



## WORKING BEE REPORT June 1-3, 2018

### FRIDAY, June 1

The June working bee is normally frantic. In past years, we have planted tubestock, putting thousands of plants in the ground, with the assistance of CVA, Green Army, and other volunteers. This year, we decided to try a different approach.

Back in February, we hosted a workshop on direct seeding. In brief (as in VERY brief!), this method involves mixing a variety of seeds, then sowing this onto a freshly raked surface, re-raking, then stomping down. The seeds are of 3 basic types: quick colonisers (such as chenopods), grasses, and small shrubs. The idea is that the quick colonisers, winter grasses and some of the shrubs will germinate over autumn-winter-spring and re-seed quickly thereby reducing weed competition, then the C<sub>4</sub> grasses will sprout over summer-autumn with the shrubs following. We have several areas where we thought this might be a better way of dealing with the weed problems and revegetating with local indigenous plants than using tubestock. So over the past few months, our group had assiduously collected seeds from the site from all sorts of things to give us a good mix. We had seed left from previous years to include, so in all we ended up with about 2kg and a decent blend of species. Some of the species we incorporated were: *Atriplex*, *Enchylaena*, *Maireana*, *Rhagodia*, *Rytidosperma*, *Chloris Enneapogon*, *Austrostipa*, *Themeda*, *Poa*, and *Setaria* (see end for the full list). At suggested sowing rates, the 2kg would be enough for 1000 square metres. The site we selected of this size was the base of the 'knoll', to the north of our display garden or lower loop. We had tried to prepare for the planting by slashing and poisoning weeds such as scabiosa, etc, ahead of time. However, windy days at Cape Jervis leave little opportunity for this, so the site was weedier than we had hoped it would be for this trial. Consequently, Carolyn and Liz spent much of Friday hand digging scabiosa and other larger weeds from the patch. The newly emerging oats/cape weed etc had to stay... too late to poison, too many to remove. The lack of autumn rains meant we missed the optimal window for sowing when the soils were warm, and gave the annual weeds a chance to get a head start.



As well as weeding the patch, Carolyn and Liz staked out some 1-metre wide strips starting from the southern edge. We figured if we had strips of fixed width clearly marked, it would enable us to work out areas of strips and hence ensure we spread the correct amount of seed mix per square metre. It was actually very effective way for us to do it since we were only working on a small patch, not over many hectares.

Once it was too dark to work on the site, we worked in Carolyn's shed. The various seed varieties had to be mixed, and then this mix had to be re-mixed with vermiculite. Briony and Glenn (Succession Ecology) had "cut" the grass seed for us, ready for inclusion (many thanks to them!). They explained there was no need to strip it all off leaving seeds only, so that was one time-saver. The vermiculite gives some substance to assist with sowing, and once dampened, gives the seeds some moisture to start with and stops the seed blowing away. Carolyn's compost tumbler was fantastic for mixing the seeds, and then incorporating the vermiculite. The ratio of seed mix to vermiculite is 1:5, by weight. Below is a photo of what the final dry mix looked like.





Sunset Friday and sunrise Saturday were both colourful!

## SATURDAY, June 2

Despite not finishing until after 9pm on the Friday night, we were back out in the shed before day break on Saturday. Carolyn sorted and watered plants, just in case we had spare time over the weekend and could plant some tubestock as well. Unfortunately, that just didn't happen! Even though the working bee wasn't officially starting til 10am, Carolyn and Liz were on site at 9am. We wanted to get a head start by raking some of our 1-metre wide rows before anyone else came, so seeding could start.

Having to set dates for working bees ahead of time means we are slaves to the weather. No rain in the preceding week was not ideal, as the ground was just damp, not as wet as we would have liked.

The ground needed to be raked to a depth of about 1cm prior to seeding. This was an onerous chore, given the coverage of weeds and native windmill grass (*Chloris*) and the dryness of the soil. However, we persevered and crossed our fingers for rain later.



1. Carolyn mixing in water.
2. The consistency of the wet mix.
3. The containers of seed and vermiculite mix.
4. Divvying up the seed mix into smaller portions.



Then it was on to the next part: water was added to the correct measure of seed mix for the strip, and mixed in. Again, trying to be careful, we marked our strips into 4 equal lengths, so we divvied the amount into 4 smaller buckets, spread by hand-scattering,

then re-raked to ensure the seed was spread evenly over the soil. If anyone was wearing a fitbit, they got their steps up for the day with the next step fairly easily: the entire strip had to be stomped on to ensure the seed was pressed into the soil.



Vince and Suz joined us at about noon, so there were more hands for raking, seeding and stomping. Vince was a marvel, and did the initial raking just about all afternoon! Meanwhile Suz (and Camellia) seeded and stomped as well. We were really grateful that Vince and Suz came to help, for without them, we would not have been able to cover anywhere near the same amount.



There is always time for some wildlife photos. One of three skinks disturbed and relocated during the raking. Very sluggish in the cool air. Vince found a just dead monarch butterfly, and we also found an unknown white mushroom.



Sunset and sore muscles put paid to our efforts at 5pm. Despite working hard, we finished only 12 of our 1m strips. That worked out to about 400 square metres... a long way short of our planned 1000! It was beginning to look like the tubestock were not going to go in the ground this weekend!!

## SUNDAY, June 3

Carolyn and Liz were on site again by 9, and the sign was out! Raking again was the first order of business. We had been moving stakes and pins over as we finished each strip, to mark out the next. The right hand picture shows one of our raked strips, ready for its quota of seed mix.



Our helpers this morning were Clare, Jess and Maggie. They soon got into the swing of it! Jess very quickly took on the job of mixing the water into the correct volume of seed mix, and bucketing it up ready for spreading. All three spread then stomped, then spread and stomped...

We made much faster progress on Sunday after adopting Liz's idea of using the pointy end of the pic to break the soil / help remove some thatch of the native windmill grass, then raking, prior to seeding (and more raking, and stomping).



Way to go, girls! Even Maggie had a go at raking. Maybe we need to find her a smaller vest??



Early afternoon, we were joined by Jodie, and then by Annie. As we had finished all the raking/sowing/raking/stopping for the day. Carolyn gave Jodie a quick tour of the site and instruction on a few jobs (hand weeding scabiosa and removing tree guards) Jodie was a quick learner, and she did a great job of teaching Annie what to do when she arrived. They removed the tree guards from around the picnic table area to liberate last year's plantings. That is a job we have been wanting to get to for ages, but other things always took priority. So hurrah! That job has now been done!!



You can see the colour of the sky has changed. In the late afternoon, the sun that had been around all the time disappeared, and it looked like we might get some rain. However, despite it staying overcast, only a few drops eventuated.

By 3pm we were all pooped. So having marked out the seeded area with bunting, we called it quits, packed up our two cars and Jodie's ute, with all the paraphernalia we had on site, and headed off site.



We figure we covered about 650 square metres with the seed mix. Here are some of our reflections on our experience. Not sure what to do with the tub we have left???



## Reflections on our direct seeding

- There was much more weed on our chosen area than we had hoped for. Next time we would make sure that we started preparing the site about 12 months at least in advance, by poisoning on multiple occasions... if only we can get the wind at Cape Jervis to drop!!
- The lack of rain at the start of the season was a disappointment. We would have preferred damper ground. With set dates for working bees and the majority of our volunteers living in Adelaide, we do not have the luxury of going out as soon as it pours. And this year it didn't rain any earlier. Wonder if dry sowing would work so the natives could germinate at the same time as the weed seed. Or would the seed all blow away?
- Raking by hand is time consuming in the conditions we were working under, and definitely the slowest step of the process. Maybe next time we can conjure up a friendly farmer with a prickle chain!
- We were happy with our seed mix, and believe it was apportioned as advised.



And a few other reflections on the site and the working bee...

Some of the plants in the display garden are showing signs of frost damage, but some other little things are reproducing! Carolyn took a short break to weed one of the tree guards to remove oats, showing all the new seedlings of *Geranium solanderi* (Australian crane's-bill)



We were very short of volunteers this weekend, but the ones we had were brilliant! A mighty big THANK YOU to you all!!! Having two new helpers on site was great ... we look forward to seeing you again, Jodie and Annie.

## Post-Script – Opportunistic Planting – two weeks later (16/17 June)

Finally some rain at Cape Jervis (46 mm) so Carolyn and Liz headed back to get some plants in the ground. We had some new biodegradable tree guards to test so we set up a mini trial of about 5 x 5 plants each in the bioguards and coreflute guards. This helped us fill in a few gaps around the paths, especially at the southern end of the lower loop / display garden.



Don't be fooled by the sunny photos above – they were taken a week later as we forgot to take them at the end of the day. On the Sat we were forced to retreat to the car (first rain event), then ferry terminal (second rain event, for late morning tea). Rain event three (or four?) was time for warm soup in the car – very glad we packed the thermos!!



We still managed to plant lots of “small pretties” include the *Wahlenbergia stricta* (tall bluebells) that had selfed seeded into Liz's empty pots last year, *Senecio pinnatifolius*, *Lotus australis*, and *Glycine rubiginosa* (twining glycine). We didn't bother guarding any of these as we don't have a rabbit problem on the lower loop and we find that snails can be more of a problem, especially in core flute guards.



We added a new species to the site, *Banksia marginata* (coastal banksia). These were joined by some muntries (*Kunzea pomifera*), *Lomandra*, *Leucopogon* and some grasses to fill another gap on site, adjacent to the remnant patch on the eastern side.

One plant that has struggled to thrive for us is nitre bush, *Nitraria billardierei*. Not sure why so we tried them in a slightly rockier patch, filling the gap between our direct seeding and the slope of the knoll. We have some more plants to go in here in August, so you still have a chance to get your tree planting fix in if you can spare the time!

One last thing to do before we finished for the weekend, was to put up signage on the direct seedling area so that passersby know why the area is fenced off. Question was, how to stop the low cost A4 laminated sheet from blowing away? Well done Liz for the idea of the mesh tree guard sandwich!! Those winds at Cape Jervis can be fierce.

Two sad things to note in the two weeks since we sowed. 1. Some of the orange flags are already starting to tear off from one end and 2. Just how many scabiosa seedlings have germinated!! Hopefully we will start to notice some natives germinating soon.



An advantage of all the rain on the weekend was some spectacular rainbows!



<b>Species</b>	
<b>Fresh seed, &gt; 10 g each</b>	<b>seed &gt; 1 year old, &lt; 10 g</b>
<b>Chenopods</b>	<i>Acacia cupularis</i>
<i>Atriplex cinerea</i>	<i>Anthropodium strictum</i>
<i>Atriplex semibaccata</i>	<i>Calocephalus citreus</i>
<i>Enchylaena tomentosa</i>	<i>Calytrix tetragona</i>
<i>Maireana brevifolia</i>	<i>Clematis microphylla</i>
<i>Maireana rohlacii</i>	<i>Disphyma crassifolia</i>
<i>Rhagodia candolleana</i>	<i>Hakea vittata</i>
<b>Grasses</b>	<i>Hardenbergia violaceae</i>
<i>Chloris truncata</i>	<i>Kennedia prostrata</i>
<i>Enneapogon nigricans</i>	<i>Leiocarpa supina</i>
<i>Rytidosperma caespitosa</i>	<i>Leucopogon parviflorus</i>
<i>Austrostipa</i> spp	<i>Logania crassifolia</i>
<i>Themeda triandra</i>	<i>Lomandra effusa</i>
<i>Poa</i> spp	<i>Lotus australis</i>
<i>Setaria constricta</i>	<i>Minuria leptophylla</i>
<b>Sedges/Lilies</b>	<i>Neurachne alopecuroidea</i>
<i>Ficinia nodosa</i>	<i>Nicotiana maritima</i>
<b>Daisies</b>	<i>Nitraria billardiera</i>
<i>Leucophyta brownii</i>	<i>Olearia axillaris</i>
<i>Olearia axillaris</i>	<i>Pomaderris paniculosa</i>
<i>Olearia ramulosa</i>	<i>Senecio lautus</i>
	<i>Senecio odoratus</i>
	<i>Tetragonia implexicoma</i>