

Great Barrier Island Charitable Trust

Environmental News



Kauri Dieback • Argentine Ants

Cockle Counting in Okiwi

Cook's Petrel

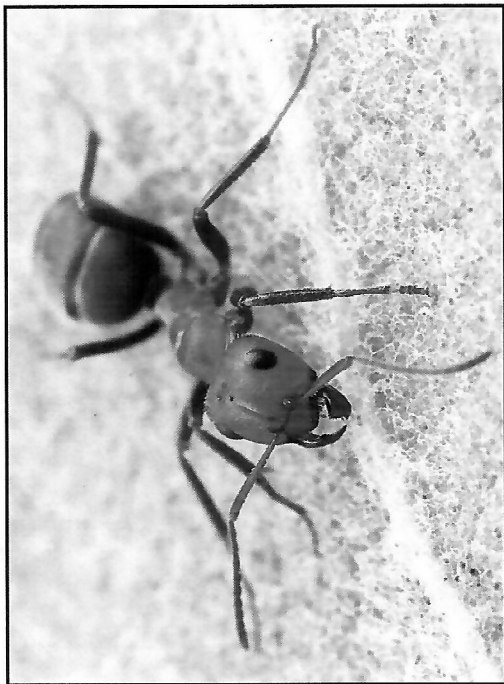
VISION:

Bring
back

kokako



• The Argentine ant's colouration can extend from light to dark honey brown. This highly successful "tramp ant" invader has a varied diet of nectar, insects, carrion, seeds and honeydew. The ant is small – here represented life-size, but what they lack in size they make up in numbers.



tation areas but the density of ants within those boundaries has been significantly reduced. Several sites including Barrier Building supplies, Sugar Loaf, Puriri Bay recycling bins and Mohunga have been eradicated. One new site was found this year.

What can we all do to help this project to succeed?

To prevent Argentine ants being re-introduced to Great Barrier or moved around Great Barrier, it is important to check all pot plants, soil media and building materials for Argentine ants. This can be done by dunking any pot plants in a container of water until the soil is fully saturated. If ants are in the soil, they should come out of the soil and fly spray can then be used to kill them. Be aware that there may be some pupae surviving in the soil, so where ants are seen, this process should be repeated in a week's time. Any vehicles that have been standing for a period of time should be shaken around a bit to disturb

any ant nests that may be present. The ants are likely to desert a moving object but any ants seen should be sprayed again with fly spray. This process should be done whenever moving materials from a known infestation area, on or off the island. Additionally, if purchasing materials from a nursery, check the supplier's hygiene standards – is their soil sterilized etc?

Argentine ants are sophisticated little critters that have ingenious methods of ensuring not just survival but dominance in many situations. Eradication of Argentine ants is still in the experimental stages and a review of the Great Barrier Island project will be undertaken this year.

A lot of information about Argentine ants is available from the web, otherwise, if you would like more information or are concerned that you may have them on your property (or elsewhere) please call Des Casey at DOC or Jeff Cook at the Auckland Council, 027 5553451 jeff.cook@aucklandcouncil.govt.nz

Editorial

Environmental wellbeing, strategic planning and the return of the kokako.

BY JOHN OGDEN

This is the time of year when the vege garden dies, the winter wood supply needs sorting, and I get to think about the last twelve months and write my annual report for the Trust.

The year has been an important one for the governance of Great Barrier, with the formation of a Local Board with greater autonomy than the previous Community Board, and a much clearer legislative requirement to address "environmental wellbeing". Much of the Trust's efforts recently have been to try to get community concerns over biodiversity decline into the Local Board Plan. These concerns are clearly indicated by the presence of at least five Trusts employing people in rat and feral cat control over considerable areas of private land on the Island. The trustees are encouraging members and supporters to make submissions to the Local Board Plan, which could influence environmental policy on Great Barrier for three or more years, or could just be more feel-good rhetoric (see our submission etc. on www.gbict.co.nz)

In summary the Trust's

GBICT Mission Statement: To protect native species through the eradication of rats and feral cats, to re-introduce species lost to the Island, and to work towards building an ecology-based economic framework for Great Barrier Island.

Cover Kokako photo credit: Matt Binns

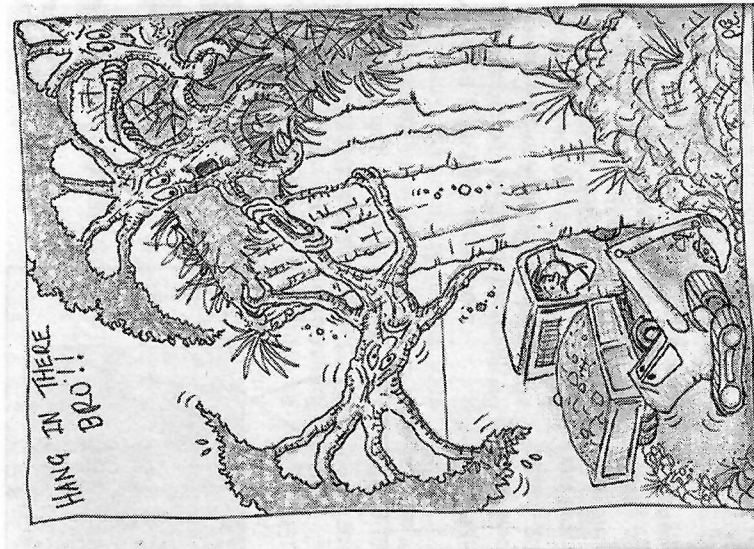
requirements into the future.

3. Building capacity. Jobs linking biodiversity with economic growth are present now on the Island and can be expanded in future. Here also we see the need to grow local skills in these areas for future employment.

Our submission thus emphasises the third part of our mission statement: "to work towards building an ecology-based economic framework for Great Barrier Island".

While rat and feral cat eradication are still central to the Great Barrier Island Charitable Trust's mission statement, the vision has always been much wider, and our new vision statement "Bring back the Kokako" encapsulates that and is in accord with the vision of Ngati Rehua. This iconic bird

was illustrated on the cover of Issue 23 of the Environmental News and discussed by Sonya Williams in that Issue. It was once frequent on the Island and was still present within living memory. The last pair were removed to Little Barrier in 1994. Otherwise, they would certainly have been eliminated by mammalian pests. As a community we know that we have lost many bird species, that our forests are not what they once were, and that the Department of Conservation doesn't have the capacity to deal with these issues. Basically it is up to us to decide what we mean by our personal and local "environmental wellbeing" and to make sure that our views



are represented in the new legislation. Public meetings and submissions on the 'mining on Te Ahumata' debacle clearly showed that the majority of people on Great Barrier put environmental wellbeing high on their list of priorities. I believe we can work out together how to achieve the vision of bringing back kokako, if we as a community have the will to do so.

COVER: Australian bird photographer and guide for company Tropical Birding *Nick Leseberg* took this fine image of a Cooks Petrel on the wing in the Hauraki Gulf.
Reprinted with permission.

Cook's Petrel on the Barrier

Not such a good island to nest on...

BY JOHN OGDEN

On April 12th I got a call from Amelia Geary at the Department of Conservation. Amelia is the new Biodiversity Ranger, replacing Halema. A Cook's Petrel with some downy back feathers – thus a juvenile which must have been born on the island – had been reported from Okupu, where it had stunned itself flying into Julie Bowers-Rakatu's glass door. Julie had it in a box at Claris store and did I want to see it? I said yes. Sure enough it was exactly as reported. I took some photos – that's it above being held by Amelia. Once fed with micro-waved pilchard it seemed happy enough so it went back into its box to be released at Okupu on dark.

Back in 2008 (Environmental News 13) we reported Cook's petrels being killed, probably by a cat, at Tryphena. Once on the ground these seabirds are not very agile, and make easy prey for cats. Cook's Petrels are increasing on Little Barrier following feral cat and rat eradication there in 2004, and the increasing number of dead ones on Great Barrier (See Graph above) might represent new colonists attempting to breed. Although there

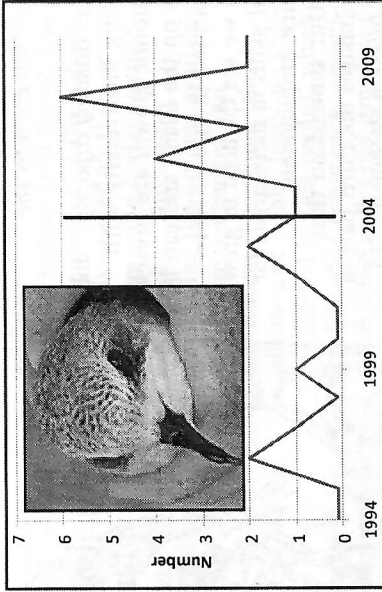


Fig 1. Number of Cook's Petrels found dead on east coast Great Barrier beaches 1994–2010. The vertical line marks rat and feral cat eradication on Little Barrier. Note the increase in mortalities on Great Barrier since then. (J. Ogdén. Unpublished data)

are still a few Cook's petrels nesting on HIRAKIMATA (Mt. Hobson) and elsewhere, Julie's juvenile is the first real evidence of fledging on Great Barrier for some years. Cook's petrels nest in burrows, which they visit only after dark; they can often be heard ("ke ke kek, ke ke kek") in summer as they fly over the island at night on their way to their main nesting colony on Little Barrier.

Despite the increase on Little Barrier, overall the species is regarded as 'declining'. The Little Barrier evidence clearly shows that rats were the main cause of the decline there. Biz Bell reports that in 2009-10, four Cook's petrel chicks in burrows on HIRAKIMATA were all dragged out and eaten by rats in one night. That is the sad reality of continuing biodiversity loss on this island.

Kauri Dieback

An emerging biosecurity threat to New Zealand's Kauri forests?

BY DR NICK WAIPARA – biosecurity scientist and plant pathologist at Auckland Council.

Growers and gardeners have long known about the perils *Phytophthora* diseases on their crops, nurseries and ornamentals. *Phytophthora infestans* was unknowingly introduced to Europe and wrecked havoc on potato crops, causing the Irish potato famine and mass human migration of the 1800's and thus also pioneering the study of plant diseases (plant pathology). *Phytophthora*'s are commonly known as "water moulds" and comprise some of the most destructive plant diseases known. Without careful attention and a variety of control methods used by both conventional and organic growers, these microscopic pathogens readily destroy most crop plants.

Unfortunately these destructive *Phytophthora* diseases have also been unwittingly introduced to many native forests throughout the world where they are not only killing millions of canopy trees but also impacting upon whole ecosystems that rely on the trees. From 'Sudden Oak Death' in North America, to declining cork forests in Portugal, new disease sites in the

Scottish heathlands and catastrophic *Phytophthora* diebacks in Australia, forest pathologists are in no doubt that many of the world's forests are under attack in the same way Europe's potato fields were. You can read more of such diseases at the websites listed in the reference section at the article's end.

So what of the *Phytophthora* situation in New Zealand's kauri forests?

A total of five *Phytophthora* species have been associated with kauri, but only two species have been demonstrated to kill trees, *Phytophthora cinnamomi* (PC) and *Phytophthora taxon Agathis* (PTA). Some of the world's first research into *Phytophthora* diseases in native forests was conducted between the 1960's and 80's in the Waitakere Ranges by eminent *Phytophthora* experts Professor Frank Newhook, who alongside Dr Frank Podger and Dr Ian Horner, undertook studies^(1,2) that showed *P. cinnamomi* was a problem for kauri in environmentally stressed sites. On sites with soil compaction, root damage, nutrient or water stress it can damage and sometimes kill young (50–150 year old) ricker kauri trees. Without these environmental triggers PC remains as a minor root nibbler that all trees with good root health can deal with. Subsequent studies have shown *P. cinnamomi* has been introduced to most native ecosystems across New Zealand but its overall impact is still poorly

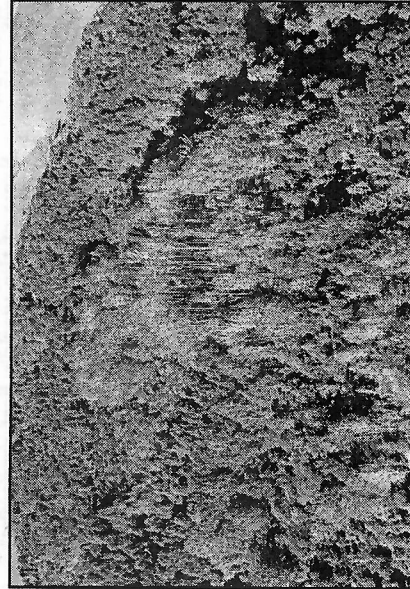
Phytophthoras...

...comprise some of the most destructive plant diseases known.

understood. It has been recorded infecting several hundred plant species in New Zealand and over 2000 worldwide.

So what do we know about PTA?

In 1974 forest pathologist Dr Peter Gadgil first described what we now know as PTA in a small NZ forest service block on Great Barrier Island. His work showed this pathogen, which he called *Phytophthora heveae*, could kill kauri, but the mortality was thought to be an isolated incident caused by an unusual set of environmental triggers on the island⁽⁶⁾. Roll on 30 years when an unusual and alarming number of kauri in the Waitakere Ranges, Awhitu and Rodney districts were found dead and dying. In 2006 the work of the late Dr Ross Beever at Manaaki Whenua Landcare Research, isolated PTA from these

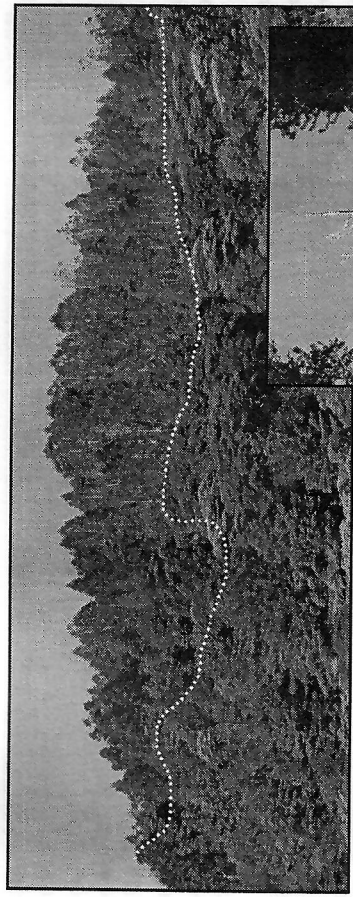


• Pakiri Scenic reserve PTA infestation

sites. Using advanced molecular DNA diagnostics his team was able to show that PTA was a valid species and new to science.⁽⁴⁾ Further tests showed PTA was an aggressive primary pathogen

which can infect and kill all life stages of kauri. Consequently not only were kauri seedlings and rickers at risk but also our large iconic and taonga trees⁽⁶⁾. This new research led to PTA being declared an unwanted pest by MAF Biosecurity New Zealand in 2008 and a precautionary preventative long term management programme was initiated nationwide. Subsequent kauri dieback surveys between 2008-20011 identified PTA is not just along tracks or highly disturbed stressed sites but also on ridgelines and other areas away from such disturbances. Like all diseases, the worse the condition of the infected host, the quicker PTA will infect and kill, but PTA is a virulent killer of kauri and doesn't necessarily need disturbance by people, pigs or tracks to do so.

PTA produces microscopic motile waterborne spores that can potentially swim like a tadpole through the soil water, eventually getting into streams and whole water catchments. The best and only protection for our kauri at the moment is to stop PTA spreading to healthy stands, particularly until the research programme can learn more about it and how to control it: Research to develop a treatment for this disease is presently underway by Dr Ian Horner at Plant & Food Research to trial conventional methods already used against related *Phytophthora* diseases in the agricultural sector.



• Above: Whangaparapara "Gadgil" site - Great Barrier Island
• Right: Kauri dieback symptoms - "stagheads" and dead trees.

Does PTA infect other species?

Luckily for us, PTA is not similar to the generalist *P. cinnamomi*, as the other native and crop trees in NZ appear to be resilient to PTA infection⁽⁶⁾, including some of the related Araucariaceae tree species. So, while this research is still incomplete, testing to date shows PTA to be a highly specific pathogen of the *Agathis* tree genus which includes NZ's kauri. A current theory is that PTA's original host may be one of the other 21 *Agathis* tree species that grow throughout the Pacific and South East Asia and it has been introduced to NZ via trade or on a dirty boot. But a lot more research is required to determine the origin of PTA.

Where is Kauri Dieback on Great Barrier Island?

The original 1970's 'Gadgil site' at Whangaparapara has long been known on the island. Subsequent testing and survey work has confirmed kauri dieback at two other sites at Kaiaraara (Port Fitzroy), and Okiwi. However, islanders have also reported

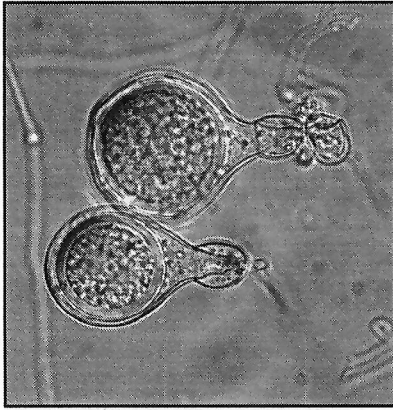
symptomatic trees at other locations on the island and further testing and surveys will be required to delimit all locations. One of the best methods used for kauri dieback across the Hunua and Waitakere Ranges has been aerial surveillance. This method has now been recommended to complete the survey work on the island as it allows systematic and widespread coverage of remote less accessible areas. Aerial methods look for the classic dieback symptoms in the kauri canopy which are thinning sparse canopies, dead and dying

branches (stagheads) and dead trees. Ground-based parties are then sent in to assess symptoms on the trunk (freshly bleeding lesions at the base of the trunk) and collect samples for laboratory testing to confirm PTA presence.

Management of kauri dieback – how can you help stop the spread?

Biosecurity for our native environment is an important and growing activity. Basic hygiene and management practices to control, contain and stop introduced pests and diseases ruining economic land and crops are crucial to New Zealand's export economy and trade. But we must also ensure protection for our native forests and wetlands from an ever increasing number of current and future pests that can do similar damage to our native plants and animals.

Biosecurity measures underway in the South Island with the "check, clean, dry" campaign to contain spread of didymo are one example where education with simple actions can protect our precious environment. Cleaning stations and kits installed at park entrances are there to assist visitors undertake the same basic biosecurity for our kauri forests. One of the ways PTA spreads is via its soil-borne spores. These microscopic spores have a resistant cell wall, similar to a plant's seed-coat, which allow it to survive periods without its kauri host or water. The spores can therefore lay dormant but alive for month's or even years. Someone walking in kauri dieback zones can therefore unintentionally move these spores with the soil adhering to their footwear. Any movement



• Oospore (soil-borne spores) of kauri dieback – *Phytophthora taxon Agathis (PTA)*.

of infested soil into kauri root zones will enable PTA to germinate and find new healthy trees to infect and kill. By promoting the "clean shoes in and out" message to all visitors at kauri forests we are aiming to reduce kauri dieback along the tracks already affected but also to protect other areas of healthy kauri forest. We know many visitors could be in the Auckland Coromandel or Northland in the following day, weeks or months, this is how this terrible disease is continuing to spread between our kauri forests locally, regionally and nationally.

The trigene disinfectant used in the kits is 100% biodegradable, safe for human use as directed but also helps inactivate the soilborne spores of PTA. However, you don't need a kit to help stop PTA, the use of soapy water and 'elbow grease' to scrub your shoes, mountain bike tyres and other dirty equipment free of soil will not only eliminate PTA spores, but other potential nasty pests, such as weed seeds, Didymo, Chytrid disease of frogs

and other common fungal diseases of plants. The cleanliness message is long overdue for our native forests and has wider relevance than just the *Phytophthora* kauri dieback issue.

Kauri is a magnificent iconic tree that many New Zealanders love to see, but as visitors we now also need to be vigilant and start practising the simple biosecurity measures to protect it against this proven and deadly disease. For more information on PTA and kauri dieback and what you can do to help refer to the website: www.kauridieback.co.nz

References

- 1 Podger FD, Newhook FJ 1971. *Phytophthora cinnamomi* in indigenous plant communities in New Zealand. *New Zealand Journal of Botany* 9: 625-638.
- 2 Horner IJ 1984. The role of *Phytophthora cinnamomi* and other fungal pathogens in the establishment of kauri and kahikatea. MSc thesis, University of Auckland.
- 3 Gadgil, P.D. (1974). *Phytophthora heveae*, a pathogen of kauri. *New Zealand Journal of Forestry Science* 4: 59-63.
- 4 Ramsfield TD, Dick MA, Beaver RE, Horner IJ, McAlonan MJ, Hill CF 2009. *Phytophthora kernoviae* in New Zealand. Pp 47-53 in: Goheen, E.M.; Frankel, S.J., tech. coords. Proceedings of the fourth meeting of the International Union of Forest Research Organizations (IUFRO) Working Party S07.02.09: *Phytophthora* in forests and natural ecosystems. Gen. Tech. Rep. PSW-GTR-221. Albany, CA: U.S. Department of Agriculture, Forest Service, Pacific Southwest Research Station.
- 5 Beaver RE, Waipara NW, Ramsfield TD, Dick MA, Horner IJ 2009. Kauri (*Agathis australis*) under threat from *Phytophthora*? Pp 74-85 in: Goheen, E.M.; Frankel, S.J., tech.

• Phytosecurity (barrel and grate) station

- coords. Proceedings of the fourth meeting of the International Union of Forest Research Organizations (IUFRO) Working Party S07.02.09: *Phytophthora* in forests and natural ecosystems. Gen. Tech. Rep. PSW-GTR-221. Albany, CA: U.S. Department of Agriculture, Forest Service, Pacific Southwest Research Station.
- 6 Beaver RE, Tsai S, Waipara NW, Dick MA, Ramsfield TD 2010. Pathogenicity of *Phytophthora taxon Agathis (PTA)*. 5th IUFRO *Phytophthora* in Forests and Natural Ecosystems Auckland and Rotorua, New Zealand, 7-12 March 2010.

International Websites:

- <http://www.succdenoakdeath.org/>
- <http://www.ipm.ucdavis.edu/PMG/PESTNOTES/pn7498.html>
- <http://www.dwg.org.au/index.cfm>
- <http://www.dieback.net.au/>
- <http://www.phyto2010.com/index.html>



Argentine Ants on Great Barrier Island

They may be tiny but these ants are a serious potential threat, and they are already here...

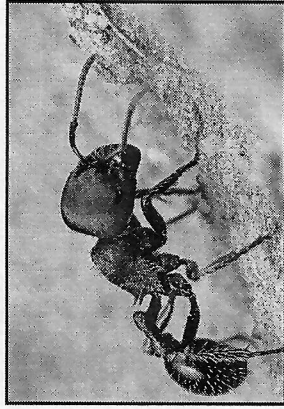
BY JOANNE O'REILLY

Background

Argentine ants originated in South America. They are listed by the World Conservation Union as one of the world's 100 worst invasive species. They were first discovered in NZ, in Auckland in 1990. Since then they have spread to a number of places around New Zealand, from Canterbury to Northland. In areas where the area of infestation is considered small enough, a coordinated approach to their control is undertaken as is the case on Great Barrier Island.

Argentine ants were identified in Tryphena 5 years ago after a call to DOC from a resident concerned about the number of ants in her garden and their aggressive behavior. After surveillance Auckland Council (then ARC) and DOC decided to undertake a coordinated control plan with an objective to eradicate Argentine ants from the Barrier. This program has been ongoing. Auckland Council has taken the lead role in this project because the majority of the infested area is private land. DOC has taken a strong support role because of the risk Argentine ants present to biodiversity values and because if left untreated they could inhabit most of the island.

From the survey work undertaken in the first year ants were found, they were identified, and assumed to be confined to, the Mulberry Grove area of Tryphena,



• An *argentine worker ant* (Linepithema humile).

Ocean View Road in Claris, and the southern end of Sandhills Road in Medlands. Additionally, several smaller sites were also found including at Puriri Bay transfer station, Barrier Building ITM, a garden rubbish dumping site on the Sugar Loaf hill, and a property on Mohunga Peninsula.

What is the problem?

So what is all the fuss about these little brown manuka honey colored ants? First of all, unlike other ant species these guys co-operate between nests creating super colonies of millions of ants. While one ant is relatively harmless, other than being able to give a little bite, in numbers they have a huge combined appetite and nuisance factor.

Argentine ants are most often associated with human habitation. Untreated, they may spread to all parts of the island where people live. Residents from infested areas have told horror stories about when ant numbers were at their highest - towels hanging in bathrooms being covered with ants, of ants swarming

over them in their beds at night. Evidently in Auckland, people will place their BBQ legs in buckets of water to prevent the ants swarming up their BBQ and onto the food. They have been known to make their way into refrigerators, microwaves and screw top jars.

In the garden, Argentine ants interfere with pollination, feed on crops and flowers and will transfer aphids from one plant to another to farm them for their honeydew. In terms of biodiversity these critters will outcompete other ants and other invertebrates - good and bad. They are a nuisance to nesting birds and have been known to kill chicks as they emerge from their eggs as well as annoying them so much that they leave their nests. Argentine ants are most aggressive in warm sunny climates and over the summer months. They tend to go to ground over winter and are not so obvious.

What has been happening

Early in 2006 after survey work had been undertaken, treatment of the infestation sites was undertaken by volunteers led by an ARC-DOC contractor - Des Casey

At the end of 2006, i.e. the beginning of the next 'summer treatment season', monitoring of the infestation sites was undertaken to determine the effectiveness of the operation. Argentine ant numbers were found to be markedly reduced in the infested areas but still scattered throughout them.

Since 2006, monitoring has been undertaken each year by local company 'Envirokiwi', under contract to ARC (AC). This monitoring has been followed by treatment of the areas where

Argentine ants are found. Additionally, areas of likely invasion ie wharves, refuse transfer stations, rubbish tips, nurseries and timber yards, have been surveyed each year.

Envirokiwi has employed teams of up to 12 people each summer to undertake the work. Most of the staff is local youth either returning to the island for holidays or residing on the island. The crew is out on the hottest days when the ants are most active. There is a need for accurate recording of results and attention to detail to retrieve pottles placed out the previous day. This may sound like unpleasant, hard work but there is great team spirit.

So what happens in the field?

Approximately 67ha was monitored this year, and a considerably smaller area was treated.

Pottles are placed out in the field in a 3m x 3m grid pattern over the whole of the monitoring area excluding buildings. Wherever possible, pottles are placed out of direct sunlight and close to the ground. Pottles (marked with flagging tape) are usually left overnight and collected the next day.

The location of ants is mapped to allow treatment to occur at the site and within a 20m radius of the site. Bait is placed on the ground in a grid pattern and four to six weeks later this is repeated to kill any ants that were in the pupae stage at the first treatment.

How are we doing?

The boundary of the areas where Argentine ants are found has expanded in the three main infes-

Continued on back cover

Rat Chat

BY JUDE GILBERT

WITH THIS WETTER warm autumn on Barrier there has been huge food abundance in our bush which is good news for birds, lizards, and insects, but its also great for rats. The well documented bulge of autumn rats which has usually started to trail off by now remains high.

In the Windy Hill Rosalie Bay Catchment Trust sanctuary, however, we have had our lowest ever autumn results since we began using tracking tunnels to monitor for the presence of rats in 2004. This has been achieved with a single perimeter track using Pest-Off (Brodifacoum) and traps at 12.5 metre spacing, with our interior tracks using Rat-Abate in stations set 25m apart.

A key to the success of this mixed programme has been the input of our keen volunteers Brandon Kerr and Dave Harland. Brandon has checked bait and trap stations on the perimeter tracks weekly – which takes fourteen hours – and this has assisted to keep the rate of rat re-invasion into the sanctuary area down. Dave manages part of the Benthorn Farm project area and is also able to check traps on a weekly basis ensuring that they are continuing to catch well.

It seems that a mix of management tools with a high level of station checks has done the trick this autumn.

The current goal of the Trust is to find the most effective, cost-effective, and socially acceptable way of

Autumn (April) tracking tunnel percentages for Windy Hill and the unmanaged Control Site:

| Year | WH | Control |
|------|-----|---------|
| 2005 | 73 | |
| 2006 | 25 | |
| 2007 | 10 | 95 |
| 2008 | 13 | 85 |
| 2009 | 23 | 60 |
| 2010 | 25 | 70 |
| 2011 | 7.5 | 70 |

keeping pests at very low densities. It takes time to find this out as each method needs at least two years of operation before the efficacy can be assessed and seasonal variations and climatic events allowed for.

So far at Windy Hill we have trialed 6 years of trapping, 4 years of traps with short pulses of rat bait (Feracol-cholecalciferol), 18 months of Pest-Off (brodifacoum) bait, and a year of the less potent Rat-Abate (diphaceneone) which is put out and replaced three times a year.

Trapping only has proven to be the least effective with a minimum of 30% and a maximum of 73% tracking tunnel percentages recorded. This has proven that toxins are required as part of any on-going pest management if we are to keep the rat and mice numbers low enough for the biodiversity to be sustained or improved. The Trust is working towards finding the least amount of toxin that can be used that combined with other methods still achieves a good result. We are close to finding that out – the Sanctuary rat tracking tunnel average for 2010 was 9% and the Control, or unmanaged area, stood at 76%. That represents a lot of rats that are not eating our precious native species in the Sanctuary.

Briefs on Waiheke Forest & Bird • Hauraki Islands

BY SUE FITCHETT - Co-secretary F&B

Wetlands

Members of our committee formed a subgroup called WIWI and although at present the subgroup is small, one big project undertaken has been a great success. This is the school wetland project in conjunction with Waiheke schools, particularly the High School. A wetland area near the school, previously infested with a variety of weeds has been turned back into a thriving wetland. Students have helped with planting and weed control. Plant growth is excellent and work on a boardwalk has commenced. It has received very favourable coverage from local media.

Branch owned reserves
Presently the branch has rangers for all three of its reserves. In the last two years the Onetangi reserve has increased in size with the generosity of an adjoining neighbour who sold (with a special discount and conditions) their land to the Society. This has allowed new vegetation planting to occur and increased the potential pest management coverage in that area. The Atawhai Whenua reserve (near Matiatia) was affected by several serious slips during the huge dump of rain in January and some remedial work on tracks is being carried out there. Pest management is by bait stations and the branch is experimenting with newer types of baits.

Community Outreach
The branch facilitated a pest management workshop in 2010, which included a range of speakers

and material. It continues to encourage landowners to carry out pest management on private land by selling bait at the branch's weekly market stall. The market stall, also, sells forest and bird products and displays conservation material.

Weed Trust

The branch's Weed Trust, which operates as an independent contractor to the private and public sector has been focusing on moth plant and willow reduction in the early part of this year.

Kauri PTA

Waiheke is still free of this disease, according to all surveys, and as a branch we have been working strenuously with Auckland Council biosecurity to draw the public's attention to the disease and ways of preventing its spread to our island.

Onetangi Reserve Cottage

This beautiful, solid little cottage at the edge of our reserve on Scott Terrace continues to be fully booked during summer. The branch continues to upgrade and maintain facilities at the cottage and the charges per night remain well under the average nightly rental in other visitor accommodation on the island. The committee contact for the cottage is Robin Griffiths; email - brian.griffiths04@gmail.com

Submissions

Submissions on various matters from local development projects to local and national relevant political issues continue to dominate the branch's work agenda. The burden of these have increased over the last two years with the change to the Super City and major issues affecting the Hauraki Gulf and surrounding areas e.g. the possibility of mining etc.