

MT LOFTY BOTANIC GARDEN

APRIL 2025 self-guided walk from the LOWER CAR PARK



We provide a copy of this walk on the Noticeboard at the Gardens which may be photographed or there is a downloadable version on our website

<https://www.friendsbgadelaide.com/garden-guides> (Mt Lofty Botanic Garden Lower Car Park).

Autumn conditions in the Mount Lofty Botanic Gardens (MLBG) highlight one of the features of the Gardens, being its collection of deciduous trees, and the colours they develop in preparation for winter dormancy. The green colour in most trees arises from their chlorophyll content. Chlorophyll is a biomolecule which is the enabling pigment for photosynthesis as it allows plants to absorb light energy and convert it into a food source. The green colour arises as chlorophyll molecules strongly absorb energy from the blue and red portions of the light spectrum whilst reflecting green light. As deciduous trees prepare for winter, their leaves cease function which includes loss of chlorophyll. As the chlorophyll level declines other natural pigments in the leaf become visible. These include carotenes (the orange colour of carrots) and anthocyanins (red colour in wine and berry fruits). Yellow is the default colour for most healthy plants as their chlorophyll content declines. However, there are many species which contain pigments which provide contrasting colours, including shades of red and orange. Over time, gardeners have selected these plants for their stunning autumn display and Mount Lofty has a wonderful and contrasting collection.

To begin this walk, make your way down to the dam via the curved path below the display garden. The current planting is of lupins which have given a fabulously colourful summer display. The MLBG gardeners will move these perennials to the woodland garden and then replant with ornamental brassicas in early May. Make your way through this section where plantings of salvias and three members of the **Asteraceae** family; dwarf sunflowers (*Helianthus*), marigolds and zinnias provide a pleasing palette of colours.

Before turning left to the dam wall take time to enjoy the planting on your right, *Berberis x smithii* 'Hancockii' (**Barberry**) which is one of many selections of *Berberis*, all with distinctive characteristics which make excellent deciduous border plants. *Berberis* spp. feature spines (modified leaf), yellow/orange flowers and red/purple berries as well as two forms of shoots (dimorphic). Long shoots form the main structure of the plant and are non-photosynthetic. These shoots form spines which provide an additional feature as a border plant. The other type are short shoots (1-2mm) which form leaves in their axils and provide the attractive colour variations seen in selections of these plants.

Cross the dam wall and just before climbing the stairs is a trellis of *Ampelopsis brevipedunculata* (with a short flower stalk) or **porcelain berry**, stretching along the overflow. It has ripening berries ranging in colour from bright turquoise to blue and mauve. This vine is a member of the family Vitaceae, which includes all wine grapes. The area ahead is an arboretum of deciduous trees which are reliant on high rainfall but suffering in this dry season meaning that they are not at their best as leaf fall has been early due to moisture stress. However, on reaching the main road on your right you will see the autumnal reds of on avenue of **Pin oaks, *Quercus palustris***, above the canopies in the arboretum. Pin oaks prefer acidic soils and are naturally a wetland tree, the specific epithet 'palustris' meaning "of swamps". A feature of Pin oak (shared by several other oak species, and some beeches and hornbeams) is the retention of leaves through the winter on current season shoots, only falling in the spring when the new leaves appear.

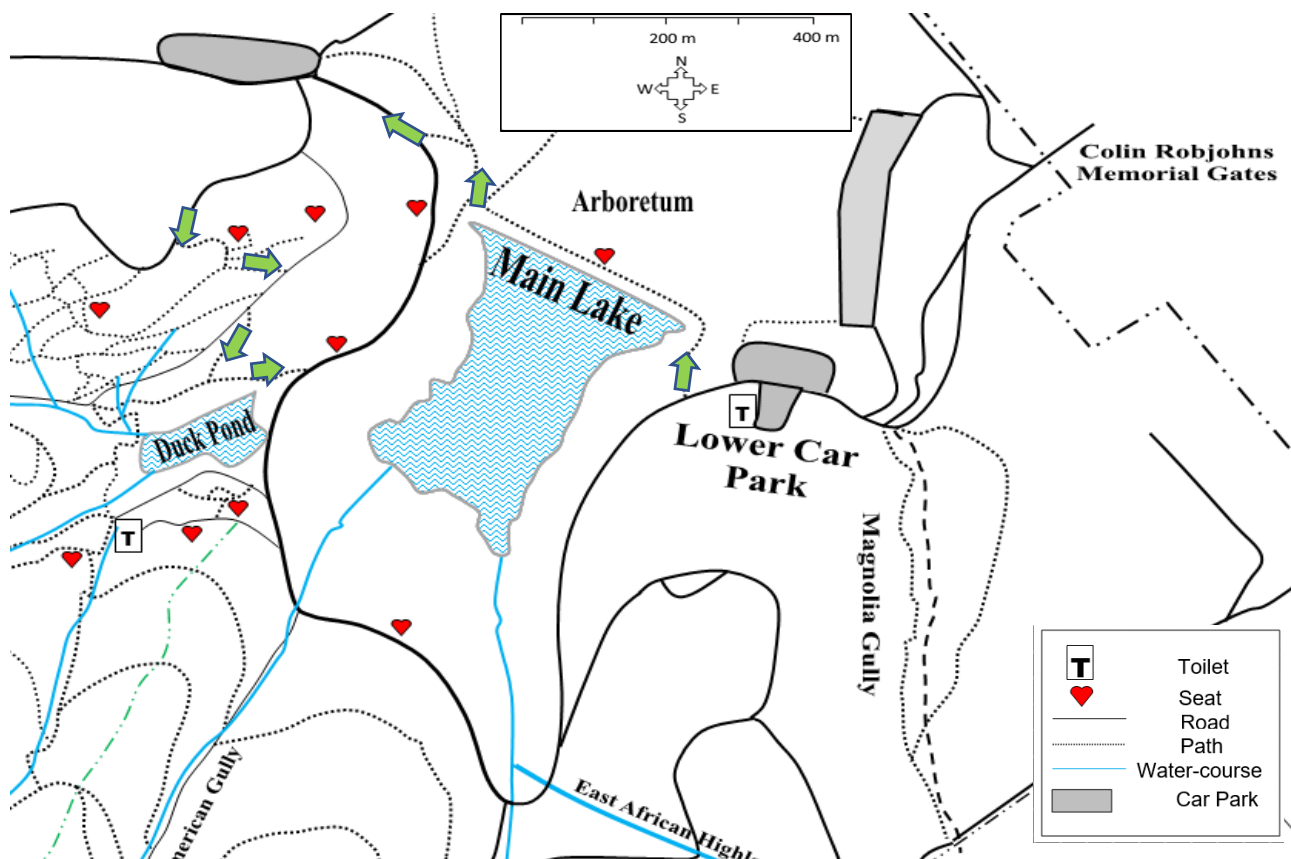
Follow the road to the left, heading up the Hill at the intersection. Cross the lawn in front of the gazebo to where the path enters the woodland garden. On the right is a trio of *Malus trilobata* or erect crabapple tree. The sign at the base also provides the German name, Dreilappiger Apfel, which translates to 3-lobed leaves, which resemble those of a maple and colour well in autumn. In spring, its white flowers produce yellow fruits which are a striking feature now, until hungry birds find them palatable. Make your way through a dense thicket of *Thuja orientalis*, the **book-leaf pine**, which is native to China. The common

name refers to the thick scaly leaves that grow in a flat vertical plane like the leaves of a book. It is from the cypress family **Cupressaceae** and is not a true pine from the **Pinaceae** family another example as to where common names may be misleading. It is monoecious (male and female on one tree) and has small cones. It can grow to 15x5 metres and lives for up to 150 years.

Make your way down the hill to the Duck Pond passing through the Woodland Garden where there are drifts of miniature **Cyclamen hederifolium** which are in full flower and providing an interesting contrast to the foliage around this area. On reaching the main road, we will view some conifers which shed their leaves (needles) in winter. Most evergreen plants retain their leaves during winter, tending to shed the previous season's leaves during warmer weather in summer. The conifers (cone bearing seed plants in the order Pinales including pines, cypresses, firs etc) however, have some exceptions including the **Taxodium spp.** One example is **Taxodium distichum**, three specimens of which may be seen below the road adjacent to the Main Lake. These trees feature knees which are part of their root structure and help provide stability when they're in their native surroundings, i.e. swampy areas from Virginia to Florida in the United States. Their needles will gradually fade to brown/orange from their summer green and begin to fall thus illustrating their common name, the **Bald Cypress**. Look to your right above the Duck Pond where there is a dwarf selection of **Taxodium distichum**, this variety being named **pendulum**. Wood was grafted in the early 2010s to a standard one-metre-tall rootstock trunk, resulting in a pleasing weeping appearance. MLBG staff take particular care in keeping the trunk free of suckers, as the vigor of the rootstock will rapidly take over from the graft if suckers are not managed.

Finally look back across the Duck Pond to the drift planting of the deciduous **Dawn Redwood**, **Metasequoia glyptostroboides**. These were first described from fossil material from Japan in 1941, with living specimens discovered in Hubei Province, China, the same year and being named in 1948. The Chinese name is translated as winter spruce. Prior to finding this relict population, the genus had only been known from fossil remains. We hope you have enjoyed the walk and observing how deciduous, and some select conifers, prepare for winter.

HK, DS, RH 4/25



This leaflet has been prepared by the Garden Guides funded by the Friends of the Botanic Gardens of Adelaide Inc. For information about the Friends and/or guided walks, please telephone 8222 9367

www.friendsbgadelaide.com.au