Identification of *Correa reflexa* hybrids

This document is based on training provided by Dr. Graeme Lorimer to Maroondah City Council Bushland Team 23/6/22

Background

There is thought to be only one naturally occurring form of *Correa* within Maroondah, that being *Correa reflexa* var. *reflexa.* Other forms of Correa are used very commonly in landscaping within Maroondah, and several of these forms hybridise with the local species causing problems for biodiversity management.

From a Bushland management perspective, the two main problems associated with hybridising *Correa reflexa* var. *reflexa* are;

1. Some hybrids tend to grow and recruit vigorously (much more so than the local form). Their growth is typically dense, with up to 100% projective foliage cover. Such dense growth allows them to monopolise the light resource, preventing smaller or less vigorous species from photosynthesising, and thus starving them out by competitive exclusion. In addition, the dark conditions under hybrid Correa canopy are unsuitable for germination of most indigenous plant species (e.g. daisies, eucalypts, Acacias), and so they negatively affect recruitment across the whole community.

2. The local form has intrinsic biodiversity value for its uniqueness. This is lost where hybridisation is occurring. In many reserves, it is now difficult to find non-hybrid forms, so that the local one can be considered threatened with extinction.

Identification of Hybrid Correa forms

Always use multiple traits to identify plants as hybrids, since they share many genes and therefore physical characteristics with the local plants.

Ecological Traits of Hybrids

The most obvious trait indicative of the presence of hybrid Correas is ecological and based on the vigour of hybrids

- Is the species forming a patch or thicket with many plants growing close together and where it is intercepting most of the light?
- Are plants shading out smaller understorey species and potentially preventing recruitment of other plants?

If yes to these questions, then the patch almost certainly includes hybrids.

Botanical Traits of Hybrids

In typically competitive bushland settings, *Correa reflexa* var. *reflexa* never grows as tall as many hybrid forms do. Any plant taller than about 1.5 m growing in these conditions should be treated with suspicion. Plants over 2 m in bushland will all be hybrids. The local Correa has an open, almost

scrambling form - it is sparse where hybrids tend to grow more densely (and thus can shade out other species).

Leaf characters

The leaves of both hybrid and local forms often vary considerably.

- Leaves of the local form are always dull green to yellow-green, are not shiny or glossy and have a blunt tip. Hybrid leaves vary in colour, but are often glossy (in the case of *Correa glabra* ancestry) and may have a pointed tip.
- The local form has translucent slightly brown/orange stellate (star-shaped) hairs on both upper and lower surfaces of the leaf, with the amount of hair variable. Hair can be sparse on the upper surface, but the lower surface is always distinctly hairy. Leaves of hybrid forms can also be hairy, but this varies and they may be completely hairless. Hairless forms will usually be hybrids with *Correa glabra*.
- Leaves of the local form are ovate (but variable), where leaves of hybrids can be much thinner - tending towards oblong in shape. This character should be combined with others before a diagnosis is made.
- The surface of leaves of *Correa reflexa* var. *reflexa* are usually wrinkled or undulate to some extent, where those of hybrids can be flat. This character should also be combined with others before a diagnosis is made.

Floral characters

Flower traits also vary considerably between hybrid and true *Correa reflexa* var. *reflexa*.

- In Maroondah *Correa reflexa* var. *reflexa* is believed to bear exclusively pale green flowers. They are never red or pink in Maroondah unless the plant is a hybrid.
- *Correa reflexa* var. *reflexa* always has two small leaves immediately above each flower which clasp the flower or form a little roof over the flower, as if to shelter the flower from rain and sun. These are smaller than normal leaves (less than ½ the size), but are otherwise similar in form. Where these two leaves are absent above flowers, or are not as just described, this indicates a level of hybridisation.
- The calyx of *Correa reflexa* var. *reflexa* (i.e. the cup-shaped structure surrounding the tube) is covered with stellate hairs, whereas those of hybrids can be glabrous.
- The calyx of *Correa reflexa* var. *reflexa* is not obviously lobed, whilst this can occur with hybrids.

Hybridising species

The following species can hybridise with *Correa reflexa* var. *reflexa* and thus ideally should not be planted within 200 m of a bushland reserve where the local form persists. Hybrid or cultivar forms such as Correa 'Dusky Bells' can also hybridise with the local species and should also be avoided near the local form.

- *Correa alba*
- *Correa baeuerlenii*
- *Correa glabra*
- *Correa mannii*
- *Correa reflexa* var. *speciosa*

Non-hybrid *Correa reflexa* var. *reflexa* traits

Hybrid *Correa reflexa* var. *reflexa* traits