

What is pollination?

Pollination is a process that occurs when pollen, produced by a flower, is transferred to another flower. This transfer is made possible by pollinators. Pollinators can be the wind, water, or animals. The pollen then fertilises the flower and leads to seed and/or fruit production. These seeds then germinate to produce new plants.



DID YOU KNOW?
Pollination is vital to the reproduction of flowering plants and the production of the fruits and vegetables we eat. One out of every three mouthfuls of food is made possible by a pollinator eg; apple, banana, cabbage, cocoa, sugarcane, tomato, potato, plum and beans.

Why is pollination important?

Imagine a world without chocolate! – without pollination the cocoa plant would not be able to produce the cocoa bean which is the main and vital ingredient of chocolate.

We all depend on pollination and pollinators to provide us with the huge array of food we eat every day. Pollination is a key part of the web of life that ensures ecosystems are sustained and plants can reproduce.

pollinators & plants a precious partnership

“Every flower is a garden, a small Eden for a nectar-craving butterfly, bee or bird.”

DIANE ACKERMAN

Pollination requires the transfer of pollen from one plant to another. In 90% of the world's plants this is achieved by animals. Animals can only assist with pollination if they can move between the different plants easily – if plants are too far apart then pollination cannot occur and the plant populations cannot grow. Plants and pollinators have a special partnership where the plant benefits from pollination because the flower is fertilised and makes seeds and fruits, and the pollinator benefits because it eats the nectar and pollen either themselves or to give to their offspring.

Unfortunately, pollinators throughout the world are becoming less numerous and less diverse due to habitat loss, disease, use of pesticides and introduced species which have negative impacts on native pollination systems.

Hints and Tips for a pollinator friendly Garden

There are a number of things you can do in your own gardens to make them more appealing to visiting pollinators. Here are a few ideas...

Provide over-wintering places and shelter

- ✿ Upside down flower pots
- ✿ A small sheet of corrugated iron or onduline
- ✿ Rock piles
- ✿ Log piles
- ✿ Leave leaf litter under plantings
- ✿ Create a pollinator palace







Provide food sources and over-wintering places for eggs and larvae

- ✿ *Muehlenbeckia* and native nettles for native butterflies
- ✿ Plant a variety of nectar-rich flowers both native and exotic that bloom at different times of the year



NZ's Native Bees tiny heroes of nature

There are 40 species of native bee in New Zealand. These tiny insects spend most of their day working hard gathering nectar and pollen to feed themselves and their young. In doing this they transfer the pollen of our native plants from flower to flower. Most of our native bees are solitary – which means they don't have a large hive like the common introduced honeybee and they nest in tiny holes in the soil often with the nests grouped together in one area.

-  **Lasioglossum bees** – the smallest of our native bees, these tiny pollinators are black or greenish and 4-8mm long.
-  **Hylaeus bees** – 7-9mm long and thin with hardly any hair and are black with small yellow markings.
-  **Leioproctus bees** – 5-12mm long look similar to honeybees but smaller.
-  **Honey Bee**

Provide water

- ✿ Pollinators such as butterflies and birds will gather and sip at shallow areas of water.
- ✿ Bird baths
- ✿ Depressions in ground (mud puddles)
- ✿ Shallow tray on ground



Avoid pesticides and herbicides

Many of these can be harmful to pollinators as well as the pests you are trying to get rid of. If you need to control pests, then apply after sundown when most pollinators have stopped moving around the garden.



Landscapes for life

You Can Make a Difference

By following some of the suggestions in the Landscapes for Life pollination wheel and in this information guide you can ensure successful pollination occurs in your garden. Your garden itself will become a pollinator friendly landscape.

NZ's Native Butterflies

There are 25 species of native butterflies and moths in New Zealand.

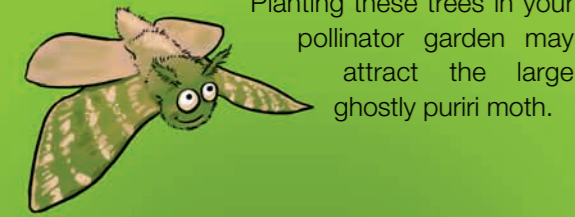


Copper butterfly caterpillars feed only on *muehlenbeckia*, so if you can include some *muehlenbeckia* in your garden you may be able to attract these tiny orange pollinators.

Red and Yellow admirals are brightly coloured butterflies and need nettles for their caterpillars to feed on. If you have a corner of your garden where nettles can grow undisturbed then you might get admirals breeding in your garden and pollinating your native flowers. But be careful to keep nettles out of harms way – as they can cause a stinging rash.



The Puriri moth is the largest moth in New Zealand! Its caterpillars tunnel into the wood of puriri, maire, manuka and wineberry trees.



Planting these trees in your pollinator garden may attract the large ghostly puriri moth.



Interesting Facts

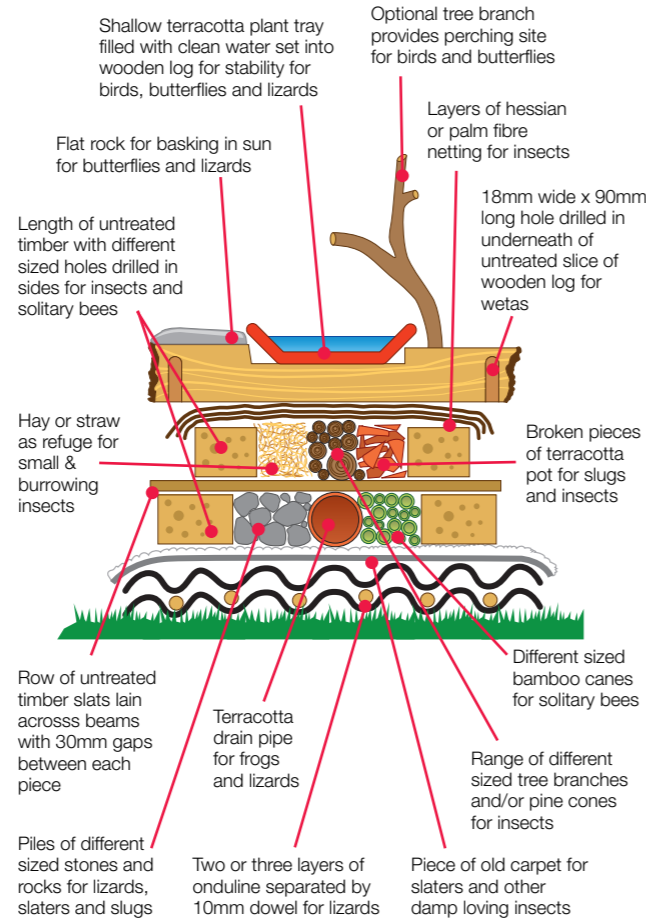
Many people often comment that NZ native plants are not very colourful as their flowers are mainly white green or yellow. It may be that this is because most of our native pollinators are insects, and these colours are the most attractive to our native bees, moths, beetles and flies.

How to make a pollinator palace

You can help to attract pollinators to your garden by providing artificial habitats. Why not try making a pollinator palace to put in a sheltered corner of your garden. The pollinator palace provides different habitats for different types of pollinators while your planting matures. You can make your pollinator palace any size, the one shown here is 600mm x 600mm x 800mm high.



A pollinator palace can be a creative and interesting feature in your garden – use your imagination to make it the perfect hide-away for our native pollinators.

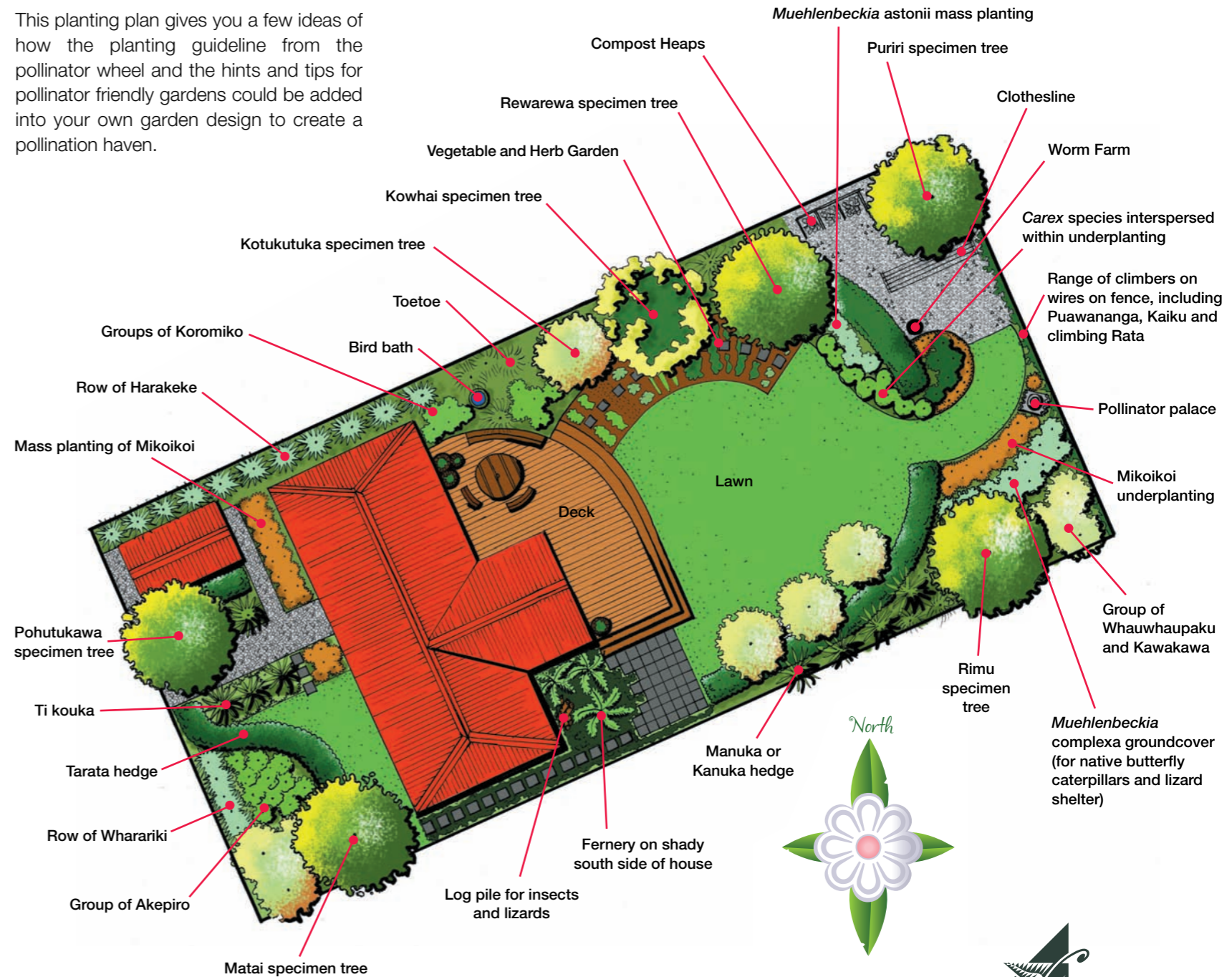


Planting for pollination

Example Planting Plan for an Urban Pollination Haven

Every garden can contribute to successful pollination and provide a habitat for pollinators and other wildlife. Each garden then links together with public parks and streets to create a green network of habitats throughout the City.

This planting plan gives you a few ideas of how the planting guideline from the pollinator wheel and the hints and tips for pollinator friendly gardens could be added into your own garden design to create a pollination haven.



“ Take this rectangle of land, reproduce it twenty times, lay the reproductions out in rows, place the rows back to back – what emerges is a mosaic of ecosystems and corridors for wildlife.”

SARA STEIN

For more information visit www.waitakere.govt.nz

Waitakere City Council
Te Taiao o Waitakere