

6.0 FOREST DWELLERS

6.1 THE LOCALS

Each layer of the forest has its own characteristic animal species, forming a complex web known as the food chain. Some forest users live in one level and feed in another. Not only are there birds but also a wide variety of insects. Lizards also inhabit forest ecosystems.

Many people do not appreciate the almost complete dependence of the podocarps on forest dwelling birds for seed dispersal. Podocarp seed is well adapted for distribution by birds. Rimu totara and kahikatea have a small seed, which is surrounded by a small fleshy berry, while miro and matai consist of a hard nut encased in an edible coat. Rimu, totara and kahikatea seed is eaten by tūi, korimako (bellbirds), pōpokatea (whiteheads) and other birds while the larger fruit of the matai and miro are eaten by kererū.

Did you know....

Pūriri Moth

The pūriri moth scatter enormous numbers of eggs as it flies. The eggs are purplish and when the caterpillar hatches it makes its way to its food tree (usually putaputaweta, pūriri and makomako). The caterpillars are wood borers. The larva's life cycle lasts five years and during this time it eats the live wood boring vertical tunnels into the tree trunk. The tunnel, which the larva forms by eating the wood, is not just a simple structure often made by wood boring insects. It always has an outlet to the surface, but this opening is concealed. Around the opening, which is about 13mm in diameter, the bark of the tree is eaten away, and the bare part surrounding the hole is typically diamond shape. The larva then forms a tough, tight fitting, web curtain of silk in which particles of chewed bark are incorporated (you will see this on the tree as a black disk that is soft to touch, be very careful that you do not damage it). Where the moth has left a hole, the tree will be quite scarred (see below).



Webbing across entrance of a pūriri moth larval tunnel, and with webbing removed.

6.2. TASK

See if you can find a tunnel on the host tree species that looks like the above (here in Whirinaki it will most likely be a putaputaweta tree). The tree will be quite scarred and you should find a number

of old tunnels or current tunnels on the tree. **NB** If you want to touch the silk covering of the hole, do it very carefully as you do not want to damage the cover.

When taking a walk stop and listen - can you hear anything (do you hear any birds calling)? Do a 'Bird survey' (See 'North Island Kaka at Whirinaki). How many different birds can you see or hear? Try rubbing a cork across a wet bottle (or polystyrene will work on a wet plastic bottle) this may entice birds to investigate the sound.

6.3 PESTS

Before the arrival of humans, New Zealand had evolved a unique flora and fauna. The only mammal was the bat. There were no predators for many of the bird life as a result many of them have no mechanisms to protect themselves from introduced predators such as stoats, cats, possums rats etc.

Possoms, deer and goats all cause terrible damage to our native forest through heavy browsing. This has resulted in loss of certain species in some areas because they are a favourite food of these animals. Possum browsing can cause a loss of foliage (dieback) of the canopy. This can be seen in species such as northern rātā, kamahi, makomako (wineberry), pate, fuschia, mamaku tree ferns and mahoe, which are especially susceptible to possum browse. Intensive possum browsing can kill a tree.

Rodents are also introduced pests which threaten the long-term survival of native species. They include the kiore (Pacific rat), ship rat (Black rat), Norway rat and mouse. Kiore, introduced by early Maori voyagers, predate on rare weta, snails, frogs, lizards, tuatara, birds and bats, as well as other insects and the flowers, fruits and seeds of plants.

Ship rats and Norway rats also eat many small animals and plant material, including the adults, eggs and chicks of many rare birds. Mice feed primarily on insects and seeds. When mice populations in forests are high it affects the regeneration of kauri and rimu.

Rabbits were introduced during the mid 1800's for hunting, however by the 1870s farmers had already decided they were a pest, and so introduced mustelids - stoats, weasels and ferrets - to kill the rabbits. Ferrets were later farmed in Northland for their fur. These mustelids have decimated ground nesting birds. In May, 2002, stoats were declared "public enemy number one" for New Zealand birds. The extinction of the kakapo from the Mainland and the probable extinction of the South Island kokako are attributed to stoats.

Cats are another problem in Whirinaki. Wild cats found in the forest would have been originally abandoned pets. They now feed on the native birds and there is evidence that they have killed and eaten kereru.

6.4 TASK

Look at the young trees and seedlings as you walk through the forest can you see any evidence of animal browsing. What are the signs that possums and deer are in the forest? Do you see any? When you have a chance to view a hillside from the track today see if you can see any effects of possum browsing. If there is intensive browsing there will be a lot of dead or dying trees present.