

Significant trees at the Aro Street bus terminus

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Throughout New Zealand there is a wave of citizen-initiated native plant restoration occurring in various public and private spaces. One such place is Aro Valley, a bushy inner-city Wellington suburb, which provides a microcosm of what is happening all over the country. The valley has steep sides, cleared of their original vegetation for firewood and farming, but which proved too steep to build on. The prominent gully here, Polhill Gully, is covered with scrubby secondary growth, mainly mahoe, and the steep sides have recently been developed as mountain bike trails. Track counters show that over 80,000 cyclists and walkers use these each year.

At the junction of Aro Street, Holloway Road and Raroa Road, there has been a terminus for trams, and now buses. By 2000 this area contained street trees, weedy slopes and council-mowed grassy areas. In the last two decades, Aro Valley Restoration Project (AVRP) has planted native trees including many young northern rata trees, *Metrosideros robusta*, in the land around the bus terminus. These were donated by Project Crimson and are not yet visible to passers-by. This tree used to be dominant here, in pre-European times.

Before this current project there already existed a cluster of interesting 'street' trees at the top of Aro Street. A war memorial (Fig. 1), erected in 1920, records the 118 men who went to World War I from Holloway Road. It now sits in a grove of mature pohutukawa.



Figure 1. War Memorial erected by the Mitchelltown Welcome Home Association, which is now within a grove of mature pohutukawa. Mitchelltown is the old name for the Holloway Road gully once owned and farmed by the Mitchell brothers. Photo taken during the 2015 tour of significant World War I sites in Aro Valley.

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At the entrance to Polhill Reserve, on the slope above the Kai o Te Aro community garden and orchard, are a native kawaka or *Libocedrus plumosa* and a dawn redwood or *Metasequoia glyptostroboides*. On the opposite side of the road, by 206 Aro Street, are four more dawn redwoods. A little further on, in wooden tree cages on the grassy slope at the start of Raroa Road, are seven specimen ash trees, *Fraxinus excelsior*.

ASH – FRAXINUS EXCELSIOR

The ash trees were planted in the 1980s, chosen for reasons now obscured by time. They eventually thrived and are well established, although nowadays only appropriate native trees are planted in the Valley and catchment.

Ash plants were brought to New Zealand in 1904 as an ornamental tree. There is one individual of this ash species on Wellington city's list of heritage trees, in Newman Terrace, Thorndon. Wellington City Council lists no 'protected trees' in Aro Valley. Those on Council land are semi-protected in that they can only be removed by the Council.

This species of ash is a deciduous tree from Europe, growing naturally from Britain to Turkey. There the pale tough timber is sought after for oars, tool handles and bentwood chairs. In spring, insignificant flower clusters emerge from striking velvety black buds (Fig. 2). The feathery foliage is distinctive: 9–11 leaflets make up the leaves which are 30 cm long and turn yellow in autumn. These amenity trees should grow 15–18 meters high with a broad, umbrella shaped crown.



Figure 2. The velvety black buds of the ash are distinctive in winter. May 2014

In 2014 AVR P met with Amber Bill, Open Spaces and Parks Manager, and Marlies Laser, Tree Team Customer Liaison, from the Wellington City Council (WCC). We all agreed that these ashes, since they are now

significant amenity trees, should stay. The wooden cages are to protect the trees from accidental damage when WCC mows the lawn. Although the ash trees do set seed, they are not expected to become weedy here.

The eighth cage was empty as this ash has not survived. The WCC have now planted a northern rata in its place. In principle this space on Raroa Road should remain open and grassy as it provides a spot of sunshine for students whose houses may be on the gloomy side of Aro Valley.

KAWAKA – *LIBOCEDRUS PLUMOSA*

Kawaka occurs naturally in lowland forests in the northern North Island, south to the Bay of Plenty region. It reappears in the northwest corner of the South Island.

The kawaka on the slope above the orchard community garden at the top of Aro Street is the last survivor of several kawaka the WCC planted along the edge of the entrance to Polhill Gully about 20 years ago. The others did not thrive and were replaced by a row of puriri (another species not native to Wellington) and kowhai, which are there today. This one survivor does produce seed but being so far from its usual habitat, it is very unlikely to have seedlings that will survive in Polhill Reserve. At the community planting day on 7 June 2014, many volunteers, mainly from the mountain biking community, planted low growing species including flaxes and divaricating shrubs on the slope below it and the other large tree already growing there, the dawn redwood.

Kawaka is a narrow, upright conifer that grows slowly to 12 metres tall with a spread of about 2.5 metres. It has bright green, tiny, scale-like leaves on flattened fern-like branches. Looking closely you will see that the scales form two rows of larger leaves alternating with two rows of smaller leaves. Kawaka trees have stringy bark and produce timber that is a beautiful deep red. An excellent lawn specimen, it also does well in containers.

Libocedrus, from Greek, means fragrant cedar, although these trees are really more closely related to cypresses. The species epithet, *plumosa*, from Latin, means feathery. There are three species in New Caledonia and two in New Zealand, making an odd but not uncommon connection between the floras of these two, now distant landmasses.

The kawaka's wind pollinated seeds are formed in cones, which have four, thin, dry and woody scales, each with a distinctively sharp spine, closely grouped on a central stem (Fig. 3). The winged seeds form on the scales and eventually sift out between them. As well as these seed cones, kawaka also have smaller pollen cones on the same tree.

You can find more kawaka in the Wellington Botanical Gardens and Otari Wilton's Bush.

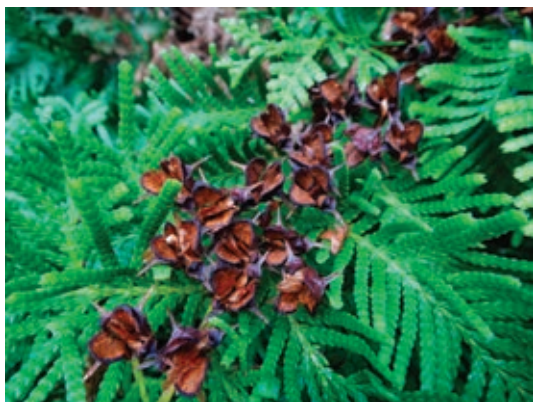


Figure 3. Open seed cones from which ripe, viable seed fell into my palm. May 2014.

DAWN REDWOOD – *METASEQUOIA GLYPTOSTROBOIDES*

This species was once known only from fossils, being common in the age of the dinosaurs. In 1945 a stand of living trees was discovered in western China. From 1948 onwards there were a number of seed introductions into New Zealand, most coming via the USA. A Wellington grower was lucky to receive seed in 1949, by the usual method of ‘someone who knew someone’. (An American here to survey wapiti in Fiordland had a friend with a connection with the Arnold Arboretum at Harvard University.) From a tablespoon of seed, several Wellington trees were cultivated. From early introductions such as this there are now many mature specimens throughout the country, with 29 listed on the New Zealand Tree Register (www.notabletrees.org.nz) in 2015.

Dawn redwoods are one of the few conifers that are deciduous. They have foliage that turns russet in autumn. These trees grow rapidly in cool climates with good summer rainfall, and were considered in New Zealand as a potential timber tree for forest plantings. They can be propagated by cuttings as well as seed.

Dawn redwoods have gained acceptance as specimen trees in parks. There are more to see in Wellington. There is a large labelled specimen near the western gate of the Botanical Gardens which is thought to be one of the original four seedlings. It was planted in 1951. There are two more in the gardens, undated, not far away. Another was planted in the grounds of Government House by Sir Willoughby Norrie on 7 August 1956 to commemorate his period of office as Governor General of New Zealand (1952–1957).

Around 1985 the WCC planted the fine tree in Fig. 4, now about 10 metres tall, near the kawaka on the frontage of Polhill reserve, just above

the community gardens. Over the road, alongside 206 Aro Street, are four more. A lot of trees were raised by the WCC for planting in 1990, the year of the sesquicentennial celebrations. These four might have been trees surplus to those requirements.

NORTHERN RATA – *METROSIDEROS ROBUSTA*

Four young northern rata, originally planted by WCC near the lone mature rata in Victoria Street, were in the way of recent street widening and were transplanted to the back of the grassy area behind the ash trees in November 2014. With watering they survived their first summer although they were over 3 m tall when moved, and two flowered the following summer.

There is a painting by William Fox, dated 1850, of this area at the top of Aro Street which shows a rata forest in bloom (Hocken Pictorial Collection, Accession Number 4,274 9). Inspired by this, AVRPA and mountain bikers have planted 500 rata sourced from Project Crimson on these hillsides and elsewhere in Aro Valley, hoping that in a few decades the area will again glow with rata blossom in its season.



Figure 4. Dawn redwood, centre, leafless over winter, alongside the native kawaka on the edge of Polhill reserve. August 2014.

By providing a record of the fragmented planting activity in Aro Valley, I want to explain how this odd diversity of trees came about. Hopefully the long term result of new plantings will again be a broadleaved/rata forest, albeit with a few odd exotics on its fringe.