



Wuhoo Timaru

Trevor Griffiths Rose Garden, Caroline Bay, Timaru Te Tihi-o-Maru



A Special Rose Garden Gift

Over 20 years ago, the Timaru Beautifying Society had a big dream – to save and share a collection of roses in a public garden. With the help of Trevor Griffiths and his family, their dream came true. In 2001, they gifted the garden to the people of South Canterbury.

Some roses, known as species (wild roses) have been around for millions of years. Others are bred by people like Trevor, to have specific traits such as particular leaves, thorns, flowers, colours, scents, and good health.

Breeding roses is a complex process where pollen from one rose is brushed to another to create a new plant with desired traits. Success is only known once the plant blooms. Breeders then take cuttings, bud or graft plants to grow genetically identical roses, preserving its unique traits. This is why roses like those in this garden are so special. If a rare plant dies, it could be lost forever.

Trevor Griffiths (1928-2010) was a rose collector, grower, and author, who developed the world's third largest collection of old roses at his nursery near Temuka. When he retired, The Timaru Beautifying Society reached out to Trevor to see if they could create a community garden from his collection. The Griffiths family budded and grafted 1,200 roses and planted them in the new garden at Caroline Bay.

The Trevor Griffiths Rose Garden was designed by architect Sir Miles Warren (1929–2022), renowned for his Brutalist design of Timaru's public library and his Ōhinetahi garden near Lyttelton, which became one of NZ's top formal gardens and a lifelong passion for him.

The Rose Garden at Caroline Bay in Timaru features geometric beds radiating from a central pergola.

Trevor planned the garden by rose families, enabling visitors to trace each rose's lineage, with nearly every rose family in the world represented.

English roses were planted in groups of twos and threes for continuous flowering, and ordered by colour gradient from pinks and crimsons to apricots and yellows. The apricots and yellows were positioned at the west end, where the sun sets.

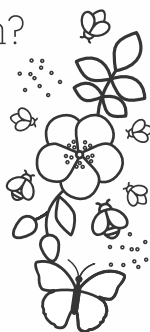
The Timaru Beautifying Society fundraised \$205,000 towards the garden. Trevor, his son Bevan and wife Elizabeth planted all 1200 roses and the Deadheaders volunteers gave over 7000 hours caring for the garden over 25 years. When the garden opened in 2001, it was debt free and gifted to the people of South Canterbury to be cared by Timaru District Council and was recognised as one of the largest rose collections in the Southern Hemisphere.

In 2012, the garden received the World Federation of Rose Societies Garden of Excellence Award and in 2023 awarded five stars by the New Zealand Gardens Trust. Thanks to Trevor's passion for roses, and the dedication of volunteers and the council, many rare roses were saved for everyone to enjoy!

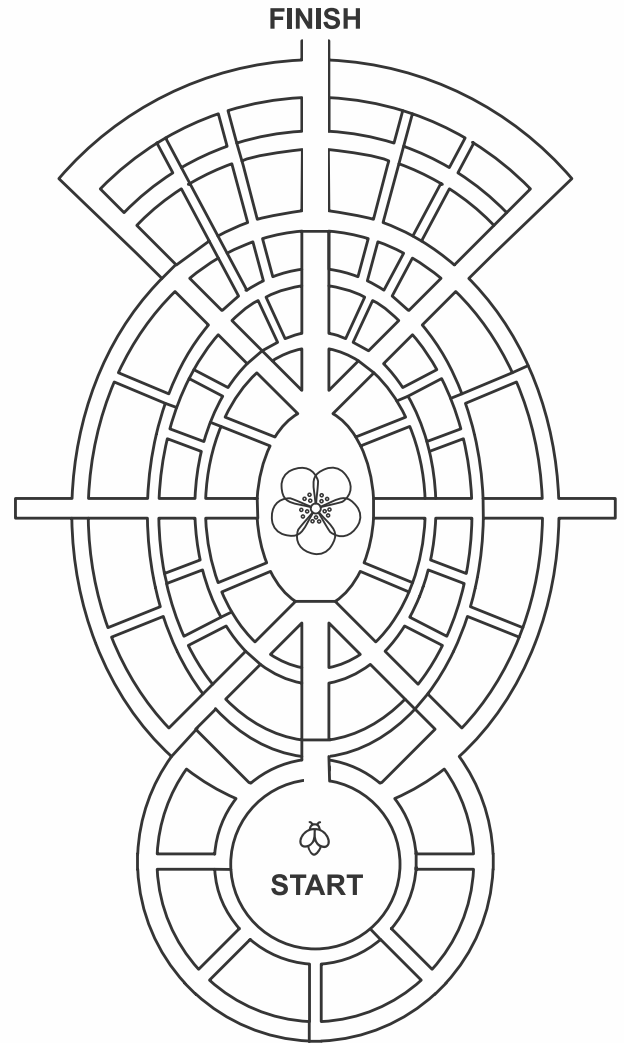
The Timaru Festival of Roses celebrates when the roses look their best in November and December. Enjoy the stunning wild and modern roses by visiting the Trevor Griffiths Rose Garden below the Piazza at Caroline Bay, and explore the Species Rose, Heritage Border, and Anderson Rose Gardens at the Timaru Botanic Gardens.

Can You Spy Treasures In The Garden?

- Can you find more than ten rosebuds starting to bloom?
- How many different coloured roses can you find?
- Do the roses smell the same? Which are your favourite?
- Can you spy on insects helping to pollinate the roses?
- Can you find any rose hips? What do you think is inside?
- Which roses have the biggest thorns? Any without?
- Is there a special area that feels fun, special or secret?



Solve The Sir Miles Warren Maze



Can You Find All of the Words?

T N O P B P P F W O L L E Y T
 E D P I N K L E O Y N C I T R
 V A H H E R E B O L N F L N B
 L S T E M O G E R A I O E G B
 E S A S D D E R R S L A T E P
 V P G O M L G G E N S S G Q D
 E V L R P G A R D E N N G E N
 E N E B H R T O H Y B R I D S
 T E E Y F A N V W R E O E A O
 E M L P M P I A B P I H U D S
 U A B G F E V R P W R T O E E
 Q T U I U L E Y S T H T I E P
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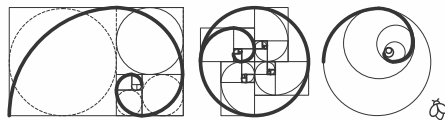
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|-----------|--------|---------|---------|--------|--------|
| Bloom | Petals | Blossom | Perfume | Yellow | Stamen |
| Bud | Stem | Bouquet | Vintage | White | Ovary |
| Fragrance | Garden | Foliage | Pink | Velvet | Seed |
| Thorns | Hybrid | Rosehip | Red | Sepals | |



Reflect On Rose's Beauty, Symmetry, And History.

Your colours could symbolise red for love, pink for gratitude, yellow for friendship, and white for purity. The rose's shape reflects millions of years of evolution, with both ancient patterns and recent changes. Its softness may evoke various feelings as you look at, smell, and touch it.

The first species of wild roses typically had five single petals. Their growth often follows the Fibonacci sequence, also known as the golden ratio, a natural pattern found in many plants. This sequence (where each number is the sum of the two previous ones: 0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, ...) is visible in the



arrangement of leaves, petals, fruits, and seeds. It plays a vital role in helping plants maximise sunlight and improve pollination.

Can you spot how the golden ratio repeats in nature? Roses, ferns, sunflowers, daisies, and pinecones are fun to study.

The beauty of modern roses is the result of millions of years of natural evolution and careful breeding. It is not easy, and takes a lot of time, merging plant genetics, horticulture, and artistry. This is why rose breeders are so highly regarded.

HOW MANY ROSE GARDENS CAN YOU VISIT?

Most roses flower from November to July.

BELOW THE PIAZZA, CAROLINE BAY, TIMARU
Trevor Griffiths Rose Garden Est 2001
 World Federation of Rose Societies, Garden of Excellence.

TIMARU BOTANIC GARDENS Est 1864
 35 Queen St Parkside, Timaru
 New Zealand Gardens Trust, Garden of National Significance

Species Rose Garden Est 1989
 NZ's largest collection of species roses includes 57 of the 100-150 known species, grown from donated seeds.

Anderson Rose Garden Est 2002
 Formal rose garden Mr. Anderson was Curator of Reserves for Timaru City Council from 1932 to 1956, author and a member of the Botanists' Hall of Fame.

Geraldine and Temuka Domains have rose gardens and many of the Districts towns have flower carpet roses in urban areas.

Origin of Modern Roses

The Dutch East India Company introduced roses from China to Europe in 1760s. People brushed pollen from one rose onto another plants rose to create seeds and grow new varieties. The modern rose was bred by combining the fragrance and shape of European roses with the hardiness and year round blooms of Chinese roses.

English roses, were developed by British rose breeder David Austin in the 1960s. Once breeders like David and Trevor Griffiths successfully created a new rose with desired traits like color, shape, scent, and disease resistance, they took a cutting from the stem to grow a new plant. This ensured the new plant would be genetically identical to the parent, preserving those traits. If they used seeds, there was a risk of cross-pollination, which could introduce unwanted traits from another plant. The modern varieties of roses we enjoy today are products of selective breeding.

Pollination

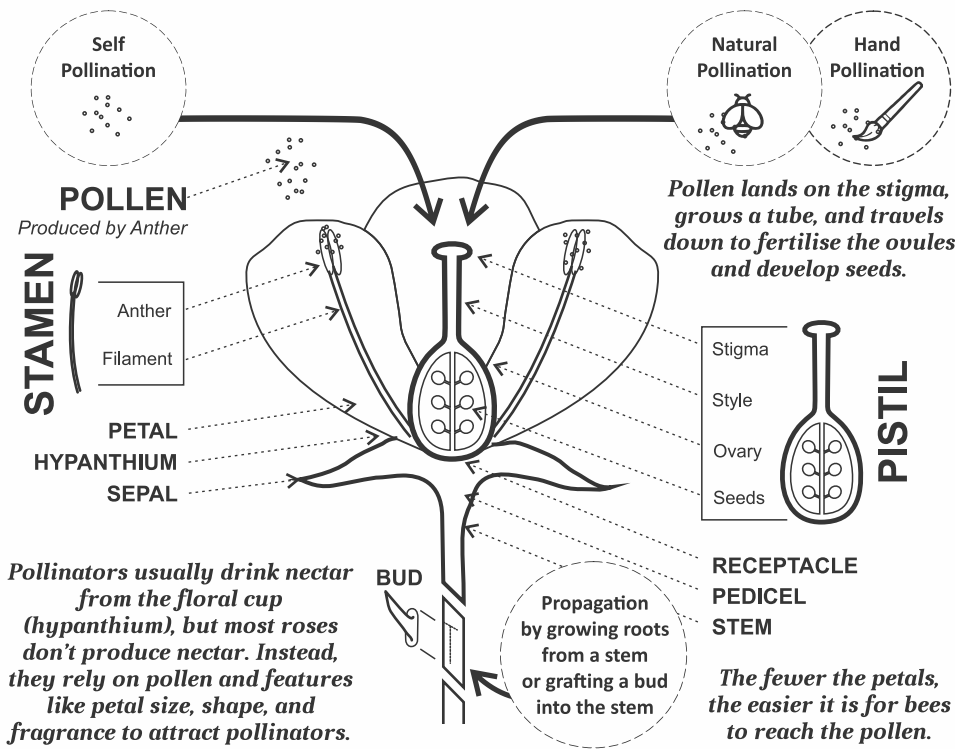
Self Pollination: Some rose varieties can fertilise themselves with their own pollen.

Cross Pollination: Insects visit the rose, and as pollen sticks to their bodies, it transfers onto the stigma of other roses, fertilising the flowers.

Hand Pollination: Pollen is brushed from one flowers anther to another's stigma to create hybrids with specific colour, fragrance etc...

Propagation From Cuttings: Cut a 200mm stem from the plant, dip it into rooting hormone to grow roots.

Budding and Grafting: A T-cut is made in the strong and resilient plant rootstock, and a bud from a mature rose with desired traits is inserted. A calice forms to hold bud into the rootstock stem, and once established, the top of the root stock off is cut off.

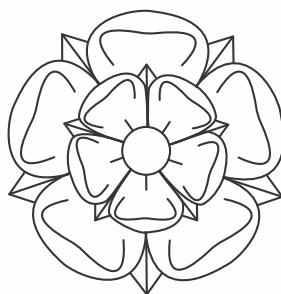


Rose Life Cycle

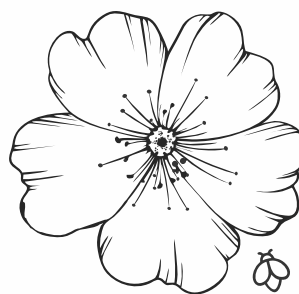
- Pollinate:** The flower's anther produces pollen, which sticks to the stigma at the top of the flowers pistil.
- Fertilise:** The pollen travels down the style into the ovary in the pistil, where it fertilises the ovules (seeds).
- Develop:** The plant focuses on developing the seeds, the petals fall, and the pistil swells into a rose hip.
- Dormant:** In winter, the cold helps break open the seed coat of the rose hips.
- Germinate:** As spring arrives, the seeds germinate and grow into new plants.

Tudor Rose

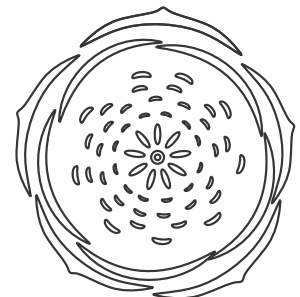
From 1455 to 1487 two families were at war over who should be the King of England. It was known as the Wars of the Roses. The red rose symbolised the House of Lancaster, and the white rose symbolised the House of York. The conflict ended in 1487 when Henry VII of Lancaster married Elizabeth of York. This marriage united the families and was symbolised by the Tudor Rose, a blend of the red and white roses to signify peace and unity. The Tudor Rose became a symbol of England, influencing works by William Shakespeare and later being incorporated into Anglican religious and national emblems.



Tudor Rose



Species (Wild) Rose



Structural Representation of a Rose
Used in botany to describe the floral formula and parts

The earliest members of the rose family (Rosaceae) are believed to have appeared millions of years ago. Fossil traces of rose-like plants were found in the Oligocene epoch (a geological period 34 to 23 million years ago) in Europe, Asia, and western North America!

There are different types of roses, including Species, Old World, and Modern Roses. Subcategories of Modern Roses include Hybrid Teas, Floribundas, and Grandifloras!

The world record for the tallest rose bush is over 18 feet tall!

Rose petals and hips are used in wines, teas and jams, and are a source of vitamin C!

Scientists sent roses into space to study them in zero gravity!

Tiny spines on rose stems help roses climb and protect themselves!

The first domesticated roses may have been deliberately cultivated as early as 3,000 BCE. They were used in the making of rosewater, in perfumed oils, for medicinal purposes, and as confetti for celebrations!

Roses were valued by ancient people in places like China, Babylon (where they were said to be part of the famous Hanging Gardens), Persia, Egypt, and even Europe!

In ancient Egypt, roses were believed to link the living and the afterlife, and worshippers of the goddess Isis offered her roses!

In a Greek myth, roses turned red when Aphrodite (goddess of love, beauty, and desire) cut her foot on rose thorns while rushing to save her dying lover, Adonis. Adonis' story is often seen as a symbol of the cycle of life, death, and rebirth in nature.

In another Greek myth, a bee stung Eros (god of love and desire) while he was smelling a rose. In anger, he shot arrows at the bush, causing it to grow thorns.

French Emperor Napoleon Bonaparte (1769–1821) grew to power during the French Revolution. His first wife, Josephine, helped popularise roses by purchasing the Malmaison estate near Paris and filling its gardens with roses from around the world.

Medieval monks grew roses in monastery gardens for medicines, perfumes, rose water, and spirituality.

There was intense competition in the 1600s among Dutch rose breeders to create the most beautiful and fragrant roses, driving the development of the varieties we enjoy today.

Can You Colour Introduced and Native Pollinators on this Rose?

 Insects visit flowers for nectar and pollen, and help plants reproduce. 

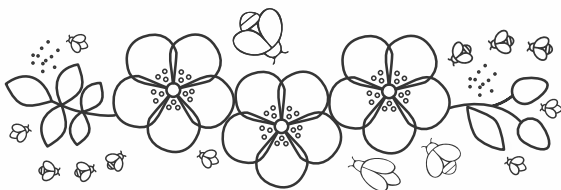
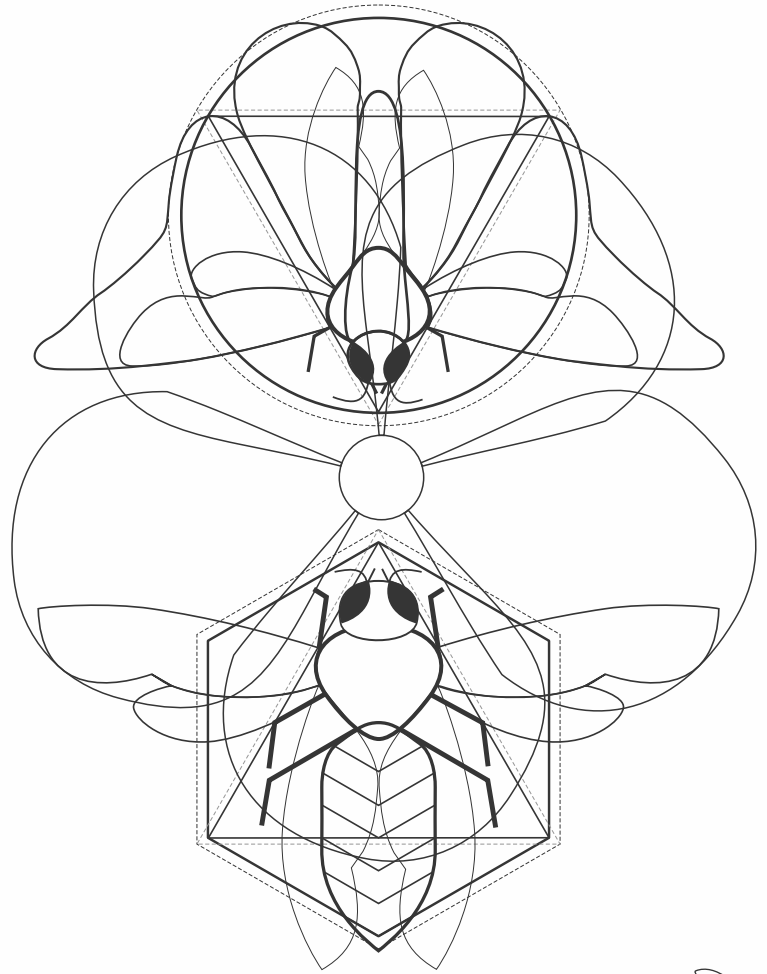
The first honey bees were introduced to NZ in 1839 by English settlers. They pollinate crops like red clover, which is vital for animal feed and soil fertility. Beekeepers harvest bees honey and wax to sell.

Honey bees are attracted to flowers' vibrant colours, scents, and nectar. They land on flowers to collect nectar with their tongues. As the bees move from flower to flower, pollen sticks to their bodies and is transferred to other flowers. The pollen moves inside the flower to grow seeds for new plants.

The bees return to the hive and convert the nectar into honey by passing it from mouth to mouth among hive workers, evaporating excess moisture. The thickened nectar is then stored and sealed in wax to become honey. Bees eat the honey during the colder months when nectar is scarce. The pollen collected from flowers is used to feed their larvae (baby bees). It's a big team effort to grow their colony.

Most roses don't produce nectar, relying on pollen, petals, and fragrance to attract pollinators. Fewer rose petals make pollen easier for bees to access.

Bumblebees were introduced in the 1880s to pollinate crops that honey bees couldn't reach. They use 'buzz pollination' to vibrate the flower to release the pollen from the flower's anthers. A bumblebee can do the work of 50 honey bees and live in nests.




How Many Native Bees Can You Find?

ANSWER

New Zealand has around 30 native bee species. These small, black bees have short tongues and feed on nectar and pollen. They don't make honey or live in hives, instead, they nest by themselves in soil or hollow stems and travel only about 100m to collect pollen.

Native bees are not as attracted to roses because they are harder to gather nectar and pollen from but are essential pollinators for native plants. Native bees are unaffected by the Varroa mite, making them a resilient and important part of NZ's environment.

 **IS IT A BEE OR A FLY? Bees tuck their wings into its body when resting, while a fly keeps its wings spread out.**

How Many Questions Can You Answer?

How do bumble bees gather pollen?

- a) With their pockets
- b) They vibrate in a specific way
- c) They sneeze to release the pollen

What do honey bees eat in winter when there are fewer flowers?

- a) Honey b) Bee-rrito's c) Pollen

What is honey?

- a) Pollen that ferments in the hive
- b) Nectar processed by bees
- c) Bee-uty products for queen bees

What do bees use pollen for?

- a) Feeding larvae (baby bees)
- b) Honey to feed the bees in the hive
- c) Attracting bees to grow their buzzing social life

What do flowers get out of attracting bees?

- a) A buzzing good time!
- b) Pollination to grow new plants
- c) Energy to bloom for longer
- d) None of your beeswax!

How can a bumblebee do the work of 50 honey bees?

- a) They are larger and carry more pollen
- b) They fly faster and in cooler weather
- c) Bee-cause they forage for longer
- d) All of the above

What do bees collect on their legs when drinking nectar from flowers?

- a) Pollen b) Bee-longings
- c) Seeds d) Grass stains

How many flowers can honey bees visit in a day?

- a) 50 b) 100 c) 1000s
- d) 1,000,000 - It's a bee-zy day for them

How much weight can honey bees carry in pollen?

- a) The weight of a peanut
- b) Half their body weight
- c) Enough to feel bee-yond strong

a) The weight of a peanut, a) Honey, b) Nectar processed by bees, a) Feeding larvae, b) Pollination to grow new plants, c) 1000s, d) All of the above, a) Pollen, c) 1000s, b) They vibrate in a specific way.

