

**Submission to the Hearing by the Rural Affairs and Transport  
References Committee re Asian Bee Incursion  
Dr Max Whitten AM FAA**

My name is Maxwell John Whitten. I write as Chairman of The Wheen Foundation, a not-for-profit Company which supports research and development to improve profitability of beekeepers and pollination-dependent industries (<http://www.wheenfoundation.org.au/>).

This submission primarily addresses point (a) of the Inquiry's Terms of Reference: namely "*the science underpinning the technical assumption that Apis cerana, the Asian honey bee, cannot be eradicated in Australia*".

By way of relevant background experience, I have been an amateur beekeeper since 1957. I have served as an R&D advisor to the beekeeping industry since 1978. During my term as Professor of Genetics at the University of Melbourne (1976-1981) I assisted the Federal Council of Australian Apiarists Association prepare a successful case for the establishment of the Eastern Creek Honeybee Quarantine Facility. This facility was commissioned in 1981 and still is capable of meeting the import needs of beekeepers. I served as the first Chairman of the Commonwealth Government's Honeybee R&D Council from 1985 until 1992. Mr Trevor Weatherhead, whose testimony the Committee heard on 24 March 2011, served with me as a beekeeper representative on that Council. As Chief of the CSIRO Division of Entomology (1981 – 1995) I secured funding from the Australian Centre for International Agricultural Research (ACIAR) to recruit Dr Denis Anderson to study the Asian Bee and its mites following their spread into PNG in the 1980s. One element in the rationale in recruiting Dr Anderson was to accumulate scientific information to assist Australia deal with the Asian Bee and its mites should they enter our country. Since 1989 Dr Anderson has established himself as a foremost expert on honeybee virology, and the biology of the Asian Bee and its Varroa parasites. I was a trigger for the parliamentary inquiry which produced the 2008 report "*More than Honey*".

During the Hearing on 24 March, Senator Milne reported that the Department of Agriculture, Fisheries and Forestry was making use of 'in-house' scientific expertise in reaching the conclusion that the Cairns incursion of the Asian Bee was not eradicable. Until DAFF releases the case prepared by its own officers, it is not possible to comment on the robustness of its case.

On the assumption that DAFF is, in part or fully, basing its case for non-eradicability of the Asian Bee around Cairns on the assessment by Dr Roger Paskin, Principal Veterinary Officer, DPI Victoria, it might be helpful to the Committee for comment on Dr Paskin's report (copy attached to this submission). I am informed that Dr Paskin's paper was circulated prior to the 25 January 2011 tele-conference of the Consultative Committee on Emergency Plant Pests (CCEPP); and it was discussed during the 25 January CCEPP tele-conference. I also understand that Dr Paskin did not participate in the 25 January CCEPP tele-conference, nor did Dr Anderson – for reasons not at all apparent, judging from Dr Anderson's testimony before the References Committee on 24 March 2011.

As stated in my testimony before the Committee on 24 March 2011, Dr Paskin's analysis is not trivial, and demands careful consideration.

Dr Paskin concluded that “the *incursion is not seen as eradicable*”. His conclusion is unqualified; and is based on his observation “*The likelihood that hundreds of undetected hives continue to exist and multiply, combined with a surveillance system that is only able to detect at the most 30% of these, means that Asian honeybees will continue to spread undetected in Queensland*”.

It should be noted that Dr Paskin does not consider the possibility that the tactics in place up until the time of his analysis can be improved or expanded. Nor does he consider the ramifications of other eradication tactics which may be available, such as bait stations. This does not imply any criticism of Dr Paskin, as his terms of reference may have been limited to commenting on the efficacy of the existing eradication practices. I return to this possibility later.

With respect to the efficacy of the existing eradication operations, we see three contrary opinions to Dr Paskin’s, namely those of Dr Denis Anderson, Dr Evan Sergeant and Mr Trevor Weatherhead. The committee was advised by both Dr Anderson and Mr Weatherhead during the Hearing on 24 March that, in their view, and in Dr Sergeant’s view, there was insufficient evidence to determine whether the eradication campaign was working or not; and that it should continue for at least a further six months. All three argued for continuation of the eradication program so that sufficient information could be accumulated in order to make an informed decision about whether the eradication campaign was working or not. Dr Paskin, on the other hand, and using the same data set, felt that there was sufficient information to make an unqualified statement that the ‘*incursion was not seen as eradicable*’. I leave it to those who argue ‘that insufficient evidence exists to abandon eradication attempts’ to develop their cases further.

I will argue another line – and conclude that Dr Paskin’s unqualified claim on non-eradicability lacks credibility on other grounds. My conclusion should not be seen as a criticism of Dr Paskin. If his terms of reference were to evaluate the current eradication strategy - and his conclusions are made in that restricted context - then the problem does not lie with Dr Paskin, but with DAFF officers for drawing the wider unqualified conclusion; namely, that the science supports their policy position that eradication should be abandoned in favour of containment; and that the Asian Bee should be declared endemic. The ramifications of this policy are so profound, environmentally, economically and socially, that it is essential for all parties that we are absolutely sure we are making an informed and correct decision. The reason for this is as follows.

What does seem well established is that the Asian Bee is likely to spread to all parts of the continent where the European Honeybee exists; and that it will have major adverse impacts on food security, biodiversity, human health and public amenity. Thus a lot hinges on whether DAFF’s advice to the Government is based on sound science. It is of critical importance that Australia does not abandon all reasonable efforts to eradicate this pest before it becomes more widely dispersed; and eradication becomes a logistical impossibility regardless of resources expended down the track.

A difficulty with Dr Paskin’s analysis is that it presumes the eradication campaign is static, in the sense that there is no scope for improvements in current eradication tactics; or, more importantly, that new control strategies are not available. For example, it is conceivable that nest detection (by active searching and bee lining) is capable of improvements (eg enhanced skills of the field team and greater community awareness and engagement). It is

also conceivable, indeed probable, that there are alternative control options for adaptation and adoption (eg bait stations). Indeed, Dr Anderson mentioned during the 24 March 2011 Hearing, that bait stations were used successfully in The Solomons to differentially suppress Asian Bee populations so that European Honeybee hives could become more viable as a result of reduced robbing by Asian Bees. The 'bait station' option was canvassed at the 29 October 2010 meeting of the CCEPP. So, even if Dr Paskin was unaware that other options were possible, DAFF officers were.

Bait trials using Fipronil as the active ingredient within the Cairns RA have shown promise. However, these trials were only conducted after the field workers had been laid off, and subsequent to Dr Paskin's Report.

The dynamics of nest destruction become entirely different with baiting; and the classical epidemiological modelling approach used by Dr Paskin is no longer appropriate. Success or failure of the eradication effort turns on whether nests are being destroyed at a rate greater than their creation. Baiting can destroy a nest without it ever being detected. Furthermore, the rate of nest destruction will be a function of bait density and nest density. In other words, the level of nest destruction becomes density-dependent. That is, the more nests in a given area and the more bait stations in the area, the greater the proportion of nests receiving lethal doses of the bait.

In the scenario of a saturation baiting program, a new approach to assessing efficacy will be needed. It would possibly be based on observations at non-baited feeding stations of foraging workers of *Apis cerana*.

While a baiting program may raise issues of collateral environmental damage – which I return to below – the above considerations highlight that **DAFF has not provided any credible scientific evidence to support their policy of abandoning the eradication program.** Unless they can do so, DAFF should admit that they 'got it wrong' and take their medicine. The Small Hive Beetle quarantine fiasco (not caused by DAFF), where this major pest was given about one year's grace to spread unrestricted because of incorrect taxonomic identification, is one failure too many for beekeepers to endure.

If a baiting program is to rely on a slow acting but broad-spectrum such as Fipronil, [the active ingredient in Regent (for cotton pests) in Termidor (termite pests) and in flea collars for domestic pets], then careful consideration needs to be given to its use such that adverse impacts on non-target organisms are minimised. There are many examples where a balanced approach, weighing the pros and cons, is used, such as the current expenditure of over \$100 million on the short term and temporary suppression this year of plague locust in SE Australia. Certainly, bait stations could be designed so that birds, mammals and larger invertebrates were not exposed to the active ingredient. There is also the possibility that selective pheromones, as are currently being developed in Asia, could be deployed to reduce the number of bait stations required and improve their selectivity.

Finally, reasons behind the delay in getting the field team in place (mid 2008 until April 2010) should be analysed. Figure 1 in the Paskin Report details the number of colonies detected in the period between May 2007 and when Dr Paskin wrote his assessment. I have already alluded to misidentification of Small Hive Beetle as the underlying cause of the spread of this serious pest after its incursion in 2000 or 2001 from a Richmond NSW epicentre. When the correct identification was made in October 2002, the pest was widely

distributed on the eastern seaboard of Australia and eradication was no longer a feasible option. If Dr Paskin is correct, and eradication of Asian bees is no longer an option, is the delay (nearly 2 years) in organising the cost-sharing arrangement a factor? Between May 2007 when the incursion was first detected, and November 2007 when there was a change in Government and Minister (from Peter McGauran to Tony Burke), the incursion was principally handled by the Queensland DPI. In November 2007 it was presumed that all existing colonies of Asian Bee (seven in all) had been detected and eliminated. The trigger for the cost-sharing arrangements was detection of a further colony of Asian Bee on 29 July 2008. Why did it take so long – almost 2 years – to arrange the finances which only became available in June 2010? (PIMC made the decision for a cost sharing on 23 April, 2010.) In fact, Queensland anticipated the funding and commissioned the field team in early April 2010. This prompt action by Queensland appears to be part reason why the funding ran out in mid November 2010, some six weeks before its scheduled expiration ( 31 December 2010) It could also be part due to the fact that the casual field staff numbers ranged from 32 to 39.

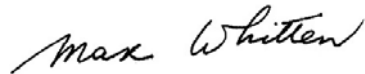
If these figures and dates are correct, then they reveal inconsistencies in the response by Tony Burke, representing Minister Joe Ludwig, to the Question without Notice by Tony Windsor during Question time in the House of Representatives on 2 March 2011. Peter McGauran was in fact not the relevant Minister during the critical period of extended inaction. It was Tony Burke. It would appear that Australia's beekeepers, the pollination dependent industries and the wider community have been duded a second time by other parties not prepared to accept their role in two serious quarantine breaches.

There is also the sorry question of why the Asian Bee incursion was “flicked” from the Consultative Committee on Emergency Animal Diseases (CCEAD) to the CCEPP after what appears having made a right proper mess of handling the Asian Bee Incursion. It appears as if CCEPP was handed a poison chalice from CCEAD. The first meeting of the CCEPP dealing with the Asian Bee incursion took place on 29 October 2010. Were the CCEPP members adequately briefed? And is there any substance to the claim that the representative from one State at the 29 October 2010 meeting came to that meeting with instructions how to vote regardless of what transpired at that meeting? What role is the Minister's Biosecurity Advisory Council, established in January 2010, playing in the Asian Bee saga? Is it just standing aloof while Australia's food security, biodiversity, health and public amenity is held to ransom by some Byzantine bureaucracy? Is this the legacy of two comprehensive quarantine inquiries, the Nairn Inquiry (1996 and which I triggered in 1995 while I was Chief of CSIRO Division of Entomology) and the Beale Inquiry (2010)?

As mentioned previously by Mr Weatherhead and myself, further consideration should be given to whether the Cairns incursion of Asian Bee be given category 1 or category 2 classification. A first assessment would place it in category 2 since there is an identifiable industry sector which would capture substantial benefit from eradication of the Asian Bee. However, the beekeeping sector is only a minor, albeit immediate beneficiary, of successful eradication. The pollination dependent sector is the major long term beneficiary. Unfortunately this sector, despite pleas from AHBIC to come to the party, has not provided financial support under the 80:20 cost sharing formula. It seems inappropriate that the 80% public funding is foregone because of failure of the relevant (non-beekeeping) industry sectors to contribute its share. This would include the broader manufacturing sector, such as the car industry, whose exports will require certification that

exports are free of Asian Bees. Given the huge public benefit to be derived from eradicating the Asian Bee, there is a cogent argument – presumably similar to that advanced for the initial response to Myrtle Rust incursion – that the Asian Bee be reassigned to category 1.

There is no doubt, in my mind, that the decision to abandon attempts to eradicate this major pest should be reversed. We should be throwing everything possible at destroying the current incursion of the Asian Bee, *Apis cerana*. We should commence doing so as soon as practical.

A handwritten signature in black ink that reads "Max Whitten". The script is cursive and fluid, with the first name "Max" and the last name "Whitten" clearly legible.

Dr Max Whitten AM FAA  
Chairman, The Wheen Foundation  
24 March 2011