

Progress report

Recovery of the Sandhill Greenhood Orchid in the Adelaide and Mount Lofty Ranges region

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Sandhill Greenhood Orchid (*Pterostylis arenicola*), Grange Golf Course. Photo: Joe Quarmby

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Government of
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The successful recovery progress of the nationally threatened Sandhill Greenhood Orchid (*Pterostylis arenicola*) on the Adelaide Plains highlights the importance of ongoing collaboration between government and community in recovery programs.

The Sandhill Greenhood Orchid is endemic to South Australia where it is found within Grange Golf Course on the Adelaide Plains and also areas surrounding Lake Alexandrina on the lower Murray River (Figure 1).

Despite being located in the Coorong National Park (Potters Scrub), Mowantjie Willauwar Conservation Park near Taillem Bend and three small Heritage Agreement areas near Wellington, the species is listed as nationally vulnerable under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

This is due to the species being restricted to less than 1% of its original distribution due to past vegetation clearance.

Surviving populations are under significant threat from weed invasion, particularly by Bridal Creeper and Perennial Veldt Grass, and from grazing by rabbits and hares.

In the Adelaide and Mount Lofty Ranges region the species is considered to be endangered, surviving in only one small remnant of native pine woodland at Grange Golf Course.

This patch is one of the few remaining remnants of the once large areas of native pine on consolidated dunes



Figure 1: Surviving populations of the Sandhill Greenhood Orchid (*Pterostylis arenicola*)

that used to occur as “islands” in the Reedbeds of the western Adelaide Plains prior to European settlement.

The remnant habitat at Grange Golf Course provides ideal conditions for the plant: red sandy soils and relatively unmodified native vegetation containing

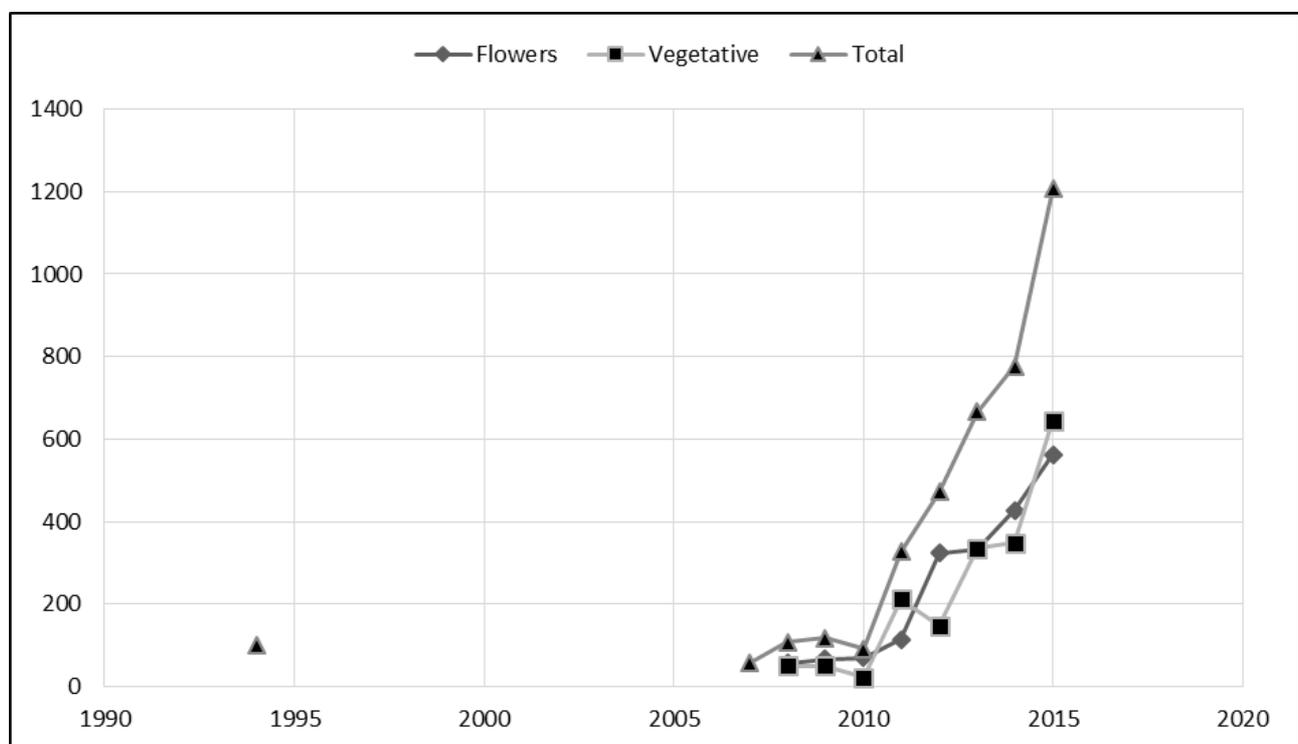


Figure 2: *Pterostylis arenicola* recovery in response to weeding; number of plants at Grange Golf Course over time





Figure 3: Participants in monitoring and weeding at Grange Golf Course
 Back row (from left): Robert Lawrence (President, Native Orchid Society SA); Peter Watton (volunteer, Threatened Plant Action Group); Joan and Ian Stratford (volunteers, Threatened Plant Action Group); Rick Davies (Threatened Flora Ecologist, Natural Resources Adelaide and Mount Lofty Ranges). Front row (from left): Tim Jury (Coordinator, Threatened Plant Action Group); Rosalie Lawrence (Secretary, Native Orchid Society SA); Richard James (Course Superintendent, Grange Golf Club).
 Photo: Judy Borlase

sparse native grasses, forbs and dwarf shrubs under an overstorey of native Southern Cypress-pine.

This population is of particular significance being a hundred kilometres from the next nearest population.

Being separated by large areas of unsuitable habitat, this population was likely to have been a disjunct outlying population even previous to European settlement and is thus likely to be genetically distinct from the populations near to Lake Alexandrina.

A recovery program coordinated by the Natural Resources Adelaide and Mount Lofty Ranges Threatened Flora Ecologist has included annual monitoring of the Grange Golf Course population since 2008.

This monitoring has found orchid numbers over the last five years have increased from approximately 100 plants in 2010 to over 1200 in 2015 (Figure 2).

These positive trends have occurred despite variable rainfall over the last five years, including periods of below average winter rainfall.

The positive population growth has been facilitated by ongoing weed management which has formed the core of the recovery program.

Integral to the successful recovery has been the active involvement of the Threatened Plant Action Group (supported by Natural Resources Adelaide and Mount Lofty Ranges) and the Native Orchid Society of SA (Figure 3) in sensitive weed removal on an annual basis.

The main threat – competition from invasive weeds such as Perennial Veldt Grass (*Ehrharta calycina*) and Soursob (*Oxalis pes-caprae*) – had been tackled mostly through patient hand weeding by these dedicated project partners.

A key part of the recovery project has been the ongoing engagement with land managers, in this case the Grange Golf Club course superintendent.



The recovery effort has occurred thanks to the golf club allowing the recovery team open access to the site.

This is a great success story of collaboration across the community to save one of our state's tiny floral gems.

Unfortunately many programs to improve the habitat quality for threatened species don't produce such spectacular population responses as experienced at the Grange site.

While the survey results and improvements in habitat quality are good news, the orchid population is still precariously small, and ongoing weeding is required to bolster the population still further and secure the species into the future.

Preservation of our orchids and native flora generally is important economically.

Wildflower tourism is a growing industry where people pay to be taken to native vegetation sites to be shown and told about native plants including orchids.

The interest in orchids in Australia and around the world, is indicated by the numerous orchid clubs containing people interested in growing and studying orchids.

Orchid propagation and translocation activities are increasingly being used to establish additional populations at other secure locations to reduce the extinction risk of threatened species.

The resurgence of Sandhill Greenhood Orchid at Grange Golf Course means that ex-situ propagation activities are unlikely to be required for this species in the Adelaide and Mount Lofty Ranges region.

Given the good recovery results to date, it is proposed that future recovery efforts retain a sensitive weed management and strong volunteer support focus.

Within the remainder of the species range in the lower Murray region, a variety of recovery initiatives have been implemented to improve the conservation prospects of the species (pers. comm. Kylie Moritz, Natural Resources South Australian Murray Darling Basin).

Such initiatives have included coordinating the implementation of weeding and rabbit control within Mowantjie Willauwar Conservation Park and another privately owned site, and workshops and management planning at a further two privately owned sites.

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