

# STEP NEWSLETTER DECEMBER 2017



## From the President

Our AGM was held on 26 November and the committee for 2018 is as follows: Judy Smith - President, David Shorthouse – Vice-President, Ross Dalton – Treasurer, Heather Green – Secretary (Minutes and notices), Andy Russell – Publications and Memberships, and committee members Bill Handke, Lainie Shorthouse, Terry Murphy and Elizabeth Minchin. We extend a warm welcome to Elizabeth. Jens stood down from his position on the committee and we thank him for his contribution, and the continuing great work he does managing our water reticulation and measuring trees.

A very dry Spring created some extra work with planting as there was a need for weekly watering to settle in new plants. Later decent rain has meant healthy growth of many new species. The grant from Molonglo Catchment Group enabled us to invest in new tools. Among other things, a soil auger has helped break up the ground and better prepare the soil for planting of more mature species, a new mattock is now sought- after to remove poas excess to our needs, and a light weight rake is very useful cleaning up the gravel paths.

Plans for the shelter to be located near the Clearing are almost finalised and we look forward to its construction. Other work has started on the Bush Tucker Trail. Paths have been marked out and formed with crushed granite. The spaces between the paths will have grass removed and planting is anticipated in some areas in Autumn next year.

Thank you to the NAC management for all of their assistance this year. It has been a great help to have our water tanks connected to the main supply and our high-sided weed trailer emptied regularly. What a shame we have so many weeds to fill it each week.

Thank you to all the many people who have contributed in so many ways to the progress we have made this year. STEP as a fully-fledged Regional Botanic Garden is well underway and this wonderful goal could not have been realised without the hard work and interest of so many. Best wishes to you all for Christmas and the holiday season, and may 2018 bring you health and happiness.

Judy Smith (President)

## **Southern Tablelands Ecosystems Park (STEP)**

### **Annual Report 1 July 2016 – 30 June 2017**

STEP can report a year of consolidation for the regional botanic garden for the southern tablelands, located at Forest 20, National Arboretum Canberra. Our enthusiastic and dedicated band of volunteers who attend our weekly working bees have continued to develop our collection of native plants and to find ways to encourage visitors to take a walk through Forest 20 as part of their visit to the Arboretum.

A major feature of the year was dealing with the repercussions of an unusually wet winter and spring in 2016, which left Forest 20 sodden and in parts waterlogged for a long period. We lost some plantings unable to cope with waterlogged soils, we repaired damage to our mineral paths that were continuously wet, dug drainage channels to disperse water, and removed a significant number of trees that had died from the extreme conditions. Notwithstanding this set-back and some loss of morale amongst our volunteers, a consistent attendance at our working bees has restored the central garden after dealing with an explosion of unwanted plants that were lying as seed waiting for wet conditions and we have started to replace lost plants. Tree replacement is underway where appropriate, including allowing some natural regeneration from seedlings that germinated near their parent tree.

Following the wet period STEP also expanded the area where understorey plants can be displayed, improved the presentation of the ephemeral wetlands and initiated special events for visitors. We also received two grants that support new projects, and worked with Arboretum staff on several projects that will enhance both Forest 20 and the Arboretum's facilities.

#### **Key milestones and activities for the year to 30 June 2017 include:**

- We continue to appreciate a close consultative and working relationship with Arboretum staff and their material support for Forest 20. This year we have received regular supplies of mulch, a second water tank and connection to the Arboretum's water reticulation system and a trailer to assist transfer to weeds to the Arboretum's composting area. In turn, STEP has assisted the Arboretum by hosting walks and special events, and provided an interesting destination for visitors and a place for school visits to learn about local flora and environmental themes.
- Our weekly STEP working bees have been well attended, and over 2200 volunteer hours contributed. Much of the focus for these working bees has been to repair damage that resulted from the very wet 2016 winter and spring, involving a massive amount of weeding and removal of dead shrubs and trees. Volunteers have also worked on the 'entrances' to Forest 20 by establishing a mix of plantings that generally will include species with reasonably prominent flowers. Work has also begun to prepare some areas adjacent to the central garden that are difficult to mow (due to their proximity to corners and paths) and which may provide conditions that may better suit some species that have not thrived in the central garden.
- New plantings have been sourced from several local native plant nurseries and, in a new initiative for STEP, from plants grown from seed and some 3000 seedlings potted up to be grown on before planting out as part of our understorey displays. This has enabled a significant and colourful expansion of our display area.

- Activities organised or hosted by STEP included walks organised by the Wattle Day Committee in celebration of Australia's national emblem and taking advantage of the 20 or so Acacias growing at Forest 20; an event for Tree Week (May 2017) attended by over 30 artists and which we dubbed "STEP into plein air"; hosting walks organised by the Friends of the Arboretum; and a short visit by a group from the Singapore National Parks Board (including their Botanic Gardens) who were looking at forest and landscape restoration in Canberra and Brisbane.
- STEP has produced four newsletters during the year, with articles contributed by many STEP members including explanations for the Latin or Greek names commonly used in forming the genus and species of plants names, articles on birds, insects and other matters relevant to our project and volunteer interests.
- We continue to work closely with the Arboretum on plans for a shelter structure adjacent to The Clearing and for a Bush Tucker Garden proposed as part of the Arboretum's contribution to the ACT Government's reconciliation Action plan. A second water tank has been installed and both tanks are now connected into the Arboretum's water supply system. A major new information sign is under production. It explains the plans of STEP at Forest 20, and directs visitors to the various plant groups in the central garden.
- The Arboretum chose Forest 20 as one location for a new visitor information initiative launched by Deputy Chief Minister Yvette Berry MLA on 5 December 2016 at the Himalayan cedars picnic deck. Each 'Augmented Reality Station' is accessed by an 'app' on a mobile phone with the station at Forest 20 featuring a welcome to Ngunnawal country.
- Receipt of grants from Friends of Grasslands (to produce a leaflet on grasses) and Molonglo Catchment Group (to assist renewal of tools).
- At the beginning of the year, STEP received recognition for its achievements when named the 2016 ACT winner of the 'Environmental Education' category of the Keep Australia Beautiful Sustainable Community Awards and Highly Commended in the category 'Environmental Sustainability'. The judges were impressed by how much work STEP has done in such a short time. The awards helped to lift the profile of Forest 20 as a special or different place to visit within the Arboretum and gave a focus of attention onto STEP as a significant asset within the Arboretum. As part of the same Keep Australia Beautiful awards STEP Vice President David Shorthouse was awarded ACT Individual ACTION Award.
- STEP has established an informal technical reference group of local botanical, horticultural and garden experts to advise us on further development of our regional botanic garden.

Judy Smith  
President  
September 2017

## What's in a name? A sample of descriptors in STEP

Plant names generally comprise two elements: a generic name (the genus) and a specific epithet (which identifies the species). The *specific epithet* will serve one or two functions: (i) it may refer to a person who is somehow connected to the species (*Eucalyptus blakelyi*; *Vittadinia muelleri*); or (ii) it may describe some attribute of the plant or refer to its habitat or the country where the species occurs.

Here are some interesting descriptors of this second kind, as applied to some examples in STEP:

*Eucalyptus dives* (broad leaf peppermint): *dives* (L)=rich, wealthy

*E. melliodora*: *mel* (L)=honey; *odor* (L)=smell (*melliodora*=honey-scented)

*E. rubida*: *rubidus* (L)=red, reddish

*Acacia pycnantha* (golden wattle): the stem *pycn-* (G)=thick, dense; *anth-* (G)=flower, so with dense flowers

*Acacia genistifolia* (early wattle): *folium* (L)=leaf (*folia*=leaves); *genista* (L)=the plant broom

*Acacia siculiformis* (dagger wattle): *sicula* (L)=small dagger; *forma* (L)=shape

*Acacia cultriformis* (knife-leaf wattle): *culter* (L)=knife (as in 'cutlery'); *forma* (as above)

*Acacia melanoxylon*: *melan-* (G)=black (as in 'melancholy', 'melanoma'); *oxy-* (G)=sharp (or sour)

Now for some entertaining oddments:

*grevillea lanigera*: *laniger-* (L)=woolly

*Pomaderris pallida*: *pallid-* (L)=pale. Here the adjective is in the feminine form (*pallida*).

*callistemon pallidus*: as above. Here the adjective masculine in form (*pallidus*).

*Convolvulus angustissimus*: *angustus* (L)=narrow; *angustissimus*=very narrow

*Bulbine glauca*: *glauc-* (L)=bluish- or greenish-grey

All the above descriptors recognize a feature of the plant: *how it looks* (or how it smells). The next set of descriptors, all ending in *-ns*, describe *what the plant--or some element of it--does*:

*Einadia nutans*: *nutans* (L)=nodding

*Dichondra repens*: *repens* (L)=creeping

*Pultenaea procumbens*: *procumbens* (L)=bending forward, sinking down

*Leucochrysum albicans*: *albicans* (L)=verging on white

*E. albens*: *albens* (L)= appearing white, becoming white

For the grammar-nerds, all these *-ns* forms are participles, which are adjectives formed from verbs (which, we all know, are '*doing* words': they denote actions or processes).

Elizabeth Minchin

## Traveller's Tales Rare plants of Northern England

Last May I went to England to visit my sisters but as part of the visit, we planned a trip to Teesdale in the north Pennines to walk and look at some rare plants that are found in the area. The area that we visited was part of the Upper Teesdale National Nature Reserve and was designated an Area of Outstanding Natural Beauty in 1988. It is known for the plants that originally colonised the high Pennines after the ice age. The reserve includes a range of upland habitats from hay meadows, juniper woodland, heathland and limestone grasslands.



After the last ice age (about 20,000 years ago in this area) there were a unique group of plants that survived in this area which are known as the Teesdale Assemblage. All of these plants are fairly rare, and many are sub-alpine.



*Cow Green reservoir*

On one day we went to Cow Green reservoir walking across Cronkley Moor and Widdybank Fell to look for some of these rare plants. The moor was wild and treeless, but we managed to find the beautiful deep blue spring gentian (*Gentiana verna*) growing in a dip sheltered by a few rocks. Beside a mountain spring we found the delicate pink bird's eye primrose (*Primula vulgaris*) and further along the track was a carpet of mountain pansies (*Viola lutea*) in all sorts of variations of cream, yellow, violet and purple. They are similar to miniature violas. There were some fenced off areas 'exclusions' used to protect some of the rare plants and we found an alpine bistort (*Polygonum viviparum*) (rather rare) growing among wood anemones.



*Spring gentian*



*Wood anemone and Alpine bistort (centre)*



*Bird's eye primrose*







*Mountain pansies, also bottom of previous page*

On another day, we walked beside the river Tees to visit the High Force waterfall which is one of the highest in England dropping 21m as it pours over the hard rock forming the Whin sill. Along the riverbank we saw globeflowers (*Trollius europaeus*) and marsh marigolds (*Caltha palustris*) and near the waterfall is the oldest juniper (*juniperus communis*) forest in England, thought to be about 250 years old (one of 3 native British conifers). There were also a proliferation of orchids beside the river. These are quite different from Australian orchids and are mainly pink and purple. There were early purple orchids (*Orchis mascula*), common spotted orchids (*Dactylorhiza fuchsii*) and some that were hybrids between the spotted orchids and marsh orchids (*Dactylorhiza fuchsii x purpurella*). Another unusual plant we found in this area was a butterwort (*Pinguicula vulgaris*) which is carnivorous.



*Marsh marigold*



*Butterwort*



*Globeflower*





*Juniper forest*

Another unusual feature of this area were the hay meadows. The North Pennines has over 40% of the UK's upland hay meadows, which survive because many farmers practise traditional low-intensity farming methods. These hay meadows have a rich diversity of plant species with over 30 different species growing in each square metre and the whole field can yield up to 100 species including 10 or more grass species. They provide an important habitat for birds, insects, bats and mammals. The mix of plants varies from year to year due to the controlling effects of plants such as yellow rattle (*Rhinanthus minor*) and eyebright (*Euphrasia officinalis*) which are semi parasitic and reduce the vigour of some grasses and other species that could affect the overall diversity.



*Yellow rattle*



*Euphrasia*



*Hybrid orchid*

This was a wonderful place to well worth a visit if you are in the area round about the end of May. I saw many rare flowers that I had never seen before and thoroughly enjoyed the scenery.

Text and photos by Jennie Widdowson

## **New STEP brochure**

After a lengthy process, including much consultation, the NAC administration has produced an updated and professional information brochure. Thank you to Lynne Sealie for all her work to create this document. It will give visitors a clear idea about what STEP is, where we are and what we do. The brochures are available at the Concierge desk at the Village Centre for visitors and FNAC guides but if you would like copies to distribute to any interested groups, organisations or individuals, please contact David Shorthouse or Judy Smith.

## **Visit from Julia Landford – NatureArtLab**



David invited Julia Landford to visit STEP on Thursday 23 November. Julia is the creator of Canberra's first natural history art school called NatureArtLab which is located at M16 Artspace in Griffith. Drawing on local experts, she offers courses which allow participants to understand the form, structure and function of plants, insects and animals and express these as art. We hope that she might consider bringing some of her participants to STEP for an "in the field" experience of the natural world. If you are interested, please check the website [www.natureartlab.com.au](http://www.natureartlab.com.au) or search for this on Facebook.

## **Traveller's Tale – The magic of the Pilliga Scrub**

If you ever travel by car to or from Queensland, a direct but much derided route is via the Newell Highway. The 118km haul between Coonabarabran and Narrabri takes you through the Pilliga Scrub. To many, the trip might seem tedious and lacking interest, but the diversity of this very special patch cannot be ignored. From a driver's or passenger's perspective, there are long stretches of associations of *Casuarina*, *Callitris*, *Acacia*, *Eucalyptus populnea* (so evident by their glossy round leaves) and *E crebra*. A Google search for information reveals so much more – species at the extreme edge of their range, many species confined only to this region and a multitude of threatened and endangered species. A worrying aspect about the prospects for this special environment is made clear by roadside signs protesting proposed coal seam gas exploration. On a return from Queensland in August this year, I was entranced by the view some 60km north of Coonabarabran where a pure stand of Ironbark stretched for about 15 km. The straight black trunks up to 20-30m high marched along either side of the road, topped with the softest grey-green foliage. And wonder of wonders, an understorey of Acacias in full bloom, 3-4m high filled in the space beneath. I didn't take a photo but the image in my mind remains vivid to this day – truly magic.

## **Welcome to New Members**

K Nash  
W Steensby



## **STEP acknowledges the support of the following Corporate Members**



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The ephemeral wetland following the recent rain. Photo David Shorthouse



## Working Together – CIT staff visit

On Monday 11 December, a group of staff from CIT School of Horticulture and Floristry visited STEP. Jane Cottee, Head of Department, brought her colleagues to investigate the possibility of CIT staff and students using STEP as a resource where they could see native plants in a garden setting. Points raised in discussion covered the purpose of STEP, propagation from seeds, identifying plant diseases, demonstrating native pollinators and the range of uses for native plants. We are pleased with the interest shown by this institution as it furthers the educational perspective of STEP and allows us to reach out to the wider community as a practical and useful resource. It is a very worthy exercise to pursue the complementarity of an association with CIT School of Horticulture.



Jane Cottee (Head of Department), Julie Collins, John Ellis, Bruce Davies



Lainie Shorthouse, Terry Murphy, Alison Robb

Flowering at Forest 20 recently



*Callistemon sieberi* River Callistemon.



*Chrysocephalum semipapposum*, Clustered Everlasting

For any feedback regarding this newsletter please contact the Editor, Andy Russell at [membership@step.asn.au](mailto:membership@step.asn.au)