

Warrnambool's Lone Pine – the next generation. By Lou Hollis. 2016

Although the tree is more than elderly and in decline, it was worth trying to propagate from it. What did we have to lose? That's right – nothing.

So, I let other FoWBG members know that I intended giving it a try. "Oh, yes. We got some seeds from it to germinate, but when we moved them, they died." The seedlings had been moved on not long after germination. Mmm, lesson number one. Sow them in individual pots that they will be able to live in for a year or maybe even two, cos they don't like to be moved as babies.

Dr David Shimmin got a couple to grow, and they are now in the grounds of Port Fairy Primary School. He confirmed that keeping them in the same spot as they germinated for quite some time was a good idea, as was keeping grubs and other hungry creatures away from the juicy new seedlings.

Over the years, I have scrounged lots of knowledge about the large pine family, which includes the local Drooping sheoke (*Allocasuarina verticillata*) as well as the Norfolk pine (*Araucaria heterophylla*), cypresses and our Lone Pine (Turkish Pine or Calabrian Pine, *Pinus brutia*).

Pines are wind pollinated. Each tree can be either male or female or have both male and female pollens. Lucky for us, with only one specimen in the Warrnambool Botanic Gardens, *Pinus brutia* falls into the latter category.

Pines are great parents. What do you see growing under a pine of any species? Not much except for maybe nettles or other extremely tolerant pioneer (weed) species. This is because the needles that they drop contain chemicals that inhibit the growth of almost everything but their own seeds.

Pines don't have leaves in the general meaning of the word. 'Stem clasping leaflets' or 'needles' are more accurate descriptions for their photosynthesizing bits.

All pine seeds consist of two parts: the wing and the actual seed. The wing is large enough to allow the wind to move it and the attached seed a reasonable distance from the trunk of the parent to a place with some needles from the parent and enough light to germinate and grow into a mature tree.

Armed with some cones that ripened in late summer/autumn, I set about getting the seeds out. The cones looked a bit dull and tarnished, indicating that they were ripe. I avoided pretty ones that looked too much like what you see on a Christmas card, as the seeds in them were probably not mature enough to germinate – that's if any were pollinated!

We sat the cones in a bowl on top of the cover on our slow combustion stove and waited a few days. Patience is a requirement if you intend growing *Pinus brutia*. The warmth induced the cones to open just enough to show the 'wings' on the seeds, but my stubby fingers were too chunky to get seeds out. Aha, tweezers to the rescue. Gently does it, and after coaxing out a number of wings with seeds attached, I realized that there were two types. The fat round seeds at the bottom of pretty brown wings would probably grow, but the flat petite ones would probably not. The cones get torn apart after the seeds are removed, just in case.

As the wing is only the delivery mechanism, only the fat round seeds were planted. One seed per tree tube, in a good potting mix without those water-storing granules that rob the plant of moisture. The rule of thumb for all seeds is to cover the seed with its diameter of soil (if planting direct into the ground) or potting mix if you are using a pot. Pines are no exception. Cover with a nice blanket of chopped up needles from Mum/Dad over the top. Green ones are gathered from the ground, as the wind seems to knock these off the WBG tree. Needles that have lost their color have also lost some of the chemicals that the seedlings need.

The planting takes place on the new moon closest to Anzac day. If you are familiar with the lunar planting calendar, this should give the best chance of success. Autumn is when the seeds naturally drop from the parent tree. Germination seems to be also very much aligned with the moon and seasons, as the seedlings emerge as one group on the new moon closest to the spring equinox! One seed took 18 months to germinate, and yes, it came up at the same time as the seeds planted a year after it.

Germination rates are rather low. About 15% to be exact, and just like in nature not all seedlings survive past the first year or two. If you have any tips on increasing the germination and survival rates, I would love to try them.

Fertilizing is not really something that we have ventured into. Each year, a new layer of chopped up needles from the parent tree is given to the seedlings (and last year's seeds), which seems to give them a boost and encourage the occasional extra germination.