

# Why conserve nature?

This is a question that we are sometimes asked, especially when environmentalists are accused of ‘putting birds and trees before people’. Here to reflect upon, is the response of American architect, Lewis Mumford (with a NZ bird exchanged for a North American one!):

‘When we rally to preserve the remaining reduced forests or to protect the (kiwi or kokako), we are rallying to preserve ourselves, we are trying to keep in existence the organic variety, the whole span of natural resources, upon which our own future development will be based. If we surrender this variety too easily in one place, we shall lose it everywhere, and we shall find ourselves enclosed in a technological prison, without even the hope that sustains a prisoner in jail – that some day we may get out. Should organic variety disappear, there will be no ‘out’.’

(From NZ Native Forests Restoration Trust Newsletter #31 Spring 2000)



## So did you know?

Humans tend to be a ‘brink’ species: they do not act until a situation begins to look like a disaster.

Forty percent of New Zealand’s land bird species have been lost since human arrival.

Thirty-five bird species became extinct during the Polynesian period, and another 10 species since Europeans arrived.

New Zealand by the 1890’s had experienced one of the most rapid losses of bird species in the history of the world.

Victorian era biological science was mainly about collecting dead specimens, not saving them.

Maori reduced forest cover from 75 percent to 53 percent of the land area.

Europeans eliminated a further 23 percent.

Some 570,000 hectares of freshwater wetlands have been lost since the signing of the Treaty of Waitangi, leaving about one eighth of what was in New Zealand at that time.

Marshes, swamps and wetlands are more fertile than forests. (Te waiou o koutou tipuna – ‘the milk of your ancestors’ – signifies the greater value of lakes, rivers, and wetlands than of solid land, for food supplies).

The first reserves were set up to protect scenery, not habitat or animals or birds.



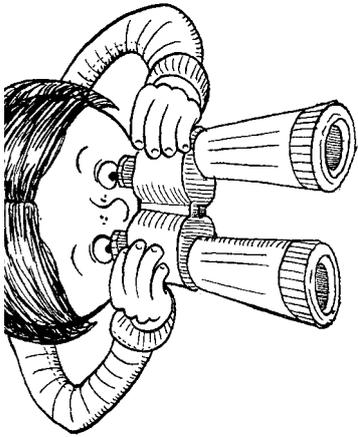
It was not until after WWII that there were real advances in conservation (e.g. Waipoua Forest).

The word 'conservation' didn't come into common use until the 1960's (at the time of the 'Save Manapouri' campaign).

Many of today's major problems are directly due to ignorance of the importance of trees: trees purify the air, keep water in circulation, return moisture to the air so it returns as rain, protect the soil from erosion, feed the soil, and keep soil temperatures even, and generally help maintain life.



# Teaching students to really look



Decide on an exploration area in the school grounds. Make a reasonably large collection of unnatural items you want students to 'discover' in that area.

Some suggested items: Brightly coloured wool, shoelace, large glass marble, piece of paper, piece of broken crockery, plastic drink bottle lunchbox, hearth brush and felt pen . . .

Place the items in a variety of positions, some easy to find, others more difficult, e.g. draped over a tree branch, in grass by a track, partially poking out of a hole in a tree trunk and so on.

Make a master list of those items and where you are going to 'hide' them, for your own security (in case you forget just where they are and some remain undiscovered by the students!).

Without students seeing what you are doing, place items around the exploration area.

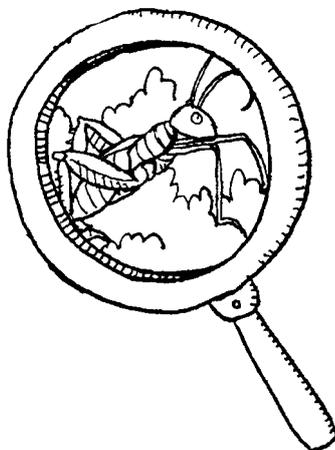
Sort the group into teams.

Explain that this is practice in observation skills.

Do not say what the items are, or how many there are.

Ask students to find as many of the items as possible in a given time, blowing a whistle or similar at the end of the time to recall the hunters.

On return to the classroom, students display what they have found and where they found it. Mark findings off against the master list.



# Wet lunchtime quiz

Occasionally, you might be unfortunate enough to have a wet lunchtime on the island. What to do??? Besides the activities listed for inside the visitor centre, you might like to try something like the quiz described below:

## What am I? (Oral or written)

The answers to all of these can be found on posters, photos or drawings on the walls of the visitor centre.

Teacher gives the clues for the first one (as many clues as necessary, perhaps getting easier as you go, until the creature is guessed), then the child who answers correctly may be chosen to think up the next one and so on, or the teacher may continue. Simple questions should be used for younger children of course.

To get you started, here are some ideas:

### Takahe

*I am a bird but I can't fly.*

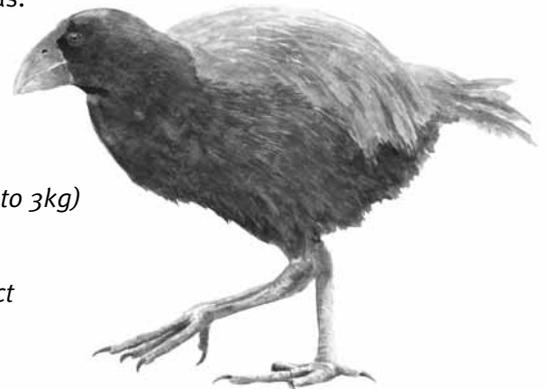
*I am very large and heavy (I weigh up to 3kg)*

*I prefer grassland to bush*

*Until 1948 people thought I was extinct*

*I have a large red beak*

And so on . . .



### Lighthouse

*I stand on the highest part of the island*

*I used to be red but now I am white*

*I have been on the island for more than 140 years*

*I am 21 metres high*

*At night I flash my light once every 15 seconds . . .*

### Tree weta

*Three different kinds of my family live on Tiritiri Matangi*

*I am small and brown and live in the bush*

*My family and I are sometimes called 'the mice of the New Zealand bush'*

*At night I scurry along the forest floor, looking for food*

*People are often scared of me but I don't hurt them. . .*

## **Tuatara**

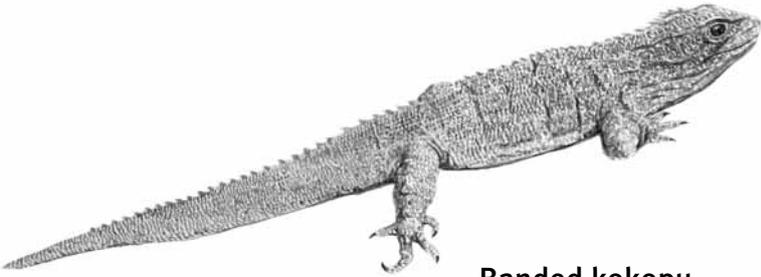
*I eat insects and sometimes birds*

*My Maori name means 'peaks on the back'*

*My family disappeared from Tiritiri Matangi many years ago but now we are back*

*I am a reptile but I'm not a lizard*

*My ancestors lived on earth 225 million years ago . . .*



## **Banded kokopu**

*I live in the little streams and pools on Tiritiri Matangi*

*I am a member of the whitebait family*

*My body has bands of colour across it and that gives me part of my name*

*I am a native New Zealand fish . . .*

## **Giant pohutukawa**

*I am 800 – 1000 years old*

*I was already living on Tiritiri Matangi when Rangitoto was an active volcano*

*Bees and tui love my red flowers in early summer*

*I live beside the Kawerau Track*

*I am so important I have my own special sign with a picture of me on it . . .*

## **Kiwi, pukupuku**

*I am an endangered bird*

*I have strong legs and sharp claws on my big feet*

*My soft grey-brown feathers and tiny wings are useless for flying*

*You won't be able to find me on Tiritiri Matangi during the day*

*My nostrils are at the end of my bill . . .*

## **Tiritiri Matangi Island**

*I am made of soil, rock and clay*

*Until 1984 I was covered in grass and bracken fern*

*Farm animals used to live on me*

*Now I am covered in native bush and birds love me*

*People come from all over the world to visit me*

# Measuring behaviour in birds

## Some suggested sampling techniques

NOTE: Before you decide on one of these techniques, you need to decide on a descriptive list of behaviours you are going to be looking for.

### 1. Instantaneous and scan sampling

A whole group of birds is rapidly scanned at regular intervals, and the behaviour of individual birds at each instant is recorded.

Because each observation must be brief, your behavioural categories must be easily and quickly distinguishable.

### 2. Focal sampling

Observing one bird for a set amount of time, and recording all of its behaviour in that time.

You need to have first decided on how long you will be observing (e.g. ten minutes). Then make sure you note the starting time.

Note that, if the bird you are watching moves out of view you can do one of two things. Either record how long it is out of sight then continue normal recording when it becomes visible again, or switch to another bird and try again.

### 3. Zero – one sampling

Decide what behaviour you want to record (e.g. preening, eating).

Then decide what time intervals you are going to use (e.g. 15 seconds every minute for five minutes, or 30 seconds every two minutes for ten minutes).

If the behaviour you are looking for occurs during the chosen time interval (15 seconds) record a tick. If not, record a cross.

