

# *Schinus molle* Peppercorn



*Schinus molle*: Avenue, GBG, January 2024

## Introduction

The generic name is derived from the Greek word for *Pistacia lentiscus*, Σχίνοϛ (schinos) which it resembles. The word *molle* in *Schinus molle* comes from mulli, a Peruvian word for the tree.

Common names: Peruvian pepper, American pepper, Peruvian peppertree, escobilla, false pepper, rosé pepper, molle del Peru, pepper tree, peppercorn tree, California pepper tree, pirul, Peruvian mastic, Anacahuita or Aguaribay and Pepperina.

## Description

*Schinus molle* is a quick growing evergreen tree that grows up to 15 m tall and wide. It is the largest of all *Schinus* species and potentially the longest lived. The upper branches of the tree tend to droop. The pinnately compound leaves measure 8–25 cm long × 4–9 cm wide and are made up of 19–41 alternate leaflets. Male and female flowers occur on separate plants (dioecious). Flowers are small, white and borne profusely in panicles at the ends of the drooping branches. The fruit are 5–7 mm diameter round drupes (stone fruit like cherries, distinct from berries that have seeds with a thin coat) with woody seeds that turn from green to red, pink or purplish, carried in dense clusters of hundreds of fruit that can be present year round. The rough grayish bark is twisted and drips sap. The bark, leaves and berries are aromatic when crushed.

The tree reproduces through seed, suckers and cuttings. The seeds have a particularly hard coat and germination rates are greatly improved after they have passed through the gut of birds or other animals. Seeds germinate in spring, with seedlings slow growing until established. The seeds easily germinate under the tree in the existing leaf litter of the mother tree, by the hundreds at once and can easily be transplanted.

## Distribution

*Schinus molle* is native to the arid zone of northern South America and Peru's Andean deserts, extending to central Argentina and central Chile. It has, however, become widely naturalised around the world.



***Schinus molle*:** Left: Alternate leaves with several inflorescences. Photo: DJ CC BY-NC-SA 4.0.

Top right: Male flower showing the yellow nectar disc, 10 stamens in 2 whorls and 5 petals.

Bottom right: Female flowers, each with 2 stigmas above the ovary and reduced, infertile stamens. Lower right: Flowering just finished and fruit developing. Both flower photos: US National Park Service Public domain.

*S. molle* is a drought-tolerant, long-lived, hardy evergreen species that has become a serious invasive weed internationally. In South Africa, for example, *S. molle* has invaded savanna and grasslands and become naturalized along drainage lines and roadsides in semi-desert. It is also invasive throughout much of Australia in a range of habitats from grasslands to dry open forest and coastal areas, as well as railway sidings and abandoned farms.

In California, in the late 19th century, *S. molle* was planted abundantly and became known as the "California pepper tree" to many. However, *S. molle* fell out of favour as a street tree in the early twentieth century, in part because it hosts black scale, which threatened the Citrus groves of Southern California. The trees also tend to heave up sidewalks with their roots, produce suckers, and interfere with buried telephone wires and sewer pipes.

In Australia, Peppercorn has been widely grown as a garden and street tree. Through our transfer and trading relationships between botanic institutions and scientific institutions, we had very strong ties to South America in the late 19th and early 20th century — to Brazil and Argentina in particular. Many plants came to Australia via this strong trading link with the Americas.

Its dispersal across Australia was mainly via Adelaide's Botanic Gardens. The peppercorn tree's immediate success in Adelaide's alkaline soils saw George Francis, the director of Adelaide Botanic Gardens, enthusiastically promote the species to other dry parts of the nation. The colonists of South Australia actually produced them and they traded them up the rivers before the rail system got in. They were later planted in parks, streets, railway stations and schools, especially in the 1890s.

Seeds are spread by animals, and it also spreads from suckers. The NSW Dept of Primary Industry describes Peppercorn trees as "environmental weeds that compete with native plants". It has been assessed as moderately invasive in Victoria.



**Schinus molle** fruit: Right: ripe fruit on tree. Photo Liz Upton, Wikimedia commons CC BY-SA.

Top left: fruit has flesh enclosed by a thin skin. Photo: Alexander Klepnev, Wikimedia Commons CC BY 4.0.

Bottom left: when the flesh has dried (been eaten?), the hard stone seed is visible.

Photo: Marianne Guarena, iNaturalist.org, CC BY-NC

## Uses:

### Culinary

Although not related to commercial pepper (*Piper nigrum*) the pink/red berries are sold as pink peppercorns and often blended with commercial pepper. The fruit and leaves are, however, potentially poisonous to poultry, pigs, and possibly calves. Records also exist of young children who have experienced vomiting and diarrhoea after eating the fruit.

Extracts of *S. molle* have been used as a flavor in drinks and syrups.

### Medicinal

In traditional medicine, *S. molle* was used in treating a variety of wounds and infections due to its antibacterial and antiseptic properties. It has also been used as an antidepressant and diuretic, and for toothache, rheumatism and menstrual disorders. Recent studies in mice provide possible support for its antidepressant effects.

### Timber

It is known for its strong wood used for saddles in the Spanish colonies.

### Other uses

Fresh green leaves in bunches are used shamanically in Mesoamerican traditional ceremonies for cleansings and blessings.

The leaves are also used for the natural dyeing of textiles in the Andean region. This practice dates back to pre-Columbian times. The Incas used the oil from its leaves in early mummification practices to preserve and embalm their dead.



**Schinus molle.** Above: Eastern Park, avenue of Peppercorn trees leading to the location of the first cottage for the Curator of the GBG.

Older trees planted in late 19th Century. Youngest trees (far end) planted Winter 2012.

Photos: Left: DJ. Right: Google Earth 29/10/12 (Licence similar to CC BY-NC-SA)

**Below:** The avenue within the GBG was reinstated with in-fill saplings in Winter 2013.

Image: Google Earth 27/1/14 (Licence similar to CC BY-NC-SA)

It has been speculated that *S. molle*'s insecticidal properties make it a good candidate for use as an alternative to synthetic chemicals in pest control.

*Schinus molle* is also used as a raw material in perfumery.

### Historical use

There is archaeological evidence that the drupes of *S. molle* were used extensively in Peru (600–1000 AD) for producing chicha, a fermented alcoholic beverage. Seeds from the vilca tree (*Anadenanthera colubrina*) produced an hallucinogenic drug which was combined with the chicha.

The Inca used the sweet outer part of ripe fruit to make a drink. Berries were rubbed carefully to avoid mixing with the bitter inner parts, the mix strained and then left for a few days to produce a drink. It was also boiled down for syrup or mixed with maize to make nourishing gruel.

**Order:** Sapindales

**Family:** Anacardiaceae [80 genera, including *Anacardium* (cashew), *Cotinus* (smoke bush), *Mangifera* (mango), *Pistacia* (pistachio), *Rhus* (sumac) and *Toxicodendron* (poison ivy, poison oak, poison sumac)]

**Subfamily:** Anacardioideae

**Genus:** *Schinus* (35 species are accepted, including *Schinus molle*)

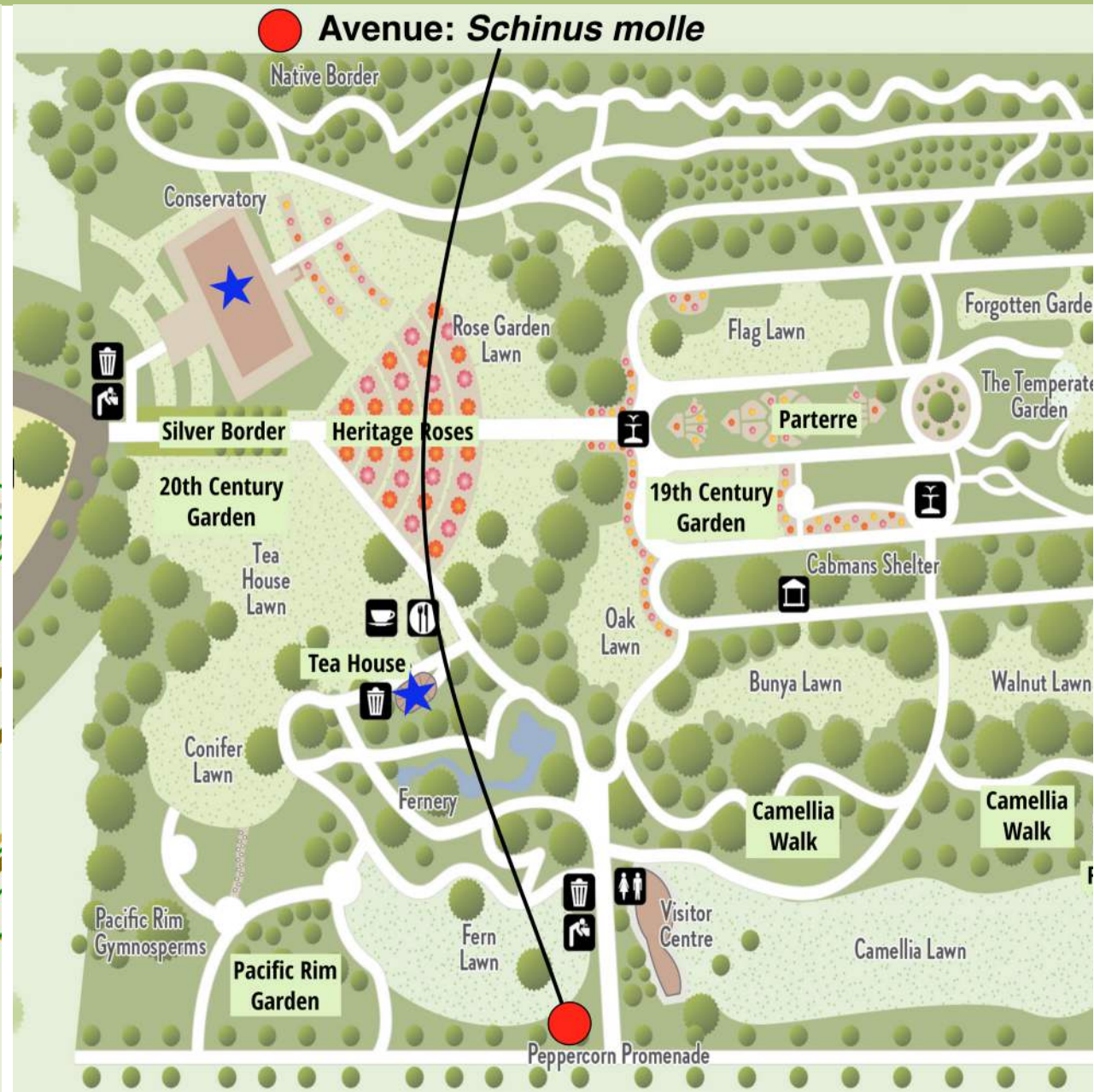
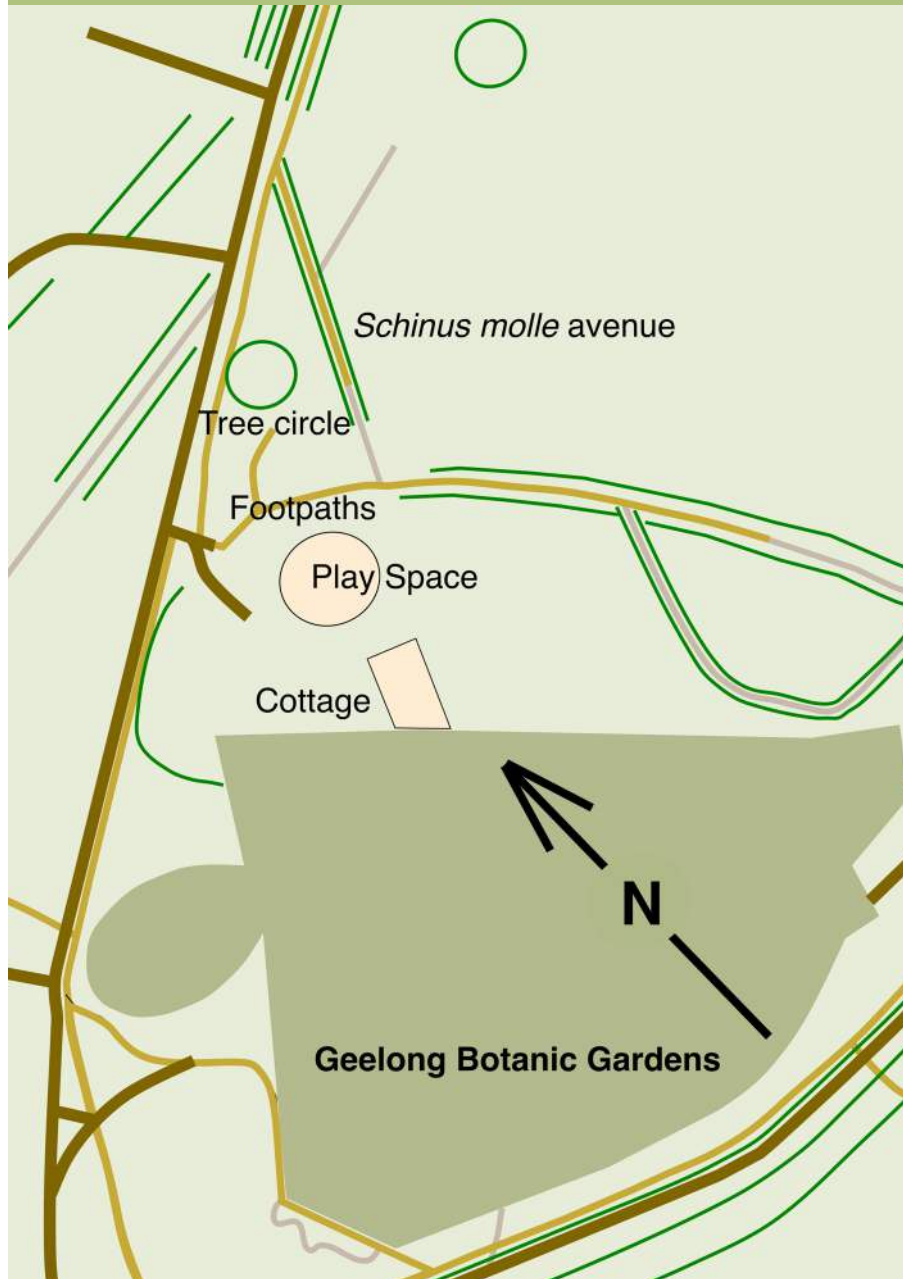
### In Eastern Park and Geelong Botanic Gardens

Eastern Park has many avenues which bordered traditional carriageways in the 19th Century. Some of these are Peppercorn avenues. One has been incorporated at the top of the Pacific Rim Garden, and extends out east of the wire fence into Eastern Park. Another runs north from the barbecue shelter towards the waterfront. There are several other single specimens in the Gardens and Eastern Park.



# Friends of Geelong Botanic Gardens

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Maps: Eastern Park and Geelong Botanic Gardens



SCHINUS Molle.

MOLLÉ à folioles dentées.

*P. Bessa pinx.*

*Didier sculp.*

**Schinus molle.** Main image: Alternate leaves and inflorescence, 1. Flower bud with 5 petals  
2. Male flower, 3. Female flower

Botanical drawing by P. Bessa, 1801, in *Traité des arbres et arbustes que l'on cultive en France en pleine terre.*

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