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Thanks!

The Mount Lofty Ranges Southern Emu-wren & Fleurieu Peninsula Swamps Recovery Program (MLRSEW & FPS Recovery Program) appreciates the commitment of landholders and other partners in enabling the achievements of the past 12 months presented in this report. Only through collaboration can we ensure the swamps and Emu-wrens survive for future generations.

The Recovery Program is hosted by the Conservation Council of SA:

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Another great year for Swamp Fest!

A fantastic effort by volunteers at this year's Swamp Fest saw 3000 native seedlings planted at Stipiturus Conservation Park. Much of the event was coordinated by the Natural Resources Adelaide and Mt Lofty Ranges Volunteer Support Officer Jodie Woof. She said the work of the volunteers on the day deserved high praise.



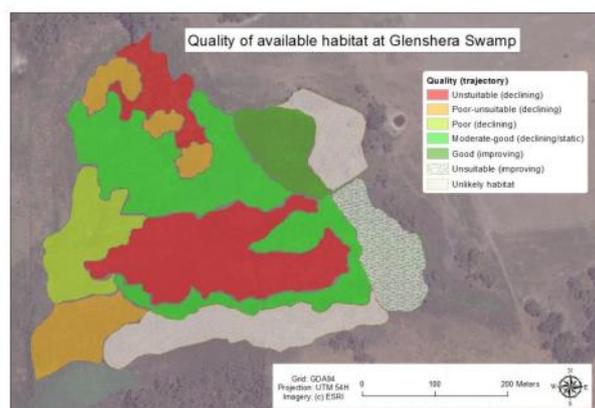
"Their efforts will go a long way towards restoring threatened plants and will contribute significantly to improving the health and resilience of our swamp systems. We had more than 100 volunteers turn up on the day. They not only planted seedlings but also installed mesh guards and put up temporary kangaroo exclosures."

These guards are vital to reduce grazing pressure and give the young seedlings the best chance of survival. Hopefully helping to create more habitat for the threatened species in the park.

Habitat use at Stipiturus Conservation Park

As reported last newsletter Tim Fearon examined the changes in Swamp vegetation as time since disturbance increases, in particular the physical structure of the vegetation and the abundance of insects and how this effects use by Emu-wrens.

Tim found the habitat use was highest at the interface between mid to late vegetation age-class units, where structural and floristic diversity was highest. Areas of lower use were found to correspond to mainly early age class vegetation, and old vegetation with little plant variety,



From the results of his study Tim predicts that over half of the approximate 14 ha of habitat (7.3 ha) within the study extent is poor to unsuitable, especially within the long unburnt vegetation. However 1.3 ha is improving and will likely be good habitat within 2-3 years.

Distribution of Water Plant Functional Groups (WPFGs) in the Fleurieu Peninsula swamp system according to hydrological gradients.

Tim has now passed the baton onto another honours student, Dane Wilden. Dane has spent a lot of time in the swamps (as an undergraduate student and field assistant) so it was a natural progression for him to focus his research on the Fleurieu Swamps. Dane is investigating the spatial distribution of swamp plant assemblages according to different hydrological gradients. Once again, the impetus of this research came from landholders who have observed the swamps on their property as changing, appearing either drier or wetter. It is hoped that this study will allow us to make assumptions about hydrological fluctuations on the basis of vegetation community changes. Dane is currently in the thick of all his field work (often literally as he tries to find a way through the impenetrable swamp vegetation) and hoping to have some results by the end of the year.



This is a University of Adelaide honours project that has been funded by the Field Naturalists SA (Lirabenda Grant). Dane is appreciative of the willingness of landholders to allow him access to their swamps.

The expansion of *Phragmites australis* (common reed) in swamps.

This project was enthusiastically taken on by Tessa Roberts with a focus on the Black Swamp and Lower Tookayerta swamp system. Landholders have been informing us about the encroachment of the common reed (often beyond fences) and these observations were considered as part of Tessa's study. After several months of intense field work (often within impenetrable reedland thickets), Tessa was able to conclude that litter depth and the water table had the greatest influence on common reed density and height. The drier areas of the swamp actually supported common reed monodominant stands with less plant diversity. Tessa also found that common reed had expanded considerably within a 9 - 11 year period. These results suggest that the common reed is an invasive species with the potential to spread within and around swamp vegetation communities. There is still much to learn about common reed (particularly management options) and fortunately, a Postdoctoral researcher from the University of Adelaide, Dr Jasmin Packer, is progressing this work.



Tessa's project was funded under the Coorong, Lower Lakes and Murray Mouth (CLLMM) Recovery Project by the South Australian Government's Murray Futures program and the Australian Government. The honours project would not have been possible without the support of landholders.

Mount Loffy Ranges Southern Emu-wren

Emu-wren populations .– Marcus Pickett

MLR Southern Emu-wren populations continued to decline during 2015–2016, but there was some good news!

Record population densities were discovered at one site and when compared to the previous year, three additional sites were occupied. The three additional occupied sites comprised one formerly occupied site in Deep Creek Conservation Park that was burnt in 2012 and two 'new' sites near Mount Compass.

Most sites nowadays support less than a few Emu-wrens/observations per km. Expanded monitoring of swamp habitat on the lower Finnis River revealed densities as high as approximately 28 Emu-wrens per km at a location on the eastern side of the river. The previous high was about 20 Emu-wrens per km recorded during 2001 in dry-heath at Deep Creek Conservation Park.

It's tremendous to find such high abundance, but important to note that areas concerned are relatively small. The high density appears to be due to habitat structure and floristic composition, and the program is working to better understand contributing factors and consider new information in broader management.

Technical workshop – Marcus Pickett

We are constantly reviewing the recovery tactics and priorities to get the best possible outcomes for the MLR Southern Emu-wren. In January this year 18 conservation experts attended a workshop to focus on short term (within the next 5 years) technical/practical management, with output guiding overarching recovery planning and annual milestones.

The participants were mainly South Australian scientists, but also included highly-respected interstate experts Dr Hugh Possingham (University of Queensland, and various eminent positions) and Dr Allan Burbidge (WA Department of Environment and Conservation). There was considerable discussion regarding key threats and approaches to manage these. Key recommendations were:

- Emergency predator control (Black Rat, Feral Cat and Fox).
- More focus on re-establishing connectivity in high-priority areas.
- Exploration of non-fire and integrated methods for habitat manipulation.
- Development of guidelines for habitat re-establishment, including using fire to develop or maintain optimal habitat quality.
- Review use of other Southern Emu-wren subspecies for possible translocation (e.g. from south-east SA to genetically or numerically bolster MLR populations), pending results of emergency predator control.

A major challenge, as always, will be securing the resources for implementation.

Estimate of population size: 143 – 288

Number of sites : 20



High quality habitat on the lower Finnis River where very high MLR Southern Emu-wren densities were recorded in 2015–2016 (Photo by M. Pickett)



Some of the highly-focused participants at the 2016 MLRSEW technical workshop (Photo by H. Possingham)

SAMDB Swamp Update – Nicola Barnes

Well we've just come to the end of year 4 of our SAMDB Swamp Recovery project! Another 510 hectares of weed control has been rolled out over the last 12 months by John Gitsham from the Goolwa to Wellington LAP, on behalf of NR SAMDB and the Australian Government through this Biofund project.

In addition, we were able to target some intensive weed control works (read: PILES of blackberry control) specifically to improve the condition of our Mt Lofty Ranges Southern Emu-wren habitat. This was organised following a meeting with CCSA ecologists Marcus Pickett, Tim Vale and myself. The site near Mt Compass was selected due to both recent confirmed presence of the Emu-wrens in this patch, as well as the opportunity to start to provide linkage of swamp habitat from the Council land at the Mt Compass wetlands and through 3 of the first 4 properties downstream.

Finally, we have been able to set up an eco-hydrology study to be conducted over the next 6 months. The work will be undertaken by Nature Glenelg Trust, experts in groundwater research who have also recently completed a similar study for Stipiturus CP. We are aiming to focus on Hesperilla CP and sections of the Tookayerta catchment. It is early days and this project is the planning phase – more details to follow and landholders will be contacted directly to register their interest in participating.

The Swamp Recovery project has another 12 months in operation before we need to start handing the bulk of the care of these endangered swamps back to their landholders. This project has been a fantastic opportunity to do a lot of the initial heavy lifting with weed control for landholders and continued maintenance of their native swamps will be much more cost efficient to achieve into the future.

A big Thank You to all the landholders involved in the project – as custodians of an endangered swamp community your willingness to be involved in habitat protection is very much appreciated by the community.

Your stories and feedback

We would love to have your voice in the newsletter too! If you have any stories or information please send it to us! We are also keen to improve the newsletter and we would love your feedback. If you have any comments or stories please send them to Julie.Schofield@conservation.sa.gov.au



Part of our monitoring and weed control program, a recovering sedgeland swamp after an accidental fire in 2014.



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