



Australian Plants Society South East NSW Group

Newsletter 119

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Corymbia maculata Spotted Gum and
Macrozamia communis Burrawang

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Next Meeting

Saturday July 2nd 2016 commencing 10.30am
at Eurobodalla Regional Botanic Gardens

Princes Highway, 5km south of Batemans Bay

Acacias with John Knight

With up to 1000 species occurring naturally in Australia, the Acacias or Wattles comprise the largest genus of all Australian plants. Ranging from low spreading ground covers to tall forest trees, Acacias are found in high rainfall areas and arid inland deserts. Their range is the broadest of all our woody plants, and their diversity of form, flowering time, and tolerance of garden conditions suggests that these hardy plants should find a home in every garden.

At this meeting we will discuss suitable species of wattles for gardens, and look at the identification features to help recognise which is which in the bewildering range of forms.

We will first look at the diversity of plant forms, and after lunch walk around the ERBG collection using recently acquired knowledge to identify some species.

Members are encouraged to bring along to the meeting specimens of any Acacia they have growing, whether flowering or not, to add to the learning experience of the day.



Acacia pycnantha, Golden Wattle
Australia's Floral Emblem

President's Message



I hope everyone and their gardens came through the June weather event relatively unscathed. However the rain was welcome after months of dry though perhaps not in the quantity delivered and not on the weekend of the meeting!

Such weather often deters gardeners from planting trees but I believe trees deserve a place in every garden. There are many beautiful small Australian trees that will enhance even the smaller suburban garden. Three of our local *Acacias* come to mind: *A. cognata*, *A. covenyi* & *A. linifolia*. All have beautiful foliage as well as the familiar yellow blossoms during late winter/spring.

Dwarf forms of many eucalypts are also available; *Corymbia ficifolia*, *Eucalyptus leucoxydon*, *E. caesia*, *E. macrandra* to name a few. Surely all gardens should have a representative of these iconic Australian genera!

Other favourites of mine include *Elaeocarpus reticularis*, *Tristaniopsis laurina*, *Hymenosporum flavum*, *Hakea laurina* and *Ceratopetalum gummiferum*. The larger *Backhousia citriodora* is also a “must have” in my garden for the fragrant lemon leaves and can be kept small with pruning.

So whether to provide a feature, shade, fragrance, screen or for just sheer beauty there is a place for a tree in all Australian gardens. Birds and other wildlife will appreciate it too!

Margaret Lynch

Report on last meeting by Jenny John, with Pete John and Paul Hattersley A Gardening Q and A Session at Punkalla

While some members, living more distantly from Punkalla, were defeated by the weather and rang to convey their apologies for not making it to the planned meeting, Shane Doherty and Paul Hattersley braved torrential rain and muddy roads and the four of us enjoyed an agreeable and informative few hours.

It turned out that Shane and Paul are near neighbours at Dalmeny and they told us about the progress of work done on the headland between the Yabbarra and Duesbury beaches. Eurobodalla Shire Council's environment officers have over the last few years organised firing of two small surviving areas of *Themeda australis* grassland communities, which once characterised South Coast seacliffs and headlands.

The communities are recognised as threatened subclimax ecosystems and the aim is to restore the fire management practised before European settlement and thus prevent trees, shrubs and weeds destroying the ecosystems. The areas are discrete patches of land on the headland sandwiched between the coastal bike path and Dalmeny Drive. After regular fire the Kangaroo grass is now dominating and outgrowing the kikuyu and Shane and Paul have observed small orchids and native lilies making a comeback.

This led to a discussion on native grasses about which Paul is enthusiastic and knowledgeable and he used as an example, a plant of *Neurachne queenslandia* (which is restricted to the Great Divide, just east of Tambo, Central Qld), which he had brought in a pot.

He explained that grasses can be categorised as C3, C4 or intermediate depending on the precise pathway by which they photosynthesise.

Designation as C3, or C4 refers to the number of carbon atoms in the immediate product of photosynthesis. C4 photosynthesis is a complicated anatomical, biochemical and physiological elaboration of C3 photosynthesis, in which a high local concentration of CO₂ is created near the vascular bundles of the leaf which enhances the efficiency of **rubisco**, the enzyme that fixes CO₂ to form 3-phosphoglyceric acid (3PGA) in all higher plants.

3PGA is the primary carbon product of light photosynthesis and is the precursor of the proteins, lipids and carbohydrates that all cells need to grow.



Neurachne queenslandia

Paul told us that the evolution of C3 to a more efficient C4 metabolism in the grass family, some 25million years ago, was in response to the decreasing levels of atmospheric CO₂, over geological time. CO₂ levels were then at their lowest in our planet's history.

Later, when the grass savannahs of the world were developing in some areas in response to increased aridity following the break up of Gondwanaland, C4 grasses really took off and dominated those ecosystems. C4 grasses outcompete C3 grasses in high light, and higher temperature situations and are also more water-use efficient .

Now, of course, CO₂ levels and global temperatures are rising due to fossil fuel use and this raises the question of how competition between C3 and C4 grasses will play out.

Themeda australis is a C4 grass and it and other C4 grasses dominate in the Dalmeny area. Meanwhile in the adjacent forest areas C3 grasses like *Opismenus* and *Entolasia* species occur.

Paul's interest in the *Neurachne* species that he brought along, is that this genus, endemic to Australia, is very unusual among grass genera. Of the seven species of *Neurachne*, many lines of analysis have shown that four are C3, one is C4, one is a C3-C4 intermediate (the only intermediate so far known from the Australian flora) and one is now suspected of becoming intermediate. Paul thinks there must be a C3 *Neurachne* species somewhere on the Great Divide but so far none has been found.

Research at UWA on photosynthetic pathway variation in this genus is providing clues as to how C4 photosynthesis evolved. This is important in the context of current anthropogenic climate change and our food security. Most major cereal food crops such as wheat, barley, oats, rye and rice are C3. Maize and sorghum and other millets are C4. The now rising CO₂ and temperature will affect the growth of food crops world-wide and there is also currently research into the prospect of modifying rice from C3 to C4 to increase its water use efficiency. (It's a shame that such an interesting and absorbing topic didn't reach a wider audience.)

Paul asked Shane as a landscape designer for suggestions for additional planting at the Lions Park near Kianga Bridge; plants that would provide shade and decoration to the area surrounding the barbecues. Narooma and District Lions Club already intend to plant *Eucalyptus botryoides*, *Melaleuca sp.*, and *Banksia integrifolia* for shade with *Myoporum boninense* and *Lomandra longifolia* for the lower plantings. Shane suggested using the dwarf and prostrate forms of *Banksia integrifolia*, one of which we could see from the window, but it was not a day for strolling round the garden.

Paul also brought to show us *Grevillea* 'Bulli Princess', a medium sized shrub to 3m or so, the parents of which are *Grevillea venusta* and *G. johnsonii*. This and a number of other *Grevillea* hybrids were selected by Ray Brown of the Illawarra *Grevillea* Park, and after extensive trialling, were released for general sale, the funds being used to assist in funding the operations of *Grevillea* Park. Another unidentified fragrant, pink flowered sprig we thought might be a *Hakea* because of its similarity to *H. decurrens* and *H. verrucosus* that are currently flowering in the garden at 1044.



Grevillea "Bulli Princess"



Grevillea "Pink Ice"

However subsequent research indicates it is more likely *Grevillea zygoloba* or a hybrid between *G. zygoloba* and *G. crithmifolia*, known as *Grevillea* 'Pink Ice'. This is an attractive small shrub to about 1.5m with a spreading habit. *G. zygoloba* is found in the low rainfall area west of Kalgoorlie W.A., and *G. crithmifolia* grows in coastal scrubland around Perth. Plants of *G. "Pink Ice"* are usually available as grafted plants in the eastern states.

None of us were able to identify the previous occupant(s) of a mud nest attached to a branch of *Hakea decurrens*. We opened it up but whatever had been inside had obviously departed through the small holes on the surface.



Pete and Paul delve into the mystery of the mud nest

Shane left before lunch as the rain increased in volume. Paul, Pete and I continued our discussion over lunch. **It was still raining!**

Committee news

APS South East NSW Group 20TH ANNIVERSARY

The inaugural meeting of the APS South East NSW Group was held in May, 1997 and as part of our 20th Anniversary celebrations the Committee has considered holding a Quarterly Get-together for NSW members.

The committee is seeking support from any of our APS members who would like to join a working group to explore the feasibility of holding this activity. The intention would be to then tackle the implementation. Some members of the existing Committee would be keen to offer their assistance.

You might find this such an enjoyable exercise that you would then consider nominating at our next AGM to join the Committee.

For further information call John Knight 0434674347 - email: johnonvista49@outlook.com



Left to Right: Inaugural Committee members,

Robin Corringham (President)
John Knight (Treasurer)
Ainsworth Patroni (Newsletter)
Andrew Hanby (Secretary)

Future activities

Your committee continues to work on an evolving program of interesting meetings for this year, activities which will hopefully add to our knowledge of Australian plants, and encouraging all members to get involved.

- August 6** Grevilleas
- September 3** Grasslands, with Friends of Grasslands date to be confirmed
- October 8** AGM Meeting at Horse Island
- November 5** Garden visit to Cliff Williams property, and driving Western Distributor Road looking at spring flowers

At the AGM in October, we are seeking members to join the committee. As some of the existing committee have indicated they will not be seeking re-election, there is a need to fill their roles. The current committee have run for 2 years, and it is time now for others to have a say as to what activities the group should entertain. All members are asked to give serious consideration as to their involvement in the group, and how each of us can assist in promoting the benefits of growing Australian plants.

If you have any issues or ideas, any of the committee would appreciate your input. (see page 8)

Callistemons

by Leigh Murray

In the last newsletter, Margaret Lynch wrote about some of her favourite Callistemons. I've got a different set.

One of my favourites is *Callistemon citrinus* 'Western Glory'. This is one tough beauty, and a skinny one to boot. Like all *C. citrinus* forms, it is very hardy, tolerating heavy frosts, salty winds, dryness and wet feet. *C. citrinus* has many good cultivars and forms, but I particularly like this form for its big, beautiful pinky-red flowers, and its narrow, upright habit which makes it ideal for tight spots in the garden. Our plants grow to about 2m high by 1m wide, and they are eminently prunable to suit any spot.

Years ago, Eurobodalla Council planted *C. 'Dawson River'* on nature strips at Tuross, and our nature strip scored three plants, with the labels still attached (so I'm sure of the variety). I added two more plants a few years later to extend the row, because they seem well-suited to the harsh, wind-blown conditions. Our original plants are a couple of metres high and wide, and they are kept to that size for easy maintenance. Some plants in other parts of Tuross are much bigger. This variety flowers often, especially if frequently tip-pruned.



Callistemon citrinus

Another callistemon that has done well for us at Tuross is *C. 'Packers Selection'*. Our plants are now woody and ungainly from too-infrequent pruning (not enough time to do it) but they flower enthusiastically, and are a hit with birds.

Callistemon 'Perth Pink' can be a stunner, with major flushes of deep pinky-red new growth, and bright pink flowers for shortish periods in spring and autumn. Wattlebirds have been known to go bananas over the flowers, disturbing my early morning sleep with their constant raucous chatter in between sips.

Another callistemon that I adore is the green-flowered form of *C. pinifolius*. This small shrub tends to be open and straggly but that's all the better to show off the luminous, lime green flowers – they really stand out.



The only pests our callistemons have had are Sawfly larvae (I knock the grubs off the foliage and then squish them), and Scale (on one of the Dawson River plants – it was eventually eliminated by repeated pruning plus hard-hosing the companion sooty mould).

For tough, handsome, brightly-flowered shrubs that bring in the birds, it's hard to go past **Callistemons**.

Margaret was right: they're good plants to have.

Newsletter Editor and Sue are now back home, having been delayed for a week due to the heavy rains which beset the east coast and then moved south to cover much of Tasmania. Our return sailing was delayed due to debris accumulating at Devonport, including livestock, hay bale rounds, large trees and a section of bridge from somewhere upstream. Of greatest concern to shipping was a number of yachts which had wedged beneath the 'Spirit' and shipping containers floating aimlessly in the harbour area.



Cataract Gorge Launceston

*Our camp site at Deloraine.
Thankfully we left 3 days before*

Since our last report, we continued up the east coast, then headed inland to some of the smaller villages, such as St Marys. We spent some enjoyable days walking through wet sclerophyll forests, with ferny understorey and tangles of shrubby Pomaderris. After the rains which fell a couple of weeks previous, all the waterfalls were again flowing, some thundering, and it seems the cooler weather had sent the locals scurrying for the warmth of a fire, as we generally had the tracks to ourselves. The little stores which rely on tourists were all but deserted, and we received a right royal welcome at any we chose to spend some time.



We enjoyed the fine cheeses on offer, but buying a large slice was out of the question as in some instances the price was \$140 for a kg. However, the amount we bought was usually enough to enjoy over 3 or 4 days, as nibbles with some fine Tasmanian Pinot noir before settling in for dinner. Visiting wineries was also an experience. I understand that in making Pinot noir, the winemaker has a much smaller harvest to work with, and that the process is also more protracted, but the hype of boutique wineries doesn't necessarily match the experience. That said, we did manage to enjoy a few, and some also followed us home, to be consumed at a later date.

Early in May I visited Pulchella Nursery, next to the Australian Bush Garden at Buckland, a short drive inland from Triabunna. First we spent a few hours admiring the work of volunteers at the Garden, and this reminded us of the early days at ERBG. There is a lot to be done, but the volunteers are well on the way to achieving a wonderful legacy for the future. Then to the nursery. Sue wisely decided to sit in the van and read, whilst I wandered around the nursery collecting plants. 2 hours, and a deep discussion with the retiring owners later, I emerged with 5 bags of plants, in 75mm tubes, but minus quite a few dollars. It is a shame that smaller nurseries are struggling to remain viable. Tasmania is blessed with a varied and interesting flora, and these family nurseries supply a range far greater than one would expect to find.

Unfortunately, as the owners age, and buyers can't be found, the nurseries suffer a slow but inexorable slide into oblivion. Pulchella Nursery closed at the end of May, and the owner told me that another equally diverse nursery, at Oldina south of Burnie, will suffer the same fate in September. Where then will we find those unusual little treasures?



Can't get much closer to nature, one of the many delightful camp sites we found off the beaten track

Those poor plants I purchased have had to put up with long dark days during our subsequent travels, although I got them out whenever we stopped for a longer break. They must have thought the seasons were moving quickly, with 2-3 hour days and much longer nights. I can report though that all arrived home in better condition than I deserved, except for the Button Grass *Gymnoschoenus sphaerocephalus*, which looked as if they might have dried out.

When I put the plants out for the night, the local pademelons enjoyed a change of diet, so from then on they had to be away at dusk.

Our journeys took us throughout most of Tasmania, and in fact we clocked up just shy of 6000 kms on the island, plus the travel to and from Melbourne. For a relatively small island Tasmania has so many delightful spots, such that you need to criss cross a bit to get to them all. Our vehicle did not balk at the less travelled roads, and were it not for a wary passenger, we might have seen even more of those hidden gems that are not necessarily in the travel guide recommendations.

Anyone considering such a journey, I can only add that time will run out no matter how much you have. We met some mainlanders, as we are known down there, who have been on the island for over 6 months, and are still finding new places to see. I might also suggest that a little earlier than our timing might be prudent, as when the cold winds blow, they blow cold!

That said, we had a great trip, and are looking forward to the next big adventure.

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