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Southern North Island Floods February 2004

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1 Site lost —1 Flooded

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President's Report

The executive has been very busy in the last few weeks responding to several issues as they arise and others that are on-going.

Help requested

Of particular note has been the concern for our Southern North Island beekeepers who have suffered losses due to the extensive flooding in the Wanganui, Manawatu and Wairarapa regions.

I attended the meeting on the 28th February in Wanganui, to find out how we could assist these beekeepers to ensure that their losses are minimised and give some moral support. I was also able to give some practical assistance by delivering some sugar that had been kindly donated by Graham Cammell and Ceracell Beekeeping Supplies. The delivery of that sugar created some tales as well, but I shall refrain from telling them here.

Many beekeepers have lost one apiary site completely and still others have lost several sites that will cause severe hardship for those concerned. It is these latter beekeepers who will need the greatest assistance. Some have got insurance cover, but are finding that what they thought was covered is not, or that the cover is inadequate.

Some have lost not only the hives but also the honey crop that was on them as well.

I would request that if you are able to spare some nucleus colonies, sugar, or hiveware, then please let me know so that we can gather together material and get it distributed to the affected beekeepers. Even if you are unable to help out 'in kind' then we would accept any donations that we could then use to put in an order for frames to help replace what was lost. It would appear that some beekeepers in the region may be able to get some of the fallen timber to make into replacement bee boxes.

We will also be working with the Federated Farmers disaster representatives to ensure that we get as much assistance as is on offer from Government. This may be in the form of taskforce green workers, or applying for funds from one of several Trusts.

It has been estimated that there is over $200 million in damage to roads, fences and tracks alone. Then there is all the damage to buildings. Pasture renovation will also be a big spend. It is incredible how much silt has been deposited on the floodplains. The devastation in the valleys gives some indication as to the immense damage that must have occurred in the headwaters – with soil, shrubs and trees finding their way into the rivers.

The Southland/Otago Field day

On the 14th of February, I flew down to Dunedin to attend the field day held in the new Momona Southern extracting facility that has been developed by the McCaw's and the Ballantyne's. I am pleased to see that the South Island beekeepers are taking up new initiatives to cope with Varroa in the future, and have learnt from our experiences up in the North Island that there are insufficient extraction facilities with a high enough throughput to enable honey to be extracted early enough to facilitate timely Varroa treatments. I just hope that we will not get small hive beetle into the country, as this would put even more pressure on extraction facilities.

It was mentioned at the field day that in part the extraction facility had been developed with the knowledge that we would now be required to meet the standards as set out in the Animal Products Act. Compliance is compulsory by 2006, and also to meet customer requirements. Our products from New Zealand are seen as being 'clean and green' – we need assurance systems in place to ensure that we can continue to market our products in this manner.

After the field day, half of the Executive spent the Sunday discussing our priorities and drafting contracts for our PMS Manager position and AgriQuality. It was both a very enjoyable weekend as well as being a productive one for the Executive.

PMS Manager

I am pleased to say that we have now contracted James Driscoll to be the PMS Manager. He will manage the day to day running of the Strategy in conjunction with the PMS Ops team.

Both Pauline Bassett and I, along with the PMS Ops Committee met with James on the 24th February to do some prioritising of the work to be carried out in the strategy for this financial year – to the end of May 2004, and to also sign the contract between the Management Agency and James.

We look forward to a very productive few months as we endeavour to achieve all of the work required for this year. I would also like to remind you that there will be new invoices coming out with your Annual Disease Returns in April to cover the 2004-2005 financial year, and that those invoices will be generated from your apiaries registered at the 31st March 2004.

Exotic Bee Disease surveillance review

Currently there is a technical review of the exotic bee disease surveillance programme being undertaken. The panel had their first meeting on the 20th January. Those on the panel include: Dr Mark Goodwin, Peter Holder (National Plant and Pest Reference Laboratory), Robert Sanson (AgriQuality epidemiologist), Murray Reid, and David McMillan (AgriQuality), Roger Poland (MAF) and Ron Thornton (MAF Biosecurity).

They were to hold their next meeting in the last week of February, where they were to make a series of recommendations and suggest various options for their implementation with their respective costs. They are hoping that these would be ready for discussion with the industry by the middle of March.

Discussion Document on the use of a GIS based register

I have recently had communication with Irene Parminter of MAF over the proposed discussion document that was to be out in mid-December over the use of a GIS based register to enable beekeepers to be informed as to where GM crops are to be grown.

Irene now tells me that it has been delayed due to the need for Cabinet approval which is likely to be considered on the 1st March. Hopefully it will be out to the industry by the end of March provided no changes are required.

- Jane Lorimer

Secretarial Snippets

The year has been busy so far, particularly with the extra administration generated by the receipt of AFB PMS levies and the associated correspondence. Although a PMS Manager has now been appointed I will continue to receive any late levy payments, but the workload for me should be reduced from now on.

All NBA members should have received a Renewal of Subscription notice. Subscriptions are coming in quickly which is pleasing. However I am aware of some queries regarding the subscription rates. These were agreed to at the 2003 conference in Nelson but it is up to the NBA member to elect which category they believe is applicable to them. This recognises the fact the NBA is funded by way of voluntary subscription.

The NBA now has 400 plus members. The Executive continues to meet fortnightly via the Telecom 3-way calling system. (The minutes are posted on the NBA Web site and I am happy to send copies to anyone requesting it). It is a system that seems to work well – the frequency of the meetings ensures that issues do not get forgotten. No doubt there is room for improvement and certainly an increase in membership numbers would give the organisation a more powerful voice. Please encourage the fence-sitting beekeepers that you know to join the NBA. Our strength is in our membership.

- Pauline Bassett

American Foulbrood PMS Manager

James Driscoll of NZAC Ltd has been appointed the American Foulbrood PMS Manager. His appointment is to the end of the PMS year being 31st May 2004. James is based in Hamilton.

The position is a part-time one and will involve the provision of services as detailed in the PMS Operational plan.

The appointment marks a key development in the management of the Strategy. It is anticipated that this appointment will ensure more focussed and timely outputs in accordance with the Operational Plan and the Order in Council.

Correspondence over the PMS should still be directed to the PMS Operations committee personnel, who will then liaise with the PMS Manager to determine what action is required.

- Pauline Bassett

Holiday Time

Thinking of your annual holidays. Apart from attending our annual conference in Napier at the end of June, why not travel to Australia and attend one of the Australian beekeeping Association's conferences. Give your family a break, learn something new, meet fellow beekeepers and claim part of the trip as a deductible expense.

New South Wales Apiarists' Association is holding their AGM in Ballina, just a couple of hours south of the Queensland border. They have organised a three-day programme covering the 26, 27 & 28 May 2004 at the Ballina RSL Club. The first day is a Queen Bee Forum - Bees for the Future. The 27th is the conference and on the 29th (the Saturday) is their field day.

If there is anything you would like to know i.e. accommodation, etc., please email the Secretary, Julie Lockhart: nswaa@bigpond.co.au

For those in a better financial position, why not attend one of the American Beekeepers' Conferences. They are generally held in early January - a late Christmas break?

Long term - Apimondia is being held next year in Dublin, Ireland and in 2007 it will be in Melbourne.

It would be excellent to see more NZ beekeepers travelling overseas to show the flag and bring back knowledge of the improvements and beekeeping problems. Perhaps we should be sponsoring a representative to some of these events.

Contact the NBA Secretary if you can provide sponsorship or are seeking sponsorship.

Nominations for the National Beekeepers Assn. Executive

Nomination forms will be sent out to all members within the next few months. This year we will need to elect two members from the North Island and one member from the South Island.

To those who are uncertain of the rules relating to how the Executive is elected, the following extracts from the rules could be of interest:

Rule 16 – The Executive

a) The Executive shall consist of six persons who are either members of the Association or the representatives of corporations which are members, three being resident in the North Island and three in the South Island.

b) The members of the Executive shall hold office for two years, commencing at the conclusion of the Annual Meeting immediately following their election and shall at the expiration of their term be eligible for re-election.

c) Nominations shall be invited from members in a manner approved by the Executive and failing the receipt of sufficient nominations the Executive shall appoint a person holding residential qualifications appropriate to the vacancy.

d) Election shall be by a postal ballot of members conducted by the Executive Secretary, on a date prior to the date of the Annual Meeting to be fixed by the Executive.

e) For the purpose of the election an ordinary member shall have on vote and a Commercial Member one vote for each 10 apiaries or part thereof, on which a levy for the current year has been paid, with a maximum of 25 votes. Levy shall be deemed to have been paid for the purposes of this Rule if payment thereof has been deferred in accordance with procedures as decided by the Executive from time to time.

f) In the event of a casual vacancy in the membership of the Executive the remaining members may appoint a person holding the same residential qualification as the vacating member and that person shall hold office until the vacancy is filled at the next annual election. At that election the vacancy shall be filled by a person elected for the balance of the unexpired term of the vacating member.

The three members of the Executive who still have the second year of their two year term to run are:

- Bob Blair – North Island
- Roger Bray – South Island
- Don Stedman – South Island

The two members who have completed their two year term are:

- Jane Lorimer – North Island
- Phillip Cropp – South Island

Also there will be another vacancy for the North Island because Ian Berry was appointed as a temporary member by the Executive to fill a casual vacancy.

These three retiring members can accept nominations for a further term for the Executive should they so wish.

The National Beekeepers Association of New Zealand Inc is now a voluntary association with more than 400 members. The changes brought about by the association losing its compulsory levy will I believe lead to a stronger and more efficient organisation better able to meet the needs of the beekeeping industry. The present Executive has done a good job of meeting the challenges and now have our National Beekeepers Association heading in the right direction.

Having been a member of the Executive since October last year I have been most impressed with the way the Executive is going about its work. Having a two hour phone meeting every two weeks certainly keeps everyone on the ball and I am sure more gets done for less cost than the old system of meeting in Wellington for three days about once every three months.

It has been a pleasure working with this positive thinking team these last few months and I would recommend to anyone who feels they would like to be a part of this team not to hesitate in letting your name go forward for this years elections. Nominations for Executive elections have been sadly lacking the last few years. Lets turn this around this year and give our members plenty of candidates to choose from for the 2004 elections of the National Beekeepers Association Executive.

- Ian Berry

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All articles/letters/photos to be with the Secretary Publications Committee via fax, e-mail, or post:

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The Finlay Cappings Wax Melter

In 1992 an article appeared in the December Beekeeper magazine with drawings and dimensions of a new system of melting wax cappings and recovering the honey, with little or no discoloring.

After 22 years Norm Finlay is still manufacturing his melter. Essentially with the passage of time the system is still the same, however a few modifications including better insulation has improved the appearance.

Present users have found the melter works well in the recovery of Manuka honey.

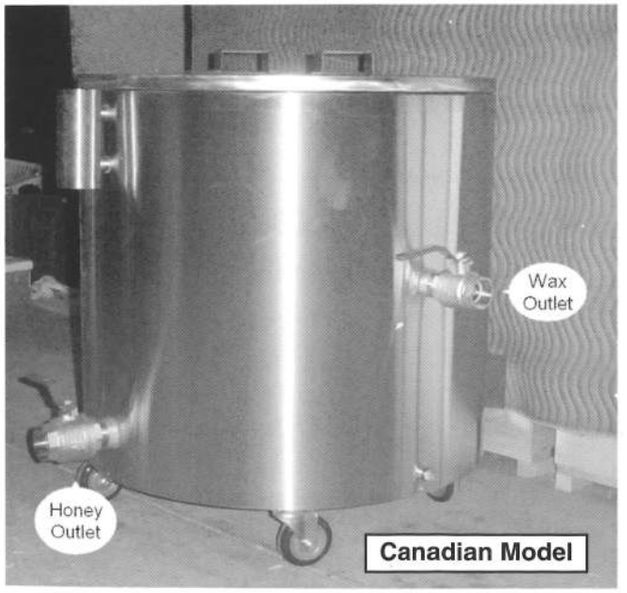
The melter can be used for cappings or shavings from a Cook and Beale centrifuge or the like, but as these carry no honey all you have to do is add hot or cold water to absorb the dross which usually comes out of these types of spinners.

Hot Tops, Pyrotechnics or the like are the most dangerous bedfellows for fire. With the Finlay Melter the heating is done with hot water thermostatically controlled and with this type of melting that fire risk is eliminated. The electrically controlled element is no more dangerous than the hot water system in most houses.

There are fifteen melters in the South Island and forty five in the North Island and one in Canada. With the exporting of a melter to Saskatoon Saskatchewan, Canada, the melters are now being made under license for the North American and Canadian markets. In New Zealand two larger New Zealand business use two and another uses three melters.

New Zealand Model

- Fiona O'Brien



Obituary

HEINRICH CARL BELIN - HEINIE

Heinie passed away on 19th January 2004 after many years of ill health.

Heinie started his beekeeping life;

- with a wheelbarrow and bicycle and finished it with 3 trucks and a van.
- selling jars to corner dairies and finished with selling 20ft containers full of packed lines to Saudi Arabia.
- brushing bees of frames of honey and finished being able to remove 400 supers by 9am.

Heinie was an influential part of growing the industry from a peasant economy to what it is today and he was practising niche marketing before the term was invented over 40 years ago by exporting 1 lb glass jars of Manuka to New York. Due to the actions of the H.M.A (the sole marketing authority at that time) he was prevented from doing so and this provided one of the catalysists which led to the demise of that body.

Heinie was made a Life Member of the NBA even though he had not held an executive position but was recognised for his contribution to the industry especially the Comb Honey industry. He was closely associated with or responsible for many innovations in New Zealand beekeeping including moving hives on pallets with a truck crane, exporting wooden comb sections, developing the exports of cut-comb honey and modern style label designs.

One example of his philosophy was shown early on in his working life. Heinie had been selling considerable quantities to the first supermarket chain in New Zealand, an outfit called Morris Master Markets when he was asked to meet with them after they had been to the U.S.A to see how things should be done. They informed Heinie that in future they would decide on the quality and price and Heinie simply got up and walked from the office. A good measure of a man's confidence in his own worth and ability to survive.

Outside the bee industry Heinie's other interests and loves included native plants, poultry, bridge and orchids. He was very active in the local orchid club and enjoyed his retirement on Waiheke Island.

Heinie is survived by his wife Noue, sons Barry & Bruce, daughter Faye and eight grandchildren.

- Mike Stuckey

From the colonies

Hawkes Bay

We are thankful that we have missed the worst of the weather and are sorry for those who were savaged.

Honey gathering is in full swing so we expect the bees travelling back with the "wets" to spread Varroa. By next Spring we think many hobbyist will be pulling the plug and exiting from keeping bees.

There has not been a rush to install mesh floors although some are busily converting all their hives. Who knows the correct answer for our area?

- Ron Morison

Waikato

In a word WET. At the time of writing the last colonies article it started raining and feels as though it has never stopped since. As I write this we are experiencing a flood worse then the 1998 one – which is what I can remember. One of those "hundred year floods", that they talk about. Currently in Otorohanga levels are at the height of the 1958 flood that swept through the township. Stop-banks are preventing this from happening at present, but then even only they have a short life-span. Figures release for February show that the Waikato received 5 times the normal rainfall for February.

Our thoughts go to the Beekeepers in the Southern North Island who have lost hives with crop on!

As far as honey production goes reports are of between 1 – 3 ton per 100 hives. Those Beekeepers that didn't do pollination did well on bush sources earlier.

At the moment beekeepers are requeening and preparing for nuc's to makeup for a spate of Queenlessness during the season, others are starting to prepare for Package Bees.

- Jeremy O'Brien

Otago

Well beekeeping in Otago has been a game of two halves this summer. After 8 weeks of hot and dry we had half time showers around the 25th of January. The trouble is we all wished too hard for rain, usually a mistake for beekeepers, and now it's late February and the showers haven't stopped. The honey flow certainly has. Those with hives in the wetter country to the south and east hauled in a near record crop in the dry spell, while those to the north and west had the opposite. Chalk and Cheese a few miles apart. As a result there was a lot of frantic moving of hives over the New Year and the season was rescued for some at least.

Other action in Otago has seen the opening of a new contract extracting plant at Momona near Dunedin airport. Allen McCaw, Murray Ballantyne and partners have invested in the latest Beetech extraction equipment installed in a renovated ex-dairy factory. It was demonstrated when the factory was the venue for an Otago Southland Fielday on February 14th. The weather was more of the wet and cold above mentioned, but didn't deter the 70 or so from enjoying themselves. One of the topics for the day was a report on the recent formation of a queen bee breeding company; Betta Bees Research Ltd. Nearly twenty southern beekeepers have joined to form the venture to improve local breeding stock with the ultimate aim to develop Varroa tolerant bees.

Over all a mixed result for Otago beekeepers, but our fortunes must have been better than those in the lower North Island floods this last week. Having seen the occasional flood put hives in the tops of willows, we can only sympathise with those beekeepers whose hives must have taken a hammering.

- Peter Sales.

Southern North Island

Much of local beekeepers attention lately has been directed to getting off the honey crop, treating hives and cleanup storm damage. What a change from our January report! Wet weather ended the flow mid - January and we have had unsettled weather ever since. Hives that were packing it in stopped abruptly and have only partially filled the boxes put on in January.

Some areas have produced well, most will have an average crop but some will be below average. The inland high country has been rained out and some of the hives that came down from the North will be going home without a lot of honey in them.

The lower west coast of the North Island is now well into the acute stage of the varroa mite invasion with over 200 mites per day reinvading some Wanganui colonies. For some reason mite numbers have also exploded in the inland hives again and unless these hives are treated quickly, mites could damage the winter bees.

Access problems persist in the flooded areas, which are exacerbated with each new cold front. Trees are down and tracks are gouged out blocking access to some apiaries. Most beekeepers have lost a few hives/ apiaries if not from flooding, then from falling trees. Many bridges are closed and a visit to an apiary just across the river from your base now takes a couple of hours. An hour's trip to hives up the Wanganui River now take 4 hours.

We appreciate all your messages of support and good will. Things can only improve.

- Frank Lindsay

Bay of Plenty

The Branch in association with AgriQuality Limited will be conducting;

(1) Authorised Person Training

On Wednesday 28th of April an Authorised Person (AP2) training course will be held at Bureta Park Motor Inn, Otumoetai, starting at 10am and finishing at 4pm. This course is free of charge and lunch will be provided.

To be an AP2 you must have had at least 5 years beekeeping experience, hold a DECA, have no criminal convictions, attended the course and passed the competency test. MAF undertake a police check for each applicant so consent forms for this will be available at the course.

Once you have become an Authorised Person you will be able to inspect hives as part of the exotic disease surveillance program if so requested and may be eligible to inspect hives as part of the AFB-PMS.

(2) Exotic Disease Simulation

On Thursday and Friday 29th / 30th April there will be a simulated exotic disease response exercise. The objective of this exercise is to train beekeepers and AgriQuality staff in exotic bee disease response procedures. The simulation will be based on a Small Hive Beetle incursion in the Bay of Plenty.

The headquarters for the simulation will be the Bureta Park Motor Inn. All beekeepers are encouraged to attend and assist to increase their understanding of significant and real threats to our industry. The exercise will begin at 8.00am both days. Lunches for the Thursday and Friday and an evening meal on the Thursday will be provided.

Further details will be provided to interested beekeepers.

If you wish to attend either or both of the above please contact:

The Secretary for the BOP Branch of the NBA, Bruce Stanley, 196 Fosters Road, RD1 Whakatane; (07) 312 9028; honeybee@clear.net.nz

- Bruce Stanley

Telford

Colin Chinnock from Ashburton, won the Graeme Clark Cup for the most successful queen bee breeder in 2003. Richard Wickens, from Lower Hutt, won the Ecroyd Beekeeping Supplies Achievement Award of $300 worth of beekeeping equipment awarded to the student with the highest overall marks in the correspondence course. The NZ Honey Industry Trust bursary of $3,200, for a full-time student showing consistent effort, was awarded to Ryan Munro from Dunedin.

Three students have started the full-time Telford Certificate in Apiculture, including one Swedish student. A further three students did not arrive due to insufficient finance and a further three international students from Bangladesh were not issued visa's by the NZ immigration service. This was a disappointing result when there were potentially nine students who could have started. The Certificate in Apiculture course began on 2 February and the Certificate in Queen Bee Rearing course began on 16 February with four students and a fifth student spent 2 weeks finishing off the artificial insemination component from last year. The Telford beehives are currently being managed by Fergus McKenzie, so that course material can be prepared for the new unit standard based courses.

- David Woodward

Southern North Island Devastation

The flooding in the lower North Island has been extensive during the last two weeks of February - a complete reversal from the report in the February Beekeeper. A culmination of successive cold fronts, high winds, and heavy driving rain caused extensive flooding in the river valley, washouts and landslips from Waitotara to Picton and across into the Wairarapa.

The 100-year flood as it is being called has caused losses in the region of $200 million in farm damage and $100 million in roading damage. Worst hit is the most fertile valley floor farms, which will take at least five years to recover.

"One of the surprising things about the flooding was how quickly and how high the water rose. Farmers had no time to rescue stock – they just had to watch them being swept away. In the Wairarapa, the Ruamahanga River came up 1 metre in 15 minutes finally reaching a height of 4.3 metres, flooding thousands of hectares. Two weeks after the initial flood there are still more than 7000 hectares underwater in the South Wairarapa. Farmers were fantastic; having lost everything they used tractors and strops to help recover beehives from the mud. Little publicity has been given to this area as the losses are mainly to pasture, stock and of course beehives.

Similar stories are being told on the West Coast. In the upper reaches of the Waitotara Valley, floodwater reached 16 metres – a height never seen before."

Beekeepers with hives in the inland river valleys were on edge, not knowing how their hives had feared, unable to contact their farmers as communications were down, access roads were either flooded, were blocked or access bridges washed out.

For the most affected, power took up to five days to be restored but kept going out again with each successive windstorm. Sodden ground and high winds, (gusting to 120 km/ph) kept toppling trees knocking out the power lines.

Allan and Serena Richards of Marton were compelled to purchase a barbeque to cook on and used the Ute's small 230-volt inverter to pump cold water to the header tank and keep the deep freeze going. His father lost the shelterbelt around the house. Eight mature trees came down across sheds and the driveway taking out the power. Similar situations were being repeated around the whole disaster area.

Vernon and Norma Gledstone-Brown answered a help call from a farmer who warned them that the water was rising and would be flooding their hives. After negotiating slips and blocked roads and a punctured tyre, they eventually arrived at the farm at midnight to find the hives knee deep in water but okay thanks to the farmer lifting them. They safely loaded the hives on to their Ute and had them at the farm house when Civil Defense ordered them and the farmer out. They spent an uncomfortable 48 hours in an emergency shelter (with only $10 and a useless EFTPOS Card) drying their clothes using the hand dryers in the toilets and trying to get permission to get into the area again to retrieve their hives. The Newspaper reported their vehicle and hives were lost in the flood however, thankfully the floodwaters didn't go any higher and both were found safe and sound where they had left them.

By the end of the second week beekeepers were allowed into the worst affected areas and began the long time consuming job of cleaning up sites and recovering hive equipment. For some, this wasn't possible, as hives had been completely washed away. Most beekeepers have lost one or two apiaries and have others with floodwater either through the brood boxes or completely through the hives, but still intact.

Miraculously there have also been some nice surprises for some. Gary Tweeddale found an apiary completely surrounded by 150 acres of mud, untouched on a little knoll no bigger than 10 square metres.

Older established beekeepers have faired better than new expanding businesses in the inland valleys. The established beekeepers hives are mainly well above river beds while those who have recently moved into Manuka and Clover areas had hives where they could get access and these, along with the hives on rich lowland pasture were the ones most affected.

Estimates are coming in suggesting that 600 to 1000 hives have been lost to the flood but these figures have not been confirmed. Some also lost their honey crop with the hives.

Travelling north on the main highway, you only see a hint of what went on as you cross the river bridges. What strikes you as you near a flooded area is the smell from dead bacteria and other things in the mud.

The two areas most visible were the Foxton flats and at Whangaehu. The flats between the stop banks at Foxton are still partially flooded. Bruce Cotterill said he travelled over the bridge just before it was closed. The milking shed had floodwater up to the roof and the milk vat was bobbing around the shed like a Rockweller on a chain guarding its property.

The Whangaehu settlement is well above the river but mud is everywhere, cars and a caravan are parked in the middle of paddocks and several houses have had the windows completely wash out. An indication that the floodwater was awfully high. It was also unusual to see Ostrich's grazing on the hillside.

The SNI branch organised a flood relief meeting in Wanganui where Bruce Cotterill from Federated Farmers gave us a run down of the devastation, area by area and what measures are being put into place to assist farmers. Forests on the ranges had been flattened. Numerous bridges and access tracks have been washed away, ie in the Turakina Valley - 16 farm access bridges have been washed away.

Federated Farmers have set up eight Agricultural Recovery Facilitators; each backed by a committee. Bruce recommended

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Photos taken by Neil Farrer

Photos taken by Allan Richards in the Waitotara Valley

that affected members contact them if they need help or farm consultancy. Don't be afraid to use the phone. Everybody's in the same boat. Those without insurance could apply to trusts for assistance.

They are also pressing the Government to provide Task Force Green labour and special grants to partly cover labour costs associated with the cleaning up flood damage, (apiary sites and bee hives). If you have diverted from normal work to attend to flood cleanup, keep a record of your time and any additional costs. Bruce recommended that we survey all beekeepers and establish losses so the Beekeeping Industry will be included in the recovery programme.

Neville Hehir from Farmers Mutual Insurance gave us a run down on insurance procedures on making claims and gave us an indication of what type of cover related to beekeepers.

Some of us realised we hadn't upgraded our insurance policies for some time. Although we have full replacement insurance, the total payout had been capped at only one or two apiaries at yesterday's hive values. Not enough to cover the replacement cost of a single apiary today.

Neville advised us to reassess our policies and revise because things change. List out: "What you have", "What you must have to carry on" – house, contents, honey house, equipment, vehicles etc, and "What can you do without". He explained the difference between indemnity and market value (just about the same and designed to put you back to where you were) and replacement insurance (start again with new equipment). Using the analogy that you could buy a second hand house for $50,000 at the removal yard and the cost of $1000 per square metre to build a house. Which would you like?

One discussion point that came out was over fire cover. A lot of beekeepers work in forests and although FMG provided $50,000 cover, beekeepers should consider having $1m fire insurance, as the highest cost to put out a fire was $850,000. Remember knowledge is power.

After Lunch we discussed actions beekeepers should follow. It was recommend that we concentrate on the remaining hives and put Varroa mite treatments into them as soon as possible. Hives with flooded brood nests would need fresh frames of brood added to prevent the hives collapsing in a month's time. Hives could need supplementary feeds of sugar and pollen to get them to produce winter bees. They also need to recover and clean up equipment as time permits or organise outside labour.

Watch for AFB in the autumn and spring. Unfortunately the flooding has not killed off the feral hives. Neil Farrer reported he was surprised to see so many different coloured bees (dark and light coloured) robbing honey boxes as he recovered them. Vernon had recovered an apiary thanks to the fencing around it. They had strengthened it just a couple of weeks before the flood and this had paid off for them.

The branch would like to thank Graham Cammell and Ceracell Beekeeping Supplies for their generous donation of two tonne of sugar and to Jane & Tony Lorimer for transporting it down to us. We will distribute it to the most needy beekeepers. We also appreciate all the offers of help from other beekeepers and businesses but it's just a little early to determine needs.

Frank Lindsay
Branch Secretary

TIPS

Some beekeepers have high-decked trucks and it's quite an effort to stack heavy honey supers on to the deck or carry supers up a plank. Merv Farrington told me that he used to arrange his hives so he could drive the truck into the middle of the apiary. He then dug two trenches up to 15 cm deep so that the back tyres sat in these. This dropped the height of the deck to a comfortable height. Try it - it makes quite a difference.

Branch AGM's

Over the next few weeks many Branches around New Zealand will be holding their Annual General Meetings.

This is your chance to be involved in the New Zealand Beekeeping Industry and the National Beekeepers Association. A chance to choose people to represent you to your Executive, and for those people to foster and encourage greater participation in the grassroots membership areas of New Zealand.

Share your knowledge and experience – Have a go!

Contact your local President or Secretary – names are listed inside the cover of this magazine, to confirm your meeting dates and times.

Don't be caught out with "Hawkes Bay Conference 2004" being early.

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How It Was!

Climate Summary for February 2004

Rainfall: Extremely wet, with devastating floods, in the centre, south and west of the North Island

Wind: Much windier than usual, especially over the North Island.

Temperatures: Below average overall, especially in the South Island.

Soil moisture: Significant deficits persist in central Marlborough, Canterbury, and Otago, but surpluses in some North Island areas.

Sunshine: Extremely low in the south and west of the North Island.

A total of 30 monthly historical rainfall records were swept aside in a number of New Zealand regions during the exceptionally wet February that produced widespread flooding and extensive infrastructure damage. Rainfall was very much above average in the south and west of the North Island from Waikato to Wellington, including Wairarapa. It was a month of climate extremes, with seven heavy rainfalls and at least three damaging high wind events. The reason for the exceptional climate pattern was an unusually high number of depressions ("lows") to the south of the South Island, which often intensified as they passed over New Zealand. There were very few of the typical late summer anticyclones ("highs"). This pattern produced the strongest westerlies in over 60 years of records for February over the North Island, and south-westerlies over the South Island.

More than 1000 mm was recorded in the Tararua Ranges for the month. This was due to a number of high rainfall-flood producing events, on the 1st, and especially between the 14th and 18th of February. The latter, produced the most disastrous floods in the Wanganui, Manawatu/Rangitikei region for many decades, as well as flooding in southern Hawkes' Bay, Wairarapa, Lower Hutt, and Picton. Hundreds of people were left homeless, considerable areas of farmland were inundated by silt and floodwaters, many rivers breached their banks, sheep and cattle stock were drowned or swept away by floodwaters, many bridges were damaged, and numerous roads closed, along with power, gas and water supply outages to tens of thousands of people. The cost of damage resulting from the floods has well exceeded $100 million. Further flood-producing rainfall occurred in parts of Northland, Auckland, Coromandel, Waikato, Bay of Plenty, King Country, and Taranaki on the 28th. Rainfall was also above average in most other regions of New Zealand. Many locations experienced 7 to 10 more wet days than average for the time of year, some more. Unusually, soil moisture surpluses exist in some North Island areas, and the west of the South Island. However, soil moisture deficits remain high in parts of central Marlborough, Canterbury, and Otago. Temperatures were below normal. Sunshine totals were well below normal throughout the south and west of the North Island.

Highlights

The highest February 2004 temperature was 31.0 deg C, recorded at Alexandra on the 2nd. The lowest temperature for the month was -11 deg C, recorded at Manapouri on the 26th. High rainfall events were frequent during the month, affecting Northland, Auckland, Bay of Plenty, Waikato, Coromandel, East Cape, southern Hawkes Bay, Wairarapa, King Country, Tongariro/ Ruapehu, Taranaki, Wanganui, Manawatu, Wellington/Lower Hutt, the Marlborough Sounds, Westland, and Fiordland. Most northern and western regions experienced at least two high rainfall events during the month. The most significant of these produced widespread rainfall totalling 65-150 mm in the 24 hours to 9 am on the 16th; in many population centres (with very much higher totals in the high-country catchments), throughout the south-west North Island, from Taranaki to Wellington, as well as in southern Hawkes Bay, Wairarapa, and the Marlborough Sounds, with further high rainfall in Wanganui and Taranaki on the 18th. The same weather event also produced storm-force southerlies and high seas, which buffeted parts of the North Island, from the afternoon of the 15th into the morning of the 16th. Ferry sailing's were cancelled and considerable delays occurred at Wellington airport and other airports due to high winds. There were power cuts and fallen trees in some areas. Gales (from the north-west) affected the Kapiti-Wellington region on the 21st, and around Dunedin (from the south-west) on the 24th. A depression from the Tasman Sea and the remnants of tropical cyclone Ivy produced rainfall, in excess of 100 mm in parts of Northland, Auckland, Coromandel, Waikato, Bay of Plenty, King Country, and Taranaki on the 28th with houses flooded in Turangi as the Tongariro River overflowed its banks. Storm force north-easterlies gusted to 120 km/h at Cape Reinga, with

gales also affecting Auckland. Of the four main centres, Dunedin was the driest. It was very wet in Auckland, Wellington and Christchurch. Temperatures were below average in all four centres. Sunshine hours were below normal in Auckland and Wellington, and near normal in Christchurch, and Dunedin.

Rainfall
Rainfall was 400-600 percent (four to six times) of average February totals in much of the south and west of the North Island from Waikato to Wellington, including Wairarapa, and 200-300 percent of average in most other North Island regions, as well as Buller, north Westland, Marlborough and Nelson. Totals were also above average over much of the South Island.

Temperature
Mean temperatures were as much as 2.5 deg C below normal in the Southern Lakes, Central Otago, and inland Canterbury, and below normal in most other regions. However, Hawkes' Bay temperatures were above average. The February national average temperature of 16.1 deg C was 1.1 deg C below normal.

Sunshine
Sunshine totals were extremely low throughout the south and west of the North Island, and below normal in most other regions. However, sunshine was near normal in Canterbury and coastal Otago.

Courtesy of NIWA

Trees and Shrubs of New Zealand - Lacebark

Lacebark:Ribbonwood.
Hoheria. Populnea and related spp.
Houhere:Hohere:Houhi:Whauhi.

There are 5 species of Lacebark, a species endemic to NZ. (does not occur naturally anywhere else.)

The Lacebark is another native tree that has juvenile and adult foliage, though not as noticeable as the Lancewood.

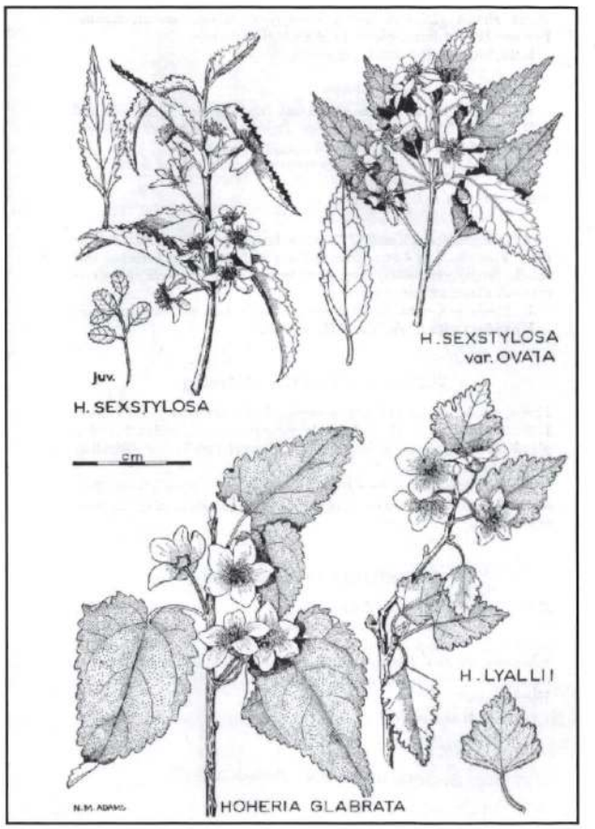
All 5 species have serrated leaves, often purplish underneath, most an oval, with 2 species having longer narrower leaves. Trees semi deciduous to deciduous in the South Island.

Flowers white and star shaped, often in large clusters, occur from March to May. The bees can collect a surplus of nectar from these flowers in favourable conditions. The honey being medium amber in colour with a strong but not unpleasant taste. It is light bodied and will run freely if the cappings are bruised. The flowers also provide white pollen.

The Lacebark gets its name from the inner bark which can be torn into ribbon like strips. The Maori used the inner bark for clothing in summer as it was cool. This was later used by colonials and Maori woman alike for hats. The inner bark was also used to make poi balls before plastic took over. Also this inner bark was often used as a bandage, or used to make a sling to hold a baby on a mothers back.

Its toughness and resistance to dampness made it useful for platting it into ropes, nets and eel baskets. It was also used to truss up bones for burial to stop them from being scattered, as some tribes placed the bones in tree branches or shelves in caves.

- Tony Lorimer



Sterilising Equipment Contaminated With American Foulbrood Spores

Dr Mark Goodwin
Apicultural Research Unit
HortResearch

Under New Zealand legislation (National American Foulbrood Pest Management Strategy Order 1998) specifies that all bees, bee products and appliances associated with an American foulbrood (AFB) diseased colony must be burnt. The only major exception to this ruling is people sterilising equipment in accordance with their Disease Elimination Conformity Agreement (DECA). If you do not have a current DECA that specifies how you will sterilise equipment rather than burn it, you must burn all equipment associated with an AFB diseased colony.

Fortunately, relatively large numbers of spores are needed to infect a colony with AFB. Because of this any sterilising technique is not required to remove every last spore, but only to lower spore counts to levels that will not cause re-infection. High and low risk equipment, based on the likelihood of being infected with high spore levels, can be treated differently.

After handling American foulbrood (AFB) infected equipment, gloves, bee suits and the decks of trucks etc, which are all likely to be carrying low numbers of spores, are best cleaned by washing them thoroughly. Some beekeepers use disinfectants (e.g. Dettol", Savlon", Methylated Spirits) to try and sterilise their gloves, however most disinfectants do not kill AFB spores. Spores can even survive being soaked in methylated spirits or alcohol. Washing gloves in soapy water is probably the best treatment as it dislodges most of the spores that may be present.

Hive tools are best cleaned in a hot flame. This can be achieved by removing the lid from a smoker and pumping the bellows until the material inside is burning vigorously. The hive tool should then be held in the flame for several minutes (Figure 1). Some beekeepers use a small gas burner to scorch their hive tool. This has the advantage that it is quicker and probably does a better job.

Figure 1 Sterilising a hive tool

There are three approved methods for salvaging infected beekeeping equipment for those beekeepers with a DECA. It is illegal to use any other methods. The economics of sterilising equipment rather than burning it needs to be considered carefully. In many cases when realistic labour costs are taken into account as well as the condition of the equipment, it is usually cheaper to burn it.

The most common method used to sterilise infected hive parts is paraffin wax dipping (Figure 2). Hive parts need to be dipped in paraffin wax at 160°C for ten minutes. The time and temperature is very important so a thermometer and timer should be used. Even at this temperature there may still be the occasional AFB spore that survives. However, there will not be enough live spores to infect a colony when the equipment is used again.

A great deal of care also needs to be taken to ensure the wax doesn't get too hot or boil over if a fire is being used to heat the wax. Many beekeepers have met their local fire brigade after mishaps with their paraffin wax dippers, and a few have lost buildings when the burning wax flowed under walls. It is a good idea to have on hand a cover that can be placed over a wax dipper to put out any fires, and an extinguisher to put out spilt wax that may be on fire. It is important also to wear protective clothing because of the high temperature of the wax.

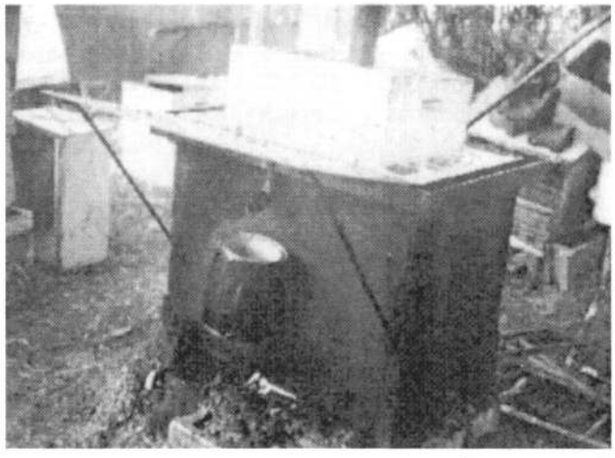


Figure 2. Paraffin wax dipper.

To check that the paraffin dipping is working the boxes should be painted immediately after dipping with a special colour. The hives the treated boxes are put on can then be followed closely to see if they become re-infected.

Floorboards, boxes, lids, excluders and wooden or metal feeders are the most common items of equipment that are

sterilised by the wax dipping method. Frames are better burnt, whist the wax is too hot to dip plastic hive components in.

Plastic hive parts and frames of foundation can instead be sterilised using sodium hypochlorite. Janola" contains 3% sodium hypochlorite while some swimming pool products contain about 35%. Sodium hypochlorite is mixed with water and so has very limited penetrating power. Anything that is to be treated needs therefore to be free of wax and propolis. Because of the air pockets that develop in cells it is not possible to sterilize drawn comb using hypochlorite.

Equipment to be treated should be immersed in at least 0.5% hypochlorite for 20 minutes. Care should be taken with dipping metal as hypochlorite can dissolve some metals as we have found out to our cost. Similarly, continually dipping leather gloves can be expensive as it causes them to rot. Sunlight breaks down sodium hypochlorite so it is important to keep it in the dark.

The third approved sterilisation method is irradiation. This is a method commonly used in Australia. We have only one irradiation plant in New Zealand situated near Wellington. If it is going to be used it is important that all the equipment is sealed in plastic so that bees do not get access to it. Irradiation has the advantage that comb can be treated as well. Brood comb should however be burnt rather than treated.

There are a number of other methods that are used overseas to attempt to sterilise AFB infected equipment e.g. scorching boxes and steam chests. These are not recommended and should not be used because they are not sufficiently effective.

MAF Update

Changes to Market Access for the Export of Honey Bees

Changes for this export season are as follows:

- The import conditions for Canada has been simplified. Examination for American Foulbrood is no longer required;

- To prevent the spread of Small Hive Beetle (*Aethina tumida*) and *Tropilaelaps* species mites, the European Commission has limited exports to queen honey bees and small numbers of bumble bees from all countries outside of the EU. MAF are working with the EU to have New Zealand's freedom from these pests recognised. There has been some agreement of our disease status getting an exemption passed into legislation is a lengthy business and any decision will not be passed for this export season.

MAF is currently negotiating import conditions with Japan and Korea and hopes for positive changes for next year's season. In addition, we have asked for clarification on the conditions for transhipping through Hawaii.

The Overseas Market Access Requirements (OMARs) for exporting honey bees, bumble bees, leafcutting bees and wasps are now available online at http://www.maf.govt.nz/biosecurity/exports/animals/omars/index.htm. These OMARs are updated whenever MAF is informed of changes to requirements.

Import of Honey Bee Genetic Material

MAF proposes to amend the Import Health Standard (IHS) for the importation of Carniolan honey bee (*Apis mellifera carnica*) semen into New Zealand from Germany to include semen from Austria. The risk profile for honey bees from Austria is equivalent to those from Germany. This draft IHS is available for consultation on the MAF website at http://www.maf.govt.nz/biosecurity/consultation.htm#draft-ihs. Submissions close on the 12th April 2004.

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The Small Hive Beetle (*Aethina tumida*)

Jacqui Todd,

HortResearch, Mt Albert Research Centre, Auckland.

Aethina tumida or the Small Hive Beetle (SHB) is a major pest of European honey bee (*Apis mellifera*) colonies in the U.S.A. and they were discovered in Australia in 2002. In the U.S.A they have been found to reproduce quickly and heavy infestations can completely destroy honeycombs and bee colonies. Overseas researchers are trying to understand how this pest travels and survives and are attempting to find ways to control it. The beetles are not currently present in New Zealand.

Small Hive Beetle Biology

Adult beetles are dark brown or black, oval in shape and about one third the size of a worker honey bee. Each female beetle can lay large numbers of eggs in a hive so even a small number of beetles can produce a heavy infestation. The larvae that hatch eat bee eggs, brood, pollen and honey and when they have finished growing (at about 1cm in length) they crawl out of the hive to pupate. Pupation usually occurs in the soil outside the hive and takes 3-4 weeks depending on soil moisture and humidity. Emerging adults may fly up to 10 miles to infest new colonies. The full life cycle takes about 30-60 days.

The beetles originated in Africa where they are only a minor pest of African honey bees (*Apis mellifera scutellata*). In those colonies, the adult beetles adopt different strategies depending on the strength of the colony. If the colony is weak the beetles immediately begin to lay eggs. If the bee colony is strong the beetles must wait for the bees to abandon the hive before they begin their reproductive cycle. It is possible that the bees leave the hive when the population of beetles gets too high.

SHB are also able to breed in bumblebee colonies and on fruit such as melons although it's not known how often this occurs in nature. Certainly the beetles are not known as a pest of fruit orchards in Africa. Studies of orchards in Australia have not detected the beetles reproducing even when the orchards are close to beehives that are infested with beetles.

The beetles are probably transported in packages of bees, honeycomb, beeswax, swarms, beekeeping equipment, soil and fruit. Adults can survive without food for 2 weeks and in the fridge for 3 days allowing them to survive freight transport between countries. They can survive for more than a month on used honeycomb or fruit.

Why are SHB a problem in European honey bee (*Apis mellifera*) colonies?

In contrast to their behaviour in colonies of African honey bees, the SHB will immediately start to reproduce in both weak and strong European honey bee colonies. This appears to be due to a difference in the way the *A. mellifera* bees act towards the beetles when compared with the behaviour of African bees (*A. m. scutellata*).

In South Africa, SHB prefer to lay their eggs in small cracks in the hive. Very few are laid directly on the combs. When eggs are laid in unprotected areas of the hive the African worker bees remove the eggs. When SHB larvae were artificially placed in a hive of African honey bees the workers found and removed the larvae from the colony.

Although both African and European bees are known to enclose SHB in "prisons" behind propolis walls, European bees are less likely to attack the adult beetles. SHB adults are even able to beg for food from European worker bees. A higher number of European bees will ignore the beetles rather than investigating when compared with African bees.

SHB in the U.S.A

When the beetles were found in the U.S.A. it was hoped that they would not be able to survive in the cold weather. Unfortunately they are able to survive in the over-wintering cluster of bees and start to reproduce once the weather warms up. Temperatures above 10°C are required for completion of the life cycle, so in areas where the ground temperature remains low the population growth of the beetle will be slowed.

In heavily infested colonies the larvae will destroy combs and consume the entire brood nest. The queen may stop laying, the build up of beetle frass will cause the honey to ferment, and the bee colony will either collapse or abscond. Infestation levels can reach up to 30,000 SHB larvae per hive and can destroy the colony within two weeks.

In the two years following the discovery of the SHB, 20,000 U.S. colonies were destroyed. Its spread around the country and into Canada has been rapid. They are able to travel with bee swarms and seem to "home-in" on apiaries after hives have been opened, suggesting the odours released from the colony may be an attractant.

SHB in Australia

So far the beetles have not caused as much damage in Australia as they have in the U.S.A. Larvae have only been found in colonies that are already weak due to disease or the lack of a queen. Consequently there has been no impact on honey production, but the beetles have affected the export of live bees from Australia to Canada, Korea and Japan.

The reasons for the lack of damage are unknown. Possibilities being investigated include:

- Climatic differences between Australia and U.S.A.?
- Differences in the number of beetles? (population numbers are difficult to calculate as there is a lot of movement of beetles between colonies)
- Differences in reproductive rates? (due to genetic or environmental differences - Denis Anderson is conducting research into the genetics of the beetles and his results suggest the beetles in Australia originated from Africa)
- Different beekeeping techniques?

- Parasites of the SHB present in Africa and Australia but not U.S.A.?
- Ants and birds in Australia attacking larval stages?
- Australian soil too dry for SHB pupation?
- Australian colonies not weakened by varroa?

Detecting SHB

Identifying the adult or larval beetles on combs is the best detection method, but be aware that there are several other similar, non-damaging beetles that can be present within hives. It is important to check under the lid and hive mat for the beetles. Adult beetles will move away from sunlight and smoke so if a super is placed on an upturned lid then the beetles will move out of the super away from light and smoke and into the lid making them easier to find. Badly infested colonies will also have a very strong smell like faeces, rotten oranges or fermenting honey. Heavily infested colonies have a dark substance on the combs which is the beetles' faeces. The damage to combs is similar to that caused by wax moth larvae but there is no webbing and instead the combs may look "slimy".

Overseas experience suggests it would be very difficult to eradicate SHB from New Zealand unless it was detected soon after its arrival. The beetles would probably spread rapidly and efforts in other countries have been unsuccessful in eliminating the beetles.

Prevention of Infestation

The following methods have been recommended overseas:

- Keep strong colonies. Strong colonies are more likely to repel the beetles and remove the beetle larvae.
- Don't feed your colonies as this will increase the humidity within the hive and improve conditions for the SHB larvae.
- Don't use ventilated bottom boards as these allow the adult beetles in and the larvae out.
- Don't give the bees too much space. SHB can reproduce more easily in feral colonies as there is often more space in these hives making it harder for the bees to repel the beetles. This makes it important to remove queen cages from your hives as soon as possible.
- Keep your apiary and honey house tidy and secure to prevent access by the beetles.
- Extract supers soon after harvesting them - stored honey supers attract beetles especially supers containing pollen or brood. For similar reasons the use of pollen supplements can be an attractant for the beetles.
- Keep your extraction areas clean as the beetles like to breed in cappings.
- Keep the humidity in storage areas below 50% to prevent SHB eggs from hatching.

Control of SHB

If SHB enters New Zealand the following control methods may be options for beekeepers, but all would first require appropriate approvals from MAF. In the U.S.A. treatment strips like those used for varroa have been used but these can leave residues and may produce resistant beetles. Some beekeepers have treated the soil around the hives with insecticides but this also kills bees and beneficial insects. It will also only kill the wandering larvae and not the flying adults.

Infested frames can be moved to strong colonies where the bees will remove the larvae. Freezing combs for 24 hours at -12°C will kill all life stages of the beetle and larvae can also be killed by immersing them in bleach or soapy water. Queen excluders could also be used to keep brood and pollen out of the honey supers to make these less attractive to the beetles during storage.

There is some research underway to develop alternative control methods. It has been noticed that SHB adults can occur in widely varying numbers in hives in the same apiary, suggesting that SHB adults use an aggregation pheromone. It is possible that this pheromone could be used to produce traps for the beetles. Natural enemies such as nematodes and wasps could also be researched for their abilities to control the beetles. It is also known that ants in Africa will attack beetles in empty bee colonies.

The above information was given during lectures by Peter Nuemann, of Germany, and Bruce White, of Australia, at the 2003 Apimondia Congress in Ljubljana. For more information, the Central Science Laboratory in York, England has produced a useful factsheet with excellent photos. Their web site is www.csl.gov.uk and the factsheet can be found in the section provided by their National Bee Unit (www.csl.gov.uk/science/organ/environ/bee/factsheets/SHB.pdf).

One of the main comments made by these researchers was that very little is currently known and much more research is needed.

IV International Apiculture Photography Contest

The Environment and Culture Council of The Excellency of Azuqueca de Henares City Government, through the Municipal Apiculture School, announces the following apiculture photography contest, ruled by the following;

RULES

- PARTICIPANTS: Any citizen or entity in any country in the world may participate in this contest.
- TOPIC: The topic to expound will be apiculture in any of its aspects, biology, flora, products, bee hives and bee yards, customs and uses, commerce, promotion, art, etc. Photographs must be original and unpublished. There will be an additional prize for published photographs of historic or artistic value.
- TECHNIQUE: All, including digital photography, in black and white or color.
- CATEGORIES: The Following categories are established. Single photographs, Reports: Three to five photographs per theme. Historic photographs
- PRESENTATION: Photographs may be presented: In unframed paper and must have a minimum size of 13X18 cm. In informatics support, CD etc. By E-mail to aulaapicola@jet.es. The number of photographs per author shall be limited to five, in either report or single form.
- MAILING:
- IV Concurso Internacional de Fotografía Apícola
  Concejalía del Medio Ambiente
  Excmo. Ayuntamiento de Azuqueca de Henares
  19200 Guadalajara, Spain
- Or by E-mail to aulaapicola@jet.es
- Each photograph shall include the next information: Title of the presentation, name and address of the author, identity card or passport number, short curriculum vitae (10 -15 lines max.) and E-mail if you have, and the category in which the author desires to participate. (Report, single or historic).
- TIME LIMIT: Photographs may be submitted from the date of announcement of the rules for presentation until April 30, 2004.
- JUDGES: Judges will be formed by personnel of the Culture and Environment Council, as well as by persons from photograph entities and presided by his Excellency the Mayor or his designee whose decision is not contestable.
- PRIZES. The following prizes are established.
  - Individual photograph category:
    First prize: 500 Euros and title.
    Second prize: 400 Euros and title.
    Third prize: 300 Euros and title.
    Report category: (3 to 5 photographs) for this entry there shall be only one prize 500 Euro and title.
    Historic category: 300 Euro and title.
    Payment of prizes shall be made net after deduction of transfer fees and taxes.
- ANNOUNCEMENT: The wining photographs shall be published on May 15, 2004 in newspapers, trade magazines, Internet, etc. winners shall be notified in person. Winning photographs shall become property of the City Council of Azuqueca de Henares who may request the original negatives, slides or computer discs.
- PRESENTATION: Participating photographs will be shown at the Culture Hall, Azuqueca de Henares from 12 to 30 May 2004. The selected photographs shall also be show at an itinerant exhibition which will be offered free to whom it may concern until 30 April 2005.
- CATALOGUE: With the selection of photos, a full colour catalogue will be edited. Near every photo will appear the data of every author. An issue of this catalogue will be send free to every participant.
- RETURN OF NON-WINNING PHOTOGRAPHS: All the photographs that are not awarded a prize shall be mailed free to the author once finished the exposition term only if the author demand it before June 30 2004. The rest will be part of the Municipal Apiculture school archives
- TITLE: All the participants will receive a justifying title.

Participation in this contest implies total acceptance of the rules of the contest.

- Agustin Arias