



Congratulations to Thomas McBride of Timaru for winning our bat competition featured in the May journal. Several readers have questioned the article about the bat colony in a Geraldine church. We came across the story in a National Museum newsletter, but it seems it was incorrect. We apologise.

This month we take a look at how seeds travel. Plants use various methods to ensure their seeds don't just drop close by them. Wind, water and

animals can help and so too can vehicles. Or plants may merely rely on their own devices, such as shooting out their seeds.

I hope you enjoy helping Kiwi sort out in the competition below how those seedy suitcases are going to travel.

*Terry Fitzmaurice*



Plants have many ways of moving from one place to another. The most frequent carrier is the wind. You will have seen the seeds of dandelions floating by with their little parachutes of silver hairs. Fluffy parachutes are also used for spreading the seeds of thistles, Maori jasmine and mountain daisies.

Instead of hairs, some plants, mostly trees, have developed seeds with wings. The wings of sycamore seeds work rather like the propellers of an aeroplane. The seed capsules spin round and round in the wind.

The feather-light heads of beach plants such as spinifex grass are sent helter-skelter in the wind, the seeds dropping as the plant's heads roll across the sand. On riverflats the native dock can also tumble long distances, scattering seeds as it goes.

Other seeds become airborne because they are so small. Tiny orchid seeds are so light they are simply blown about like dust. The dust-like spores of ferns also drift in the wind. Even the seeds of big manuka and rata trees are easily blown around.

Raindrops can help spread plants. The egg-like spores of birds-nest fungi are usually splashed away by raindrops. Rain-fed rivers can start the journeys of fallen seeds such as kowhai. However, they are usually caught up in the roots and branches along the banks of our lakes and rivers.

We generally think floods are all bad news. Sometimes though, a big flood can provide the chance for seeds to find the right spot to grow again.

Some plants are spread by animals. Seeds like hookgrass simply cling to an animal's coat or your socks as you pass by. Later the seeds are brushed off in the undergrowth. You have probably experienced the problem of removing "stow-



The luscious looking seeds of kohuhu provide a feast for birds who carry them to new places where this hardy and attractive tree can grow.

aways" like bidi-bids which have hooked into your clothing. There are 32 species of hookgrass and 15 species of pipiri (bidi-bid) in New Zealand. Before the arrival of humans and their animals, these plants must have been spread by flightless birds such as moas, kiwis and wekas.

Ever since New Zealand was first inhabited people have also helped seeds travel. The Maori planted karaka near their pa for food and to attract pigeons. We now plant an enormous variety of seeds in all sorts of places either for the beauty or usefulness of the plant which grows from them.

The seeds of plants such as rushes have a sticky coating. This causes them to become attached to the feet of cattle, car tyres and especially bird feathers. Ducks are probably responsible for the rapid and widespread introduction of exotic rushes to swamps throughout New Zealand.

Other birds are great seed carriers too. Pigeons and tuis are attracted to the brightly coloured fleshy berries of miro, rimu and kahikatea. The juicy outer part of the berry is digested by the bird. The hard central seed is either spat out by the bird or is passed right through it. Bird droppings anchor the seeds where they fall. The droppings also provide the right supply of water and manure for the seeds to grow in.

Some plants use a kind of explosion to spread their seeds. Many of you would have heard the snap, crackle n' pop of broom pods on a hot summer's day. Inside the pods are thin cells which contain the seeds. These cells dry and expand more quickly than the outer thick skin of the pods. The pods eventually spring open to scatter the seed in all directions. Other plants such as our three native violets use the same method to disperse their seeds.