



Seedbank Officer Gavin Phillips collecting *Prostanthera petraea* in Boonoo Boonoo National Park (Photo: Jessica Wait, RBGDT)

A key feature of the new Herbarium will be six protective vaults made of thermal mass materials to shield the collection from bushfires and extreme temperature events. Inspiration for the Herbarium has been drawn from the seed pod of NSW's floral emblem, the iconic waratah.

The construction of the herbarium is due to commence early in 2020 and be completed in 2021, and will form part of the recently announced Australian Institute of Botanical Science. The new Institute will bring together science facilities and collections across all RBG Sydney and ABG sites, and significantly reduce travel times for our seed collectors who require access to the herbarium collections.

## Western Australian Seed Centre, Kensington

### Setback and success: collecting for the 1000 Species Project

On paper it might seem like a simple task, a walk of just over five kilometres in the Mount Manypeaks Nature Reserve to visit populations of the poorly known *Scaevola xanthina*, as well as a population of the threatened *Banksia verticillata*, with the aim of collecting seed. However, the reality on the ground was quite the opposite. An early start was made as the walk in was known to be a difficult in thick vegetation and a steep terrain. The first target was the *Banksia* and, although the going was slow, the population was easily found and a suitable collection made. That's when things became interesting.

It wasn't far – around 300 metres as the crow flies – from the *Banksia*'s location to where over a thousand plants of the *Scaevola* had been recorded five years earlier.



*Scaevola xanthina* remained elusive during this collecting season, with a population decline observed at Mount Manypeaks Nature Reserve. It is hoped that future collecting trips will result in a collection being made. (Photo: Andrew Crawford, DBCA)



The Mount Manypeaks Nature Reserve is located near Cheynes in the southern reaches of Western Australia. The reserve is home to an impressive array of wildflowers and was one of the focus areas for collecting this season. (Photo: Andrew Crawford, DBCA)

Finding the *Scaevola* shouldn't have been too difficult; the plants should have been flowering, the habitat where it was known to grow was restricted and clearly defined, and one of the previous finders of the population was present on the trip. Still, it took over half an hour to find the first plant. It was flowering, but there was no sign of fruit.

An extensive survey of the habitat located only thirty-two more plants. Only a few of these had small quantities of immature fruit, which did not warrant collection. Another population was then investigated and, where the species had previously been common, now only a single plant was found. As the return walk was expected to be tough, the decision was taken to abandon the search and return to the vehicle. With daylight fading, and 12½ hours after setting off, the vehicle was finally reached. The trip had secured a collection of *Banksia verticillata*, but unfortunately a seed collection of *Scaveola xanthina* was not to happen that day.

Despite the disappointment of the Mount Manypeaks trip, the rest of the 2018–19 seed collecting season was successful for the team from the Western Australian Seed Centre, Kensington. Collections were made from across south-western Australia, from the heights of the Stirling Ranges to the plains of the Western Australian wheatbelt. Over 100 seed collections of conservation-significant species were banked in the Threatened Species vault of the Western Australian Seed Bank, including collections of six threatened species and eight priority species, previously unrepresented in the *ex situ* collection.

## Western Australia, Western Australian Seed Centre, Kings Park

### Persistence pays off in seed lottery

This year the Botanic Gardens and Parks Authority (BGPA) delivered its final collections for the Millennium Seed Bank (MSB), representing an extraordinary partnership of 18 years. A total of 3,289 collections were sent from WA during that time, combining BGPA and the Threatened Flora Seed Centre contributions.

Some collections of tree species have proven to be more challenging to secure than others, with return visits required on multiple occasions to achieve a significant quantity of seed (up to six visits in one case). The collector often has to locate a species when flowering and then return when seed is available, always with the hope that it will be a great season.

This year, three species provided real challenges in this regard. *Grevillea gordoniana* is a spectacular tree growing to around 10 metres that favours red sand dunes from the north-west of WA to Shark Bay. The yellow ball-like flowers produce seed in late January, and these tend to rely on wind dispersal once mature. The first visit to the target population on the Useless Loop Road near Shark Bay was in October 2017 when the species was in flower. A significant seed collection was finally achieved in January 2019 just prior to a major wind event that would have scattered the seeds throughout the landscape. The result was 1,800 seeds delivered to the MSB at 98% viability.