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IN THIS ISSUE

An unusual discovery of the endangered Glasshouse Banksia.

Below is a copy of a media release from the NSW Department of Planning, Industry & Environment issued back in July 2017 and is a prelude to the following paper by Botanist, Peter Olde, regarding conferta var. conferta.

'A new population of the critically endangered Glasshouse Banksia, conferta var. conferta, has been discovered in Coorabakh National Park, north-east of Taree.

Office of environment & heritage (OEH) Data Support Officer, Andrew Steed said the discovery was made while conducting soil sampling and plant monitoring in the area, as part of the conservation work being funded by the NSW Government's Saving our Species program.

"We were extremely surprised and excited to find the Glasshouse Banksia in a remote and mountainous area in Coorabakh National Park, as this plant usually prefers a different type of soil and geology," Andrew said.

The Glasshouse Banksia was previously only known to live in a small area within the park as well as the Glass House Mountains in Queensland – so this new population is great news for this rare plant.

"We haven't counted the exact number of plants in this population as yet but we think it could be in the thousands, which is why we will go back later in the year."

During the research expedition, the group also found extensive populations of two other vulnerable plants – Big Nellie hakea and Dracophyllum macranthum.

"This trip was very encouraging as finding more plant populations fills us with hope to be able to secure these endangered or vulnerable plants in the wild into the future," Mr. Steed said.

"And we can't wait to get back to Coorabakh National Park for further monitoring – who knows what else we could find," he said.

The Glasshouse Banksia is an interesting looking shrub growing to four metres in height. Branchlets can vary in colour from orange to red to brown and its individual flowers are yellowish-green to pinkish-brown in bud and golden when open.'

The taxonomy of Banksia conferta. - Peter Olde, Botanist.

Banksia conferta was first described by George (1981) in a seminal revision of the genus, *Banksia*. Two varieties, var. *conferta* and var. *penicillata*, were recognised at a time when only three geographically disjunct populations were known (two populations in Queensland, from the Glasshouse Mountains and the Lamington Plateau), which comprise the antonymic variety and Var. *penicillata* from the Newnes area near Sydney.

George considered that *B. conferta* was related closely to *B. integrifolia*, from which it differed in its follicles remaining closed until burnt, with old flowers persistent, its habit lower-growing and shrubby, its flowers more crowded, and golden in colour. It may be correct but who would know without some scientific analysis?

Banksia conferta can be summarised as a seed-obligate, non-lignotuberous, serotinous *shrub* up to 4 m high, with tessellated *bark* in adult plants, whorled, elliptic or obovate-obtuse adult *leaves* 3.5–12 cm long, 0.7–4 cm wide, hairy on the upper surface, white-tomentose below except the venation ferruginous or glabrous, the new growth ferruginous; *conflorescences* cylindrical to 19 cm long with fine, crowded flowers that are pinkish-brown and grey in bud, yellow at anthesis, *involucral bracts* 10–20 mm long, persistent, tomentose-pubescent, common bracts with pale apices, *perianths* slender, 20–25 mm long, appressed-pubescent on the outer surface, *pistils* 22–25 mm long, slender, glabrous, curved with scarcely thickened pollen-presenter < 1 mm long, infructescences with persistent flowers, the follicles 8–15 mm long, narrow-elliptic, remaining enclosed until burnt.

George distinguished *Banksia conferta* var. *conferta* 'especially by its entire leaves, the pubescent involucral bracts and the closely pubescent pale apices of the common bracts. The follicles seem consistently smaller than in var. *penicillata*.' Differences were also noted between the two Queensland populations. 'The populations on the Lamington Plateau [600 km away] differ from those on the Glasshouse Mountains in having thicker branchlets that remain villous longer; less prominent lateral nerves on the underside of the leaves; shorter inflorescences, mostly 5–12 cm long; slightly longer indumentum on the apices of the common bracts; flowers of a deeper yellow; and follicles that sometimes open when mature.' Unfortunately, no empiric measurements were given and it is difficult to evaluate terms such as 'thicker', 'less prominent', 'remain villous longer', 'slightly longer' or 'deeper yellow'.

George (1981) distinguished var. *penicillata* by its bark smooth with lenticels, its adult leaves serrate, with less prominent reticulate venation, its involucral bracts densely villous, its common bracts with apices exserted, tufted, (penicillate), ferrugineous, its follicles usually 11–15 cm long.

In 1996, Thiele conducted a cladistic analysis of *Banksia*, and concluded, among other things, that var. *penicillata* and var. *conferta* constituted two distinct species. Now, here's the thing. If you ask ten botanists the difference between a species and a variety, you will get 11 different answers. On the available morphological evidence, under a phylogenetic species concept, the ranking favoured by Thiele is clearly valid. The varieties can be fully distinguished on more than one character, when one would be sufficient, which in turn indicates lineage divergence at the population level. But then, George was/is operating on the Biological Species Concept which accepts subjective evidence on whether allopatric populations should be regarded as species. Sure enough, George (1999) rejected Thiele's taxonomy but instead of reverting to variety, he recognised both taxa as subspecies. What is the difference between a variety and a subspecies? George does give his reasons but let us not go there for fear that we are entering another rabbit hole. OK. So here is the key, courtesy of Flora of Australia P. 191.

Adult leaves entire	subsp. **conferta**
Adult leaves serrate	subsp. **penicillata**

Another alternative for those inclined to a narrower perspective under a phylogenetic concept (such as me) might have been:

Banksia conferta* with two overlapping subspecies** (note that George acknowledges several differences between the two Queensland populations) and ***Banksia penicillata with maybe two subspecies (there is considerable variation in addition to the Coorabakh plants). (I know I will regret proffering this point of view but this is my article).

So there the opinions stood ready for digestion. Then Gwen Harden (2002) decided to accept Thiele's evidence that *Banksia conferta sensu* George comprised two distinct species. *B. penicillata* and *B. conferta.* No-one yet has come up independently with my opinion. The issue seems black and white. One species in Qld has entire leaves and the other toothed leaves (NSW). Yes? No!

So now we come to the point of this article. In comes in the guise of a fourth population, a second one in New South Wales, quite disjunct from *B. penicillata* but not distinct from, because it has toothed leaves. It occurs in Coorabakh National Park, Lansdowne, north-east of Taree, NSW. Apparently, there are thousands of plants. They have toothed leaves. Open and shut case. Nooooo!

Environment New South Wales (2009) Scientific Committee lists as critically endangered population of *Banksia conferta* in New South Wales at Coorabakh NP. Something has changed. Who identified these plants to this species and why? Have one or more secondary characters listed by George now taken precedence (Bark for instance which is never shown in the pics). My bet is that someone did a DNA analysis. If so, this has completely discombobulated the accepted taxonomy and needs alignment with one or some morphological characters.

On top of this, not wishing to confuse things further because I would never do that, Phil Trickett claims that seedlings of *B. conferta* sometimes have toothed leaves (seed source not identified).

Dr Peter Weston (pers. comm.) has suggested that perhaps the Taree/Lansdowne plants (Coorabakh) are a separate taxon.

I can find no reference to the characters that caused the Taree plants to be recognised as *B. conferta, perhaps the bark, perhaps the bracts*. Some of the other characters distinguishing var *conferta* must come into play.

Interested opinions welcome.

A few References

Baird IRC, Benson D (2021) Population ecology of two endemic, fire-sensitive, Blue Mountains Banksia taxa (Proteaceae) in response to fire. *Proc. Linn. Soc. New South Wales* 143: 87–108.

Environment New South Wales (2009) Banksia conferta A.S.George subsp. conferta - critically endangered species listing https://www.environment.nsw.gov.au/topics/animals-and-plants/threatened-species/nsw-threatened-species-scientific-committee/determinations/final-determinations/2004-2007/banksia-conferta-a-s-george-subsp-conferta-critically-endangered-species-listing

Environment of New South Wales (2017) https://www.environment.nsw.gov.au/news/an-unusual-discovery-of-the-endangered-glasshouse-banksia

George AS (1981) *Banksia conferta. Nuytsia* 3: 284. (https://www.biodiversitylibrary.org/item/223763#page/4/mode/1up).

George AS (1999) *Banksia*. *Flora of Australia* 17B

Harden GJ (2002) *Banksia*. Flora of New South Wales Ed. 2: 84

Thiele K, Ladiges P (1996) A cladistic analysis of *Banksia* (Proteaceae) *Aust. Syst. Bot*. 9(5).

Editor comments.

It appears that, as with some other eastern banksia species, they are still in a state of evolution compared to WA species that are quite stable in their form. E.g. *B. marginata* is extremely variable in habit & flowering times, with some flowering acropetalous and others basipetalous and it's not uncommon to have two very different forms growing side by side as in the Grampians and they don't appear to hybridize. Alex George commented after his work on this species, "They require further investigation".

Similarly*, B. canei* which grows in remote disjunct populations has very distinctive habit & foliage forms which I've found grow true to type from seed.

Current DNA work is underway examining these *canei* populations. The findings will be a good indicator of the degree of evolution of this species and its' isolates and hopefully shed some light for further investigation of the *marginata, integrifolia*, & *conferta* complexes.

We have had the formerly described conferta variants growing side by side in our collection for the past 25 years. *Conferta var. conferta* from the Glasshouse mountains has distinctively different non serrated foliage to that of *var. penicillata*. It is more integrifolia-like.

From my observations *Conferta var. penicillata* is quite different and possibly deserves separate species status. The leaves, cones, inflorescences are all very different to that of *var. conferta*. Then low and behold we have a plant which is intermediate between the two. Could it be the Lamington Plateau form which more closely resembles *var. penicillata*.? We have not yet seen or grown the Coorabakh form.

I concur with Peter that more taxonomic work needs to be done between the four provenances considering it is suggested the new Coorabakh National Park population is considered to be *var. conferta.?*

See below a comparative picture of foliage, bark & blooms of the three forms at our property, Banksia Farm.

LHS. ***B. conferta var. penicillata*****.** CENTER. ***Conferta var. conferta***. RHS. **Mystery intermediate**.

Leaves in order as above.

Bark of *var. conferta.*

Bark of *var. penicillata*.

***var. penicillata*.** ***var. conferta*.** **Mystery intermediate.**

Contrary to descriptions *var. penicillata* has smaller follicles than *var. conferta*.

Banksia Grafting Update from Phil Trickett.

While much of my grafting this season has been with Isopogons and Petrophiles (Catriona and I are study group leaders of these two genera), I have still managed to fit in many banksia grafts. These include tried and true combinations and a number of experimental grafts with species I have yet to successfully graft. The results have been very pleasing with good success rates and a number of 'new' grafts of species I had yet to conquer.

Here are the 'new' successes and the rootstock used. Note that long-term compatibility will take a number of years to determine as their performance in the garden is evaluated.

- *B. prionotes* on *B. integrifolia* – a grafted plant 18 months old is still growing vigorously. This is not one of the easy species to graft so expect lower success rates.
- *B. aculeata* on *B. integrifolia* – I had one successful cotyledon graft this season and have subsequently successfully grafted a couple of plants off a potted seedling.
- *B. caleyi* on both *B. integrifolia* and *B. serrata*. Having previously grafted a plant onto *B. serrata* I now have some successful grafts onto *B. integrifolia*. Given my preference for *B. integrifolia* as a rootstock I will now use this for future *B. caleyi* grafts.
- *B. candolleana* on *B. serrata* – only one successful graft so far but it is growing vigorously.
- *B. elderiana* on *B. serrata* – one successful graft growing steadily, not as vigorous as *B. candolleana* so far.
- *B. saxicola* on *B. integrifolia* – two successful grafts of the Wilsons Promontory form indicate that both the Grampians and Wilsons Promontory forms are compatible on *B. integrifolia*.
- *B. ornata* on *B. integrifolia* – one successful graft is growing rapidly, quite a surprise given my previous lack of success with this species.
- *B. prionotes* x *menziesii* on *B. integrifolia* – one successful cotyledon graft. Need to try using cuttings of 'preferred' forms of this hybrid.
- *B. speciosa* on *B. integrifolia* – two grafted plants in our garden are growing beautifully after two years in the ground. Its compatibility with *B. integrifolia* is a surprise given that a couple of decades-old plants which have since died at the Australian National Botanic Gardens in Canberra were thought to be on *B. serrata*.

Other successful grafts this season with established combinations (all on *B. integrifolia*) include *B. burdettii*, *B. croajingolensis*, *B. dentata*, *B. epica*, *B. grandis* (shrub and tree forms), *B. lemanniana*, *B. laevigata* ssp. *laevigata*, *B. littoralis* (shrub and tree forms), *B. media* (various forms), *B. nutans* var. *nutans*, *B. occidentalis*, *B. occidentalis* var. *formosa*, *B. occidentalis* (miniature form), *B. praemorsa* (yellow and burgundy forms), *B. pulchella*, *B. rosserae* and *B. seminuda*.

Grafting tip

This season is unquestionably my most successful yet due to one key change. My taping of the graft union is much, much tighter. I do this by cutting the parafilm into 35mm x 50mm pieces, then folding in half to make a piece 17.5mm x 50mm. This produces a stiffer, stronger tape which can be wound around the graft union to produce a very tight bind. I use this technique for cotyledon and standard grafts using cuttings off established plants. I don't believe that a single layer of parafilm is strong enough for banksia grafting.

Grafted *B. prionotes X B. menziesii*.

Grafted speciosa.

Editor

We greatly appreciate Phil sharing his skills & techniques. He has made these available through the Banksia Lovers Facebook site as well as giving enthusiasts personal demonstrations.

As a result, there is a number of budding enthusiasts achieving greater success with their banksia grafting. This enables our beautiful western banksias to be grown & enjoyed by many more Australians. Phil is constantly providing ANBG new grafts to bolster their dedicated banksia garden where many WA species on their own roots have not been successful.

Notes on propagation of Banksia cuneata by Eva Campi

Jen, Paul and I are volunteers with the Growing Friends at the Royal Botanic Gardens of Victoria Cranbourne (RBGVC) and we have been sowing a large number of banksia species for our plant sales. The majority of the seeds are sourced from Paul's extensive collection near Inverloch. Paul releases the seeds by using a flame burner so the seeds are subject to smoke which aids germination. Seeds were usually sown in autumn (late March, April) with some also sown in July and early August. Most species gave a good germination rate when sown in 3:1 perlite vermiculite in round pots ca. 10 cm deep. A smoke water solution is usually sprayed on and the pot placed in the seed area of the RBGVC glasshouse.

Banksia cuneata seeds are difficult to obtain and the only source was seed obtained in 2002 from Nindethana by the RBGVC and stored sealed in a frig in the RBGVC nursery. Attempted germination of 20 in March 2002 was unsuccessful. A further 20 seeds were sown in August 2023 and 6 seeds germinated (30%). The reason for some success this time is unclear and may be the time of year or the smoke solution applied. The RBGVC nursery had obtained some new solutions from a local company (Grayson Australia, Bayswater Vic.) under the "Regen" label and a diluted sample of "Smoke Master" was sprayed on the sown seeds.

The seedlings were transferred into forestry tubes and the nursery's potting mix and left in the seed section of the glasshouse or several weeks. This treatment of seedlings had been found to be beneficial by nursery staff as watering and temperature were controlled.

The RBGVC nursery has also successfully propagated B. cuneata from semi-hardwood cuttings taken in November 2022 using Yates powder as rooting hormone. Eva Campi.

B. *marginata* forms – A trip to Victoria, March 2023.

As reported in previous articles on this species, we found *marginata* to be extremely variable in its habit at various locations throughout Tasmania and now likewise in Victoria. One population was flowering basipetalous whilst the rest were acropetalous.

Our first observations were at the Big Desert Wilderness Park. The plants here were 1.6m upright branching shrubs with pale yellow inflorescences flowering acropetalous. The cones were holding seeds for around 2-3 years before opening.

Continuing south through Nangarita Conservation Park, we saw lovely roadside plants of grey-flowered *ornata* also in bloom. Here the *marginata* were taller, larger shrubs with similar yellow blooms and very little seed set.

The third population we encountered were roadside near Cannawigera and were markedly different with egg yolk yellow blooms, flowering basipetalous, having shorter leaves with prominent leaf tip

serrations. These shrubs were around 1.5m tall, compact with blooms predominantly on the older wood. They were holding their seeds as well.

B. marginata. (Big Desert Wilderness Park.)

B. ornata. (Nangarita Conservation Park).

B. marginata. (Nangarita Conservation Park)

B. marginata. (Cannawigera) “basipetalous blooms”

We then passed through Bordertown and headed east before going south through another bush area and the *marginata* were now shorter shrubs.

At Miga Lake we visited wildflower growers, Brett & Diane Mc Donald.
On their property they had locally existing medium tree forms of *marginata* as well as sparse branched 1.6m shrubs. These were both flowering acropetalous with pale yellow blooms.
Further east heading for Stawell we encountered, in another bush block, two distinctive forms growing side by side. One tall shrub with taller blooms and a sprawly lower form with shorter blooms. These closely resembled two distinctive forms that we had seen previously growing side by side in the Grampian Mountains.

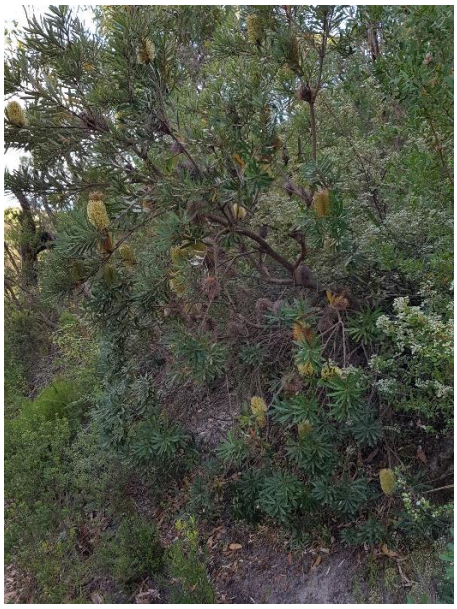
B. *marginata*. Small tree form at Miga Lake.

Next at Marriott's, near Stawell, we saw large tree *marginatas*. In a previous article we detailed mistletoe growing on this population.

Many years back, we visited huge isolated *marginata* trees, on volcanic soils near Colac during a Fred Rogers seminar. These were the biggest we'd seen and local enthusiasts had a programme to breed and re-establish them as they had been harvested, virtually to extinction, on farmland for horse yolks, ships' masts and general building. Progeny donated for our garden collection ended up having a genetic disorder and produced buds which always aborted and grew poorly. We still have tall-flowered large trees, sourced from Tasmania, in our collection. These are around 0.5m in trunk diameter and 12 – 15m tall.

Other locations with *marginata* populations we encountered during our trip in Victoria were Inverloch, Wilsons Promontory and in the Otway ranges. These were predominantly medium sized shrubs flowering acropetalous.

The Otway range population we visited were low suckering, understorey plants rarely higher than 1.5m. They tended to have serrations on the leaf tips resembling a form of *canei*.



B. *marginata* shrubs. (Wilsons Promontory).

B. *marginata*. (Low suckering form.) Otways.

This trip was rewarding in that the Cannawigera population is only the second population we have seen having solely basipetalous blooms. The plants closely resemble a form of *marginata* grown at A.N.B.G. in Canberra with identical coloured blooms, same size and habit, but flowers acropetalous and has fully serrated foliage more like *spinulosa var. collina.*
The other population we know of flowering basipetalous are on Mt. Tenant near Canberra.

In summary blooms vary from 3x3cm pom poms to tall 3x20cm spikes. Plants range from 0.5m low shrubs to tall 3m shrubs and small to large trees. Some have semi-terminal blooms and others flower within the bush. Some are dense shrubs and others open spindly branched plants. It is one species that Alex George commented on as "requiring further investigation".

Hint, hint, aspiring PhD students - let *marginata* be the next line of investigation or indeed investigate the puzzle of why some bloom basipetalous and others acropetalous.

Work is currently underway looking at the DNA of the 6 or so distinctive forms of *canei*. The outcomes will be in a future newsletter.

Miga Lake Wildflowers.

This property is owned by Brett McDonald and family members with a very busy floriculture enterprise. Flowers are picked weekly and trucked to the markets in Melbourne. They have 100 acres (40 hectares) of various Australian natives including many species of WA banksias. All up around 50 species are picked including some S. African species.

Kathy & I have known these folks for many years and provided banksia seed of new WA floriculture selections. We visited the property in March 2023. It was a privilege to see many of them growing and producing superbly. The special ones were the dark-chocolate/ bronze *menziesii*, *prionotes x hookeriana*, terminal flowered forms of *baueri* and *praemorsa* (yellow), *media*, red stemmed *baxteri* and *coccinea* and *cuneata*.

Other WA species in production include *ashbyi*, *attenuata*, *burdettii*, *hookeriana*, *prionotes*, *sceptrum*, *solandri*, *speciosa*, and *victoria*.

Brett's plantation is on an old inland sand dune ridge considered useless for pasture. He leaves the natural grasses which are deep rooted and help bring moisture to the surface. He doesn't irrigate and plants in bare sand in concave-ploughed drains. The light showers have rain trickling to the bottom for watering the young seedlings. He had his own nursery and grew many of their selections himself. He has not had to spray his plants as he doesn't have banksia moth. The site is dieback free with very little insect or bird damage. Chemical-free produce, what a bonus. They also harvest some *ornata* and *marginata* existing in their natural bush areas.

B. cuneata **to the left and** ***B. prionotes X menziesii*** **on right.**

B. baueri **(terminal flowered form.**

***B. menziesii* bronze/brown coloured form.**

Banksia Farm, parent plant of Brett's terminal flowered *B. praemorsa* (yellow)

APS Victoria - Grampians branch.

Kathy and I were delighted to be guest speakers at their March meeting talking on everything banksia and showing slides of some of our plants & flowers from our collection in Mt. Barker, W.A. where we have all species represented.

Thanks to the committee members & Grampians friends, Neil & Wendy Marriott and Ross & Carole McGregor who all made us very welcome.

We also enjoyed tours of Marriott's & McGregor's gardens in which they have many lovely banksia species growing superbly, with WA species well represented.

Ian Evans Garden in Bendigo.

Ian, a former landscape gardener, showed us his small but beautifully designed garden showcasing interesting plants & features. He has a few grafted banksias established and doing well in this garden, notably *ashbyi, dryandroides* and *repens*.

Ian showed us his glass house & nursery in which he had numerous grafted banksias looking good. He was venturing into cotyledon grafting after instructions from Phil Trickett.

We are looking forward to hearing of the progress of the various grafts.

David Pavlou's Floriculture farmlet at east Cobram.

We have previously featured a little on this farmlet showing B. *epica* trees in cultivation; possibly the only grower in all of Australia having this species in a grove. We had the pleasure of being shown over the property by David and his brother Michael, up from Melbourne, and met Cody who spoiled us with her fabulous cooking.

David is adding new rows of banksia plantings and doing some replacement. Some of these are from Banksia Farm selections. The original plantings are quite old and some plants are run-down, dying or got too tall to pick. He has some beautiful colour forms of B. *menziesii* along with a big list of banksia species. A very pale ginger-gold *menziesii* was a stand-out matched admirably by a very floriferous lime green coloured one.

His produce is used by his brother, Michael in his exclusive wildflower shop in Carlton North called 'Bush'. We were generously given a copy of the hard cover book, 'Bush Flowers', co-authored by Michael Pavlou and Cassandra Hamilton. It is an impressive 268-page book detailing sourcing, drying and arranging the blooms with exquisite photos of many of the best Australian wildflower species used in floriculture.

B. menziesii **(light-bronze)**

B. menziesii **(lemon-yellow)**

B. menziesii **(lemon-yellow)**

Kevin, David and Michael alongside their magnificent *B. menziesii* (lemon-yellow) plant.

Moama Wildflower Conference field trip report by David Pavlou.

Our farm tour was part of the 10th Australian wildflower conference, which was a 2-day event held in Moama. The first day was the sit-down conference portion featuring talks from many experienced growers including Angus Stewart, Neil Marriott, Anthony O'Halloran (Bilby Blooms) as well as directors/owners of large-scale farms including Protea Flora, Wafex and East Coast wildflowers to name a few.

The second day was the farm tour portion of the event. Conference attendees were given the opportunity to visit 2 of 3 farms in the surrounding area. The other 2 farms involved were Marilyn Sprague's farm in Mandurang and a specialty Eucalyptus farm in Gunbower.
We had 2 separate busloads of around 50 people each come to our farm at around 9am and 2pm. Each tour was around 1.45 mins each. We set up a footbath area outside our farm that all attendees went through. The foot baths were set up on a flat spot and consisted of 4 wide low tubs of methylated spirits

which seemed to work well. And most people completely understood the need for it and many had done them before. Luckily there was even a talk at the conference on pest and disease management with a focus on Phytophthora *cinnamomi* and footbaths were mentioned so it was nice that everyone was already made aware of them.

The first part of our tours was greeting everyone and giving a bit of background about us, talking about Michael's shops, Bush in particular which sells exclusively Australian natives. A brief history of the farm that it was set up in the mid-80s by a banksia collector named Morris Gould. Then our goals with the farm- to celebrate Australian flora in all its beauty and to continue to grow more varieties and ultimately introduce people to more unique and interesting native flowers. We also discussed the deep sandy soil and slope of the property and how it provides the ideal growing conditions for banksias and proteaceae in general. We started off the tour in the top section of our farm which is where the majority of our younger plants are. The reason for that which we discussed in the tours is that the previous owners hired a company to spray for certain weeds in that area and it ended up killing around 100 banksia trees. As devastating as that would've been at the time, the positive side when we took over is that it gave us a large section of open space for us to start fresh and plant out with new varieties.

We then took the groups down the north side of our farm through our groves of red wattle which were in full bloom at the time. Then past our *epica* and talked briefly about the species, that it's rarely cultivated, especially the taller form we have because of how incredibly difficult to access in its natural habitat. We then passed through our section where we are experimenting with *robur* and *plagiocarpa* which is partly shaded and is flatter at the bottom of the slope so generally stays a bit wetter than the top sandy sections. Other notable spots we passed through were our light bronze *menziesii* which luckily still had several nice blooms and then our grove of Hakea *platysperma* which were in full bloom, which both the delicate flowers and the gigantic fruits were both very popular with the group.

We also discussed the pros and cons of our more "garden" style of farm compared to a neater commercial one. Pros in our opinion being; overall a more beautiful and interesting looking farm with lovely fully grown trees, having the ability to cut much larger branches for special events etc (I'll include a photo of some large *integrifolia* branches we cut on the weekend, also the fact that some of our older fully grown banksias can produce 100 of stems each and make more use of vertical space when ground space is so limited on our 7 acres.) (Can also be seen as negative as tall trees will block out sun.) Having larger trees around can offer a degree of frost protection as well. Another pro we discussed was as the farm was set up by a collector who was able to source plants/seed from a variety of sources and has given us plants with a wide spread of different features- our *menziesii* are probably the best example of this. We have many different interesting colour forms and variation in just about every attribute from foliage size to inflorescence shape, stem length etc. This means we can provide customers with more interesting blooms and variety and is highly advantageous at peak times as we are able to sell more stems as opposed to being stuck with 1000s of flowers that all look exactly the same.

Some of the cons include larger trees block out sun and can take excess water/nutrients from younger ones, using a cherry picker becomes essential and can slow you down compared to picking at ground level, we do have many older woody trees that have become unproductive and don't produce usable stems. We also talked and showed examples of some of our older unproductive *menziesii* that we have experimented with cutting right back to knee height to activate fresh growth from the lignotuber. Some have been incredibly successful, others not so much; it's been about a 50/50 split.

We did a brief stop by my modest greenhouse propagation setup (I'll attach a photo). It's nothing too flash but is a great way to propagate all the species we already have as well as experiment with a few new ones. The banksias I'm propagating at the moment from our own seed are *menziesii*- light bronze form and yellow form, *ashbyi, solandri, candolleana, baxteri, media, epica, dryandroides, victoriae, lemanniana, caleyi* plus

a few others. I also showed and talked about the new varieties I'm growing in there too including banksias - *oreophila, benthamiana, lanata, cuneata, ilicifolia, laevigata, brownii, hookeriana x prionotes, canei* as well as Hakea *cucullata*. This was a good opportunity to have a discussion about other potential varieties that could be used for the cut flower industry. Neil Marriott had many suggestions too, his talk the day before was actually focused on this. Some genera we hope to experiment further with in the future are: Verticordia, Isopogon, Dryandra, Hakea, Petrophile, Darwinia, Kunzea, and Melaleuca to name a few.
Also to finish off the tour we did a little cherry picker demonstration and picked some large branches of *integrifolia* and Acacia *binervia*. Then we headed up to the shed for snacks and refreshments. This was also a good chance for everyone to have more one-on-one discussions with each other. We also had our picked flowers on display for people to look at while they ate and talked. We had a fairly large selection of our banksia varieties and it was good for people to see lesser grown species like *solandri, candolleana* as well as our *menziesii* in different colour forms including light bronze (a crowd favourite) and yellow.

Overall, I think the tours were a success. They were certainly big groups and it was a bit daunting to have so many people through the farm in one day! I definitely felt the first group was a bit more energetic and easier to keep interested, this was probably just because it was such a big day for everyone and the second group would have obviously gotten tired by the end of the day. Either way it was great to be a part of the conference and meet all the fantastic people we did. I don't know if we'll ever have a tour that big again to be honest feels like a bit of a one off! We'd be keen to do smaller ones in the future though, I'm sure.

The main banksias we pick are: *menziesii, speciosa, prionotes, praemorsa* (yellow), *ericifolia* "Giant Candles", *ashbyi, baxteri, burdettii, integrifolia, media and baueri.*
Other species grown in smaller quantities*: grandis, spinulosa, ericifolia, victoriae, occidentalis, hookeriana, lemanniana, caleyi, solandri, ornata, dryandroides and candolleana.*

Regards,
David.



David with very long stemmed *coccinea* & *integrifolia* branch, visiting group and Michael with a *solandri* bloom.

David and Cody. “Proud of their produce.”

Finance and members.

Our account balance is: **$2101.29.**

Welcome to new members: Anthony Walsh and David Prigg.

Membership now 233.

Thanks to members and others for your input for articles and hospitality for our visits. We welcome any reports and articles on successes or failures of cultivating Banksias either here in Australia or overseas.

Kevin & Kathy.