The Woodlupine seed project

By Andrew Crawford, Trevor Phoebe, Karena Joyce, Tammy Quarman, Cody Funnell, Sukhpreet Kaur, Jett Ferguson, and Jaslyn Toop

Seed conservation is an important recovery action that is used to help prevent species from becoming extinct. DBCA's Western Australian Seed Centre (WASC) in Kensington is a facility that collects and stores seed of the State's conservation significant plant species, ready for use in recovery actions such as translocation – the establishment of new populations back into the wild. It can be difficult to collect enough seed from the wild due to a paucity of plants, often combined with low seed production. To boost seed stocks, seed production areas can be established.

Woodlupine Primary School is a small, independent school located in the foothills of the Perth metropolitan area. In 2019 the school was seeking a meaningful way of becoming involved with conservation. The school's principal, Trevor Phoebe, heard about the work being carried out by the Australian Seed Bank partnership around Australia and approached them with the idea of developing a school-based conservation project. This approach put him in touch with the WASC and led to the development of the seed conservation project, resulting in the establishment of a seed production area in the school grounds.

A principal's perspective – Trevor Phoebe

At Woodlupine Primary School we have recognised the global significance of living a more sustainable lifestyle. Across the school, students are provided with many opportunities to learn about and engage in sustainable activities to develop environmental awareness and global stewardship. Our partnership with the Western Australian Seed Centre enables our students to participate in an authentic long-term sustainability project with State Government scientists – protecting Western Australia's biodiversity. This venture led to our participation in the Millennium Kids project, a related and significant project that encourages students to become change agents both now and in the future.

We actively model the benefits of sustainability to the whole community. Our school has publicly committed to reducing the amount of lawn that we maintain. As well as being an introduced species, lawns are water intensive and financially costly. Replacing small areas of lawn with indigenous plant species encourages insect and bird life, which not only supports biodiversity, but saves fertiliser, water, and mowing costs – a much more financially sustainable approach that we promote in our school in the belief that community members will mirror our approach to the benefit of the State.

As we continue with our whole-school approach to sustainability, we have delivered a strong message to our community and beyond that sustainability is a key component of the culture of this school and a vital component of 21st century schools.

Learning through life

Woodlupine PRIMARY SCHOOL

An Independent Public School

Left to right: Jett Ferguson, Karena Joyce (teacher), Tammy Quarman (gardener), Cody Funnell, Jaslyn Toop and Sukhpreet Kaur with showy everlasting flowers (Schoenia filifolia *subsp.* subulifolia). *Photo – Jett Ferguson.*

Continued next page ...

The students' perspective

My name is Cody, some of my fellow Year 6 students and I at Woodlupine Primary School are gravely concerned about the fact that Western Australia's diverse ecosystems and bushland is gradually being cleared, and the effects of climate change is just making the effect on bushland areas so much worse.

At one time our bushland areas were a flourishing wonderland of biodiversity with a large array of flora and fauna. Now they are a biodiversity hotspot due to the increasing number of plant extinctions.

However, despite this devastating change, multitudes of people are trying to make a difference, and among them is my great school, Woodlupine Primary. Woodlupine Primary School has many enthusiastic students regrowing and documenting the progress of endangered plants, namely *Darwinia squarrosa*, *Schoenia filifolia* subsp. *subulifolia* and *Ptilotus pyramidatus*, with the amazing support of the WASC, and as a result, these wonderful plants are being saved from extinction and growing in numbers!

– Cody Funnell

My name is Sukhpreet and I am one of the students collaborating with Dr Crawford to save three native endangered plant species from disappearing from planet Earth forever (i.e., going extinct).

Schoenia filifolia *subsp.* subulifolia *drawing by Sukhpreet Kaur.*

Sukhpreet Kaur monitoring Schoenia filifolia *subsp.* subulifolia. *Photo – Karena Joyce.*

Schoenia filifolia *subsp.* subulifolia *plants flowering in the seed orchard at Woodlupine Primary. Photo – Andrew Crawford.*

In the Seed Bank Project, I am looking after the *Schoenia filifolia* subsp. *subulifolia* (showy everlasting). I have been going out and documenting the plants' growth. One thing that I have noticed while I was documenting is that they only flower or open when it is nice and sunny, when it is rainy, they close.

The showy everlasting plants at our school have grown from self-sown seeds which means the seeds were not planted by humans. The seeds seeded themselves from the original plants.

I am so very grateful that I am part of the Seed Bank Project.

– Sukhpreet Kaur

My name is Jett, and I am one of the students collaborating with Dr Crawford in the WA Seed Centre Project. In the Seed Bank Project, we are growing three endangered species of plants (another is on the way). I am looking after the *Darwinia squarrosa* (fringed mountain bell).

I have been documenting and looking after these plants daily with the help of our gardener Tammy. We have been weeding the beds, documenting the insects/pests that have been visiting them, seeing if any plants have died and/or are dying and recording their growth.

The Year 6s at Woodlupine Primary School have recently gone on an excursion to the Western Australian Herbarium and Seed Bank, where I found out that the most recent species that Dr Crawford is studying is the darwinia that I am looking after, which is really amazing.

– Jett Ferguson

Darwinia squarrosa *flower. Photo – Andrew Crawford.*

The students' perspective

My name is Jaslyn and I am one of the students who is helping Dr Crawford save endangered native plants from the bush.

The native plant I am saving is *Ptilotus pyramidatus* (pyramid mulla-mulla). The seedlings were planted on the 3rd of June 2020, and I have been recording and documenting the growth of the plants and looking after them. Some of them have already started to flower. There are a lot of weeds in the bed and so I have been pulling them out.

I am very grateful that I have had the opportunity to be a part of the Seed Bank Project and appreciative of the help that my teacher Ms Joyce, our gardener Tammy, and the other students doing the project have given me. I hope future generations get to enjoy this plant and hope more people continue to save endangered native plant species, so that they can be replanted into bushland areas.

– Jaslyn Toop

Jaslyn Toop monitoring Ptilotus pyramidalis.
Photo – Karena Joyce.

Ptilotus pyramidalis *drawing by Jaslyn Toop.*

Ptilotus pyramidalis *plant flowering.*
Photo – Andrew Crawford.

Since its establishment in 2019, the seed production area at Woodlupine Primary school has trialled the growth of five conservation significant plant species. In its first year, three species were trialled, and we were able to collect seed from all species planted. Despite the small scale of the plantings, the amount of seed harvested added significant quantities to WASC's seed stocks. Seed collected for one of the species, *Schoenia filifolia* subsp. *subulifolia*, facilitated a direct seeded translocation trial for the species. The latest addition to the planting is *Darwinia squarrosa*, a species normally found in the peaks of the Stirling Range National Park. Will these plants successfully produce seed? Only time will tell. In the meantime, these dedicated students are finding that small, local conservation actions can have a meaningful impact on species in the wild.

Contacts

Andrew Crawford
DBCA
email Andrew.Crawford@dbca.wa.gov.au

Trevor Phoebe
Woodlupine Primary School
email woodlupine.ps@education.wa.edu.au