

Friends of Lord Howe Island

Newsletter No.19

Summer 2007

1 million weeds removed!

Headline in LHI Signal December 2006

The weed team has done it! In the first week of December 2006 the dedicated Lord Howe Island Board weed team together with the assistance of some fantastic mainland and local volunteers quietly reached an impressive milestone. One million weeds have been removed from the island.

The current figure which stands at 1,006,596 (and counting) has been achieved since the Board began recording weed removal effort in November 2004.

These results could not have been achieved without the financial support of the NSW Environment Trust. Support through the Trusts grant program and adoption by the Board of an innovative weed monitoring system has facilitated a long-term approach, which concentrates on essential follow up work and eradication.

The top five weed species found and removed from the bush on Lord Howe Island are:

Cherry Guava (442,733 removed)
Ochna (304,235 removed)
Ground Asparagus (163,127 removed)
Pittosporum (33,023 removed)
Cotoneaster (18,916 removed)



Other weed species that have escaped into the bush include Climbing Asparagus, Bridal Creeper, Tobacco bush, White Cedars, Norfolk

Pines, Camphor Laurels, Umbrella trees. In addition a total of 1530 Bitou Bush plants have been removed from the Island's cliff faces with the assistance of helicopters and a team of abseilers.

Recording the number of weeds removed from the bush each day is proving to be a useful tool both for monitoring the spread of various weeds as well as providing hard evidence for weed control grant applications.

FLHI weed program

Friends of Lord Howe weed volunteers have been actively assisting the LHI Board with weed removal since 2001, mainly removing Ground asparagus and Climbing asparagus on Transit Hill. Because of the very large number of seedlings being removed, the measure of effort is hours worked and bags of weeds removed.

Since volunteer weeding ecotours started in 1995 there have been 43 weeding weeks, 505 people have participated. Next newsletter there will be some statistics on these weeks.



Weeding Tour dates for 2007

Dates for weed ecotours have been fixed at

June 9 to 16	June 16 to 23
June 30 to July 7	July 14- 21
August 11-18	August 25 – Sept 01
	October 13 to 20

****Bookings and deposits requested early****
*****See back page for booking form.*****
Presidents Report

We should all be celebrating the milestone of **One Million Weeds** removed by the LHI Board's weed teams.

We need to thank the LHI Board for pursuing grant money to fund this program.

But in particular we should acknowledge the dedication of those Island residents who have joined the Board's weed team. The terrain that they go into every day is demanding and often potentially dangerous. Over summer, with warm days and high humidity the conditions are quite arduous, particularly to do it day after day. The Island will be in debt to these people for generations to come. It is pleasing to see Bruce (Gilbert) Thompson leading the groups in the field, as back in the 1970's Bruce was one of the Island rangers. Bruce knows the Island like the back of his hand from a lifetime of being out there seeding, rangering and exploring and this task could not happen without him.



It must also be pleasing to all the Friends of Lord Howe Island to hear of this great achievement for the conservation of the Island – all pulling together we will eradicate the weeds.

Des Thompson President
Weed tour group July 22 to 29

Supervisor for this trip was Elizabeth Brown, who has had many trips to the Island and knows our areas well. We had many repeat weeders, with Bruce and Bev Bensemann along, with their contingent from Tasmania.

Part of this group stayed on the lowlands and weeded dense, mature Ground asparagus from the area to the south of Pinetrees. The majority trekked up to the Transit Hill and weeded east of the track. Long term volunteer weeders John Zyla and partner Soie were delighted to see very little regrowth in this area, having worked over it several times in previous years; it is working.



Diary entry from Hilary Walker

Weeders to Lord Howe Island have heard fascinating talks on the evolution of many new species on this island. We were given to believe that we would be tackling two asparagus ferns:-

- 2 Protasparagus aethiopicus (growing)*
- 1 Protoasparagus plumosus (climbing)*

This trip has made it obvious that the asparagus is responding to a new enemy- weeders:- so far five sub-species have been observed:-

- 1. P. peterii- to be found under the peter lever*
- 2. P. bagii- to be found under a weed bag.*
- 3. P. blinkii- this specimen vanishes at the blink of an eye when one is repositioning ones self for attack-can be found after a concentrated effort.*
- 4. P. backii- always found behind a weeder.*
- 5. P. sittii- only appears after being sat upon.*

It is rumoured that a P. knifii is evolving. Please report any sightings. Hilary



Soie leading the walk to Erskine valley



Reef walking at Ned's Beach

Weed tour group Aug26 to Sept 2



Bill McDonald was supervisor for this week that had a strong contingent from the Brisbane area. The group started weeding with Climbing asparagus along Middle Beach Road and Ground asparagus on Lagoon Road near Blue Peter cafe. Ranger Meg Loran has had her eye on these outbreaks waiting for a keen group of volunteers to tackle them, and the group worked hard to remove the weeds.

Then for the rest of the week it was off to the south end of Transit Hill, climbing up from Blinkie Beach, and doing a block on the steep west side, then another on the east side of the track.

Highlights for the week were North Bay, and seeing the seabirds back for summer breeding-White terns, Sooty terns and Mutton birds came back through the week. Also the Fireworks jazz band was playing at Pinetrees. We only had one Mount Gower climber. Gwenda Lister again tackled the climb, with veteran guide Jack Shick who has 1100 climbs to his credit. Gwenda enjoyed it just as much as her first climb.

October tour group

Following requests from weeders who had been on several winter trips, an October trip was advertised and was fully subscribed by many who regularly made up the first June party.



The group had to have an early start for the first day, with a 7 am departure from Sydney airport. But this was rewarded by a fantastic reef walk on the first day, with one of the lowest tides ever recorded here. The group was able to walk all the way from Ned's Beach around to Middle Beach and explore this rugged piece of coast with its many rock pools and fascinating geology. The low tides continued and on Sunday the afternoon excursion was to South Reef where the Potholes were exposed for several hours. Here we enjoyed Spanish Dancers, rare sea urchins and corals sticking out high and dry. For the first time ever on a weeding trip the weather allowed a Ball's Pyramid boat trip and 9 people took advantage to see this world's largest ocean rock stack, 23km southeast of Lord Howe Island.

Of course one reason for the October trip was to see the seabirds, and they were back in full

courtship mode, and one keen bird twitcher recorded 32 different birds for the week.



Jane Gye gingerly handling a rare sea urchin

For the morning weeding activities something different was trialed. Several years ago Colin Lambert had experimented with an herbicide mix of Roundup and Trounce (which he dubbed “gloop”) to research its effectiveness against Climbing asparagus with just cutting the stem and applying this mix. He found this to be 100 percent effective in killing the Climbing asparagus. For several years a small group of June weeders had been trialing an area south of Edie’s Glen and were having success.

So for this October week it was decided to see how a large group of 22 would go. The results for the week were stunning, with a large area 70 m x 40m treated. And everyone who participated was very pleased with their efforts, as it was a very visual difference. LHI Board staff Terry Wilson and Greg Pierce inspected the site and were also very impressed. Several members also worked along Lagoon Beach, removing Sea spurge, a serious weed of beaches on the coastline of Victoria and southern NSW.

On Friday morning the group finished work early and assembled on the east side of Edie’s Glen where the original Climbing asparagus areas were treated by Friends of LHI groups. Here, next to a planted Banyan tree, a small plaque was dedicated to one of our pioneering bush regeneration supervisors, Colin Lambert, who passed away in August 2005. Colin’s wife Mary and son Nicholas came over for a few days to be at the dedication. The banyan trees can live for thousands of years and be a fitting memorial to Colin who was so dedicated to conservation here and in Sydney.



Mary Lambert and friends

Herbicide trial on Climbing asparagus

As part of the October weed trip, I decided to experiment with different herbicide mixes to determine variation in effectiveness against Climbing asparagus. Several small trial plots were set up and marked with string to monitor the effects of different treatments. Four areas 4 x 4 m were marked, and all asparagus stems inside (about 100 to 150 stems in each) were counted and given different treatments:

1. cut and apply gloop to the stem
2. cut and apply Roundup to the stem
3. scrape and apply Roundup, then cut and apply Roundup to the stem
4. control – no treatment.

Obviously if just cutting the stem and applying herbicide treatment is effective this will save time over using a method where the stem is scraped and then cut (current practice with FLHI).



Trish Evans carrying out trials.

The gloop mixture has been proven 100% effective, but is an extra cost and also it is quite time consuming to mix the two chemicals, which result in a mix with a short shelf life once mixed.

(also special permits are required to mix and use this). Also this mix may be putting more toxic chemicals into the environment. It does have the advantage of being a thicker mixture that results in less spillage from the dispensers currently in use. If the Roundup is just as effective as the gloop with Climbing asparagus then this may be a more economic, safer method, but may require trialing different dispensers to minimise spillage.

In December, after two months, death of all Climbing asparagus plants within the treated plots was 100 percent effective, with no regrowth. The trial plots will be examined after 6 months and a strategy drawn up to put more teams into this area and rid the Island of Climbing asparagus.

LHI Board Appoint a Water Management Project Officer

In January 2007 Duncan Rayward moved to the Island to take up this position. Duncan is an Environmental Engineer and his previous position was Manager of the Water and waste section of the Scone Council in the Hunter Valley.

His initial focus will be on the water treatment process at the tip and then improving the Board's procedures for sewerage management and developing strategies for management of the Island's sewerage, water and groundwater.

At the tip, a reed bed system is being installed for trial, using *Phragmites australis* reeds (which occur at New Gulch next to Mount Eliza.)



Phragmites reed beds at the tip

Focus on rodent eradication.

In February 2001 World Wildlife Fund sponsored a trip by Ian Hutton and LHI Board Manager Greg Leaman to attend the IUCN Island Invasives Conference in Auckland. This resulted in a feasibility study into rodent eradication for LHI prepared by Alan Saunders and Derek Brown from the Endangered Species Recovery Council..

In October 2001 the Foundation for National Parks and Wildlife held a black tie fundraising function on Fort Denison to fund a Cost Benefit Analysis of rodent eradication for the Island.

Since then the LHI Board have had a major focus on weed control, with some large funding provided by government grants to develop and implement a long term program for weed eradication. This program is now in place and the Board will look more closely at rodent eradication.



To move forward on rodent eradication, Dr David Pridell, Senior Research Scientist with Dept of Environment and Conservation NSW, has arranged the appointment of an officer specifically to investigate rodent eradication on LHI. The position is responsible for providing statutory and strategic planning, advice and support to the Department (DEC), the Lord Howe Island Board, and other external parties (including funding agencies and the community) regarding the eradication of rodents from Lord Howe Island. Mr. Ian Wilkinson has been appointed to the position.

Currently on Lord Howe Island there is a control program for rodents using warfarin based poison. This program involves placing out the warfarin in special bait stations over about ten percent of the Island- the settlement, Kentia palm forests and a small area on the summit of Mount Gower.

Most of the knowledge about rodent eradication on islands has come from research and successful eradication projects carried out in New Zealand

over the past 20 years. In these projects brodifacoum is the toxin most widely used.

Successful methods used on the New Zealand islands range from bait stations and silos serviced on foot, to aerial spread by helicopters using satellite navigation systems. By applying lessons learned from previous operations the size, complexity, and cost-effectiveness of the eradications has gradually increased. The islands now permanently cleared of introduced rodents are being used for restoration of island-seabird systems and recovery of threatened species such as large flightless invertebrates, lizards, tuatara, forest birds, and some species of plants. The most ambitious campaigns have been on remote sub Antarctic Campbell Island (11,300 ha) and warm temperate Raoul Island (2,938 ha) both aimed to provide long-term benefits for endemic plant and animal species including land and seabirds.

In total, successful NZ rat eradication campaigns have recreated around 20,000 hectares of pest-free habitat. The aerial spread of poisons on offshore islands has been remarkably successful. None of the campaigns has yet failed to eradicate rats on the first attempt, although there have been some problems with mice. (Most of these programs have been to eradicate Polynesian rat, and Lord Howe Island has ship rat *Rattus rattus*)

There are a number of issues that are important to consider in any eradication process and particularly important on LHI.

Baiting around the settlement area:

Because of the possibility of accidental ingestion of baits by humans or pets, any baits used within the settlement area would need to be placed out by hand, probably in similar stations to those currently used on the island for warfarin poison. A thorough education and awareness campaign would need to be implemented in the community about the program.

Impact on water supplies:

Brodifacoum is most unlikely to be found in water even after aerial application of baits for rodent control on offshore islands Brodifacoum is not mobile in soil and is *extremely insoluble* in water (<10 mg/L water at pH 7). When baits disintegrate, brodifacoum will be likely to remain in the soil, where it will be slowly

degraded by soil micro-organisms. The half-life in soil varies from 12 to 25 weeks.

Impact on non target species:

Brodifacoum has the potential to cause both primary and secondary poisoning of non-target species. However, as with the other vertebrate pesticides, the adverse effects of brodifacoum on wildlife are dependent more on how baits are used and the behaviour of non-target species than susceptibility of individual species to the toxin. Baits in bait stations are less accessible to non-target species than baits on the ground. Secondary poisoning of birds is most likely where target species are a major part of the diet.

Invertebrates have been seen eating baits containing brodifacoum, and residues of brodifacoum have been found in beetles collected from bait stations containing Talon intended for rats on Stewart Island. It is considered that invertebrates are unlikely to be directly killed by brodifacoum, and insectivorous birds would be very unlikely to be at risk as invertebrates have only low doses of the toxin.

Birds most at risk from feeding directly on cereal-based baits containing brodifacoum are those species that are naturally inquisitive and have an omnivorous diet (e.g. Woodhens, Currawongs, Banded rails, Eastern swamphens).

The risk of secondary poisoning is probably greatest for predatory and scavenging birds that feed on target species i.e. live or dead rats (e.g. Woodhens, Currawongs, Banded rails, Sacred kingfishers, Eastern swamphens)

A focus of the research into the feasibility of eradicating rodents from Lord Howe island will be how to minimize the impact of the program on non target species.

However.... The risks of non-target mortality after pest control must be carefully balanced against the benefits. On islands where rats have been eliminated there have been impressive broad ecosystem improvements. This includes the recolonisation by seabirds, improved seedling success, increases in numbers of invertebrates, amphibians, lizards, and birds, and a return to a balance of plants unaffected by the selective eating habits of rats.

And on Lord Howe Island there are the economic benefits to the community through cost savings of

the ongoing control program and no damage to palm seed crop.

New rodenticide developed in New Zealand.

A new non poisonous rodenticide, "Natural No-Rats" is currently being marketed by Kiwicare Co in New Zealand. The product acts by blocking cellulose digestion – in effect the rats die of constipation. This is specific to rats and mice and kills no other mammals. It would appear to be the ideal answer to the problem of poisons as it kills nothing else except rodents, so it is safe around humans, pets and livestock and does not accumulate in the environment.

However this is a newly developed product and does not have the twenty or more year's research that has been undertaken with eradication techniques using brodifacoum poison. It is hygroscopic and so is not suitable as aerial bait, it must be applied in covered stations.

The product may have some uses in certain control situations, but there is no data on whether it would kill 100%. It would have the advantage of avoiding non-targets, but not much use if it does not get all the rats and mice.

Landcare in New Zealand is currently undertaking field trials on this product.

Masked Owls culled

As reported in FLHI Newsletter no. 17, the Masked Owls introduced to Lord Howe Island in the 1920's to control rats are a problem for seabirds and Wood hens. While the main diet of the owls appears to be rats, they also prey upon the Island's native birds including White Terns, Black-winged petrels, Providence Petrels and Woodhens.

Following many representations by the LHI community, the LHI Board agreed to obtain permits to shoot Masked Owls and in December 2006 the LHI Board Ranger shot six Masked Owls around the settlement area. The Owls were never part of the LHI environment and should be eradicated to prevent loss of birdlife native to the Island. It is hoped that an owl eradication program be initiated.

LHIB Ranger Meg Lorang finishes

Ranger Meg Lorang leaves the island at the end of January, after twelve months on the Island Board staff. Meg was involved with several of the winter 2006 weeding tours and was always very supportive of the Friends of LHI. Meg has indicated she may come back as bush regeneration supervisor one week. We wish Meg all the best returning to her Ranger position at Tenterfield.

Chris Hasselden (Christo) has been selected as the new LHI Board Ranger. Many FLHI weeders know Christo as he has liaised with many Friends weeding tours over the years, and we wish him success in his new role.



North Bay

Extreme low tides

During the October weeding week the Island experienced extreme low tides- certainly the lowest I have seen on the Island, and many Islanders saying the lowest for more than 50 years. The peak low was in the afternoon and with sunny days the coral that was left out of the water by 10cm or more in many places died. Dr Peter Harrison of Southern Cross University was here in January 2007 to research the coral spawning and will assess the damage from the coral drying out.

New Lord Howe Island Documentary

On New Years Eve SBS television screened the latest LHI documentary. Produced by German television for screening in Europe, the documentary gives stunning scenery and updates conservation issues on the Island. DVD copies of the documentary (English commentary) are available from Ian Hutton \$30 includes postage.

Black noddy chick failure.

During January 2007, large numbers of Black Noddy chicks have been dying and falling from

their nests at North Bay. The chicks range in age from a few days to probably 5 to 6 weeks. From 10th to 24th I counted and buried about 130 dead chicks, and the total colony is around 330 pairs. Strong winds were not responsible, and it is most likely linked to poor food supply for the adults, with the erratic position of the East Australian Current. The 30 or 40 juvenile Black Noddies that are usually seen loafing on North Beach adjacent to the breeding colony also have been absent the past few weeks. Sooty tern chicks do not seem to be affected.

Bird sightings 2006

Some new records for birds have been recorded in 2006 and some interesting rare sightings.

We had 3 White Ibis turn up on the Island in March. They were quite at home foraging in the paddock areas between Capella and Mount Lidgbird, Moseley Park Swamp and Pinetrees grazing lease. Two seemed to have moved on in and at this time just one is on the Island.

A juvenile Brown booby was seen by several boats around Ball's Pyramid in March 2006, and again another in December 2006 at the Admiralty islets. Also in March we had a Chestnut teal and from March to May a Grey teal at the Golf course.

On 6 April, regular visitor to the Island, Cliff Booth was sitting at Humpty Mick's café and saw a Peregrine Falcon attack a White tern in the pine trees nearby. A lone Silver gull was at Ned's Beach in April for about 3 weeks.

Island fisherman Keith Galloway reported a Buller's albatross, with a nice photo of the bird sitting on the water, in June. This was the first record for Lord Howe Island. On a boat trip to Ball's Pyramid in September I spotted one Antarctic Prion.

In October for a week or so a number of White-throated needletails were sighted. In November a Black-faced cuckoo shrike was reported; there are regular reports of this bird in November most years.

Bird Tour Guide David Bishop was on the Island in October and spotted an immature Australian Hobby in a pine tree opposite the museum on the 16th- another first record for LHI.



Buller's albatross

BOOKING FORM 2007 TOURS

post the form and deposit cheque to:

Lord Howe Island Nature Tours
 PO Box 157
 Lord Howe Island NSW 2898

Full price \$1950.26 ex Sydney or Brisbane, twin share (sole rooms subject to availability -\$2125.26)
Deposit \$ 200 (cheque made to PINETREES)
Balance \$1750.26 (twin share) 45 days prior to trip.

Please book me on the Lord Howe Island bush regeneration tour
 included is my deposit of \$ 200 per person

Name(s) _____
 Mr/Mrs/Ms/Miss _____

Address _____

Phone _____
 Email _____

QANTAS Frequent Flyer number

June 9-16 **June 16 to 24**
June 31 to July7 **July 14 to 21**
Aug 11 to 18 **Aug 26 to Sept 2**
October trip 13 to 20 - cost to be advised

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