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Seeds of Hope Project

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In December 2022, the Australian Seed Bank Partnership launched the 'Seeds of Hope Appeal' to rally community support for the conservation of a priority plant. Thanks to the generosity of the community and matched funding from The Council of Heads of Australian Botanic Gardens, the Appeal raised over \$5,000, which was put towards our Seeds of Hope Project.

The Small Flowered Conostylis (*Conostylis micrantha*; Figure 1) is found only across a narrow, 35 km range in the Geraldton Sandplains on Yamatji Country, and when last surveyed was only known from fewer than 250 plants. Due to impacts of threats such as habitat loss and invasive species, the Small Flowered Conostylis is listed as Endangered (EPBC Act; Vulnerable in Western Australia) making conservation efforts such as seed conservation critical for its survival. Given the Conservation need, this species was chosen as the focus for our Seeds of Hope Project.

The primary goals of the Seeds of Hope Project were to:

1. Survey all known populations to collect current information about plant numbers and their distribution.
2. Collaborate with Indigenous rangers to strengthen ties between traditional knowledge and modern conservation techniques.
3. Sustainably collect and bank seeds for long-term conservation.



Figure 1. Small Flowered Conostylis (*Conostylis micrantha*) in flower. Photo: Andrew Crawford.

Outcomes

Species survey

From mid-2023, staff from the Western Australian Seed Centre, assisted by local staff, indigenous rangers and volunteers including members from the Geraldton Regional Herbarium, carried out extensive surveys of all previously known populations of *Conostylis micrantha* (Figure 2). Despite the small stature of the plants and their preference for growing beneath larger shrubs, the team successfully identified more than 1,000 plants across the six populations where plants were found. This finding significantly expanded the understanding of the species' numbers, offering a glimmer of hope for its future.

One particularly encouraging discovery came from a population affected by wildfire 18 months prior. The team observed plants resprouting from their rootstocks, demonstrating the species' resilience as a re-sprouter in the face of fire—a finding that has important implications for its ecological management. All surveyed plants were GPS-marked, providing crucial up-to-date information on their distribution and ensuring easy relocation for future seed collection and monitoring.

Collaborating with First Nations people

A key component of the project was the collaboration with Yamatji Indigenous rangers. Their knowledge of the land and ecosystems played a pivotal role in the success of the field surveys, and the partnership offered valuable opportunities for cultural exchange and skill-sharing between Indigenous rangers and seed collectors.

Seed Banking

The heart of the Seeds of Hope Project lay in securing seeds from each of the populations to ensure a representative conservation collection for future recovery efforts. Despite the challenges of low seed production, over 800 seeds were collected in December 2023 and banked at the Western Australian Seed Centre in Kensington (Figure 3). These seeds represent a lifeline for the species, offering the potential for future restoration projects and deeper research into the species' ecological needs.



Figure 2. Survey teams in the Geraldton Sandplains. Photo: Andrew Crawford.



Figure 3. Seed of the Small Flowered *Conostylis*. Photo: Andrew Crawford

Conclusions

The Seeds of Hope Project marked the first focused conservation action for the Small Flowered *Conostylis* in over 15 years. Partnering with Yamatji Indigenous rangers, the project sought to not only gather updated information on the distribution of this delicate species but also to bank its seeds to safeguard its future.

Overcoming challenges related to low flower and seed production, the project gathered invaluable data and plant material to support recovery efforts. This data will help conservation managers to understand the species' current conservation status and inform future recovery strategies.

This project represents not just a conservation success, but also a meaningful collaboration that we hope will continue to inspire partnerships between conservation scientists and Indigenous communities in the future. While the battle to conserve *Conostylis micrantha* is far from over, the Seeds of Hope Project has provided a vital boost to its chances of survival, ensuring that future generations may continue to marvel at this delicate wildflower.

Acknowledgments

The success of the Seeds of Hope Project would not have been possible without the support of many. The Australian Seed Bank Partnership extends its deepest gratitude to the Yamatji people, the Traditional Owners of the land, for their vital role in the project.

These efforts were made possible through generous community donations and matched funding from The Council of Heads of Australian Botanic Gardens. If you'd like to consider a tax-deductible donation to fund future projects, please visit SeedPartnership.org.au/donate/.

The project was led by the West Australian Seed Centre, Kensington, part of the Department of Biodiversity, Conservation and Attractions, with critical support from the Yamatji Indigenous rangers, Northern Agricultural Catchment Council's Midwest Aboriginal Ranger Program, district staff from the Department of Biodiversity, Conservation and Attractions, and volunteers from the Geraldton Regional Herbarium. Their combined expertise and dedication have laid the foundation for future restoration of the species.