

Enviro News

The Environment Unit of the Lord Howe Island Board is pleased to offer the Summer edition of the 'Enviro News' detailing environmental management activities for the Island. These notes have been prepared to provide up to date information for operators within the Island's tourism industry to assist with guiding and for informing Island visitors.

Annual Woodhen Survey

The annual woodhen survey was conducted by Environment Unit staff during late November and early December 2006.

170 birds were recorded in total, comprising 79 records for the settlement, 55 records for Mt Gower, 12 records for Far Flats, 22 records for Grey Face to Boat Harbour and 2 records for Erskine Valley. Of the overall total of 170, there were 61 new bandings, and 45 birds were recaptured to complete their banding. The remainder were seen or heard. The findings are very similar to 2005 with 172 birds recorded.

Woodhen numbers in general remain strong across all major areas. As the birds are territorial, it's now thought that they have approached their maximum carrying capacity throughout the surveyed areas. It is known that bird numbers are constrained by availability of food and water. Numbers in the settlement area are thought to be higher as the result of supplementary food and water provided by residents.

Once again the continued support and involvement of Island residents during these surveys is greatly appreciated. The community's efforts greatly contributes to the successful recovery of the woodhen, bringing it back from being on the brink of extinction.

(photo: I. Hutton).



Inside this issue:

Woodhen Survey	1
Invasive species	2
Draft Biodiversity Management Plan	3
Environmental Works	4
Current research	5
Research continued	6
Contact	7

Lord Howe Island Woodhen (*Tricholimnas sylvestris*).

Invasive species

Preparations for the eradication of rats and mice from Lord Howe Island have taken a step forward with the appointment of Dr Ian Wilkinson to co-ordinate the planning process. Ian is a wildlife ecologist with extensive experience of island ecology, which included managing a team that assisted in the eradication of feral cats from subantarctic Marion Island in South Africa.

Any eradication is a complex process that requires precision planning to ensure the successful removal of every last rodent. Removal of these pests will have ecological benefits for plant, invertebrate, lizard and bird communities on the island, and also make life more convenient for human residents who will no longer have to control rodents either in or around their properties.

Ian is liaising extensively with his former colleagues at the New Zealand Department of Conservation (DoC) (he worked for DoC for 5 years) who are acknowledged world leaders in rodent eradication to ensure we follow best practice for this extremely important project. DoC have been successfully eradicating rodents from islands for more than 20 years, including the 11,300 hectare subantarctic Campbell Island to most recently the 3,083 hectare Little Barrier Island near Auckland. The operation on Little Barrier Island dealt with complex issues relating to native species that were at risk from the baits and this knowledge will assist in planning work on LHI. The terrain on many of the islands successfully treated by DoC has been similar in nature to that found on LHI, including areas such as the northern cliffs, and Mounts Lidgbird and Gower. Successful eradications have also been undertaken on inhabited Islands in the Seychelles, and plans are currently being developed for Rangitoto Island (3000ha, ~50 inhabitants) and Great Barrier Island (28000ha, ~900 inhabitants) in New Zealand's Hauraki Gulf close to Auckland. Experience to date therefore provides strong support that eradication of rats and mice is definitely feasible on LHI.

In contrast to the current goal of rat control undertaken by the Board and residents, which results in a temporary reduction in the population size, eradication will remove all rats and mice. If successful, it will make redundant the need for any future control operations. The project is complex, will take several years to complete and will require multiple approvals from all tiers of Government. It will also require the total support of the community to succeed.

To ensure island residents are kept up to date with project activities, a community consultation process will be developed that will engage residents throughout the planning and implementation process. Information will be provided, and input from the community sought through project newsletters, public meetings, focus groups and individual consultation.

Ian's appointment was made possible after the Board received a grant from the Commonwealth Government through the Northern Rivers Catchment Management Authority (CMA) as part of a LHI biodiversity package.

The aerial spread of poisons on offshore islands in NZ has been remarkably successful. None of the campaigns has yet failed to eradicate rats on the first attempt.

For any information regarding this project, please contact:

Terry Wilson Manager Environment World Heritage, Lord Howe Island Board 65 63 2066

Draft Biodiversity Management Plan

The Lord Howe Island Group currently contains 23 threatened species and one endangered ecological community listed under the NSW *Threatened Species Conservation Act 1995*. Sixteen threatened species are also listed on the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*. More species and communities are likely to be listed for the Lord Howe Island Group in the future due to the significance of the island and the high proportion of endemic species found on the island.

Because of the isolated geographic location of Lord Howe Island, its relatively small size and limited access, a number of threats common to many species can be identified on the island, for example predation by rats and weed invasion. There are also a number of management plans in place or being prepared by the Lord Howe Island Board to deal with vegetation management, weed control and quarantine issues. In addition, there are two approved threatened species Recovery Plans for the island – the Lord Howe Woodhen and the Lord Howe Island Placostylus (Land Snail).

The Department of Environment and Conservation (DEC, formerly the NSW National Parks and Wildlife Service) Northern Threatened Species Unit, based in Coffs Harbour, in conjunction with the Lord Howe Island Board, the Australian Museum and the Lord Howe Island Recovery Team, has prepared a Draft Biodiversity Management Plan for Lord Howe Island. This Plan will, in effect, be a Recovery Plan for all the threatened and significant species on the island. The plan will look at common threatening processes and the implementation of a range of recovery actions rather than on individual species, as many recovery actions can be applied across a range of threatened species.

This multi-species approach to recovery planning is a more efficient way of dealing with threatened species recovery, and has the added advantage of looking at all biodiversity conservation issues, not being restricted to threatened species. The plan will assist land managers with identifying priorities for actions and the resources that are needed to implement them.

The multi species approach is the first of its kind in Australia. Comments on the draft plan are welcome and can be submitted by the 30 March 2007 to:

Dianne Brown,
Senior Threatened Species Officer,
Department of Environment and Conservation,
locked bag 914, Coffs Harbour,
NSW, 2450.

For further information, please contact :

Terry Wilson,
Manager, Environment, World Heritage
6563 2066.

Environmental Works.....

Weed Program.....

The LHIB Weed Team have been busy finishing off the weeding blocks across the Island. Areas include, Malabar, Transit Hill, Mt. Lidgbird and Mt. Gower. As well as targeting these blocks, they have been re visiting areas previously weeded for follow up work.

The total number for individual weeds removed from Lord Howe Island stands at: 1,030,047. All weeds treated are recorded in the LHIB data base.

The treatment of all climbing asparagus sites on Crown land throughout the Settlement has also been completed. The weed program is supported by the NSW Environmental Trust, Commonwealth NHT and the Northern Rivers CMA.

Revegetation Program.....

The environmental works crew have been maintaining all Sally Wood (*Lagunaria patersonia*) Swamp Forest revegetation sites throughout the island including, Old Settlement, Johnson's Creek and the Solider Creek sites.

The LHI Sally Wood (*Lagunaria patersonia*) Swamp Forests is listed as an Endangered Ecological Community. The re-establishment of this vegetation community is a long term staged approach requiring successional planting and follow up maintenance. Constant maintenance is required to re-establish Sally Wood Swamp Forest's in these key areas.

Walking Track Maintenance.....

Ongoing regular maintenance of the walking track system on the Island is underway. Current works that have been undertaken include, step work on Transit Hill and Bowker Avenue, clearing of tree limbs and the felling of dangerous trees on the Max Nichols/North Bay walking track, the painting of non-slip paint on all boardwalks and the painting of the bridge and steps at Middle Beach.

Feral Animal Control.....

The 2007 rat baiting program commenced on the 26 February. Rat bait is available from the LHIB two weeks prior to the commencement of each baiting period throughout the year. Please be reminded that only 1 cup of bait per station is needed to effectively manage the feral rat population on your property.

Current research

Shearwater Research

As part of an effort to understand the feeding behavior of the flesh-footed shearwaters (*Puffinus carneipes*) breeding on Lord Howe Island, researchers will be working in the Muttonbird colonies from January to April in 2007.

Flesh-footed shearwaters range across the Pacific and Indian oceans. Their only known breeding locations are in New Zealand, the southern Western Australia islands around the Recherche Archipelago, and Lord Howe Island.

Flesh-footed shearwaters are listed as a Schedule 2 species under the *Threatened Species Conservation Act 1995* (NSW), and are listed as a Migratory Species and Marine Species under the *Environment Protection and Biodiversity Conservation Act, 1999* (Commonwealth). One of the reasons for being listed as a threatened species is because of the limited number of locations they breed, and because of this there is potential for whole populations to be effected by a single cataclysmic event such as a population crash in the fisheries on which they feed.

This species has also been nominated as at risk from long-line fishing when oceanic long-line fishing was listed as a key threatening process. Approximately 91% of seabirds caught of Eastern Australia as by-catch are flesh-footed shearwaters, and this level of by-catch is considered to be the most significant threat to the species. Other threats include habitat removal, plastic ingestion by chicks after being feed by the parent birds. and road kill in key habitat areas on Island roads.

For the research being conducted here, small data loggers about the size of a match box, and weighing only 18 grams will be attached to a shearwater's back. These data loggers will collect information while the birds are feeding at sea and enable us to find out where these birds go to feed, what depths they feed at, and how long they dive for.

A greater understanding of the shearwaters behavior at sea will allow the identification of possible threats to these birds such as interactions with long line fisheries. This information can assist fisheries managers and the Lord Howe Island Board to work towards maintaining the Flesh-footed Shearwaters as an integral part of Lord Howe Island's unique biodiversity.



Researchers Tim Reid and Peter Vertigan removing the data logger from a Shearwater.

Current Research continued...



Controlling Formosan Lilly

PhD research candidate Ms Susanne Warner of the University of New England is back on the Island continuing a three year study on the biology and ecology of Formosan, or Tiger Lilly (*Lilium formosanum*). This study will focus on this weed impact's on native and endemic species, and the role this weed plays in the Island's ecosystem. Of particular interest will be investigations into possible biological control mechanisms.

Formosan Lilly is a highly successful invader as it is capable of producing many offspring through the high number of seeds each plant produces, and the ease by which those seeds have spread throughout the Island. As such it has potential to spread across large parts of the Island and become the dominant plant species.



Christo (above) weeding on the Roundface Lord Howe Island.

New Ranger... Chris Haselden has been appointed Acting Ranger LHIB for a period of 12 months. Chris has worked for the LHIB since 1989 and has been involved in all aspects of environmental works.

His previous role of supervisor of the Enviro/World Heritage Unit has given him extensive knowledge of the day to day management of Lord Howe Island's unique environment. Chris has an Associate Degree in Applied Science (Parks, Recreation and Heritage) from Charles Sturt University. "This is a great opportunity for me, I hope my knowledge and experience of the Island will contribute to the management and overall protection of the environment on Lord Howe".

Lord Howe Island Board



Environment Unit
Lord Howe Island Board
PO Box 5
Lord Howe Island NSW 2898
Phone: 02 6563 2066
Fax: 02 6563 2127



Photo point monitoring of re-vegetation works above Middle Beach.

Photo Taken 2000



Photos:
Looking north towards the Admiralty Islands

Photo Taken 2005



Photos taken by:
Chris Haselden

How to contact us

So you want more information?

If you would like more information on any of the Environment Unit's activities you can either drop by the Administration Centre, call us on: 02 6563 2066 or Email us on ranger@lhib.nsw.gov.au