



Association Of Societies For Growing Australian Plants

Banksia Study Group Newsletter

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In This Issue

Rare & Threatened Banksia #10 – Tennis Ball Banksia – C Liber
New cultivars – dwarf *B. occidentalis* – C Liber, M Sprague
Updates on endangered banksias near Albany – S Barrett
Interesting purple hybrid or colour variant – K Collins
Update on cultivation at Strathmerton – P Kennedy
Update on cultivation at Deans Marsh – Brendon Stahl
More on banksia cultivars – Cas Liber

Dear all, Alex George and Kevin Collins are continuing to collect information for the new Banksia Book so there is still the chance to make a contribution to horticultural/botanical literature...

Rare & Threatened Banksia #10 – Tennis Ball Banksia

(*Banksia laevigata* subsp. *laevigata*)

The Tennis Ball Banksia (*Banksia laevigata* subsp. *laevigata*) is a subspecies of small woody shrub occurring in Western Australia's semi-arid shrubland. Most notable for its oval-shaped inflorescences, it is rarely cultivated; its sensitivity to dieback precludes its use in many gardens though its compatibility with *Banksia integrifolia* rootstock shows promise.



Description: The Tennis Ball banksia is a shrub to 3.5 metres high with grey, flaky barked trunk, which may reach 10 cm in diameter. There are 2 variants distinguished by their leaf margins, one along the Fitzgerald River with rather obtuse leaf teeth, the other in the Ravensthorpe Ranges with larger, acute teeth similar to those of subsp. *fuscolutea*. The former is represented by the type. New growth occurs in summer. The inflorescences occur in summer and are oval in shape and a greenish yellow in colour. *B. elegans* is the only other species outside the series Abietinae with this shape. Though they occur on lateral branchlets within the shrub, they are fairly conspicuous due to the rather open habit.

Like other banksias, the Tennis Ball Banksia is likely to play host to a variety of pollinators though ants, bees and wasps have been recorded thus far (Banksia Atlas).

Taxonomy: Described by Meissner in 1856 from a collection by James Drummond in 1848, the Tennis Ball Banksia gained trinomial status after the Golden Ball Banksia, subspecies *fuscolutea*, was described by Alex George in 1966.

George described its nearest probable relative as *B. audax* and placed it in the series *Cyrtostylis*, which he concedes is rather heterogeneous. The series was split into three in the morphological cladistic analysis by Thiele and Ladiges, with *B. laevigata* placed in the new series *Ochraceae* with *B. audax* and *B. benthamiana*. This was reinforced in Mast's 2002 analysis, as *B. laevigata* came out as sister to three groups; the first the pair comprising *B. audax* and *B. benthamiana*

Distribution and habitat: It is found in shrubland on rocky soil (spongolite and laterite) on slopes or the tops of hills and breakaways along the lower Fitzgerald River and in the Ravensthorpe Ranges in inland southern Western Australia. It is associated with *B. lemanniana* and the mallees *Eucalyptus pleurocarpa* and *E. falcata*. Occasionally it may grow in taller woodland with *E. gardneri* or *E. lehmannii*. Other plants it grows in association with include *Beaufortia orbifolia*, *Calothamnus quadrifidus*, *Gastrolobium parvifolium*, *Hakea obtusa*, *Hakea verrucosa*, *Hovea acanthoclada*, *Acacia subcaerulea*, *Acacia fragilis*, *Stylidium albomontis* and *Leucopogon cuneifolius*

Cultivation: As with other western banksias, *Banksia laevigata* subsp *laevigata* has been shown to have medium to high susceptibility to dieback. This means it will be difficult to cultivate in many gardens, especially those with humid summers or heavier soils.

There has been some success in grafting of this species onto *B. integrifolia*, initially by Doug McKenzie, who tried a cotyledon graft – 1 of 2 survived (oldest 5 years). He thought it was possibly compatible, but noted slow growth, (BSR 7&8). Interestingly Doug had a grafted subsp *fuscolutea* which lived for over 15 years and flowered well. Phil Trickett in Canberra has also grafted it onto eastern species and reports it was easily his most successful combination, with 4 from 6 successful on *B. integrifolia integrifolia*, 1 from 1 on *B. integrifolia monticola*, and 1 from 1 on *B. conferta*. Scion material was off a purchased plant that was around two years old and about a third of a metre high.

(9 month old graft by Phil Trickett)



Mark Ross reports that he did a batch while working at Annangrove Nursery but moved to WA before he could assess the combination. These were done as a cotyledon graft . He will be trying it as a mature scion seedling rootstock combination within the next month or so.

Conservation: *Banksia laevigata* subsp *laevigata* is currently classified as **Priority Four - Rare:** taxa which are considered to have been adequately surveyed and which, whilst being rare (in Australia), are not currently threatened by any identifiable factors. These taxa require monitoring every 5–10 years. When recorded for the Banksia Atlas, many populations were noted to be small (less than 100 plants).

Ravensthorpe Ranges is currently the subject of a Vegetation Mapping project, funded by South Coast NRM group and managed by DEC. Though the project is still in its early stages and the results will not be published until next year, populations of *Banksia laevigata* subsp *laevigata* in this area have also been noted to be small, with most less than 100 plants. In some areas there has been no recruitment of this species in burnt areas where it could have been expected to regrow, while in others there are only large senescent shrubs. These findings may see its status changed in the future.

New cultivars – dwarf *B. occidentalis*

Marilyn Sprague of Goldfields Revegetation a Native Plant Nursery, Wildflower Farm in Mandurang near Bendigo has been propagating a dwarf form of *Banksia occidentalis*. She got it from Phil Dowling whose sister had grown it for cut flowers. (Native Plant Wholesalers). Never seen it again- not sure whether it's a plant.

The form, sold as *B. occidentalis* 'dwarf' has reached 60 cm in height by 4 years of age; it has short narrow leaves, reddish spikes 10cm, and flowers for a long period into autumn. They have been propagating it by cutting and selling it for the past 4-5 years. It is very hardy and drought tolerant. Very popular.



Phil Dowling of Native Plant Wholesalers in South Australia adds that the original came up as a chance seedling in a batch of *B. occidentalis* var. *formosa* seeds he sowed about 8 years ago. He noted it looked markedly different in leaf shape and growing habit from all other seedlings which came up and grew it – the oldest specimens have reached a height of just over 1 metre in 8 years or so. He adds that it is difficult to strike by cutting and has offered to send material to anyone keen to try grafting it.

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Updates on endangered banksias near Albany

Sarah Barrett, DEC Officer for Rare Flora in Albany branch of DEC reports that *Banksia brownii* is being translocated to two sites, one south of the Stirling Ranges and the other near Cheyne Beach, due to ongoing threat from *Phytophthora*. These plants were propagated from seed collected from now extinct population and stored in DEC's Threatened Flora Seed Centre. A molecular genetic study is being conducted on extant populations to determine genetic diversity.



B. brownii - Wychinicup shrub form



B. brownii (below & left)
- Gold-styled form from Milbrook Rd, now extinct in the wild



Kevin Collins kindly sent these photos; *B. brownii* was covered in Newsletter Vol. 5 No. 1 (Spring 2003)

Banksia verticillata is recovering steadily but slowly from the 1997-8 bushfires; plants have a long juvenile period with only 10% flowering at 10 years post-fire. Two populations are perishing, one from aerial canker and the other from *Phytophthora*.

Interesting purple hybrid or colour variant

Some six years ago I seeded 50 *Banksia integrifolia* var. *monticola* collected from my own arboretum. Three seedlings grew to have more silver coloured foliage and lower stature as seedlings. These were kept aside and added to my arboretum. I missed the first flowering four years later and was surprised to find the following year that the flower was a lovely purple colour in full bud with green presenters (see attached pic). On opening it turns pale yellow. The plant did not set any seed in the first two years so I tried cuttings which succeeded. Autumn grown, dipped in banksia honey with no hormone treatment, heat or misting. These were grown in an open nursery in a wind protected semi-shaded area.

The plant in the arboretum has set a small amount of seed this year which I intend to sow and see what the progeny is like.

In my experience I have only seen *B. integrifolia* var. *monticola* flowers yellow thru'

to pale or dark pink. The intensity of the pink deepens with colder wetter Autumn – Winters.



The habit is a tall single trunked tree to 5m branching a little 2m from ground level, whereas *monticola* is a huge multi-branched tree with branches close to the ground. My guess is that it may well be a hybrid with another species nearby, possibly with *B.integrifolia* var. *integrifolia*. Can't explain where the colour comes from however as the only nearby flowering species was the burgundy *B. praemorsa*. (Unlikely?) The plants also have lovely pink purple new foliage. Curious!!!

Update on cultivation at Strathmerton – Paul Kennedy

Most of the Banksia collection survived the very dry hot summer, but unfortunately there were a few that found the conditions just beyond their ability to survive.

Most of the losses would have been caused by my human error in that I probably planted them in the wrong location. *Banksia meisneri* ssp. *meisneri* had been planted in a garden bed of sandy loam which mainly received full sun all day. It had flowered for the past four years and had reached a height of 750mm. Its natural location is in the south west of WA where there would be quite a few days over summer where the temperature would be in the high thirties but there would also be numerous cool changes coming in off the sea. Our temperature for January and February was mostly above 35 degrees C. The rainfall too would have been in the order of 1000mm, much more than the 225mm that fell here at Strathmerton. So I suspect its death was from being exposed too much to the sun and hence the next one will have to be planted in a much more shady position. Another loss were the two specimens of *Banksia oligantha* which again like *Banksia meisneri* ssp. *meisneri* were probably planted in a too open position. They were two years old and 800mm tall when all of a sudden they stopped growing and leaves started to lose their lustre. In reviewing their location I suspect they are growing in a more loamy soil and in a semi forest location, again where the temperatures are not quite as severe in summer as here and a lot higher rainfall.

The third loss was *Banksia littoralis* which I suspect died from root invasion from other large trees around it. It was in a shaded spot in loamy soil and received some summer watering as I had noted its location in the WA was in rather moist shady areas.

One of the Banksias that did like the hot summer was *dentata* from the tropical areas. It survived the minus 7 degrees C frosts last winter with a plastic sheet wrapped around it, and with some watering over this summer has now grown to 1.5m tall. If it continues to grow upwards, I will have quite a challenge to protect it from frosts in future years.

Altogether I suppose I should be grateful that the Banksia collection here at Strathmerton has in the main survived another terrible summer. To have some 87 species and sub species growing here is probably pushing the boundaries beyond reasonable expectations considering that this area probably had only *Banksia marginata* growing along a few sandy spots near the Murray River in the years gone by.

Other Banksias flowering at present are *laricina*, *integrifolia* ssp. *integrifolia*, *baueri*, *aemula*, *candolleana*, *hookeriana*, *media*, *epica*, *ashbyi*, *lullfitzii*, *coccinea*, *occidentalis*, *sphaerocarpa* ssp. *sphaerocarpa*, *scabrella* and *telmatiaea*.

Update on cultivation at Deans Marsh – Brendon Stahl

Just a report on my Banksias. I have lost two mature *Banksia grandis* plants and in one section of my garden also lost *Banksia serrata*, *Banksia littoralis*, and *Banksia seminuda*. The *grandis*, *serrata* and *littoralis* were planted by the previous owner. We have owned the property for thirteen years and the plants were mature when we purchased the property.

I do not know whether they had reached their 'time' in an Eastern State garden or whether the lack of rainfall was the cause. I am not referring to *Banksia serrata*. We only had 550 mls of rain last year. Our average used to be 800 mls, but in the last few years the average has been 700mls. The only other Banksia that died was a *Banksia victoriae* and was a few years old. Have other study group members had a similar experience with their Banksias?

More on Banksia cultivars

Recently at the autumn plant sale of the Grevillea Study Group I had an opportunity to wander around Peter Olde's garden at Oakdale. I was lucky enough to take some snaps of a couple of cultivars I've been waiting to photograph for some time. *Banksia marginata* 'Minimarge' is pictured below. I made a point of telling Angus Stewart who was due to try another after his first one died. Peter Olde's is the first one I have seen growing in Sydney and it looked happy too.



Banksia “Cherry Candles” was interesting as its styles were a dark red-brown and quite distinctive - a few shades darker than its parent *B.* “Birthday Candles”. I didn’t think to measure the inflorescence but it looked a good 12 cm or more in height.

Over in Perth, Lullfitz Nursery has been selling real dwarf *Banksia prionotes*. Hopefully Mark’ll graft them ok for us poor gardeners in dieback-prone Sydney.



Postscripts: I was going to comment on the new combinations for dryandras into banksia but feel this is probably better done in Australian Plants given the global importance of the whole change to all of us enthusiasts. Also, this is the 2nd and final newsletter of the 06-07 membership. I’ll get the first for 07-08 membership later this year. Finally as I finish this, Phil Vaughan’s nursery near Geelong (03)5250 5592 has some grafted *B. tricuspis*, *violacea*, *pulchella*, *meisneri*, *media* and *burdettii*.