

MACQUARIE ISLAND

King penguins.

EXPLORE TASMANIA'S SOUTHERNMOST DEPENDENCY, HALF WAY TO ANTARCTICA

Why is Macquarie Island important?

MORE than 1500km south-east of Tasmania lies a small island which is important in the history, geoscience and ecology of the Southern Ocean. Geologically the island is of great interest, as it lies on a rare uplifted portion of the sea bed at the edge of two tectonic plates of the earth's crust. The island also acts as a major barrier to the Antarctic Circumpolar Current, the earth's largest and most important oceanic current, which flows eastward about the Antarctic landmass. This impacts on the balance of oceanic and atmospheric heat and chemical exchange, which in turn has an effect on the southern hemisphere's weather patterns. Because of the island's special location it is an ideal monitoring location for meteorological activities. Macquarie Island experiences frequent earth tremors and is the site of an important seismological observatory.

Things to explore:

- **Why is Macquarie Island nick-named "The Sponge"?**
www.aad.gov.au/default.asp?casid=29582
- **Why was Macquarie Island declared a World Heritage Area in 1997?**
www.environment.gov.au/heritage/places/world/macquarie/index.html
- **What do seismologists study?**
<http://earthquakescanada.nrcan.gc.ca/info-gen/seismolog-eng.php>
- **Where was the most recently measured earthquake in the world?**
www.ga.gov.au/bin/listQuakes



What lives there?

Macquarie Island is also home to vast quantities of Southern Ocean birds and mammals, and scientists use the island to monitor many marine animals and birds. A number of species found in the Macquarie Island region are under local or global threat and most of these species require extremely large migratory or foraging ranges. These species include:

- Subantarctic fur seal
- Antarctic tern
- Fairy prion (southern)
- Grey petrel



- Blue petrel
- Black-browed albatross
- Wandering albatross

Things to explore:

- **Why is the protection of the feeding and migratory areas of these species of international significance?**
www.environment.gov.au/coasts/mpa/macquarie/features.html
- **How far can a wandering albatross fly in a day?**
www.antarcticconnection.com/antarctic/wildlife/birds/albatross.shtml
- **Find a map showing the location of Macquarie Island.**
www.environment.gov.au/coasts/mpa/macquarie/maps/regional.html

When was Macquarie Island discovered?

During Captain James Cook's second voyage in 1773 he must have sailed quite close to Macquarie Island but missed seeing it, possibly due to the low cloud which often hangs over the island. Discovery of Macquarie Island is attributed to Captain Frederick Hasselborough of the brig *Perseverance* who sighted it on July 11, 1810, during a sealing voyage out of Sydney. Hasselborough was not the first visitor though – he reported seeing a wreck "of a large vessel of ancient design".



This may have been from Polynesian or other earlier visitors. The following year another shipwreck was found high up on the grass on Bishop and Clerk Islands to the south.

Things to explore:

- **After whom did Hasselborough name Macquarie Island?**
www.aad.gov.au/default.asp?casid=29581
- **What does a brig look like? How many sails does it carry?**
www.ladynelson.org.au/
- **Which animals on Macquarie Island were targeted for early commercial exploitation? What were the results?**
www.aad.gov.au/default.asp?casid=29579



Who owns Macquarie Island?

A dispute between the colonies of Tasmania and New Zealand about sovereignty over the island was resolved in Tasmania's favour, and Macquarie Island is now part of the Huon Valley Municipality. Macquarie Island was an important part of the first Australasian Antarctic Expedition (1911-14) and the Australian National Antarctic Research Expedition station was established there in 1948. It is still an active base for the Australian Antarctic Program. Commercial exploitation of the island finished in 1920, and in 1933 a Wildlife Reserve was created. The Macquarie Island Conservation Area was created in 1971, under the control of Tasmania's Parks and Wildlife Service.

Things to explore:

- **When was the Macquarie Island Commonwealth Marine Reserve proclaimed?**
www.environment.gov.au/coasts/mpa/macquarie/history.html
- **If you visited the Macquarie Island Marine Reserve, what activities could you do? What is not allowed?**
www.environment.gov.au/coasts/mpa/macquarie/activities.html

Pests on Macquarie Island

Macquarie Island has been subject to the influence of many introduced pests, and some native species are either extinct or endangered as a result. Early visitors reported large numbers of parakeets but these seem now to be extinct, as does another bird, the Macquarie Island rail. Cats, mice and rats were probably escapees from visiting ships, while other species were deliberately introduced.

The weka or wood-hen was introduced by sealers around 1867 and this is likely to have been a major contributor to the extinction of the Macquarie Island rail. Rabbits were introduced by Elder & Co. around 1877 and there was rejoicing that their numbers grew so quickly. The *Jessie Niccol* in December 1877 left behind five donkeys, goats and pigs and the early ANARE expeditions used horses. These larger species were not well adapted to the environment and quickly disappeared.

Cats and wekas were successfully eradicated, but in recent years increasing numbers of rabbits and rodents on Macquarie Island have had devastating effects on the native fauna and flora. A project to eradicate these pests has been developed to restore Macquarie Island's biodiversity and natural systems as much as possible.



Things to explore:

- **Dogs have played an important part in the pest eradication program on Macquarie Island. What were they trained to do?**
www.abc.net.au/news/stories/2009/09/04/2677190.htm
- **Find out the latest news on the eradication project:**
www.parks.tas.gov.au/index.aspx?base=13001

