



# Lord Howe Island

## World Heritage Area

by Chris Murray

Some seven million years ago a large shield volcano erupted from the floor of the Tasman floor, creating Lord Howe Island, an island originally forty times larger than it is today.

Whilst marine erosion has greatly reduced the size of the main island, it has also left a spectacular landscape of mountains, cliffs, hills and offshore islets. Subsequent variation in sea level caused by successive ice ages, led to deposits of wind blown sand, cemented into sedimentary rock called calcarenite. Some of these deposits have been dated to over 130,000 years old, and contain fascinating fossils like the extinct horned turtle *Mciolania platyceps*.

Lord Howe Island was colonised by plants from the surrounding lands of New Zealand, Australia, New Caledonia and other Pacific islands - which is not surprising considering its location in the central Tasman Sea. The island's varied landscape of mountains, valleys, hills and lowlands has provided an amazing diversity of habitat for various associations of plants. Micro habitats range in altitude from the sea grass meadows on the lagoon floor to dense entangled mist forests of orchids, ferns and mosses on the summits of Mount Gower & Mount Lidgerbird. Over 100 of Lord Howe's 241 native species are considered to be endemic. These include four species of palm, the best known being *Howea forsteriana*, which forms dense lowland forests in some areas. *Howea* seeds have been exported from the 1870s to the present day for the indoor plant trade, and the palm is still considered to be one of the world's best decorative indoor palms.

When the Island was discovered in 1788, the first visitors marvelled at its bird life, including 15 species of land birds and multitudes of seabirds. The predations of visiting ships and early settlement unfortunately caused some extinctions, but further colonisation has taken place. Today 18 land bird species breed on the Island. One species, the Lord Howe Woodhen, *Tricholimnas sylvestris*, was saved from near extinction by a captive breeding program in the late 1970s and early 80s and is now reestablished across the whole Island.

However, it is the thronging colonies of seabirds - some 14 species - most of which are summer breeders that are the most spectacular form of bird life. Huge colonies of Flesh-footed Shearwaters, Sooty Terns, and Providence Petrels, numbering tens of thousands of individuals, can be seen from Island walking tracks, some quite close to the settlement area. Smaller colonies of Masked Boobies, Red-tailed Tropic Birds, Grey Teralets, Wedge-tailed Shearwaters, Little Shearwaters, Kermadec Petrels, Black-winged Petrels, White-bellied Storm Petrels, Common Noddies and Black Noddies are also present, though many nest on the offshore islets and are best seen by boat.

Lord Howe Island has only one native mammal - a small nocturnal bat - and two native reptiles, a gecko and a skink. However, there is rich invertebrate fauna of insects, spiders and snails, with much research still to be done on these numerous species. One giant endemic phasmid or stick insect was known locally as the land lobster being up to 7 cm in length, but it disappeared after the accidental introduction of rats onto the

Island in 1918, a tragedy that also led to the disappearance of five endemic species of land bird. The Island's marine life includes over 500 fish species and many hundreds of invertebrates - starfish, snails, slugs urchins and worms. Whilst Lord Howe is located in cooler waters at latitude 31 south, it has a remarkable mix of tropical as well as temperate marine life. The larvae of tropical species, including corals, are swept south by the warm East Australia Current which flows past the Great Barrier Reef in Queensland before swirling out into the north Tasman sea. Rock and coral reefs around the Island provided shelter for many other organisms, so that complex marine communities can develop. Coral outcrops, with their multi-coloured populations of fish, anemonies and seaweeds, occur within metres of the low tide line at many Island beaches, and the extended reef which shelters the lagoon is the most southerly barrier reef in the world.

The Island is administered by the State Government of New South Wales, under the Lord Howe Island Act of 1951, subsequently amended in 1982. All land is leasehold, with owners being required to reside on the Island. The local government authority, the Lord Howe Island Board, is chaired by a nominee of the Minister for the Environment. It has an additional State Government appointee, and three elected Island members. Under amendments to the Lord Howe Island Act in 1982, a Regional Environmental Plan and uniform Building Code have been prepared for the Island, and the natural areas protected in a Permanent Park Preserve, having its own Plan of Management.

Although Lord Howe Island has an interesting history, it is the Island's many outstanding natural attributes that led to its acceptance onto the World Heritage List in 1982. A property can only be World Heritage Listed if it satisfies one or more of four natural criteria used to judge the suitability of an area. Lord Howe Island was considered to meet two of these criteria being:

- An example of superlative natural phenomena.
- It contains important and significant habitats for in situ conservation of biological diversity.

The Lord Howe Island Group World Heritage Property now includes the main island, offshore islets and Balls Pyramid totaling about 1455 hectares of land. A further 145,000 hectares of marine environment are included in the World Heritage area, with conservation values reinforced in 1998 when the State Government declared a Marine Park in these waters.

Lord Howe Island is considered to be an outstanding example of an Island ecosystem developed from submarine volcanic activity, having a rare diversity of landscapes and biota. The high proportion of endemic species provide a superb illustration of independent evolutionary processes at work.