

Enviro News

The Environment Unit of the Lord Howe Island Board is pleased to offer the winter edition of the 'Enviro News' detailing the Board's 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.

Internet site

Construction work has progressed steadily to upgrade Lord Howe Island's information web site. The web site (www.lordhoweisland.info) has been developed for the Island's Tourism Association and will provide up to date information on the range of services, events, activities, and environmental news relating to the island. So if you haven't already, go check it out, and follow some of the links.

Beetle smuggling: Part 2

Further to the previous attempt to illegally smuggle Lord Howe stag beetles (*Lamprima insularis*), another two Japanese nationals were detained by Australian Customs Service in Sydney in March. It is alleged the two had in their possession up to 50 beetle larvae and pupae specimens. Lord Howe Island Board staff were tipped off by Lorhiti's caretaker Matt King whose suspicions were aroused by the two traveler's unusual arrival and their subsequent inquiries regarding the island's fauna. On advice from Senior Constable Buckley, Australian Customs intercepted the two travelers as they attempted to depart from Sydney Airport. Their hearing is set for June 04. The keeping of beetles as pets is an established cultural activity in Japan and is supported by a substantial industry.

Noxious weed inspections

During April and May noxious weed inspections were carried out on perpetual and special leases across the island. Advice was then provided to lease holders as to how best to control noxious and environmental weeds. Specimens of common garden plants were also collected to enable the Environment Unit to undertake an audit of introduced plants on the island. The audit provides an opportunity to identify any potentially newly emerging weed species, such as cotoneaster (*Cotoneaster glycophylla*). Cotoneaster is a common shrub in gardens. It grows from seed quite readily and the seeds are favoured by birds, and therefore easily dispersed. It is now spreading into the northern hills where if unchecked will pose a threat to native vegetation communities.

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Cotoneaster is readily identified by the bunches of red berries, and elliptical leaves. (Photo: S. Thompson)

Threatened species

Lord Howe Island Biodiversity Plan

A planning process is well underway for developing a threatened species recovery plan for the whole of the Lord Howe Island group. The intent of the plan is to identify and define recovery actions and threat abatement strategies for endangered species found here, and to detail responsibilities for those actions. The plan is being prepared by the NSW National Parks and Wildlife Service in close cooperation with the Lord Howe Island Board and community members.

Generally, threatened species recovery and conservation involves developing an individual plan with its own species specific recovery actions. However, it was considered more strategic to adopt a whole of island approach encompassed by the one plan.

This is due to the isolated geographic location of Lord Howe Island, its relatively small size and limited access. Further, a number of threats common to many species can be identified on the island, such as predation by rats or weed invasion.

The biodiversity plan will reflect management plans in place or being prepared by the Lord Howe Island Board for vegetation management, weed control and quarantine issues. In addition, the two approved threatened species Recovery Plans for the island – the Lord Howe Woodhen and the Lord Howe Island Placostylus (Land Snail) will also be reflected in the biodiversity plan.

The draft biodiversity plan is due to be released for public review and comment in June 2004.



Male (left) and female (right) painted snipe (Illustration by Doyle 1980)

The NSW Scientific Committee have made a preliminary determination to list the painted snipe—*Rostratula benghalensis*, under Schedule 1 of the *Threatened Species Conservation Act 1995*. Schedule 1 species are those considered to be endangered. It prefers shallow freshwater swamps, but are mostly active at night. It is more generally found on many Pacific islands further north. The painted snipe is an occasional visitor to the island, having been seen around the airport in the past.

More news on Lord Howe's own cockroach

The Lord Howe Island wood-feeding cockroach (*Panesthia lata*) recently listed as an endangered species under the *Threatened Species Conservation Act 1995*, is now found on two islands off Lord Howe. It prefers a diet of wood and plant material rather than the contents of our kitchen cupboards. It is easily recognisable by its shiny black metallic colour with a tinge of red, and for being wingless. The cockroach was first recorded in 1868 but has been driven to near extinction after the arrival of rats in 1918. Conservation of this species is important as it plays a key role as a nutrient recycler of dead plant material and also contributes to the overall biodiversity of the Lord Howe Island Group.



Lord Howe wood eating cockroaches listed as endangered, (Photo: NPWS 2003)

Current research activities



One very sodden researcher, Nathalia Velez sifts for invertebrates at sites along the Mt Gower track. Photo: S. Thompson

Climate change research

Ms Nathalia Velez commenced a PhD research project with the Australian Museum that will investigate the predictive impacts of climate change on the island's biodiversity. The Australian Museum has collected an extensive range of environmental data from the island continuously since the 1870s. This project will focus on comparing invertebrate fauna across a range of altitudinal gradients, from sea level to the summit of Mt Gower. Climate change has the potential to have significant impacts on the island. For example, a rise in surface temperatures by several degrees could result in a reduction in precipitation and cloud formation on Mt Gower. The cloud forest at the summit could be significantly affected as a result.

Wedge-tailed shearwater foraging behaviour

Researchers from James Cook University, Cairns undertook a short study to analyse both foraging behaviour and population divergence of the wedge-tailed shearwater (*Puffinus pacificus*) population on the Island. This project provided information on the feeding behaviour of wedge-tailed shearwaters, and how the chicks were provided for. A number of adult birds were fitted with miniature data loggers that collected time, depth, temperature and salinity information for each feeding trip and dive. This information was compared to data from the population on Heron Island in the Great Barrier Reef. Shearwaters around Lord Howe do most of their foraging for squid between the hours of 6am-8am, in close proximity to the island, only dives shallowly, and for infrequent periods. This differs from the Heron Island population which spend most of their daylight hours foraging further afield with longer and more frequent dives. From this study it appears that the waters around Lord Howe have greater productivity than in the tropical north, and that seabirds are readily able to satisfy their dietary needs in waters close to the island.

Fish population research

Researchers from Melbourne University were kept busy during the summer months installing and inspecting specially built light traps located in and around the lagoon and North Passage. These traps were designed to catch juvenile fish for a study that will help broaden our understanding of the genetic diversity and life history characteristics of endemic fish species around Lord Howe Island. The results from which can be used to better manage the island's fisheries for the longer term. It is anticipated that this project will run over two years concluding next summer.



An emperor angel fish looking pleased to be the subject of an ongoing research project (photo: LHIB)