

AUSTRALIAN PLANTS SOCIETY SOUTH EAST NSW GROUP

Newsletter No. 97- August 2013

NEXT MEETING- SATURDAY 7th SEPTEMBER AT 10.30AM
AT THE BERMAGUI COMMUNITY HALL
Off Tathra Road (Please enter via the back door)

Presentation on Waratahs, prepared by the APS Waratah Study Group.

Ken Jacobs, a Waratah grower, will be in attendance. We also hope that other people who are or have been growing Waratahs will come along and share their experiences.

Don't forget SHOW and TELL(bring samples of native plants, especially Waratah flowers, seeds etc, if you are lucky enough to have some)

Please bring morning tea and lunch. There will be an urn there for your use.

<u>FUTURE MEETINGS</u>		
DATE	GENERAL/COMMITTEE	TIME/LOCATION
Saturday 4 th November	General & AGM	Horse Island, Bodalla 10.30am Management of Myrtle Rust and landscape principles See map on back page.
Wednesday 4 th December	Committee	Narooma- Quarterdeck 10.30am



***CISSUS HYPOGLAUCA*: keep it under control**

By Jennifer Liney

Do not ever plant the woody climber *Cissus hypoglauca* in a domestic garden, particularly if it moist and shady. It will very soon take over your garden with all its tamed flowers and shrubs, and probably your house as well. If you doubt me, drive to Narooma and see how it has taken over great swathes of the moist forest on the

western side of the Princes Highway south of Dalmeny. But it behaves quite well if confined to a pot, either indoors or out; it enjoys good light, but not strong sunlight, and even withstands some neglect.

Commonly called Water Vine, or Native Grape, it is a member of the Vitaceae family, to which grape vines belong. There are only two native genera in New South Wales belonging to this family. The leaves of the Water Vine are palmately compound with five leaflets, that is, the leaflets all arise from the one point; the round fruit are purple and presented in open bunches. Not really like grapes, but sort of. The small yellow flowers appear in summer, ripening in winter to the purple fruit.

C. hypoglauca has had many uses over the centuries. The fruit has long been part of the Aboriginal diet, and also for early Australian settlers, who used them for making jelly and jam. Strong loops of stem were used to aid climbing trees to collect animals and honey from native bees nests.

Some vines produce sweet fruit, but more often it is somewhat astringent. The fruit contains mucous, so were used as a gargle remedy for sore throats. Whether the gargle is a sure cure is not known. Short lengths of thick stem (that have been recorded as growing to a diameter of 35cm!!) cut at both ends drip sap that is drinkable; hence the common name Water Vine. In Les Robinson's *Field Guide to the Native Plants of Sydney*, he quotes from the 1856 publication *The Letters of Rachel Henning*, that 'sometimes the huge cables reach from the top of one tree to another at some distance, the slack hanging a few feet from the ground, and so providing a natural swing where one can sit and enjoy a rest and a pipe after lunch in the brush'.

Tendrils are produced opposite each leaf. A branch will wave about in the air until a tendril connects with something solid, when it very quickly holds fast and the plant takes another leap upwards.

Cissus comes from a Greek word *kissos*, meaning ivy. Apparently it was thought that the leaves of the Water Vine resembled those of the ivy plant. *Hypoglauca* is again from the Greek; *hypo* meaning nearly, or not quite, and *glauca*, blue-green. So this means that the undersides of the leaves are almost blue-green.

The botanist responsible for naming this species was an American, Asa Gray, probably the most important American botanist of the 19th C. He was another qualified doctor who abandoned medicine for the delights of studying and teaching botany. He corresponded with British and European plant people, among them Charles Darwin. Over 300 letters written by these two men to each other have been preserved.

In 1854, Gray published the name *Cissus hypoglauca* as a new species, noting that the Type specimen was collected in 'New South Wales, near Sydney'. *Cissus australasica*, *Nothocissus hypoglauca*, and *Vitis hypoglauca* are all synonyms. That means the names have been published and have been used, but, for various reasons, are no longer accepted.

Cissus hypoglauca has an interesting history, but we should leave it in the bush where it belongs.

(Photo by Jackie Miles, copied with permission from her website
<http://thebegavalley.org.au/plants.html>)

Welcome to new members

by Jenny Johns

Welcome to Joan George, Luke McPherson and Vincent Bastien- all new members to our group. We are looking forward to meeting you at one of our events.

Red and Pink

by Leigh Murray

With deep red flowers, *Kunzea baxteri* has been a surprising success in our Tuross garden. I say surprising because it is planted in a fairly shady spot. It is growing happily under the Norfolk Island Pines, amongst granite boulders. Our shrub doesn't flower prolifically but by tip-pruning it from time to time, it often sports a few beautiful red flowers that are fancied by honeyeaters. Rosellas love to eat the seeds.

We also grow a few of the large-flowered hybrid grevilleas: a *Grevillea* 'Superb', a *G.* 'Misty Pink', a *G.* 'Sylvia', and a *G.* 'Flamingo'. The Superb is a major drawcard for honeyeaters (although the bush is the personal property of Red, the resident Red Wattlebird, and she doesn't let others dine there often). Sylvia, with its gorgeous pinky-red flowers, is a knockout for looks but isn't as popular with the birds.

Flamingo – a much younger shrub – is already proving attractive to birds but its flower colour does NOT live up to the picture on the label, which shows a colour not unlike that of Sylvia, just a bit paler. The flowers of *G.* 'Flamingo' that I've seen on TV were a beautiful deep pink, but our Flamingo started out with pale pink flowers. Ditto our Misty Pink.

I've tried sulfate of potash and Epsom salts (separately, over a month apart, a few teaspoons of each per plant) watered in around Flamingo and Misty Pink. Regardless of whether these additives have had any effect on flower colour, they don't seem to have harmed the plants, and the flowers of both shrubs are now a stronger colour than the very pasty pink they were to start with. After many years of pale pink flowers, Misty Pink's flower colour has intensified to a mid-pink, and Flamingo's flowers are also a deeper colour, although they aren't yet anywhere near Sylvia's stunning colour. The photo shows the new, stronger colour – it's not exactly deep pink yet, is it?



I've read recently that iron can intensify the colours of pink or red flowers, so iron chelates will be my next try. It's interesting that such elements may be able to modify colour intensity (as can things I can't change, such as temperature and cell pH and sun exposure).

WANTED! New committee members

Two of our long-standing Committee members are retiring after serving our Society for many years. We need more volunteers to help us organize Committee meetings and events.

We also need help to "tart up" our website.

You can join our committee without having a specific portfolio and we would love to hear from people who think they may be able to help. Please contact a Committee member if that's you. See back page for contact details.

A Tale of Three Gardens: June 2013 *by Mog Bremner*



There was a big turnout for the June general meeting at the ERBG: APS members, Friends of the ERBG and the general public all arrived to hear about three very different botanic gardens.

John Aitken, (pictured on right) the President of the NSW APS was also there as part of his campaign to meet as many NSW APS members as possible.



Various volunteers provided an excellent morning tea to welcome everyone, and then we began the main business of the day with Michael Anlezark, (at left) the manager of the ERBG, telling us about his time as manager of the Burrendong Botanic Gardens and Arboretum, near Wellington NSW, and the Arid Lands Botanic Gardens in Port Augusta SA. He had a series of beautiful slides that showed how varied the Australian flora is and how lovely even an arid garden can be. It was fascinating to hear about how he developed each garden, working with their strengths, their constraints – and their definite quirks. He finished his talk with an overview of his plans for the ERBG.

Then Ryan Harris, (pictured below) the seed bank officer at the ERBG, told us about his recent time at the new Cranbourne Botanic Gardens in Melbourne. He also had slides to show us, including part of the gardens that have only opened very recently. We enjoyed hearing about how he implemented plans and designs, some of which made him wonder how they would go in the real world away from the drawing board! As it happened, I had visited the gardens the week before, so it was good to hear about the background to what I had seen, and to understand more about the ideas involved.



To finish the day, we had a tour around the new seed bank and propagating areas at the ERBG where Michael and Ryan have been planning and implementing a larger, more streamlined propagating system. The seed bank has been spending its grant money and now has a beautiful climate controlled workspace with all the necessary machines and technology.

We all had a good day out, and left with firm intentions to visit the other botanic gardens as soon as possible.)
(Photos by Mog Bremner and Jan Robilliard)

Nowra APS has a Big Day Out at the ERBG!

By Mog Bremner



On May 15, around 20 members of the Nowra APS group came on a trip to Mogo and spent a day at the ERBG.

There was a very busy start because the Eurobodalla Shire was thanking and celebrating all its volunteers on the same day! We managed to steer the Nowra visitors to the right morning tea, generously provided by many volunteers, and which was judged to be even better than that provided by the Council (yes, some people did manage to sample both).

There was a full morning of informative talks and tours from Michael Anlezark and various ERBG volunteers and members about many different aspects of the life and work of the ERBG. In the afternoon, John Knight took a tour around the gardens, filling us in with anecdotes and the history of almost every plant and area.

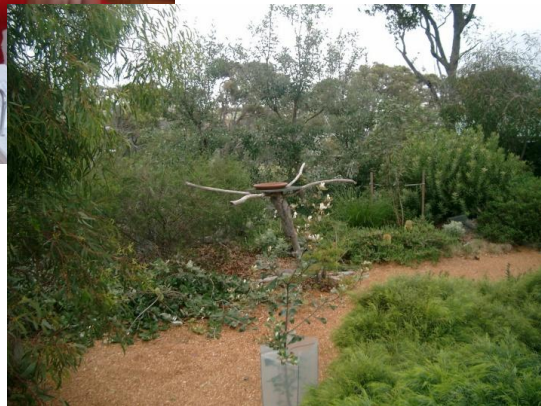
The Nowra guests were delighted: so much so, that they have very generously decided to donate some money to the seed bank. We all enjoyed the day and it was a pleasure to meet other members and take pleasure in this remarkable botanic gardens.

Interstate relations

by Jan Robilliard



Not only was the South East Group involved with our sister group from Nowra, we also hosted a morning with a small group from Canberra ANPS. Nine members of this group camped at Bournda for a 3 day weekend at Bournda National Park.



On the Saturday morning they visited two magnificent south east gardens at Tura Beach- Wendy and Bob Ross' and Liz and Terry Smith's. Lunch was at Robilliard's.

It was a very enjoyable day and thanks to all the South East group who opened their gardens and provided food for the day. It is fun to meet up with others with similar interests and get-togethers like this often result in swapping valuable information and contacts.



The Family Goodeniaceae contains about 400 species, of which 377 have been recorded in Australia. Named after Rev. Samuel Goodenough, Archbishop of Carlisle in the 19th century, the Family should rightly be Goodenoughia, but the Botanists of the time thought Goodenoughia was not good enough, and thankfully shortened the name. It is interesting to note that the Reverend, along with others of his era, opposed the views of Linnaeus in classifying plants based on sexual characters. This was despite his prominent membership of the Linnaean Society, and his being surrounded by many eminent botanists and scientists.

A complete review of the Family was undertaken for the preparation of Volume 35 of the Flora of Australia, published by the Australian Government Printing Service in 1992. Whilst work of this magnitude is a collaborative effort by many, it draws heavily on over 30 years research by Dr Roger Carolin, who retired after 43 years as lecturer in botany and Curator of the John Ray Herbarium at the University of Sydney.

In the Flora of Australia treatment, there are 11 Genera in the Family, and Brunonia is treated as a separate monotypic Genus as in the classification of Cronquist. Despite this, Dr Carolin believed that Brunonia should be included in Goodeniaceae, as is the case with Vol.3 of the Flora of NSW (Editor Gwen Harden) which was published in the same year. Dr Carolin is cited also as the authority in the Flora of NSW for the entry on the Family Goodeniaceae.

The best known and widely grown Genera are *Scaevola* (71 species), *Dampiera* (66 species), *Goodenia* (178 species) and *Lechenaultia* (26 species). The other 7 Genera include *Anthotium* (3 spp), *Cooperookia* (6 spp), *Velleia* (21 spp), *Verreauxia* (3 spp), and *Selliera* and *Pentaptilon* (monotypic Genera of 1 species each).

As a generalization, plants in the family are floriferous small herbaceous shrubs, and tend to colonize recently cleared or burnt areas. As such many are short lived, but most are relatively easy to propagate, so we should maybe treat them as annuals or biennials, and be thankful for their generous showy displays whilst they are at their best. In the garden, they should be grown in well drained soils with plenty of sunshine to encourage quick growth and plenty of flowers. Too much water can cause problems with rot, and my experience is that plants put out in autumn are then best left to their own. Spring planting is also successful, but plants need to be well settled before the onset of summer. Pruning is beneficial, and many can be lightly pruned often and the flowers used for indoor decoration. Many have a long vase life with no special treatment. Propagation can be successful throughout the warmer months, say late August to May, using strong young growth without too much flowering. Note though that some species which produce long flowering stems do not root using flowering wood, but are successful using new vegetative shoots. Hard pruning of vigorous plants produces ideal propagation material, but unthrifty plants rarely respond well to this treatment. The lesson; prune often and keep the plants young and strong.

As shown by the open flat petal structure, the majority if not all the taxa are insect pollinated, and the petal wings are mostly yellow, seen as white under UV, or shades of blue, which under UV also is much more intense than we see, therefore signalling to insects a strong attraction. There are of course exceptions, such as the variety of colour displayed by the *Lechenaultia* group.



Goodenia heterophylla, showing the flat petal arrangement typical of the family



The petals of all species have tactile guides to direct wanted pollinators and deter those who would simply steal nectar. These features are readily observed with a good 10x hand lens, an indispensable aid which all gardeners should carry at all times, and take the time to stop and investigate the intricacies of our wonderful Australian flowers. You will be amazed at what you can learn by such close observation.

Reverse view showing the petals (silvery colour) and the strongly blue wings of *Lechenaultia biloba*

So what feature identifies GOODENIACEAE ?

They are widely variable in their morphological make up, that is leaf shape, stems, roots and seed. Even the flowers are dissimilar.

However with your 10x lens at hand, you will see that they all feature a special way of handling their pollen presentation. Each stigma is topped by a hairy cup, called an indusium (*induere* to put on, and Greek *endysis* dress or garment)

This is the only flowering plant family to have such an arrangement, although many ferns also have indusia covering their spore.



Typical fan flower of *Scaevola aemula*, on left, showing the hairy indusium.

On the right, with some petals removed, you can see that the style, at first shorter than the stamens, has elongated and now presents as a receptive organ.



As the flower matures pollen is shed from the stamens into the cup, and the style then elongates to present the pollen to insects. Once the pollen is removed, the stigma becomes receptive to pollen from another flower. This prevents self pollination.

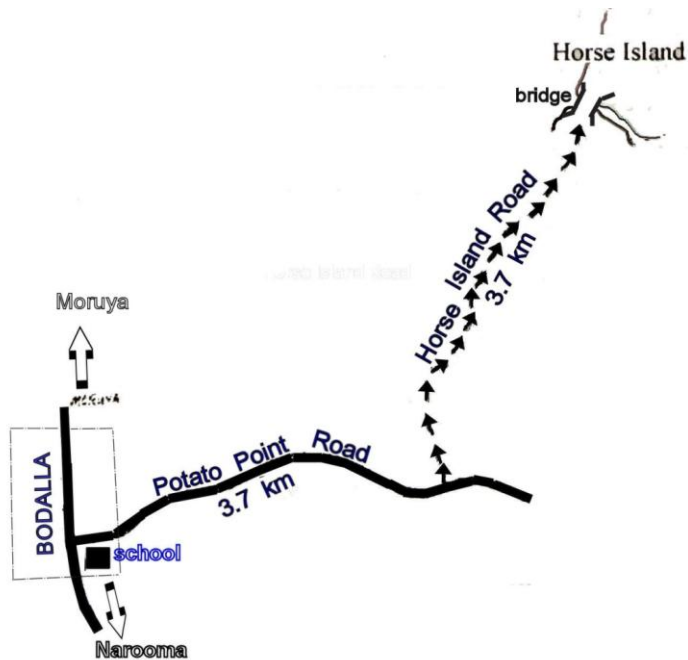
The system obviously works well, for I have recorded seedlings of *Scaevola*, *Dampiera* and *Goodenia* appearing in gardens where multiple plants are growing.

References

1. Flora of Australia, Vol.35, AGPS 1992
2. Flora of NSW, Vol 3 (Ed. Gwen Harden) NSW University Press 1992
3. Encyclopaedia of Australian Plants suitable for cultivation, Vol 4, Rodger Elliot and David Jones, Lothian 1986

Directions to Horse Island- Saturday 4th November

- we will meet at the gate at 10.15 am and then drive on to the Island.



Contacts

President:	Position vacant		
Vic President:	Position vacant		
Secretary:	Mog Bremner	Ph.0401 968 899	Email: mogbremner@mogajon.com.au
Treasurer:	Sue Sullivan	Ph. 6495 7819	Email: navillusbs@bigpond.com
Membership:	Jenny John	Ph.4476 3576	Email: peteandjenny.john@gmail.com
Newsletter Ed.	Jan Robilliard	Ph.0400 901 331	Email: janandrob1969@hotmail.com
Committee:	Wendy Ross	Ph 6495 0306	Email: wenbobr@bigpond.net.au
	Bob Ross	Ph 6495 0306	Email: wenbobr@bigpond.net.au
	John Knight	Ph.0434 674 347	Email: john.knight@erbg.org.au
	Cliff Wallis	Ph 6494 5028	Email: cliffwallis@hotmail.com
	Michael Anlezark	Ph.4471 3348	Email: michael.anlezark@eurocoast.nsw.gov

Website : <http://thebegavalley.org.au/1479.html>

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