

## Two short talks about Quarantine Island/ Kamau Taurua Ecology

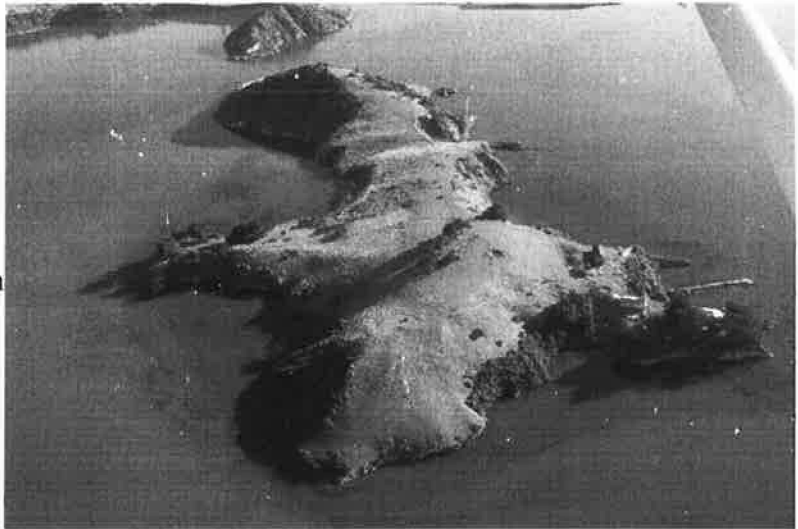
### - Jim Fyfe 2011 & 2012

'Wind rocks this little land'. Three minutes is just the blink of an eye. Tide in, tide out. Another SW squall. Ecology is the study of organisms in relation to one another and their environment. Note that this definition does not exclude humans.

Our steadfast island is made of volcanic rock and is in the heart of Otago Harbour - a wise place for an ecologically friendly dwelling when sand is shifting around us. In this short talk I hope to erect four corner posts and start to weave a roof that will help protect the integrity of the Island's Ecology.

#### **First corner post: An important remnant of native bush**

All who have walked around the island will have been drawn to the track through the bush remnant with its diversity of small trees and shrubs, suited to the windswept coastal environment and yet so rare now. This bush attracts the birds – bellbirds, tui, kererū, fantails. New planting strengthens and protects the integrity of this remnant.



#### **Second post: An unmodified harbour shoreline**

The edges of Otago Harbour have roads, railways and Port facilities. Areas have been reclaimed for industry and sports fields, but the shore of our Island is largely intact. Marine wildlife that rest on land are unimpeded in their use of the island, and this is demonstrated by the large proportion of the Harbour's little shags that nest here.

Some damage has been caused by the erection of pylons for high <sup>Voltage</sup> tensile power-lines, intercepting seabirds who use the Island's updrafts and snapping fragile wings.

#### **Third post: A rich marine environment**

An interpretation of the Māori name 'Kamau Taurua' is 'seine net'. The island restricts the water flow in and out of the harbour and phytoplankton or small planktonic animals are herded past the island in strong currents. A diversity of marine species – sponges, barnacles, sea tulips, bryozoans, hydroids, brachiopods, molluscs – flourish by filtering this food from the water. Last week a dwarf minke whale was seen feeding here.

#### **Fourth post: The island factor**

Things can be different on an island. Isolation can protect a fragile species, or allow rapid adaptation in small populations. Islands can be a sanctuary from predators.

Now we have the four corner posts:

1. important remnant of native bush
2. An unmodified harbour shoreline
3. A rich marine environment
4. The island factor

To provide a roof for our ecological dwelling the Community needs to weave its stories between these posts.

Forest restoration is already a well established activity on the island

The community is exploring the opportunities to reduce its carbon footprint and present a model for sustainable living.

The experience that the island offers to schools and youth groups, allowing escape from the overwhelming world-scale issues, and a chance to contribute locally to improvements in our island ecology is unforgettable.

***Our aim is to protect this island at the heart of Otago harbour as “a cradle of possibility”.***



## **Ecology and Transformation 2012**

**The word Ecology is derived from the Greek Oikos, meaning house.** Ecology is the study of the relationship between different organisms, and between organisms and the environment.

**Focusing now on the theme of transformation,** I turn immediately to the remnant vegetation and admire the expanding areas of bush and wind shorn scrub. The transformation we are well on the way to achieving is ecological restoration – a return to a previous state of higher natural diversity. This is not a case of just letting things 'revert'. The pasture-land that was established after deforestation and years of grazing is stable and resistant to change. After fencing out the sheep and carefully planting the trees it is necessary to continue to release them from the thick growth of grasses that threaten to smother them. Robust winds from the SW and NE batter the plants and dry out the ground. To plant is just the beginning of a long process – that tree or Flax, once grown, can then be used to shelter others

It is through the active and ongoing participation of the Island Community that we achieve change. Ecological restoration is a long term programme requiring a process that initiates, maintains, monitors, responds to any issues that arise and recognises the milestones and new opportunities as habitats develop. People getting involved with the programme learn to be observant and responsive to the needs of different plants. A transformation in the Island ecology results and participants are vital part of the new ecology.

The transformation has become a ritual of ongoing and understood process. However, our Island is small, and those who find peace in the ritual realize that the quality and pacing of the planting are very important components of the process. This helps to make the programme sustainable. Engaging with heart and soul in the process is more rewarding than racing to plant as many trees as possible. What will we do when the Island is completely forested once more?

So we have experienced pleasure in achieving a process that is transforming the Island vegetation and creating opportunities for associated native wildlife, but this is just one of the four corner posts identified earlier. The other three all stand, at least partly, in adjacent ocean. Productive harbour, undeveloped coastline, the Island factor.

We have less control over what happens in the ocean. There is a need to reach out to the wider world and share responsibility for the required transformation. We face issues of over-fishing, sedimentation, pollution, ocean acidification, pst species, sea levels rise and inundation with plastic rubbish. We believe a brachiopod species may have become extinct in the Harbour within the last 10 years. Nobody noticed – why would they when the animal is no bigger than a tear drop? In the ocean, who initiates, maintains, monitors, responds to issues that arise, or understands the thresholds that may mark a point of no return? The natural baselines for the Harbour had shifted before anyone started to look. The issues are huge and daunting, but we need to engage because they do effect the ecology of our little island. 'Join the Island community and become a citizen of planet Earth' ... transformed by the closeness of a marine environment that can sometimes seem like an ocean between here and the rest of the world.

There is hope. Recently we watched a critically threatened NZSL herding mullet into a tight shoal and slowly directing them out of the channel and around the front of the Island. He would periodically emerge through them, a flash of silver in his mouth, while sea birds hovered to get their share. This is the stuff people make movies about. Why aren't we all clambering to ensure a healthy ecological future for our local coastal waters and the species that live there, like this sea lion threatened with extinction or the brachiopod that, perhaps, already is? There is hope, but no effective process has yet been provided to allow the wider community to unite in common action for the protection, let alone the restoration, of our coastal waters and oceans.

The Greek Oikos has been transformed to become a metaphor for the amazing inter-relationships of the natural world we live and study in – this is our house and we have a place in it.

In what I find an alarming example of divergent transformation from Greek to modern meaning, 'Economy' comes from the same root, oikos. Economy – to manage the house. Can we make peace in turmoil of a growing ocean between the disciplines of Ecology and Economy? Can we discover the process where the small trees we plant in the minds of others can be nurtured sufficiently well to overcome the smothering culture of economic growth that is rooted so deeply in modern society? There is strength and richness in diversity. Become a vital participant in the ecology of the planet. Find a restorative ritual that works for you today, and share it.

Jim Fyfe