



January 2020

by Emma Bacon, Nursery Supervisor

My first year in the nursery has flown by. I have really enjoyed putting into practice the theory that I learnt on my RHS course. One of the things I have enjoyed the most has been to see the many seedlings germinate and the high success rate of cuttings taking root. In this blog I have written about some of my 2019 highlights.

Wollemi germinations and carnivorous plants

Wollemia nobillis (Wollemi Pine) is one of my favourite trees and is from a small area in New South Wales, Australia. It was only discovered in 1994 and is critically endangered. It very narrowly escaped becoming extinct in the recent bushfires; thankfully The National Parks Wildlife Service had measures in place to protect the specimens.

We had a handful of seeds and 10 germinated. Sadly some of the seeds were eaten by sciarid fly larvae before they got to that stage. This prompted me to try some different biological methods of control such as nematodes that lay their young inside the sciarid fly larvae, sticky paper to trap the adult flies and prevent them laying eggs and most interestingly some carnivorous plants. I saw the *Pinguicula moraniensis* 'Tina' at the Chelsea Flower Show and really wanted to grow them. They produce a sticky substance on their leaves that attracts the flies to land on them and eventually they are digested into the plant.



First Wollemi seedling. Photo credit – Fiona Grant



The sticky leaves of *Pinguicula moraniensis* 'Tina' trapping the sciarid flies



Carnivorous plant that can eat rats! *Nepenthes rajah*.

Photo credit https://en.wikipedia.org/wiki/Nepenthes_rajah

Speaking of carnivorous plants, a very interesting example is the *Nepenthes rajah*. It is from Borneo and is capable of trapping and digesting invertebrates and small mammals such as rats!



***Abies bracteata* trials**

This tree grows in a few areas of the Santa Lucia Mountains along the Pacific slope of California. We currently have 7 in the pinetum of various ages.

We sowed 140 seeds this year and had 34 germinations. We then went on to trial some different compost mixes to see which would result in the strongest plants.

The composts included our pre-made deciduous and conifer mixes, a peat based mixture with no fertiliser and a peat based mixture with fertiliser and iron stone rich subsoil. The conifer mix appeared to perform the best with the seedlings strong and slightly taller than the other mixtures. The least successful was the deciduous mix as it is really not designed for conifers.

Planting

One of my jobs has been to oversee the organisation of the planting of trees and shrubs that we have grown in the nursery. It is a great sense of achievement to see them planted in their final positions within the Pinetum.

In the period before Christmas we planted 159 trees and shrubs, plus 250 grasses. The grasses have been positioned in the visitor centre beds to fill in some gaps and add a sense of movement.

Unfortunately rabbits have had a good nibble of some of them, but hopefully we will be able to identify where they are hiding soon.

We planted an *Abies grandis* to replace the Old Man of Kent as part of the Forestry Commission centenary celebrations. The seed was collected in 2015 by our curator Dan on a joint expedition with Westonbirt, Oxford University Botanic Garden, US Forest Service and Morton Arboretum.

A couple of other interesting plants to go into Pinetum were *Cephalotaxus koreana*, which was wild collected in Korea and *Picea maximowiczii* from Japan. It is the first time that we have had both of these in the collection.



Planting the Abies grandis for the centenary celebrations



Cephalotaxus koreana



Grasses and Echinacea waiting in the nursery for planting

Coming up in 2020 will be the stratification and sowing of the seed collected by Dan on his most recent trip to Japan. It is currently being x-rayed at our research facility – Alice Holt in Surrey to check the viability of the seed and for any pests.

We are also aiming to carry out another batch of planting before the end of spring. There will be plenty of potting on of seedlings from last year and general maintenance activities to keep us busy!