

## STEP NEWSLETTER MARCH 2022



*View from the Forest 20 entrance path with the orange mesh-parawebbing temporally laid down. It is easy to note that there are several dead trees visible which are likely to have died as a result of waterlogging. Photo Andy Russell*

### From the President

It may not be news to many of you, but STEP will be closed to the public for some months. Due to the excessive rain and two torrential downpours, paths have been considerably damaged to the point of creating a serious hazard to walkers. The whole of Forest 20 has been fenced off with orange mesh-parawebbing and only STEP volunteers, NAC personnel and others directly involved with remediation are allowed entry.

Unfortunately, it is not only the paths which have been affected. Crushed granite, in places up to 20 cm deep, has washed from paths onto gardens burying many plants. Most of these will not survive. We are facing considerable work to re-establish the gardens and the cost of plant replacement will also be a significant impost on our funds. (See article)

We have submitted a plan for the remediation, and we are grateful to NAC administration and horticulture staff for putting up the fencing and for their involvement in the remediation process. In mid-February, Bill Handke and his STEP team met with hydrological engineers to determine what needs to be done to solve these pressing water problems and repair the paths. (See article)

Prior to the second damaging rain event, a team of Friends volunteers came to STEP and helped with some weeding. Thank you for your efforts on our behalf are much appreciated.

Despite the understandable frustration and sadness, the Thursday volunteers remain cheerful and optimistic and are putting in extra days each week to ensure the restoration work gets done as speedily as possible. Their efforts are greatly appreciated.

Judy Smith

## *Juncus usitatus*

The excess water in the Central Garden has created an explosion in the growth of the Rush plant *Juncus usitatus*. Our efforts to clear this biomass have been greatly assisted by Pete Mealy and his Hort crew. As the clumps were dug up - from very wet soil – these were turned over and left to dry out for a week. The task then was to knock the soil out of the roots and back into the holes from which they had been removed. It was laborious work, but the resulting area will soon be papered and mulched to discourage further weed growth.

Having tried (unsuccessfully) to use some plant matter from my garden to make fibre baskets, I brought some *Juncus* home. My efforts are a bit rough, but with practice, I might be able to produce a more professional product. I thought I could call them “Junc baskets”.



“Junc baskets” woven by Judy photo Judy Smith, Mike cutting *Juncus usitatus* plants for more weaving material. Photo Andy Russell

## **Forest 20 (Southern Tablelands Regional Botanic Garden) IS CLOSED FOR SEVERAL MONTHS!**

Yes, and if you were unaware of this, then please read on and consider how you might be able to help STEP recover our very special project.

As you will have experienced, we have been in a very wet period with above average rainfall, heavy storms, high winds – all characteristics of a *La Nina* weather event. This has, over the months built up soil moisture to the point where it became saturated across the garden beds and other grassy areas as well. In turn this has meant that many of the species, including trees, that have grown so well in Forest 20 have been unable to withstand the saturation. And I mean ‘saturation’ - the water has at times just flowed across the ground surface.

There are a couple more reasons why we the Arboretum has agreed with STEP to close Forest 20 to visitors. Over the last couple of years, the Arboretum has completed the lower carpark by sealing it and landscaping the beds that separate the ranks of parking spaces. However, there are two unfortunate outcomes that





have exacerbated the above average rainfall conditions outlined above. The earthworks for the carpark may have created, re-formed or otherwise exposed undersurface flows and springs that emerge from the bank up-hill of Forest 20. As well, inadequate drainage into the expanded lower pond for the very large storms we have experienced has meant that were two major overflow events in December and January. In turn, each inundated Forest 20 and severely damaged our gravel paths and some of the garden beds, and swept mulch away. Plants well adapted to these wet conditions such as *Juncus* and *Cyperus spp.* have thrived and taken over some areas.



*Drain which overflowed down into Forest 20 causing much damage.*

Damage to the main entrance to Forest 20 and to most of the path system, including movement of gravel into the ephemeral wetland and onto the Management Road at the base of Forest 20 left terrain that was unsafe to visitors. Some paths became eroded to beneath the underlying soil and became dangerous to walk along. In December 2021 the STEP Committee wrote to Arboretum management proposing closure of the paths and this was eventually agreed to after the second flooding occasion.



STEP is now working closely with Arboretum staff to repair the damaged entrance, paths, and garden beds, through establishment of a joint team of Operations staff and STEP volunteers. Responsibility for overflows has been acknowledged and expert advice from hydraulic engineers sought to define restoration works. These will take place of the next few weeks and include cut-off drains, new gravel paths, and internal water diversions off paths.



*Middle photo, Gravel from paths washed down onto management road. Bottom photo Path damage in Bush Tucker Garden.*



In the meantime, and while the infrastructure plans are completed and put in place, our wonderful Thursday working bee STEPpers have commenced the enormous task of garden bed restoration, removal of accumulated weeds, and reclaiming our plant signs (where no planting survives). Each week between 20 and 25 STEPpers cheerfully toil away and by late February tangible improvements can already be seen. But there is much more to be done and we do not anticipate much planting, if any, before spring 2022.



*Closed path between B and C sections  
overgrown with Juncus and other rush.*

We plan to modify some routes of the gravel paths to assist management of future surface water flows and create new planting opportunities. We also need to consider how many of the 35 or so trees that have died or been blown over in high winds should be replaced. This consideration needs to include any policies the Arboretum might have to deal with such incidences and discussion with the Arboretum's arboricultural team is hoped for.

*Juncus and Cyperus clumps dug out*





*Mulch and gravel moved downhill  
smothering plants not already dead from  
waterlogged soils.*



*Photos by Lainie and David Shorthouse*

At the beginning of this article, I asked you to consider how you might be able to help STEP recover our very special project. Well in a number of ways:

- Might you join our Working Bees, or would you be interested if we arranged several special weekend Working Bees?
- Could you look after plants purchased when available, but needing to be stored until planting can proceed?
- Could you make a special contribution to the anticipated very large cost of new plantings?
- Could you contribute in some other way?

Our STEP Committee would be very pleased to hear of any offers of help or other suggestions to support us on our road to recovery (Contact us at: [secretary@step.asn.au](mailto:secretary@step.asn.au)).

**“For recover we will!!!”**

David Shorthouse

## NatureArtLab receives award

Some STEPpers may know that we have been building a relationship between STEP and NatureArtLab, using Forest 20 as a venue for some of their activities. It is with great pleasure that I relay to you in this newsletter the following from Julia Landford, Founding Director of NatureArtLab.

NatureArtLab is the winner of the *Telstra Best of Business Award for Promoting Sustainability in 2022!* We also received three awards as an ACT Finalist for Building Communities, Accelerating Women and Championing Health. It is a wonderful tribute, and we can all be justifiably proud of what we have achieved. Here is a link to our local City News on the award. [National business award to Local nature art group Canberra City News](#). NatureArtLab will now proceed to the National Finals to be held later this year. See also <https://natureartlab.com.au>, It's a beautiful website.

Very many congratulations to Julia Landford and her group. Incidentally, a course in nature journaling due to be held at Forest 20 during February/March has had to be located elsewhere due to the closure of Forest 20. Several STEPpers have assisted with the course by providing expert information about local ecosystems.

David Shorthouse

## Restoration Works to Avoid Future Water Damage

The unfortunate water damage to STEP necessitates some expansive capital works to ensure this cannot happen again. Amalie Shawcross of NAC arranged a meeting with 2 hydrologists from GHD and a couple of STEPpers to discuss the possible remedial works. NAC will fund the new works.

The first and most immediate priority for action is to address the overflow problem at the new STEP Entrance and the sub-surface seepage along the western allee (along our new Wattle Walk).

This will involve modification of the storm overflow drainage arrangements at the foot of the lower carpark. In addition, works will be undertaken to intercept sub-surface seepage from the area upland into STEP. These works may involve a 500mm deep drain to be constructed along the Wattle Walk allee and, possibly, a subsurface drain below that to intercept sub-surface flows.

The existing ditches from the southern edge of the Mesa Oak forest down to STEP's water tanks and from the water tanks along the interface between the Mesa Oaks and STEP will be cleared out. Further consideration will be given as to further works to facilitate flows along these ditches.

The paths will be rebuilt when this is being done a liquid bonding agent – Soilbond - will likely be incorporated into the crushed granite-clay composite to bond the material further.

We have assurances from NAC that all will be restored to its previous gold-star best appearance.

The works will be undertaken as soon as possible – a few dry days will help!

Bill Handke

## STEP acknowledges the support of the following Corporate Members



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## Valuing Volunteers

The ACT Legislative Assembly's Standing Committee on Environment, Climate Change and Biodiversity has set up an inquiry into Environmental Volunteerism.

We have contributed to this, firstly by giving a brief history of STEP and of its development through the work of volunteers over many years. We also documented the benefits of the significant expertise of active members, most of whom are retired from a wide range of professions in scientific disciplines and outlined how we work with institutions and bureaucracy through vehicles such as our Memorandum of Understanding.

Judy Smith



Some photo taken on February 28<sup>th</sup> but not used in the recent photo sheet



*Our latest volunteers Photo by Judy Smith*



*Ranunculus papulentus* Large river Buttercup



*Pelargonium rodneyanum* Magenta Storksbill





*Westringia eremicola* Slender Westringia



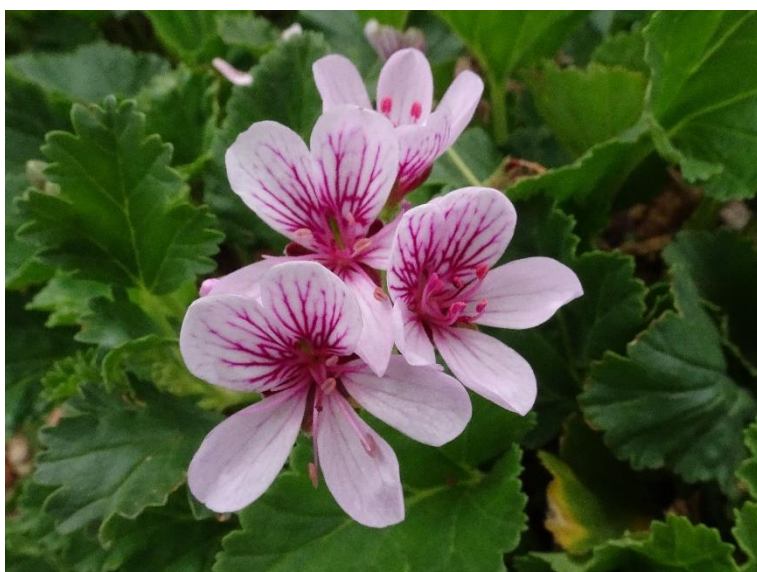
*Grevillea victoriae* var *nivalis* Royal Grevillea



*Austrostipa verticillata* Slender Bamboo Grass



*Lomandra longifolia* Spiny-headed Mat-rush



*Pelargonium* sp. *Striatellum* Omeo Storksbill



*Cassinia quinquefaria* Rosemary Cassinia





*Eucalyptus rossii* Scribbly Gum, interesting bark colour. *Allocasuarina nana* Dwarf She-oak showing cones.



*Calocephalus citreus* Lemon Beauty-heads

*Chrysocephalum apiculatum* Common Everlasting



Left A yet to be identified cockroach. Centre *Paropsis atomaria* Eucalypt Leaf Beetle Right *Chauliognathus tricolor* Tricolour Soldier beetle

Photos by Andy Russell

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