Submission to People's Inquiry – 101
Exposure: lived in spray zone
Catherine Delahunty
Oral testimony transcription only

End

Submission to People's Inquiry – 102
Exposure: lived in spray zone
Oral testimony transcription only

End

Submission to People's Inquiry – 103
Exposure: lived in spray zone
Oral testimony transcription only

WRITTEN CONSENT NOT YET GIVEN

End

Submission to People's Inquiry – 104
Exposure: worked in spray zone
Kubi Witten-Hannah
Oral testimony: Yes

My involvement with the Painted Apple Moth Eradication Programme was motivated by a desire to protect the fragile environment of the Waitakere Ranges. I did not, initially, consider it even a remote possibility that people's health could be put at risk in the process.

I was pleased that MAF chose to create an advisory group – the PAMCAG. I was keen to be a member because of my environmental concerns and because I felt that I could offer a lot in terms of helpful community contacts.

My first hint that all was not as positive as it should be was an attempt by MAF to appoint a chair of the CAG. This was rejected by the group and I was asked to Chair it. I still believed that MAF genuinely wished to consult and looked forward to our meetings.

It quickly became clear, however, that MAF's intention was that we should be a conduit for them to the community and that they were not really interested in any ideas coming the other way. We had an excellent model for a Community based approach in Operation Forest Save in which the Regional Council backed up their own programme of pest eradication by working with local groups.

We made a number of suggestions to MAF which were rejected although some were later revived. An example was a vegetation movement control zone.

As a group we were keen to come up with strategies that would bring about safe eradication and that would be able to be replicated in the face of any future incursions.

There appeared to be substantial issues within MAF that compromised the possibility of an efficient eradication operation. Once Mr Isbister and Mr Gear were appointed to run the programme all pretence of working cooperatively was abandoned.

The operation became not just callous but even vindictive. An example of this was that having been forced into relocating some affected people MAF chose to put several families into a motel that sits between a busy roading network and the main trunk railway.

MAF was prepared to spend a great deal of money on self-promotion and on convincing the public to support aerial spraying.

MAF now claims to have achieved eradication and that recent moth finds have been new and separate arrivals. Whether or not that is true has been at huge cost both in money and human suffering. Further MAF has missed an opportunity to establish a modus operandi that could have been a blueprint for the future.

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Kubi Witten- Hannah - 104
Attachment 1

(an edited version of this paper was published by the New Zealand Herald on 6th January 2003 entitled *"We need new ways of beating the moth."*

A REVIEW OF THE PAINTED APPLE MOTH ERADICATION PROGRAMME - JANUARY 2003 by Kubi Witten-Hannah

Everyone acknowledges that mistakes have been made in dealing with the painted apple moth incursion. That is all history and while it is important to learn lessons for the future what is important now is to constantly re-evaluate where we are and how we should proceed. As the painted apple moth spreads and

public opposition to aerial spraying mounts some solutions that seemed acceptable a year or even six months ago are now no longer workable. The Ministry of Agriculture and forestry (MAF) needs to work with the community to develop an approach that can succeed.

On September 5th 2001 I received a letter of appointment to the Painted Apple Moth Community Advisory Group. (PAMCAG) This group was enjoined to liaise between MAF and the community with the goal of achieving the safe eradication of the painted apple moth. Tension between the PAM-CAG and MAF arose from MAF being more used to operating in the rural environment and the CAG wanting to find solutions that would suit an urban population wary of sprays and high tech solutions. This tension was healthy because it challenged each party to confront the issues raised by the other.

I am as keen as Mr Robert Isbister and Mr Ian Gear to see the moth eradicated and would like to help them achieve that goal. I have committed considerable amounts of my time and energy to that goal as have other CAG members. Unfortunately direct communication has broken down and neither TV nor radio sound bites nor letters to the editor are satisfactory ways to conduct a dialogue over a complex issue such as this.

Around the time of the general election last year dialogue broke down and mistrust and suspicion arose between MAF and PAMCAG. This eventually led to MAF 'sacking' the PAMCAG. We would like to invite the Ministry to reconsider this decision because we believe that informed dialogue between community representatives and government agencies is essential. The members of the PAMCAG remain committed to the safe eradication of the moth. We have built up knowledge of the issues and trust in the community that will take time for a new group to gain. The ministry initially planned to have a new group established by the beginning of December. It is still not in place today.

Many of the problems MAF are now facing spring from a lack of a good relationship with the community. An example is the belated and heavy handed imposition of vegetation controls. Fifteen months earlier we had advised them of how to go about establishing effective vegetation movement controls based on public cooperation rather than threats of draconian penalties. It is also no surprise that since the breakdown of dialogue between MAF and CAG there has been a proliferation of groups implacably opposed to the way the operation is being conducted. Some of these groups reject the value of eradication of the moth altogether.

The goal of safe eradication is not being met by the current operation because it is neither safe nor effective. The initial targeted aerial spraying failed because the spread of the moth was not clearly delineated and the spraying was not supported by effective measures to stop further spreading of the infestation. Problems also arose because of the difficulty of reaching all the vegetation that needed to be treated. MAF acknowledged the failure of its operation and considered several options including giving up and the current blanket spraying of an enlarged area.

The PAMCAG presented them with an extra option which became known as the Community Option because it relied on turning the problem of dealing with an urban incursion into an advantage by enlisting the community's support. The Community Option did not appeal to MAF. I believe that because of their rural experience and the mistrust generated with 1080 drops they did not accept that the community could be an ally. If they had looked more carefully at such programmes as Operation Forest Save and its spin-offs they would have seen that community acceptance can be a powerful tool.

The PAMCAG was not allowed to present its proposals directly to the politicians and an unsympathetic presentation by MAF meant its rejection by cabinet. This was despite its endorsement by a workshop of scientists assembled by the PAMCAG and including members of the team that successfully eradicated the white spotted tussock moth from east Auckland. It is our understanding that abandoning the eradication attempt was initially MAF's preferred option.

That option was rejected in favour of blanket spraying largely because it was seen that if the goal of eradication was abandoned there were no effective control measures that could limit the spread of the moth and the damage it could cause. Blanket spraying was endorsed with funding of $90 million dollars committed. Despite the advice of the Community Option, which promoted both control and eradication,

inadequate resources were committed to developing control techniques in the event that blanket spraying was unsuccessful.

Blanket spraying is having considerable success in killing off moths. This is a tribute to the professionalism of those carrying out the operation. However as well as creating major health issues it is also failing because killing most, or indeed nearly all, of the moths is not enough. One female moth can produce 700 or more eggs so that even a handful surviving in what will be a benign environment once the spraying stops will be enough to allow for rapid reinfestation.

We are concerned that not only are moths being located outside the spray zone but that they are still being trapped within the zone. In the most sprayed area of all, Waikumete Cemetery, moths have still been found. This is likely to be happening for two main reasons. First because the layered nature of the vegetation means that it is difficult for the spray to penetrate to vegetation below the upper canopy. The second reason is that it has been difficult for MAF to find the ideal weather in which to spray.

Their preferred option is to spray in light wind that will allow the spray to drift in to the target vegetation. The operation has been hampered by rain and high winds and as a consequence MAF has been forced to spray on calm days when the wind has not been in the range that will allow the spray to drift into its target.

It is time for the government to reconsider the Community Option. Two of the cornerstones of that option would not only enhance the possibility of eradication but also the prospect of effective control in the event that eradication is no longer achievable.

The first of these that needs to be implemented immediately is the eradication of all unwanted wattles from the Auckland area. Most importantly this operation should target those wattles in the rail and road transport corridors that are greatly contributing to the spread of the moth. MAF figures place over 85% of larval finds in wattle trees. While they have carried out some strategic removal of wattles they reject the suggestion of widespread removal because they believe the moth will simply shift to other species.

Entomologists consulted by the PAMCAG believe that removal of wattles would reduce not only the ease with which the moth can spread but also its ability to thrive thereby buying valuable time in the battle for eradication. Experts have assessed the cost of wattle removal at $3 million with a further $1 million dollars needed to assist council and community groups with appropriate replanting. Given the part wattles are playing in the development of the painted apple moth problem this seems a small slice of MAF's $90 million budget. It has obvious additional benefits in enhancing the environment.

The second and most essential building block for a successful eradication and/or control operation is the development and employment of a synthetic pheromone. MAF acknowledges the value of a synthetic pheromone and has put resources into developing one. They will not, however, support the parallel programme of Dr John Clearwater and his associates.

Given the importance of pheromone development MAF should be jumping at the chance to support a second programme. Dr Clearwater has a proven track record. He was responsible for the successful development of a synthetic pheromone to combat the white spotted tussock moth. Against all the odds and employing his own resources Dr Clearwater has made good progress on developing a pheromone for the painted apple moth.

Why then won't MAF provide a quarter of a million dollars to help him on his way? There appear to be two main reasons. One revolves around professional jealousy within New Zealand's small scientific community. Dr Clearwater no longer works for MAF and some within the ministry appear to resent his success and standing within the community. A more fundamental problem revolves around how a synthetic pheromone will be employed once it has been developed.

MAF favours the use of the pheromone only to replace the female moths currently used in the indicative trapping programme. They rightly see that this would allow for an expansion of that programme and therefore make it easier to delineate just where the moth has spread.

Dr Clearwater favours the additional use of a synthetic pheromone as a control technique and as part of an eradication programme. His approach involves using a proprietary system that uses small amounts of paste laced with pheromone and poison to attract and kill male moths. It is an ideal technique for an urban situation.

If one household every 500 metres agreed to have the paste in a tree then there would be a good chance of eliminating male moths and therefore the chances for females to be fertilised. I believe that almost every household would be keen to support such a programme. This approach would not only be very useful in the current attempt at eradication but it also has potential for long term control if required and for rapid deployment should a fresh introduction of the moth occur. There are no guarantees that a pheromone development programme will be successful but it must be worth ploughing resources into. It is also vital that we don't rely on only one team to come up with a successful formula.

The PAMCAG has worked for safe and effective eradication. Having outlined the problems hampering effectiveness I would like to turn to problems of safety. Before aerial spraying began I received advice that significant health problems would be suffered by perhaps one percent of those sprayed. Experience has shown us that the percentage is at least 5% in the adult population and higher among children.

These effects include serious respiratory problems; rashes; and vomiting and diarrhoea. These have been serious enough to disrupt people's lives and in some cases have cost them their employment as well as considerable medical expenses. For children these problems are compounded by the fear factor associated with the low flying aircraft.

Doctors treating these patients are flying blind. MAF won't reveal the contents of the spray for reasons of commercial confidentiality. Instead they seek to reassure a sceptical public that all the additives are found in food or cosmetics and are perfectly safe. When these products are used in commercial products the contents are listed on the labels and those who are sensitive can avoid them. Needless to say there are also substances that may be safe to use in a controlled manner that you wouldn't want squirted up your nose. Ignorance of the contents of the spray also makes it difficult to assess just what long term health effects there may be. This fact is of particular concern to pregnant women and the parents of young children.

MAF is operating a health programme but many people have found the staff of the firm contracted to provide that service inquisitorial and dismissive of their concerns. In almost all cases the contractor has been unwilling to meet the medical bills of those affected. Based on the 5% figure (quoted by cabinet minister, Marion Hobbs), in excess of 10,000 people living and working in the spray zones are being significantly affected. Of these approximately 1000 are being evacuated.

The challenge of getting through the barriers to get this kind of help are daunting enough for anyone. For the inarticulate or non-native speaker of English they are overwhelming. Even for those evacuated the costs are high and no part of the $90 million is available to meet the losses of individuals or businesses suffered as a result of being sprayed or avoiding the spray. Avoidance is not always practical. How will schools and child care centres cope with closed windows and doors in the heat of February?

Waitakere City Council has provided valuable support to the PAMCAG and has taken up a PAMCAG proposal that would see people receiving free treatment from their own medical practitioners. MAF is considering it but the Ministry is dragging its heels over settling details of implementation.

Failure to address people's legitimate health concerns will not only jeopardise this operation but it has the potential to seriously hamper the response to any future bio-incursion. Safe eradication is not yet unattainable but if MAF does not change its approach then achieving eradication will be impossible and the cost to public health will have been in vain.

Notes:
Kubi is Chairman of the Painted Apple Moth Community Advisory Group. At the time of the spraying he worked as a high school teacher in the heart of the painted apple moth spray zone. He chairs the West Coast

Plan Liaison group and the Karekare Surf Club. He is also a volunteer rural fire-fighter and a member of the Waitakere Community Board.
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Kubi Witten- Hannah - 104
Attachment 2
Community Advisory Group Plan for the Eradication of the Painted Apple Moth
December 2001

PAINTED APPLE MOTH ERADICATION
The Community Advisory Group Plan

1. Objective

1.1 The objective is to eliminate the painted apple moth without endangering the health of people or causing extensive damage to the ecology of the area.

2.Health Concerns

2.1 Experience from Operation Evergreen and similar programmes overseas suggest that some people will suffer adverse health effects as a result of exposure to Btk spray.

2.2 A large number of people living in the area to receive aerial spraying with Btk are financially disadvantaged and some of those people who suffer adverse health effects as a result of exposure to Btk spray may not seek treatment.

2.3 A number of individuals may be at a greater risk of significant adverse health effects than the general population. Such people would include those with severe multiple allergies, unstable (brittle) asthma, significant immune defects, diabetes, and heightened chemical sensitivities, particularly when they are known to be sensitive to one or more of the 'inert' components of Foray 48B.

2.4 Every effort must be made to minimize the effects of spray on pets and wild life. Consideration should be given to the provision of veterinary advice and assistance at the medical centre,

3. Campaign

3.1 The campaign must be directed by a Waitakere-based supervisor, who directs and co-ordinates all activities.
3.2 The director must be supported by a team using the best expertise available in NZ (or from overseas if necessary).
3.3 This includes staff involved in the successful Operation Evergreen and Operation Forestsave (ARC).
3.4 The implementation of this plan needs to commence immediately so that further spread is minimized.

4 General approach.

The approach proposed relies on five main strategies:

4.1 Continuation of the search for alternative methods of eradication that do not require the introduction of large quantities of toxic chemicals into the environment. Field trials of peppering should be carried out.
4.2 Large-scale deployment of pheromone "attract and kill" baits over the entire area of infestation as soon as a pheromone is ready.
4.3 A large community-based programme using the eyes of the public to help detect infestations of PAM, to wipe out weed hosts and to help control the movement of vegetation.

4.4 A well-targeted campaign aimed to wipe out PAM by directing trained staff into infested areas.
4.4a) This is an intensification of the current programme.
4.4b) Where ground spraying is required Btk, not Decis should be used
4.4c) Student Job Search could be used to recruit extra skilled personnel e.g. biology students.

4.5 Aerial spray application is a last resort and must be limited to areas without human population. (See appendix 1. "Spray Drift").

5. Research

5.1 Improved collaborative research with scientists in Australia.
5.2 Pheromone work – field trials.
5.3 Life history work – potential spread of caterpillars, life cycle at different temperatures, etc.
There seem to have been difficulties with research on potential hosts, on pheromones and on biology, largely resulting from this research being based on rearing PAM [in quarantine.]
5.4 It is likely that PAM can be found in various climate areas in Australia– data on its biology, abundance and significance could be gathered.
5.5 Continued research into the production of bulk synthetic pheromone is urgent.

6. Spraying

6.1 All spraying poses some health risks therefore it is desirable that spraying be kept to the minimum required to eradicate the moth.
6.2 Wide-spread use of "attract and kill" baiting should be undertaken as soon as possible.
6.3 Aerial spraying should not be used in populated areas or in any area in which painted apple moths could be eradicated in any other way.

This can be achieved by:
6.3.1 Targeted, very intensive treatment of known infested areas with Btk. This should involve a team of expert "spotters" who would work through areas extremely thoroughly.
6.3.2 Destruction of known weed hosts throughout areas proposed for aerial spraying.
6.3.2.1 If these major hosts are removed, the chance of large infestations and thereby widespread dispersal is considerably lowered.
6.4 Large areas of Spanish heather could be removed (manually with a stem treatment to prevent re-growth) from Waikumete Cemetery.
6.5 Treatment of large trees with targeted spraying with Bt, or felling
6.5.1 Training a special team to deal with the wattle and other hosts in the Whau margins.
6.5.2 Alternative means of access to difficult sites need to be investigated e.g., cherry pickers.
6.5.3 Where surface access is not possible aerial techniques that minimize spray drift must be considered e.g. applicators suspended from helicopters
6.6 Each find should invoke a detailed one square kilometre search of the neighbourhood.
6.7 Clear, large-scale maps indicating all finds and search areas must be available at the campaign headquarters.
6.8 Comprehensive analysis, including mathematical modeling, of all data relating to finds, must be carried out.

7. Health Issues

7.1 In accordance with the objective stated above it is imperative that the NZ standards [as outlined in the Growsafe Agrichemical Users Code of Practice] are strictly adhered to.
7.2 Monitoring of all the health issues raised is essential.

7.3 A medical centre must be provided where people with concerns can go without cost and with a free dial-a-ride service.
7.4 Recognized practitioners of alternative medicine as well as doctors should be available at the medical centre.
7.5 Information must be publicised about the groups of people most likely to be adversely affected by sprays including:
- 7.5.1 Those with immune problems
- 7.5.2 People with allergies
- 7.5.3 People with heightened chemical sensitivity
- 7.5.4 People with asthma and other respiratory complaints
- 7.5.5 Pregnant women
- 7.5.6 Babies (including babies in utero) and children
- 7.5.7 People taking alkalizing medication.

7.6 Local GPs need to be requested to contact patients whose conditions could be exacerbated by spraying and advise them to attend the medical centre.
7.7 Evacuation must be offered where there is a danger of spray drift. This includes the offer of complete evacuation to affected schools.
7.8 Clean-up advice and assistance must be provided when evacuees return.
7.9 Spore counts within buildings must be monitored.

8. Education

8.1 It is essential that a large-scale educational campaign be mounted. This should involve:
- 8.1.1 Leaflets, radio advertisements and billboards telling people about PAM and what they can do to help – leaflets in a range of languages to all households within 1 km. of infestations.

8.2 Involvement of schools and children in detecting the moth – with care given the potentially irritating nature of the caterpillar's hairs.
8.3 A dedicated 0800 number must be provided e.g. 0800DOBINAMOTH.
8.4 A well-trained rapid response team must be ready to deal with public responses and communicate directly with field staff.
8.5 Rewards for correct finds should be offered – set up for a limited time period to prevent rearing of moths occurring.

9. Special Circumstances

9.1 There are a number of circumstances where special measures will need to be taken:
9.2 Immediate attention must be given to motorway and rail corridors to reduce spread.
9.3 Special plans must be developed for dealing with areas of conservation significance – Pollen Island Marine Reserve and Waitakere Ranges.
9.4 Waikumete Cemetery.
9.5 West Lynn Gardens and others involved in butterfly rearing require protection.
9.6 Old wattle trees in New Lynn/Avondale that provide the main habitat for Avondale Spider should not be felled.
9.7 Supplementary feeding must be provided for birds that may be affected by caterpillar decrease.
9.8 Issues related to partnership with local iwi must be discussed with iwi representatives e.g. through Te Taumata Runanga.

10. Longer-term Considerations

10.1 Some of the proposed emergency response actions could leave areas looking "devastated." Appropriate replanting and restoration strategies need to be put in place.
10.2 Sensitive follow-up work will be needed on the banks of the Whau to prevent bank erosion if wattles and other weeds are removed. Friends of the Whau in association with Project Crimson could be asked to assist with this.

10.3 On-going work will be required to build on the potential for an improved weed-free environment once weeds are removed. Keep Waitakere Beautiful is a likely partner.
10.4 Attention must be given to improving the Biosecurity Strategy and its implementation to deal with new pest and disease incursions.
10.5 A post-mortem on the painted apple moth operation must be carried out soon after completion.
10.6 For the eradication of future introduced pests it is essential that the outcomes of the current and past campaigns are used to develop protocols that will not only be effective but which will be accepted as widely as possible by the community.

Appendix 1. - Spray Drift.

Given that aerial spraying is to be highly targeted, the opportunity exists to reduce spray drift on to homes to an absolute minimum. We propose the following:

1. Collect accurate data on spray drift distance, which will be a function of
   1.1. Droplet size
   1.2. Wind speed
   1.3. Helicopter downdraft and spraying height
2. For each geographical area to be sprayed, determine the wind speed and direction criteria that will prevent spray drift onto dwellings in the area. It must be ensured that no spraying occurs when these criteria are exceeded.

   Note that these criteria should also be applied to spraying in the vicinity of the motorway to prevent spray drift affecting vehicle occupants.

   Where spray drift onto dwellings is unavoidable, every effort must be made to identify those occupants that may be at risk. This would include determining the primary language of the householder and making all written and oral communications in that language.

End

Submission to People's Inquiry – 105
Exposure: lived in spray zone
Linda Cowlishaw
Oral testimony transcription only

End

Submission to People's Inquiry – 106
Exposure: lived in spray zone (hot spot)
Cliff Burkett
Oral testimony transcription only

End

Submission to People's Inquiry – 107
Exposure: lived in spray zone
Oral testimony transcription only

End

Submission to People's Inquiry – 108
Exposure: lived and worked in spray zone
Stephanie C McKee
Oral testimony transcription only
(Accompanying material will be published with transcription for context and relevance)

End

Submission to People's Inquiry – 109
Exposure: lived in spray zone (hot spot)
Mrs E Duke
Oral testimony transcription only

End

Submission to People's Inquiry – 110
Exposure: lived in spray zone
Chris Bench – 19yrs
Oral testimony transcription only

(The following was read to the Inquiry as part of the family's testimony)

I started to feel quite ill exactly as mum and dad have explained they did and my brothers. I was the only other member who started to get the arm drops like dad. I often had no energy to undertake sports at school and just slept when I got home each day and most of the weekend. My eyes were always sore and red and one day got so affected that I was unable to open my left eye, which they often still get. I would also have coughing fits where they would get to the point that I had difficulty getting my breath in and I too felt frightened about what was happening.

Dad and I went to do some work in the garden after so much time out of Auckland it was in need of attention however it was the worst thing we could have done with the residual spray that was all over the place, we both hit the deck feeling really ill. We didn't stay out for more than an hour because we were affected so badly.

The MAF doctor gave me a peak flow tester because she labelled me as asthmatic and I never saw her again. The specialist report clearly states what I displayed if left untreated, could lead to "severe morbidity and sometimes death". Dr W stated clearly "I do not believe Chris has had asthma".

I was caught out in the spray and 2 years ago at Christmas Dad notice a mole had changed shape on my back, within days I had to have it removed and then 3 weeks later I had to go back under the knife to have more cut out. I question was it the spray because my GP stated that at my age you don't get melanoma. Dad insisted I see a specialist. I am not a person who takes off a shirt in the sun.

AerAqua very kindly sent me not one but two letters advising me the spray was ended and guess what – they were in two different names.

End
