Wellington Beekeepers Association
Support and encouragment of beekeeping and beekeepers
March 2026 Newsletter

Next meeting | Wednesday 4th March 2026
Where | Johnsonville Community Centre
Editor| Jane Harding janeh@xtra.co.nz

BEGINNERS' SESSION: 6.45pm Upstairs

Robbing/wasp guards, end of season prep – Janine Davie

MAIN MEETING: 7.30pm

Wasps and other pests – John Burnet and Paul Chapman

Paul Chapman (owner of Pest Proof Pest Control) will talk to our club on his pest control experiences. Paul will be accompanied by Davide Santoro, ecologist and research scientist with MPI also currently working on the yellow-legged hornet incursion in Auckland.

Note from the President

I really enjoyed the presentation by Professor Leonard Foster from the University of British Columbia to the meeting in February. We were so fortunate he managed to fit us in the night before his flight the following morning. I was surprised to hear about the volume of queen bees that are exported from New Zealand to Canada and further surprised to hear that they have some problems performance wise. Leonard's talk included a lot on those twin topics that come up again and again in the Colony Loss survey, queens and varroa. I should have at least taken a photo but I was too invested in listening.

It's been a weird summer, I use that term loosely because I think it may have passed us by unnoticed. I can only hope for a balmy autumn to make up for it. I should have extracted some more honey before now but am hoping to get the last of it in the next couple of days – I just have to think of some ways to avoid setting them up for robbing. I will report on my success or lack of it…

It is very timely that this month's meeting covers the topic of pests with an update on the Auckland Hornet situation from Phil Lester and some general coverage on wasps and other pests. I have discovered a wasp nest in the retaining wall next to one of my hives. I have purchased some "No More Wasps" spray to deal to them. I can only say I hope it works but if not, hopefully I will be better informed about how to deal with them in the future after the next meeting.

Very short note this month but I don't have much to report and I've honey to harvest, painting to be done, a car to wash, a cake to bake for my son's birthday and that's just the start of the list.PS: I have checked two of my hives since starting this report. There was minor mayhem with bees everywhere but no robbing I am pleased to report.

I checked both hives with an alcohol wash. One has quite a few varroa and one has almost none. I am hoping to take off some more honey in a few weeks so I consulted my Varroa Treatment chart and will probably administer an oxalic acid vapour treatment every four days for 3 or 4 cycles and see if that knocks the varroa back. I will then put a non-organic treatment in the hive with the heavy varroa load after I have removed the last of the honey. I could use Bayvarol but I didn't get very good results with that when I used it last year.

I will see if the chart can be attached to the newsletter but I have a funny feeling it is in the wrong format so I may have to see if it can be emailed out for those who are interested. It's a little bit out of date in that some of the more recent treatment options are missing but it may be of use to some

Janine

For Sale

Three frame honey spinner for sale. Well cared for and maintained.

Perfect for small home beekeeper with 1-3 hives. Price to be negotiated. Pick up Kelburn. Contact Anne 021 605 234.

Varroa treatment

Frank Lindsay

Apilife Var is cheap and effective. Use something to knock down mites and then follow up with Apilife var. I'm just using apivar and formic acid at the moment.

In considering what miticide to use will depend upon how many other beekeepers are around you and what re-invasion was like last year as to what you use. Otaki gets hit hard with mite re-invasion in April - May so I use apivar even though this is not a nice miticide leaving residue in the hives.

Bayvarol works if you haven't used it for a year but monitor after three weeks to see if it has worked as we can't rely on it now as mites develop resistance.

Some are vaporising with Oxalic Acid every 5 days for at least a month. 4 gums per brood box. Very effective if repeated.

Place Oxalic Acid strips only when mite levels are very low <1% for 6 -10 weeks which may take you through the winter.

Don't use acid if hive is falling over with mites and deformed wing damage as this will drive all bitten bees and perhaps the queen from the hive. Use soft treatment first. Even Bayvarol if you have to, and then when the next generation of bees emerge use acids again.

Why Honey Bee is Two Words

Regardless of dictionaries, we have in entomology a rule for insect common names that can be followed. It says: If the insect is what the name implies, write the two words separately; otherwise run them together. Thus we have such names as house fly, blow fly, and robber fly contrasted with dragonfly, caddicefly, and butterfly, because the latter are not flies, just as an aphislion is not a lion and a silverfish is not a fish. The honey bee is an insect and is preeminently a bee; "honeybee" is equivalent to "Johnsmith."

—From **Anatomy of the Honey Bee** by Robert E. Snodgrass

Chartwell apiary

On Thursday 19 February, Martin Toland and Eva Durrant joined Frank Lindsay and John Burnet for a morning's work at the apiary. There are 20 hives at the apiary including 12 Nucs. The bees are rearing plenty of brood following the rain which encouraged flower production of the native trees in the reserve.We checked hives for honey and adding varroa treatment.

Apilife Var and Oxalic strips were added to each hive's brood box. Honey frames were shared with hives with little food.

If your hives have lots of Varroa…..

Phil Lester from Victoria Univsiey Wellingon, is looking for more Varroa mites for his Deparment's study.

You can email Phil at phil.lester@vuw.ac.nz

An angry swarm and a cautionary tale

By John Burnet

Frank and I were at Chartwell on Sunday 8th February to install two hives donated by Graeme Chisnall who has given up beekeeping. Frank has since been back to cut the grass and I installed a swarm there on Saturday, captured from Miramar North on Friday night and considered to be too aggressive to be given to a member.

I have since determined that this Miramar North swarm has been loose for a couple of days at three different locations and was therefore probably starving and hence more aggressive than the usual swarm.

Murray Soon who finally captured this swarm did not know it was an angry swarm until he started to box it. Even though he was wearing PPE gear Murry received numerous stings from bees that crawled over his sneakers and into his beesuit, stinging his legs, body, arms and face. Murray drove home but was having difficulty breathing and his wife called an ambulance. BUT even while being ambulanced to ED (he was having difficulty breathing!) Murray called me and asked that I finish the job. How's that for dedication? Anyway, he was given a shot of adrenaline by paramedics, kept in hospital overnight and is back to normal now. Needless to say he will wear boots and spray with sugar syrup next time he captures an angry swarm!

A Cautionary Tale: wear thick work socks and tuck trousers into them when not wearing gumboots!

Import information in regard to the Asian Yellow Legged Hornet and MPI's eradication plan.

Incorporated *"Working for Beekeepers"*

February 2026 :: Members Information New Zealand Beekeeping Dear Members,

Following our recent Executive meeting, on February 22nd, we would like to update you on our work regarding the **Asian Yellow Legged Hornet** incursion.

We have been concerned for some time that the MPI led response is not sufficiently robust. We have been advocating for wider surveillance to determine if Hornet queens have been transported further afield, beyond last year's over-wintered population. From the Webinar held last week with the experts from the UK, the message was clear that Hornet nests had been found inland along transport routes and in particular near large truck stops.

It is our opinion that we need to do some surveillance with traps and/or sentinel hives to prove the presence or absence of Hornets outside the current 11km MPI surveillance area.

Ian Fletcher and more recently Jaime McRae (our new Executive Member) have been leading this push to get wider surveillance undertaken. Jaime has spent considerable time drawing up a possible plan (with maps) that he and Ian presented to MPI late last week. Draft plan further below - this

is currently a skeleton plan that is being worked on to get a more detailed matrix set out that looks at how each phase of the hornet life cycle will be addressed through beekeeper and public participation. Of particular note

is the intention to talk with Transport companies like Mainfreight and Move to become actively involved in this response.

For this plan to succeed MPI must be onboard to provide an App for reporting possible sightings of hornets and submitting photos for identification. The MPI tech team have been hesitant to support an App so Ian is working to resolve this.

Along with the surveillance plan, we have the following information to share:

1. Information supplied by John Berry regarding the Hornet impact on not only our bees, native fauna and our bird species
2. An OIA (Official Information Act) letter in response to questions the Executive requested regarding the incursion of the Hornet.
3. Of interest also is the Hansard transcript where it indicates the Minister was informed of the Male hornet find on July 11th
4. Video footage of Hornets attacking bees in Portugal - *will email this separately*

Please email Linda - info@nzbeekeeping.co.nz, or
phone me 027 294 6559 if you have any questions or comments.

JANE LORIMER
PRESIDENT

Biosecurity New Zealand
Ministry for Primary Industries
Manatū Ahu Matua

OIA25-0870

20 February 2026

Jane Lorimer
info@nzbeekeeping.co.nz

Dear Jane,

Thank you for your email of 8 December 2025 requesting information relating to the finding of yellow-legged hornets in Auckland. Your request has been considered under the Official Information Act 1982 (OIA).

You requested the following:

Please provide all papers, briefings, notes, documents, advice, records and other information from the 1 June 2025 to now relating to, concerning, or touching upon Asian Hornets – yellow-legged Hornets and including more specifically the following:

Email updates to other agencies on the response are attached as Appendix One. Situation reports provided to other agencies are attached as Appendix Two. A report and technical advice provided to Treasury are attached as Appendix Three. Advice provided to the Environmental Protection Authority is attached as Appendix Four.

Some information has been withheld under section 9(2)(a) of the OIA – *to protect the privacy of natural persons.*

MPI is satisfied that, in the circumstances of this case, the withholding of the information is not outweighed by other considerations which render it desirable in the public interest to make the information available.

1. A male hornet found on 24th June 2025
Exactly what was the location of the male found and how was it notified?
How was the male hornet found and by whom relevant to the location
Who was the find notified to and with whom was the notification shared.
What condition was the male in when found - was it alive, dead, semi-conscious.
Was this hornet sent to the PHEL or similar laboratory for analysis

A single male hornet was reported from the outside of a café on Grafton Rd, Grafton. The notifier called the Ministry for Primary Industries' (MPI)'s public reporting line, and the notification was passed on to the Plant Health Incursion Investigation (IIPH) team who contacted the notifier and collected the sample for the Plant Health and Environment Laboratory (PHEL) for identification. The hornet was alive and lame when found.

2. A male hornet was notified on 4th July 2025
Exactly what was the location of the male found and how was it notified?
How was the male hornet found and by whom relevant to the location
Who was the find notified to and with whom did the first receiver notify

Ministry for Primary Industries
Charles Fergusson Building
38-42 Bowen Street
PO Box 2526
Wellington 6140, New Zealand
mpi.govt.nz

What condition was the male in when found - was it alive, dead, semi-conscious. Was this hornet sent to the PHEL or similar laboratory for analysis

A single male hornet was found on the outside of a window of a multi-storey building in Munroe-Davies Drive, Albany. MPI was notified through the online reporting tool, and the hornet was identified by PHEL from photographs. Based upon the photographs that were provided, the hornet appeared to be alive and in good condition, however the notifier did not collect it, and therefore could not be sent for further analysis.

3. Have any other male hornets been notified or found since the 1st June 2025? If so, please confirm the location, notification information, condition of the hornet and if it was sent for laboratory analysis.

In response to the increased publicity following the detection of queen hornets in October 2025, a suspect single male hornet was reported from a residential property in Glenfield, Auckland, on 2 November 2025 using MPI's online reporting tool, and a photograph provided. When the notifier was contacted by the IIPH team, they advised that the hornet was detected on 7 June 2025. The hornet was alive when found, but was killed by the notifier, and no sample was retained. As this report was received after the first queens had been detected, urgent measures were already underway.

4. During July MPI notified industry groups.
What date and which Industry groups were notified by MPI.
What date and which Beekeeping Industry groups were notified by MPI.
What date did MPI notify AsureQuality of the Male Hornets

The following organisations were notified of the two detections and provided with a factsheet on 14 July 2025:

- New Zealand Bee Health and Biosecurity
- New Zealand Apples and Pears
- Horticultural Executive Services Ltd
- Kiwifruit Vine Health
- Foundation for Arable Research
- New Zealand Avocado

These organisations were subsequently provided with an update on the investigation and an updated factsheet on 23 October 2025.

AsureQuality were not notified of the detections on either of these dates, as they are not directly involved in the operational response.

5. When did MPI notify the National Apiculture Surveillance Inspectors.
Who on the National Apiculture Surveillance team did MPI notify.
Which hornets (male or queens or both) were notified and what were the recommendations to the National Apiculture Surveillance team and when were these actions undertaken.

The Manager of the National Apiculture Surveillance team was notified of the detections and provided with the factsheet on 14 July 2025. No recommendations were made.

6. When and to whom did MPI notify in the GIA partners.
When did they meet to progress a response to the notified male hornets.

An MPI response was initiated on 3 November 2025, transitioning to a Government Industry Agreement (GIA) response with key industry partners on 11 November 2025. The GIA partners outlined above (refer question 4) had been notified of the positive detections on 14 July 2025 and provided a further update on 23 October 2025.

> *7. a) When and to whom did MPI notify in Apiculture NZ about the finding of Asian Hornets - Yellow-legged Hornets either male or Queens or both.*
> *b) When and to whom did MPI notify in New Zealand Bee Health & Biosecurity (NZBB) about the finding of Asian Hornets - Yellow-legged Hornets either male or Queens or both.*
> *c) When and to whom did MPI notify in New Zealand Beekeeping Ltd about the finding of Asian Hornets - Yellow-legged Hornets either male or Queens or both.*
> *d) When and to whom did MPI notify in Southern North Island Beekeeping Group (SNIBG) about the finding of Asian Hornets - Yellow-legged Hornets either male or Queens or both.*

On 23 October 2025, the following apicultural organisations were notified of the detections by email:

- Apiculture New Zealand
- New Zealand Beekeeping Incorporated
- Southern North Island Beekeepers
- Auckland Beekeepers Club
- Rodney Beekeepers Club
- Franklin Beekeepers Club

As outlined above, the Chief Executive of New Zealand Bee Health and Biosecurity was notified via email on 14 July 2025.

> *8. Please supply all Ray Smith, Director General, MPI reports and responses presented to the Select Committee during Scrutiny week regarding:*
> *a) the Beekeeping Industry, and*
> *b) Asian Hornets-Yellow-legged Hornets.*

Papers submitted to Select Committees are published at https://www3.parliament.nz/en/pb/sc/submissions-and-advice/. No documents were provided to the Primary Production Select Committee that specifically related to the beekeeping industry or yellow-legged hornets.

Should you have any concerns with this response, I would encourage you to raise these with the Ministry for Primary Industries at Official.InformationAct@mpi.govt.nz. Alternatively, you are advised of your right to also raise any concerns with the Office of the Ombudsman. Contact details are: Office of the Ombudsman, PO Box 10152, Wellington 6143 or at info@ombudsman.parliament.nz.

Yours sincerely,

Andrew Spelman
Commissioner Biosecurity Intelligence, Systems and Response

Surveillance Plan – Executive Summary

This document presents a science-based, operational 24-month eradication plan for the Yellow-Legged Asian Hornet (Vespa velutina), tailored specifically to New Zealand's climate, ecology, biosecurity system, and beekeeping sector. It draws on international eradication and containment programmes (France, Spain, Portugal, UK, Italy, South Korea) and adapts proven methods to NZ conditions.

The strategy assumes a credible incursion risk or early detection event in Auckland and is designed to eradicate—not manage—V. velutina before permanent establishment.
The plan is structured around:

- Two Main Surveillance zones (0–11km, 11- 320km)
- Seasonal biology of queens and nests (Spring & Autumn critical)
- Integrated surveillance (MPI, Beekeepers, Public)
- Aggressive nest detection and destruction
- Port, freight, and high-risk forest focus
- Continuous public awareness and reporting

Species Overview (Evidence Based)
Scientific name: Vespa velutina nigrithorax

Origin: Southeast Asia
Primary pathway: Containerised cargo, timber, machinery, ships, aircraft, freight trucks, humans.
Expansion rate: 60–80 km/year (Europe)
Reproduction: A single nest can produce as many as 300–600 new queens in autumn, which then hibernate and establish new colonies the following spring.
Climate: Warmer climates accelerate their establishment.
Colony Cycle: The old queen dies at the end of the season, and the newly mated gynes leave to hibernate, emerging in spring to establish new, individual nests.
Queens: Overwinter individually; spring queen survival is the single most critical control point.
Predation pressure: Severe on honeybees, native insects, pollination networks. One nest can consume around 11 kilograms of insects in a single season, compared to 0.6 -1.8 kg for Common/German Wasps.
Global Impacts (Published Evidence)

- France: >500,000 nests destroyed since 2006; failure to eradicate due to late detection. Introduced to Europe in 2004 (France)
- Spain & Portugal: Severe honeybee losses; documented ecosystem disruption.
- UK: Repeated successful eradications through early detection + rapid nest destruction
- South Korea: Rapid spread where early queen trapping was insufficient

Key lesson:
Early Spring queen removal + aggressive nest destruction = eradication possible.

Biology Relevant to Eradication - Seasonal Cycle (NZ-Adjusted)

- Late Winter / Early Spring (Aug–Sep): Overwintered queens emerge.
- Spring (Sep–Nov): Primary (embryo) nests established.
- Summer (Dec–Feb): Secondary nests expand rapidly.
- Autumn (Mar–May): Production of new queens and males.
- Winter (Jun–Jul): Colony collapse; fertilised queens overwinter.

Spring and Autumn are the most crucial intervention windows.

- Spring (Aug–Oct): Founding queens
- Autumn (Mar–May): Reproductive queens.

Traps: Attractants: protein + carbohydrate blend

- Trap placement: sunlit edges, port perimeters, forest margins.
- Trap elevation: 1.5–2.5 m.

Studies from France & Spain show >70% population reduction when queen trapping is sustained over 2 seasons.

Surveillance & Response Zoning Framework
Zone 1: 0–11 km (Core Eradication Zone – MPI Led)

Objective: Immediate eradication (Delay = Permanent Establishment)
Lead agency: MPI Biosecurity NZ
Support: DOC, Regional Council, Beekeepers,
Actions:

- Dense trap grid (every 250–500 m)
- Monitoring & bating traps, feed stations
- Radio-tracking of foraging hornets
- Thermal imaging & drone surveys
- Night nest destruction teams
- Mandatory reporting protocols
- Transparent reporting dashboard for beekeepers, industry partners
- Targeted messaging to monitor apiaries

Zone 2: 11– 320km (Containment & Detection – MPI + Beekeepers)
Objective: Prevent outward spread
Lead agency: NZBI / ApiNZ / NZBB
Support: MPI, Beekeepers, DOC, Regional Council, Public
Actions:

- Trap density every 1–2 km
- Sentinel apiaries
- Beekeeper visual inspections
- Targeted forest surveillance
- Targeted surveillance at Freight Depots, Ports, Camp Sites, Boat Ramps, Tourist Spots, and Pollination Areas
- Seasonal queen trapping

- Public reporting campaigns
- Transparent reporting dashboard for MPI, beekeepers, industry partners
- Targeted messaging to monitor apiaries

High-Risk Forests & Reserves (Auckland – Tracking/ Visual Surveillance Priority)
These areas must receive regular visual inspections, baited traps:

- Eskdale Reserve
- Kauri Park / Kauri Point
- Kauri Glen Reserve
- Stancich Reserve
- Smiths Bush
- Witheford Reserve
- Arcadia Reserve
- Manuka Reserve
- Kereru Reserve
- Fernwood Grove
- Dene Court Reserve
- Fernhill Escarpment
- Lucas Creek Reserve
- Verran's Road Gully Reserve

Rationale: Dense canopy, sheltered gullies, proximity to located queens, nests, suburbs and waterways.

Ports, Freight & Logistics High-Risk Nodes
Mandatory Trap Deployment
All major NZ ports:

- Ports of Auckland
- Tauranga
- Lyttelton
- Wellington
- Napier
- Nelson
- Timaru
- Dunedin
- Bluff

Freight & logistics hubs:

- All Mainfreight depots nationwide
- Move Freight Auckland & Hamilton
- Inland ports and container yards
- Auckland Airport Cargo

Trap types: Attractant + Protein-bait spring traps, carbohydrate autumn traps, or blend.

24 - Month Operational Timeline

Months 0–6 (Queen Interception/ Nest Destruction – CRITICAL) October – March (Spread Risk = LOW)

- Maximum queen trapping
- Public social media campaign (weekly)
- Paid ads targeting Auckland & Upper North Island
- School & council engagement
- Public signage along motorways and areas of hornet finds
- Radio-tracking operations
- Night-time nest removal
- Thermal drone use in high density areas
- Ongoing media updates
- Monitoring & bating traps, feed stations

Months 6–9 (Autumn Queen Suppression/ Nest Destruction – CRITICAL)

April – June (Spread Risk = HIGH)

- Second peak trapping campaign
- National awareness push
- Rural & freight sector focus
- Public - nest find incentives (financial)
- Radio-tracking operations

- Night-time nest removal
- Thermal drone use in high density areas
- Sentinel apiaries established
- Targeted messaging to monitor apiaries for “hawking”

Months 9–12 (Winter Revaluation Phase)
June – August (Spread Risk = HIGH)

- Reduced but strategic trap checks (once per fortnight)
- Sentinel apiaries maintained
- Reduced but area targeted public social media campaign
- Review with MPI, Beekeeping sector, of response, and future planning

Months 12–15 (Spring Queen Interception – CRITICAL)
August – October

- Maximum queen trapping
- Expand traps to all Ports
- Public social media campaign (weekly)
- Paid ads targeting Auckland & Upper North Island
- School & council engagement
- Public signage along motorways and areas of hornet finds
- Public signage in Auckland Airport for Pest of The Month
- Radio-tracking operations
- Night-time nest removal

- Thermal drone use in high density areas
- Ongoing media updates
- Sentinel apiaries maintained
- Targeted messaging to monitor apiaries for Hornet Queens or “hawking”
- Monitoring & bating traps, feed stations

Months 15–21 (Queen Interception/ Nest Destruction – CRITICAL)
October – March

- Maximum queen trapping
- Public social media campaign (weekly)
- Paid ads targeting Auckland & Upper North Island
- School & council engagement
- Public signage along motorways and areas of hornet finds
- Radio-tracking operations
- Night-time nest removal
- Thermal drone use in high density areas
- Ongoing media updates
- Sentinel apiaries maintained
- Targeted messaging to monitor apiaries for “hawking”
- Monitoring & bating traps, feed stations

Months 21–24 (Autumn Queen Suppression/ Nest Destruction – CRITICAL)
April - June

- Second peak trapping campaign
- National awareness push
- Rural & freight sector focus
- Public - nest find incentives (financial)
- Radio-tracking operations
- Night-time nest removal
- Thermal drone use in high density areas

Months 24–30 (Validation Phase)
June - November

- Sentinel apiaries maintained
- Continued port, depot surveillance
- Surveillance of all previous nest sites
- Targeted messaging to monitor apiaries for “hawking”
- Reduced but strategic trapping
- Final spring/autumn trapping cycles, Queens are prioritised
- Independent Scientific Audit (international expert)
- Stand-down planning
- Publish eradication report

Communications & Public Awareness Strategy

Spring & Autumn (Top Priority)

- Weekly social media posts (MPI + councils)
- Short videos: “Spot it, Report it”
- Geo-targeted ads (Facebook, Instagram, YouTube, Google)
- Posters at Airports, ports, depots, garden centres, busses, billboards

Year-Round

- MPI reporting hotline
- Beekeeper newsletters
- Media briefings after key milestones
- Social media engagement

Role of Beekeepers

- Sentinel hive monitoring
- Trap maintenance
- Rapid reporting
- Assistance with hornet tracking
- Social media engagement with fellow beekeepers
- Beekeeper newsletters
- Assistance in nest destruction

Beekeepers are the most effective early-warning network.

Success Criteria (Non-Negotiable)

- ZERO confirmed nests after 24 months
- ZERO queens detected in two consecutive spring/autumn cycles
- Independent scientific verification review confirms eradication

Conclusion: With early detection, immediate action, aggressive spring and autumn queen suppression, dense surveillance in Auckland, and full MPI–beekeeper–public integration, New Zealand can eradicate Yellow-Legged Asian Hornet.

Strategic Expansion of Surveillance Geography and Pollination Risk Overlay

I strongly recommend that surveillance coverage extend beyond the immediate Auckland response zone to include the Far North, through to Cape Reinga.
Auckland functions as New Zealand's primary international gateway. However, it is also the principal transit node for freight logistics and domestic tourism. A significant proportion of international visitors arrive in Auckland and then travel north to destinations such as Cape Reinga and Ninety Mile Beach within days of arrival. This travel pattern creates a plausible secondary dispersal pathway, particularly if a fertilised queen were inadvertently transported via luggage, vehicles, campervans, freight, or recreational equipment.
Given the high ecological value and relatively lower density of managed surveillance infrastructure in the Far North, early undetected establishment in this region would materially increase eradication difficulty and cost. Expanding surveillance to cover the full

Northland corridor, including Cape Reinga, represents a practical and proportionate risk mitigation measure.

Integration of Pollination Movement Risk into Spatial Planning

If pollination movements are incorporated into the operational mapping framework, it is essential that Hamilton, and Tauranga, are included as priority surveillance nodes.
In particular, Tauranga requires elevated attention due to:

- Its central role in the kiwifruit pollination season (October–November).
- The seasonal aggregation of large numbers of managed hives from across New Zealand.
- Regular inter-island hive movements, including from the South Island.
- High apiary density and close spatial proximity between operators.

This concentration of hives during the pollination period creates a temporary but significant amplification point for potential spread. If a hornet were to establish within or near this pollination network, the risk of rapid secondary dispersal via hive movements would increase substantially.
Hamilton and Gisborne similarly function as important pollination and beekeeping regions, with established hive movement corridors that warrant inclusion in surveillance modelling.

South Island Risk Assessment

The probability of establishment in the South Island via commercial hive transport from Tauranga is lower, relative to North Island spread. Most inter-island hive movements occur in refrigerated transport operating at approximately 4–6°C, conditions that reduce hornet activity and survival probability.
However, this pathway cannot be considered negligible. Areas within stacked pallets particularly insulated or central positions within load configurations can maintain temperatures above ambient truck cooling levels. A mated queen or hornet nest located in such a position could potentially survive transport.
While this scenario represents a lower-likelihood pathway, the consequences of a South Island establishment would be significant and costly. Therefore, a risk-based but not dismissive surveillance approach is warranted.

Fiscal Rationale for Expanded Surveillance

Expanding surveillance geography and incorporating pollination movement modelling increases short-term expenditure but materially reduces long-term liability.
International evidence demonstrates that once *Vespa velutina* exceeds early containment thresholds, eradication becomes unlikely and management costs escalate indefinitely. Early investment in:

- Broader geographic surveillance,

- Pollination corridor monitoring,
- Seasonal queen interception,

is financially sensible when compared with the long-term economic cost of permanent establishment, including impacts on apiculture, pollination services, and native ecosystems.
In summary, an expanded surveillance footprint now represents a cost-avoidance strategy rather than discretionary spending.

Below are suggested surveillance areas and task for MPI & Beekeepers:

MPI Tasks

- **Trapping and Surveillance**
- **Public social media campaign (weekly)**
- **Paid ads targeting Auckland & Upper North Island**
- **School & council engagement**
- **Public signage along motorways and areas of hornet finds**
- **Radio-tracking operations**
- **Night-time nest removal**
- **Thermal drone use in high density areas**
- **Ongoing media updates**

Posters at Airports, ports, depots, garden centres, busses, billboards

Beekeeper Tasks - (*NZ Beekeeping Inc, Apiculture NZ, NZ Bee Health & Biosecurity*)

- **Trapping and Surveillance (Trap maintenance)**
- **Sentinel hive monitoring**
- **Rapid reporting**
- **Assistance with hornet tracking**
- **Social media engagement with fellow beekeepers**
- **Beekeeper newsletters & communications**
- **Assistance in nest destruction**
- **Radio-tracking operation Assistance**
- **Thermal drone use in high density areas**

MPI – Beekeeper Surveillance Zone includes:
Northernmost Point: Cape Reinga
Easternmost Point: Omarumutu – Opotiki
Southern Central Points: Awakeri, Murupara, Waiotapu, Tokoroa, Otorohanga
Southernmost Point: Kawhia

TECHNOLOGY to IMPROVE ERADICATION

VespAI - VespAI combines artificial intelligence with a visual monitoring system to provide automated surveillance capabilities for European, Asian, and Oriental hornets. VespAI can identify hornets in real-time with ≥99% accuracy, delivering substantial improvements over manual techniques. Its bespoke species recognition algorithm can distinguish hornets from visually similar insects and is robust to a diversity of conditions. VespAI can deliver dawn to dusk coverage and is suitable for deployment in remote areas, enabling constant vigilance. Once identified an alert with an image is sent to the user. Unlike surveillance trapping, VespAI is a passive system that does not harm or kill visiting insects.
VespAI should be incorporated into feeding stations within the surveillance area that has coverage. This will increase monitoring presents, alert users to positive sightings, whilst reducing human labour costs.
Software code is FREE to download, includes manuals and instructions https://www.vespai.co.uk/

App (Similar to UK Asian Hornet Watch)
We need to create a New Zealand based APP for Hornet reporting. Everyone has an operating cell phone now and can help with the response. Much like the UK model (shown in photos) the APP needs the ability to log photos, videos, pin location, date, comments, time stamps, display differences between Honeybees, Wasps, Natives Bees/ Wasps, Asian Hornets. Have a selection of information on hornets, guides on what to do if user suspects hornets, comparison

photos etc. Confirmation that the users report has been sent to MPI and that they will or have processed their report (include negative or positive reports back to user.

AI can be used in the backend to sort through the mass of photos and report to MPI any positive, inconclusive, and or negative photos into appropriate groupings

Interesting websites

How Bees See and Why it Matters

https://beeculture.com/bees-see-matters/ The most likely colours to attract bees, according to scientists, are purple, violet and blue. Bees also have the ability to see colour much faster than humans. Their colour vision is the fastest in the animal world-five times faster than humans. Read this fascinating article from Bee Culture, the Magazine of American Beekeeping.

Who can I speak to?

President – Janine Davie president@beehive.org.nz
Treasurer – Eva Durrant treasurer@beehive.org.nz

Secretary – Jane Harding 027 421 2417 secretary@beehive.org.nz

Membership – John Burnet – 0274-379-062
Supper co-ordinator - Barbara Parkinson – (04) 2379624
Swarm WhatsApp Administrator - Jim Hepburn (021 926823)
Newsletter Editor - Jane Harding - 027 421 2417