike in NZFSA fees

Recently NZFSA increased their fee structure with regard to applying for and amending Risk Management Programmes:

	June 2006	November 2007	Increase
"Registration of Risk Management Programme"	Application fee: $100.00 inc GST	Application fee: $411.75 inc GST	**311.75%**
	Assessment fee: $80.00 inc GST per hour	Assessment fee: $137.25 inc GST per hour, $34.31 inc GST per ¼ hour	**71.56%**
"Registration of Amendment to Risk Management Programme"	Application fee: $100.00 inc GST	Application fee: $343.13 inc GST	**243.13%**
	Assessment fee: $80.00 inc GST per hour	Assessment fee: $137.25 inc GST per hour, $34.31 inc GST per ¼ hour	**71.56%**

Two decades of varroa, part II

Dr. Malcolm T. Sanford
http://apis.shorturl.com

In last month's issue *[November 2007]* I discussed the arrival of the varroa mite *(Varroa destructor)* and the seminal decisions made by beekeepers and regulators, which abandoned regulatory efforts and steered beekeepers toward dependence on what has been termed the "pesticide treadmill". The first approved pesticide (fluvalinate, brand name Apistan®) would help beekeepers weather the first decade of the varroa experience in the United States. But this 'silver bullet' and others of its ilk could only be relied on temporarily as the chemicals and mites engaged in a war of effectiveness.

A problem with varroa was that it was so devastating to honey bee populations. Beekeepers observed the effects of the mite on the wild or feral populations left to their own devices. Over 90 percent died (collapsed), depleting the landscape of this heretofore-ubiquitous insect, something that commercial beekeepers could not tolerate and stay in business. Thus, beekeepers became paranoid about treating their bees in an effort to rid them entirely of mites, more often than not treating due to the presence of a single mite. Because the first treatment material, the pyrethroid fluvalinate, formulated as Apistan®, was so effective, killing well over 90 percent of the mites in a colony, this appeared to be a definitive answer to mite control. But in the end this only accelerated the development of resistance by varroa to the treatment. In addition, there were rumors of increasingly use of 'extra-legal' applications that worried many in the regulatory and research community.

In April, 1992, I wrote: "The rest of the United States is starting to realize what many beekeepers in Florida have learned in the last two years. Varroa mites are here to stay and monitoring the mite population is the best way to keep parasite populations low. Dr. Eric Mussen in his January/February 1992 issue of *From the UC Apiaries* published a piece called 'Varroa Getting Nasty.' It seems many beekeepers in California got a surprise when their colonies collapsed last fall. The symptoms at first seemed to be classical for tracheal mites: 1. rapid loss of adults; 2. tiny clusters of bees with a queen; and 3. abundance of stored honey and pollen. Not characteristic was varying amounts of capped brood. The latter revealed that something else was going on; the adults were not being replaced. Developing pupae were killed in their capped cells by mites and never emerged.

"To prevent colony collapse, Dr. Mussen suggests checking bees for Varroa two to four times per year. Finding a mite or two doesn't mean the colony is in immediate jeopardy, but it will require treatment sooner or later. And if another check, not too much later, turns up a lot of mites, then you are the unlucky recipient of someone else's failure to detect a problem. Choose your method of colony examination (ether roll, tobacco smoke, Apistan®), he concludes, early detection is critical to colony protection.

" 'Looking for trouble,' is the way Dr. Roger Morse categorised the perpetual hunt for Varroa in the April, 1992 issue of *Bee Culture.* He concluded, '... in all probability every beekeeper in the continental U.S. and Canada will have infested hives within two to four years.' He recommended, therefore, that beekeepers in the U.S., Canada and Mexico check colonies for Varroa at least twice a year. Although it has been reported that colonies sometimes take years to die after being infested with varroa, there are exceptions. Dr. Morse speaks of a New York beekeeper whose hives produced over 100 pounds of honey in July and August, yet were dead by late fall. And Dr. Mussen describes a California beekeeper who, after a good producing season, saw 75 percent of his colonies severely damaged or dead by Christmas. That beekeeper is no longer in business and had to sell out at submarket prices. These cases may be because of drift by bees from nearby heavily infested apiaries that were not treated. Also the fact that mites are hidden and protected in capped brood cells may mean a serious undercount in those found on adults or in bottom board debris.

"Fortunately, detecting Varroa is a fairly simple process. A number of methods are described by Dr. Morse, including: examining brood or adults; sorting through bottom board debris; and using the ether roll. The technology to determine when a Varroa infestation reaches a treatable level by any detection method currently in use has not been well worked out. Detection results may vary and are dependent on bee/mite population dynamics. For example, in the fall, Dr. Morse says, with little or no brood, you are more likely to find

mites on adults, whereas in the spring they will be easier to find in brood. Practical experience by the Florida Division of Plant Industry indicates that when 20 mites in an ether roll of approximately 300 adult bees are found, a colony should be treated with Apistan®. However, Dr. Harvey Cromroy of the Entomology Nematology faculty, University of Florida, believes more than five mites is a treatable level. Dr. Morse concludes finding 30 to 40 mites per hundred bees (ether roll) is serious and the colony may be beyond saving. The ability to correlate ether roll with other detection methods is not presently available."[1] This lack of a suitable treatment threshold has confused the Varroa control issue considerably, and to some extent this still exists today.

Since that time, other detection methods have been implemented beyond the ether roll, which had the disadvantage of killing bees and using smoke from materials like citrus leaves that disrupted the colony's organization. I stated in an earlier column in this series that Dr. William Ramirez of Costa Rica had suggested powder be used as a control as far back as November, 1987. This concept is now being employed using powdered sugar pioneered by Dr. Kamran F. Fakhimzadeh, of the University of Helsinki, Finland[2] and the University of Nebraska.[3] In addition, many kinds of monitoring boards have been developed that can be inserted into beehives, often with greased surfaces to trap fallen mites and not allow them to return to their host bees. These also employ a screen (8 mesh to the inch), which allow the mites to fall through, but keep the bees from contacting the monitoring device (sticky board) on the bottom board. These screened bottom boards are now in widespread use and beekeepers have often found them advantageous in their own right, eliminating moisture from a colony ensuring better winter survival.

Drone brood is preferred by varroa. It has a longer post-capping period and so a female mite infesting a developing drone can potentially produce more offspring. Drone brood is also the only caste affected by varroa in the original host, the Eastern honey bee *(Apis cerana)*. The mite is so devastating on the western honey bee *(Apis mellifera)* precisely because it infests both drone and worker brood. Drone brood management, therefore, can be used effectively to detect as well as control mites. Trapping mites in drone brood and then removing them before emergence has become an excellent strategy, especially in developing countries where pesticides are often not an option. Dr. Zachary Wang at Michigan State University has developed what he calls a Mite Zapper®, which also targets drones.

Pesticides, so-called 'hard' applications, have become the treatment of choice when available, especially in large-scale operations where time and labour expended on varroa control needed to be kept to a minimum. Beekeepers got a good decade of effectiveness from the pyrethroid, fluvalinate, originally applied via wood strips, but later in plastic strips, formulated as Apistan®. However, for many it has now lost its effectiveness. The next chemical to come along was the more highly toxic and problematic organosphosphate, coumaphos, formulated on plastic strips as CheckMite+®. Beekeepers are only beginning to experience dealing with this material and already it shows signs of mite resistance. A third material, amitraz, representing a different class of pesticides, was employed for short period as the labeled material, Miticure®, formulated on plastic strips, but was withdrawn from the market by the manufacturer as too problematic. The fact that amitraz resistance by varroa mites exists, however, suggests that it has often been used in 'extra legal' formulations.

Hard pesticides like fluvalinate and coumpahos were relatively flexible molecules that worked across a wide range of temperature and other variables. This allowed beekeepers to rely totally on them to manage mite populations. With elimination of these materials through varroa resistance fostered by continuous use, beekeepers have had to become much smarter in mite control by using less toxic, more so called 'soft' materials. These include organic acids (formic and oxalic) and essential (thymol, wintergreen) and other (food-grade mineral) oils. These materials were much less forgiving and more or less effective based on environmental circumstances in the beehive. However, the potential of them impacting the honey crop through contamination was less because many are found naturally in honey.

As beekeepers have lost effective materials due to resistance, they have resorted to a technology called Integrated Pest Management or IPM. Although often viewed as not employing chemical treatments at all, IPM is really about managing pesticide use to minimise contamination and the development of resistance. Its touchstone is the idea that beekeepers should not use pesticides to totally rid bees of mites (eradication philosophy), but to maintain a low non-damaging level of varroa in their colonies. This is done using a number of technologies, including hard pesticides, soft chemicals (organic acids and oils, and biomechanical tools (screened bottom boards, powdered sugar dust, drone trapping).

Varroa is here to stay. This conclusion may seem obvious, but cannot be stated too many times in the modern United States beekeeping climate. My friend Martín Braunstein, an Argentine queen breeder, has even suggested it be referred to as the fourth individual in the colony after the queen, worker and drone.[4] Given this circumstance, the long-term solution to varroa mite control must be looked at in terms of innate tolerance or resistance through genetic management. Fortunately, there are indications that the European honey bee *(Apis mellifera)* itself can implement this technology, just as has its cousin the Asian honeybee *(Apis cerana)*. Two outstanding examples of this have been documented.

The Africanised honey bee is a New World example of this phenomenon. Varroa mites were introduced via Japan in the

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1970s into Paraguay and quickly spread to much of Latin America. Mite tolerance or resistance by *Apis mellifera* is most documented in Brazil. The Africanised honey bee in this sleeping giant has metamorphosed from a beekeeping industry pariah to savior.[5] Varroa is ubiquitous in Brazil, but no treatments of any kind are used by beekeepers. Clearly, the Africanised honey bee infested with varroa cannot produce the prodigious amounts of honey per colony that true European honey bees do, but this is made up for by the sheer number of feral colonies found in the wild. In addition, Brazilian beekeepers have to do minimal management when compared to that required by varroa-infested bees in much of the rest of the world.

The other example, more recently come to light, is South Africa. Relatively recently infested with Varroa (1997), I wrote the following in my report of the Apimondia meeting in Durban, South Africa in 2001: "It will be instructive for the rest of the world to closely follow the Varroa situation in south and central Africa. This situation not only has great importance for beekeeping, however. The honey bee is a native insect in Africa and therefore its survival and health is important for many wild plant communities that rely on it for pollination and propagation."[6] The jury is in with a report in the 40th Apimondia conference in Melbourne, Australia just concluded. "The rapid development of mite tolerance in South African honeybees is thought to be due to the well developed removal of Varroa-infested brood and the short post-capping period of worker brood, particularly Cape honeybees. Together these resulted in a very rapid increase in infertile mites in the colony, the collapse of the mite population, and Varroa tolerance." Tellingly, it was concluded: "A 'live and let die' approach to the wild and commercial honeybee populations was crucial to the development of population-wide Varroa tolerance."[7]

There is more and more evidence that varroa tolerance already exists at least in rudimentary ways in European honey bees in the United States. The introduction of Russian honey bees, as well as breeding bees for hygienic behavior in general and varroa in particular, is quite promising.[8]

All the above evidence is encouraging in the sense that the varroa situation has indeed stabilised itself and is now moving into a different phase in beekeeping in the United States. Thus, beekeepers now have rational and powerful tools to manage mite populations in colonies and the long-term solution provided by nature, genetic selection, is on the verge of becoming a reality. Given these circumstances, I am more encouraged than ever that beekeeping in the United States has a brighter future than many might have thought a few short years ago. Many of the challenges varroa has wrought in the 20 years since its introduction still exist, but it is more and more probable that my statements written in a recent *Bee Culture* column might be apt when I said that I didn't want to be forced into being a pest control operator. Thus, it may not be as protracted as I thought when I concluded: "I've waited a long time to resume my beekeeping activities."[9]

References

1. Sanford, M.T. *Apis Newsletter*, Volume 10, Number 4 (April 1993), http://apis.ifas.ufl.edu/apis92/apapr92.htm#3, accessed August 14, 2007.
2. Fakhimzadeh, Kamran. Detection of major mite pests of *Apis mellifera* and development of non-chemical control of varroasis. Department of Applied Biology, University of Helsinki, Finland,. accessed August 14, 2007. http://ethesis.helsinki.fi/julkaisut/maa/selai/vk/fakhimzadeh/detectio.pdf
3. Ellis, Marion, *Bee Tidings,* University of Nebraska, January 2000. http://entomology.unl.edu/beekpg/tidings/btid2000/btdjan00.htm#Article2, accessed August 14, 2007.
4. Sanford, M.T. 2007 "The Fourth Individual in a Honey Bee Colony," *Bee Culture* (September) Vol. 134 (9): 17–19.
5. Sanford, M.T. 2005. "Beekeeping in Brazil: A Slumbering Giant Awakens," *American Bee Journal* Vols. 144–145 (four installments: September and December 2004; January and March 2005).
6. Sanford, M.T. 2002 "Apimondia in South Africa,"*Bee Culture*, Vol. 130 (seven installments: January, February, March, May, July, August, September).
7. Allsop, M. 2007 Varroa Tolerance in South African Honeybees, *Proceedings of the 40th Apimondia International Apicultural Congress*, Abstract No. 91.
8. Sanford, M.T. 2004. "Mite Tolerance in Honey Bees," *Bee Culture* (October) Vol. 132 (10): 23-26.
9. Sanford, M.T. 2005. "Survivor Bees Around The World; Why I No Longer Keep Bees," *Bee Culture* (August) Vol. 133 (8): 19–21.

NIWA's climate outlook: January to March 2008

Late summer average atmospheric sea level pressures are expected to be higher than normal over the South Island, and lower than normal to the north, with more easterly or northeasterly winds than normal across the North Island, and lighter than normal winds across the South Island.

Air temperatures are likely to be above average across the country. Rainfall is expected to be above normal in northern North Island, below normal in the west, south, and east of the South Island, and near normal elsewhere. Soil moisture levels and stream flows are likely to be above normal in the north of the North Island, and below normal in the southwest of the North Island and in the west, south, and east of the South Island.

Tropical cyclone risk is normal through to May 2008. Should one approach New Zealand, the regions most at risk are the north and northeast of the North Island.