

Callitris planting in the Aranda Bushland

Mary and Ian Falconer, Friends of the Aranda Bushland

In the whole of the Aranda Bushland in the year 2000 there was only one mature tree of the native Black Cypress Pine (*Callitris endlicheri*), which was growing south of the Powerlines track in the bushland. There were no seedlings under the tree or elsewhere in the bushland, so we were apprehensive that the death of this tree would make the species extinct in our patch. These Cypress pines are very susceptible to fire, and the wildfires and frequent controlled burns in the Aranda Bushland provided a risk. This encouraged us to think about increasing the numbers of native pines in the area, by growing seedlings ourselves from seed collected from the only tree.



The original *Callitris* pine, photographed in 1994



Scene in April 2023 with self-sown seedlings, after a controlled burn in which the pines were protected.

In 2012 we collected seed from the tree (with a permit from Parks), together with soil from beneath the tree, to try to germinate it in pots in our garden. The idea behind the soil collection is that the pine roots associate with soil fungi to take up nutrients from poor soils, and without the fungi it was unlikely we would be successful. Under the existing tree it was likely that the fungi would be present. The seed germinated slowly, but after two years we had 12 growing seedlings ready to be transplanted. Simultaneously under the mature tree a group of natural seedlings germinated, encouraging us to go ahead with a good chance of success. This spontaneous germination followed a very wet year in 2010 with 1052mm of rain, well above the average of about 600mm.

We decided to plant the new trees east of the ageing *Radiata* pine plantation, the idea being in the long term of replacing the Californian pines with the native local species. The first group of *Callitris* seedlings were planted in 2014 in rather bare ground, guarded by wire mesh cylinders attached to wooden stakes to defend them from the ravages of kangaroos. Even with these protections, some guards and seedlings were smashed by the 'roos, probably just because they were new to them.

At the same time a second seed collection was planted at home, giving another group of seedlings which were later transplanted near to the earlier ones in 2016. These were given some added protection and assistance by digging a shallow rain channel into the root area, diagonally to the slope. At roughly the same time, but quite independently, a shield shape of the bark of a nearby red stringybark tree was cut out by an Aboriginal park worker, which we have heard was then painted and is exhibited at the Namadgi park headquarters. This marked tree now provides a good visible location to help us locate the pine seedlings.

Our park ranger at this time was Craig Wainwright, who supported us in requesting that the old Radiata pines should be felled and removed. These trees were well beyond the date at which they were any use for timber, and shed seeds which grew into seedlings which we then removed. The felling was approved, and by the work of Craig, other park rangers and a team of detainees from the local prison, the trees were felled, cut up and taken away. This left us with a cleared area of very poor soil and pine sawdust with a few small red box (*Eucalyptus polyanthemos*) seedlings, some cauliflower bush (*Cassinia longifolia*), wallaby grass (*Joycea pallida*) and matrush (*Lomandra longifolia*).

A third collection of *Callitris* seed and soil was then done in 2018, grown in pots in our garden and the seedlings from this were planted in August 2019, towards the end of a severe three-year drought in Canberra. This was due to rainfalls of 537, 464 and 344 mm in 2017, 2018 and 2019 respectively, followed by 911mm in 2020. Mary and I carried water to the seedlings at frequent intervals during the drought until they were well established and the rainfall increased, to ensure that they survived. None were lost, though their individual rate of growth was very different in different areas reflecting soil quality.

In autumn 2022 a controlled burn was scheduled for the area in which both the natural and planted *Callitris* were growing. Poor weather prevented the burn that year, which was delayed until 2023.

In April 2023 we were notified in advance by Marty Bajt from ACT Parks of the intent to burn this area, and Ian went round the area of the burn prior to the event with Kelzang Tsering, the local ranger. The protection of the *Callitris* was discussed and the *Callitris* and the newer planted areas were marked by Kelzang with the ground cleared round them. We were also concerned that the elegant seat that was installed on the powerline link trail was not affected, which is located on the edge of the burn site.

The burn was initiated in the morning of Wednesday 5th April, a windless, cool day, by igniting the undergrowth at the top of the slope. By 5pm the fire had reached the track at the bottom of the slope, near the most recently planted *Callitris* area. This rather bare patch had a raked earth barrier which was not crossed by the fire, and no seedlings were burned. A few of the earlier planted seedlings, which had been raked round for fire protection, were scorched but we expect them to recover.



Controlled burn approaching the planted *Callitris* area



Planted *Callitris* seedling after the burn.



One with some scorch

The natural *Callitris* seedlings and the mature tree higher on the slope were almost untouched by the fire, due to the Parks staff protecting them successfully. Overall the burn was carried out with care and the outcome a highly successful cool burn with no canopy scorch.

Controlled burns are a very contentious issue in Canberra Nature Park management. This particular area had not been burned in recorded history, and was only lightly vegetated. A strong argument was raised by members of Friends of Aranda Bushland against this burn being required at all, particularly as it was to the south of the powerline track, a wide east/west fire track that would stop a wildfire travelling north towards the suburb. The burn dates and locations for this burn are part of the Regional Fire Plan, and are prepared by the Rural Fire Service and Parks and Conservation on the basis of fuel load and the date of the last burn, with the aim to protect the adjacent suburbs from wildfires. While the Committee of the Friends of the Aranda Bushland were in general opposed to this burn, we recognised that it was undertaken by Parks under legal instruction, and that the valued plantings and natural flora of the burn area were well protected by the parks staff undertaking the work, and we thank them for their care and diligence.

April 2023