

STEP Newsletter December 2025



From the President

Hello all.

This will be the last piece that I will be writing as STEP President, as I am standing down after three years in the position. We held our AGM on Thursday 20th November, and I am pleased to announce that Bill Handke will be taking over my role. Bill has a wealth of knowledge about Forest 20 and has been involved in many significant projects like the tool shed construction, labelling and signage, path building and establishment of the Parade of Peas. Congratulations Bill! (There will be a full list of office bearers at the end of this newsletter).

In sadder news, I would like to pay tribute to our STEP webmaster, Keith Pantlin, who passed away last month. Keith was an intrinsic part of our team and will be greatly missed. It is thanks to his skills and dedication that STEP has had an informative and useful web page, and we are extremely grateful for the time that he volunteered in the service of our group. Vale Keith.

The weather has been unpredictable in the last few weeks, and the dry spring conditions have led to diligent watering of our young plants. Gale force winds on the 25th of November damaged two trees in the gardens – a *Eucalyptus blakelyi* (pictured) had one half blown over in *Section I*, and a *Eucalyptus macrorhyncha* went down in *Section A*. Most of the other damage was superficial and quickly remedied by judicious raking and tidying.



There has been a lot of thinning and cutting back of the *lomandra* and *dianella* patches in the Bush Tucker Garden. A dedicated team of pruners and mulchers have made a huge difference to the tidiness of this area. There have also been snake sightings down in STEP, so our volunteers must be extra careful amongst long grass.



Digby ready for work with the brushcutter



Hugh with an enormous pile of Lomandra clippings



A brown snake sunning itself on a path in STEP

BH

The National Botanic Gardens' Plant Identification group and Plant Science group visited STEP in late spring. Attendees were complimentary about our guided tours and enthusiastic about the range of Southern Tablelands native species that are on display at Forest 20.

We have had new members join our working bees recently and it's great to see the 'STEPper' team continue to expand and thrive. I extend my thanks to all those who volunteer their time and energy - your contribution makes a genuine difference to the success of the gardens.

Our sessions run every Thursday, start around 8.30 am and go until 11.00 am each week, with a break for a shared morning tea. If people want to come and see what we do, we always welcome visitors. Our website is www.step.asn.au for more information.

With best wishes to all for the coming festive season,
regards

Jane Cottee STEP President (Outgoing).

STEP Committee for 2026

The AGM was held on Thursday 20 November at 10 am. The following positions at STEP were nominated for and seconded:

<i>President:</i>	Bill Handke
<i>Vice President:</i>	David Shorthouse
<i>Secretary:</i>	Elizabeth Minchin
<i>Treasurer:</i>	Ross Dalton
<i>Memberships:</i>	Yvonne
<i>Committee Members:</i>	Terry Murphy, Digby Gascoine, Judy Smith, Hugh Milloy, Jennie Widdowson
<i>Public Officer:</i>	Chris Ikin

Photos and text Jane Cottee

Retiring president

News from Forest 20

A number of interesting plants and insects, both helpful and harmful have been observed at STEP this spring.

The Kurrajong star psyllid



STEP's young Kurrajongs are being attacked by a pest called the Kurrajong star psyllid. The adults are green and 2-3cm long while the nymphs look similar but can be distinguished by a red stripe running from head to abdomen. The nymphs produce wool-like threads which can look like stars when several psyllids are clustered together. The eggs are laid in small clusters. Large numbers of these psyllids can cause leaf drop but they can easily be rubbed off with fingers. If the leaves are badly damaged, they can be pruned off. Predators such as birds and various insects usually manage to keep the psyllids in check before the trees suffer any significant harm.

DH



Kurrajong star psyllids on a young Kurrajong

St John's wort beetles

St John's wort is a perennial weed which grows and flowers prolifically around Canberra and is difficult to eradicate. It frequently invades STEP despite the best efforts of STEppers to eliminate it.

The Australian biocontrol hub has established 6 insect species to help with the control of this weed.

One, and possibly 2 of these have been identified at STEP. These are the St John's wort beetles which have been found clinging to the stems of some St John's wort plants. There is both a greater St John's wort beetle (*Chrysolina quadrigemina*) and a lesser St John's wort beetle (*Chrysolina hyperici*). The greater St John's wort beetle has been positively identified by Canberra Nature map.

As beetles of different sizes have been observed at STEP, the lesser species may also be present. The two species are very difficult to tell apart as they are both small, black and shiny, but the greater species is about 5mm long and the lesser one is about 2mm long. Hopefully they will weaken the plants by their presence and help to stop the spread of this weed.

The other biocontrols introduced for St John's wort are a midge, an aphid, a mite and a borer, but these have not yet been observed at STEP.



Orobanche minor – Broomrape

Orobanche plants have been appearing in a number of areas of STEP. This is a non native, non-photosynthetic plant that is a parasite on various pea (Fabaceae) and daisy (Asteraceae) species. These hosts provide nutrients for the orobanche plants. Any roots that the orobanche grow are used to anchor the orobanche to its host. The flower is brownish beige and there are no leaves. The plants disperse their seeds efficiently so it is best to remove any orobanches that are found.



Orobanche plant with roots attached to a native geranium



Closeup of Orobanche flower

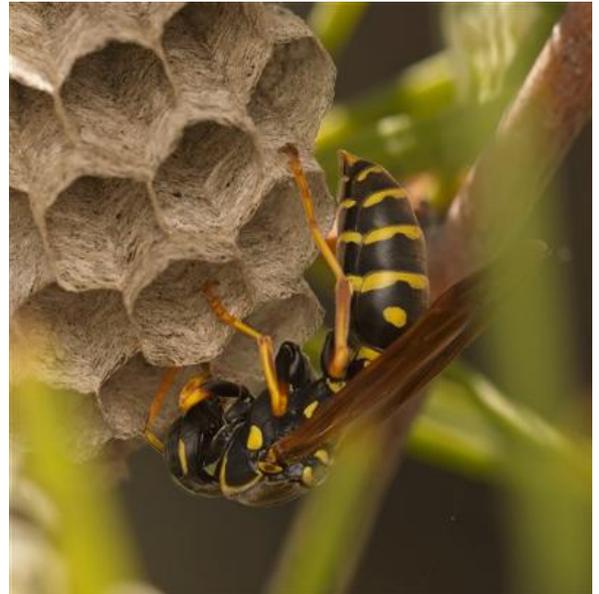
Paper wasps

The paper wasps that are more usually seen around Canberra are the species native to Australia (*Polistes humilis*). They have light brown coloured legs and bands of brown and yellow on their abdomen. Their nests are a cluster of hexagonal shaped cells usually found attached to bushes or the eaves of buildings.

The Asian paper wasp (*Polistes cinensis*) is a fairly recent arrival in Canberra (first identified in Fyshwick, Kingston and Pialligo in 2011). This year, they have found STEP and taken up residence in the *Hakea microcarpa* in Section H. These wasps have yellow legs and a black and yellow abdomen. They are smaller and slimmer than the European wasp which has similar colourings. The Asian paper wasps can be very aggressive in defending their nests and have a painful sting so it is best not to disturb them.



Asian paper wasp nest in the hakea microcarpa



Asian paper wasp – closeup

DH



Australian paper wasp nest



Australian paper wasp closeup

Community News

Moth Tracker

The centre for eResearch and Digital Innovation (CeRDI) in collaboration with Zoos Victoria has developed a citizen science project to support research into Bogong moth movements and numbers which, in turn, will support conservation of the Mountain Pigmy possum. There is a web application called The Bogong Moth Tracker which allows sightings of Bogong moths to be recorded and tracked. If you are interested in being involved in this valuable citizen science project there is more information at:

<https://www.cerdi.edu.au/BogongMothTracker>

Keith Pantlin's contribution to STEP

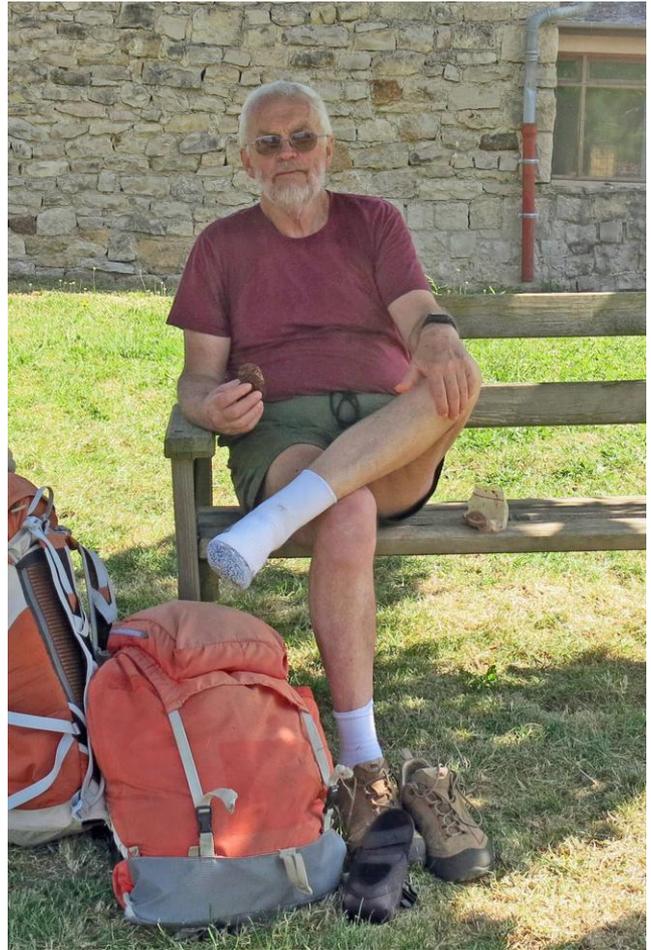
from Jenny Andrews:

I joined STEP in about 2012, at the instigation of Cathy Robertson, who was a founding STEP member, and a long-time friend of Keith's through their work with the teachers' union. She initially tried to get Keith interested in working at STEP but he was not – he does not pull out weeds. However, I was very interested and I quickly became a regular Thursday morning participant.

STEP already had a website but it was rather unsatisfactory, so our erstwhile Welsh member, the beloved Richard Jones, got his ANU computing students to make a better one, which they did. But it was unfinished when they all graduated, and David Shorthouse asked Keith whether he would be interested in taking over responsibility for it, which he was happy to agree to.

He has maintained and improved it ever since, and made it much more user-friendly. For instance, all the president's newsletters and "Of Interest" sheets (that Andy Russell produced) are there, and it has a wonderful picture as header, of us doing what we do best, i.e. pottering about weeding.

I am still trying to come to terms with the fact of his death, which was sudden at the end.



Keith, resting while on a walking tour in France

JA

Learning About Native Peas



JW

Members of the Australian National Botanic Gardens Plant Identification Group visited STEP recently to learn how to identify native pea species. As there are some 1400 native pea species across Australia and 131 species in the Southern Tableland it is a big job. So Terry, Jennie and I started with the basics of the 19 genera involving the 51 species on display in STEP, with the Parade of Peas as the focus.

Identifying native peas can be a daunting task but luckily there are some ready indicators for distinguishing between genera.

But first we showed them the extraordinary complex way native peas are pollinated by insects. Seeing that the smallest pea flower we have in STEP (*Pullenia gunnii*) is 1/3 the size of a grain of wheat, some very small insects have that task. I can not think of a more complex manner in which plants are pollinated: arguably more complex than Trigger Plants and Hammer Orchids, but no head banging is involved – just tummy tickling.

Examples we used to explain the differences between some of the genera:

Daviesia (Bitter-peas) species – the seed pod is shaped like a stylized “D”

Dillwynia (Parrot-peas) species – the petals at the back (called the “Standard”), are broader than tall so looks like Mickey Mouse ears or a figure 8 lying on its side. Also the leaves are narrow and linear with a groove running along the top.

Gompholobium (Wedge-peas) species - three leaves come off the same point on the stem

Bossiaea – if a pea has flattened stems and leaves, it will be a Bossiaea (but not all Bossiaea have this feature).

Pultenaea (Bush-peas) species – have hairy stems and leaves.



Pultenaea polifolia - Dusky bush pea

JW



Pultenaea pedunculata - Matted bush pea

JW

We showed them the flowers with eye lenses and under a microscope so they could see other features – eg, the calyx, bracteoles, stipules, the ten stamens and the three different ways they are joined; and the hairy stems and leaves of Pultenaea species.

Overall a good time: they were most grateful and greatly impressed with STEP as a whole, and I reckon that we have turned a few of them into PeaNuts, just like a few of us at STEP.

Bill Handke

The Case of Unexplained Pea Deaths

While the Parade of Peas has put on a brilliant display again this spring, not all plants have been playing their role as intended. We find a couple of species hard to keep alive. A particularly difficult genus has been the Wedge-peas, ie Gompholobium. With big, brightly coloured, all-yellow flowers they stand out in the bush. All four Gompholobium species we have planted multiple times have died after six months or so.

Native peas, like all of the legume family (including wattles), develop a symbiotic relationship with rhizobia soil bacteria. The rhizobia fix atmospheric nitrogen (N₂), which plants cannot use, and transform it into ammonium (NH₄), a soil-bound form that plants can use. This fixation takes place in nodules that form on the roots.



Michael Hunt invited Dr Peter Thrall, former CSIRO Chief Research Scientist/Ecologist, to STEP to discuss the matter and to advise on how we can improve rhizobium inoculation to help with the establishment of these more challenging pea species. Dr Thrall indicated that some native peas and other legumes have a requirement for quite genus-specific rhizobia.



And one way to get some of this pea elixir is to take a teaspoon of soil from around the roots of thriving plants of that species. Also he advised that CSIRO holds freeze-dried stores of four types of rhizobia bacteria that might be helpful – he indicated that he would see if he could obtain some for us to test.

Dr Thrall joined us for morning tea and spoke to the group about rhizobia soil bacteria and the difficulty in identifying which specific rhizobia are required by some plants. Nathanael from the Arboretum, also at morning tea,

indicated that some of the Arboretum's wattles were poorly and speculated that it may be because the best rhizobia soil bacteria were absent. Unfortunately, there is no simple soil test to determine their presence. It can only be determined by experimentation.

So is the case of unexplained mortality solved – we plan to ask Peter to help secure some of the magic ingredients from the CSIRO vault for us to trial!

Bill Handke / Michael Hunt

Some additional information on this topic is available at the following website. Ed.

<https://www.soilquality.org.au/factsheets/legumes-and-nitrogen-fixation-south-australia>

The Tumut Grevillea – *Grevillea wilkinsonii*

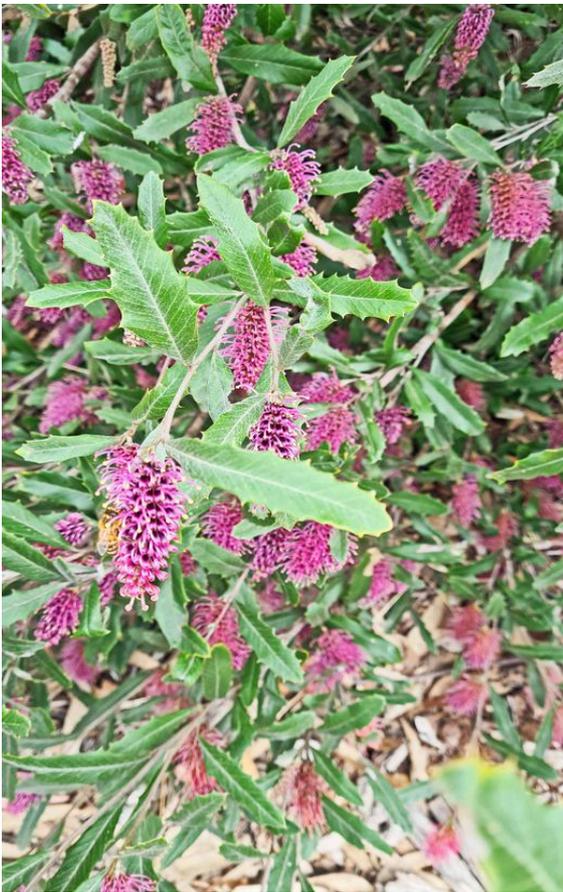
The Tumut grevillea was featured on the ABC news a few months ago. This species is listed as critically endangered by the NSW Office of the Environment and Heritage and in the wild, it only grows in a very restricted area in two known population groups. One group is near the Goobarragandra river, east of Tumut while the other occurs near Gundagai. The plants are mainly growing on private land, but this has been fenced to exclude stock from damaging them. Over a 20 year period where the plants have been surveyed, their numbers have declined 70% due to flooding, grazing, weed invasion and climate change. Now, less than 1000 plants have been found and less than half of these are mature specimens.

However, the shrub propagates quite easily, so the NSW government has been encouraging people living in the Tumut area to propagate these grevilleas from seeds and cuttings to help to save it from extinction. Several workshops have been held in the local area to educate people in how to grow and care for these endangered grevilleas. This was what the ABC news item was about.

STEP has some quite mature bushes growing adjacent to Section B in the Central garden. Their lilac coloured flowers provided a colourful display for a few weeks in October.

This medium sized shrub needs good drainage and a dry climate. It will grow in most soils but can be affected by heavy frosts. Although it is drought tolerant, it needs regular winter rain to flourish.

In the future, maybe STEP could think about collecting seed from our plants to propagate additional seedlings. This would be a way to further help to save the Tumut grevillea from extinction.



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The STEP Newsletter is produced quarterly in March, June, September, and December. Contributions, comments and suggestions are welcomed. Email widjennie@gmail.com

Thank you to Jane Cottee, Bill Handke, Peter Thrall. Michael Hunt and Jenny Andrews for their contributions this month. Also thank you to Jane Cottee (JC) and Debbie Howard (DH) for their photos. This newsletter has been edited by Jennie Widdowson.

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