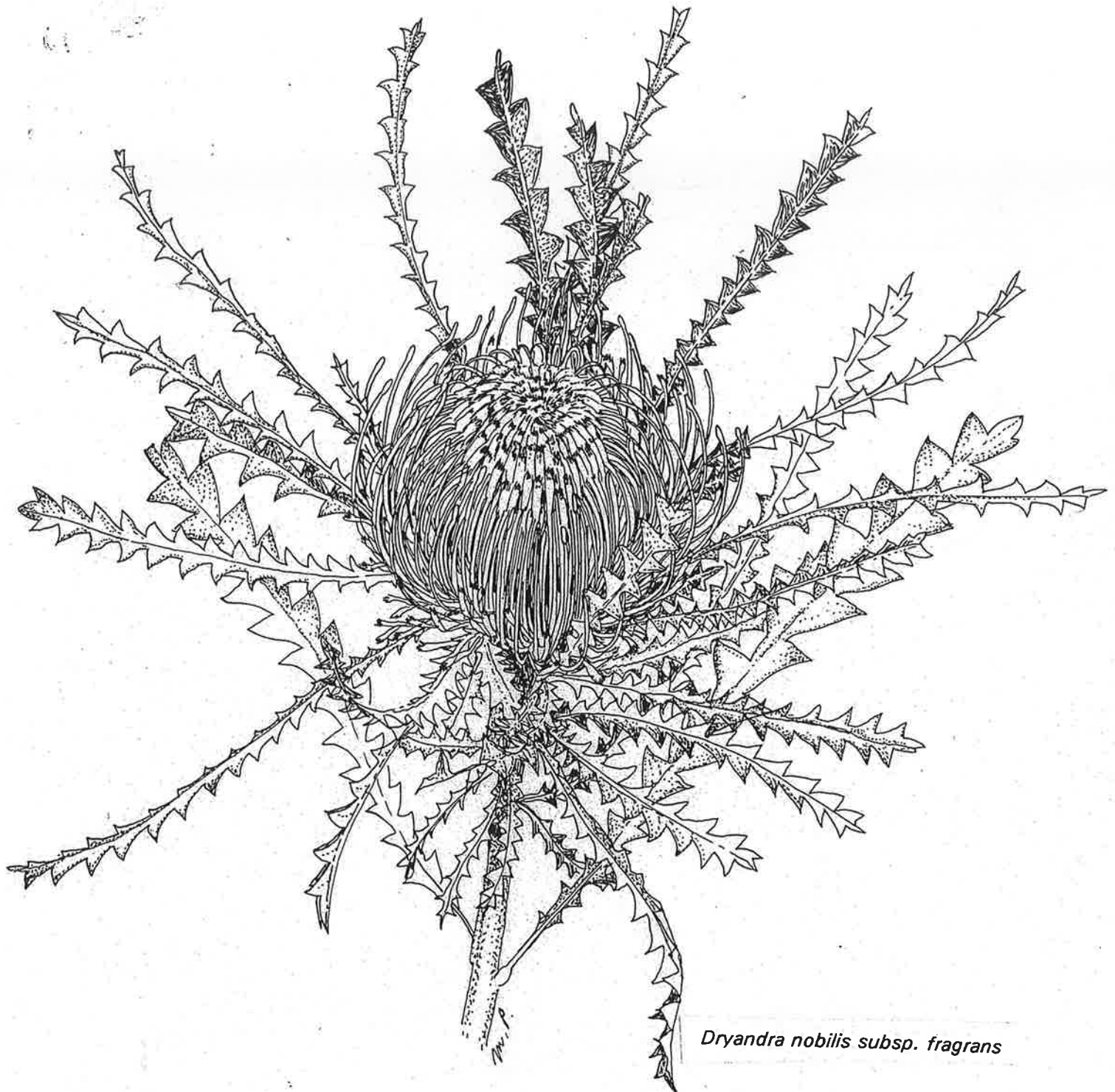


DRYANDRA STUDY GROUP NEWSLETTER NO. 50



Dryandra nobilis subsp. fragrans

ISSN: 0728-151X

March 2006

ASSOCIATION OF SOCIETIES FOR GROWING
AUSTRALIAN PLANTS

Dryandra nobilis* subsp. *fragrans

Dryandra nobilis subsp. *fragrans* is relatively rare in the wild and is restricted to an area near Badgingarra. A large, bushy shrub, it has softer foliage than the similar *D. nobilis* and delightfully scented flowers which appear in spring. It suits a warm climate and requires excellent drainage and a near full sun situation.

DRYANDRA STUDY GROUP

LEADER

Mrs. Margaret Pieroni
22 Ravenhill Heights
DENMARK
WA 6333
Email: mpieroni@bigpond.com

NEWSLETTER EDITOR

Mr. Tony Cavanagh
16 Woodlands Drive
OCEAN GROVE
VIC. 3226
Email: tony.cav@bigpond.net.au

Welcome to our first newsletter for 2006.

Margaret has now settled in to her new house and while she doesn't have many natural dryandras, she seems to have a wealth of other plants and has the joy and pleasure of discovering more almost every time she goes out exploring. Liesbeth Uijtewaal was telling me that when she was there in September, they found a new orchid. Margaret also has a stock of dryandras to go in and I am sure she will be trying to match the garden she had in Perth.

Thanks to everyone who wrote about their experiences. It is good to get this information and to know that members like Phil Trickett are experimenting with grafting as this is one means by which we may be able to grow some of the more recalcitrant dryandras in difficult areas. I have tried for years to grow *D. stuposa* but every plant simply dies when the soil dries out – this is one species that appears to have no tolerance for a dry situation. Yet I can grow the closely related *D. nobilis* very successfully and that for me stands dry and is never watered. Maybe there is a case for grafting *D. stuposa* onto *D. nobilis* – I wonder if they are compatible?

Congratulations to Study Group member Bob O'Neill for winning not only the ABC Ornamental Gardener of the Year award but then also the big one, the ABC Gardener of the Year for 2005. As I watched the TV interviews on the show Gardening Australia, I marveled at the enormous amount of work that Bob and Dot had put into their hectares of gardens. I was also pleased to see a *Dryandra* feature, that lovely foliage plant *D. brownii* which Bob had bought at the Banksia and Dryandra weekend only some 18 months before. Well done, Bob.

It was also good to get some photos of David Randall's garden at Cobram and to see just how healthy his plants in general were and especially how attractive some of the smaller and bushier dryandras were as garden plants. If you have pictures of dryandras in your garden or have favourite species you would like to tell us about, please drop a line to Margaret or myself.

The *Dryandra* book, to be called *The Dryandras*, is now fully laid out with some corrections and changes being made. Margaret has designed a cover which looks very striking and this is being produced in electronic form. The book is A4 in size and will have a hard cover and book jacket. It is approximately 240 pages and is expected to sell for around \$69.95 RRP, with a special deal for APS and Dryandra Study Group members of around \$56.00 plus postage. There are over 320 colour photos and for each taxa, there is flower head in close up and a general view of the plant, together with b x w line drawings of a leaf, seed capsule, seed and seedling, and a locality map. There are four introductory chapters - historical, biology and ecology, cultivation and propagation, keys to series and species and an illustrated glossary to assist with understanding specialized botanical terms used. We hope that this information will be of help in the sometimes difficult task of identifying many of the species. Target date for publication is May.

Alex George has recently published descriptions of six new taxa in *Dryandra* in the latest issue of *Nuytsia*, 2005, vol. 15, part 3, pages 337-346. This brings the total number of dryandras to 135 and they are all covered in the book as Alex had kindly provided us with an advance copy of the paper and Margaret had photographs of them all. Indeed, she was the collector of the type specimens for three of them. The taxa were covered briefly in earlier issues of the Newsletter (see Index in No. 49) but they are:

D. prionotes, *D. ferruginea* subsp. *magna*, *D. fraseri* var. *crebra*, *D. fraseri* var. *effusa*, *D. ionthocarpa* subsp. *chrysophoenix* and *D. pteridifolia* subsp. *inretita*. Margaret and Kevin Collins have grown some of them but all are listed as Rare and/or Endangered because of their restricted habitats or in the case of *D. prionotes*, because of severe insect damage to flower heads.

Happy *Dryandra* growing,


Tony Cavanagh

News from Denmark (WA!)

I am writing this in my new home, 7 km from Denmark town, looking over a grove of Jarrah, Marri and Karri trees on my one acre block. Some trees are just saplings and I can see the tops of them. There are a few mature trees but as there was a gravel pit nearby, in the past, most of the very large trees were cleared. I am fortunate because topsoil from the workings was piled on my block making for interesting contours and very good plant re-growth. Perhaps as a result of this area being an interface of Jarrah-Marri and Karri associations, the understorey is rich in species. The block is sloping to the north with Mt. Hallowell behind and the soil is gravel over clay with some granite boulders.

There are two dryandras here; *D. lindleyana* subsp. *lindleyana* var. *lindleyana* and *D. serra*. The latter is fast growing but short lived. Unfortunately the house had to be built where most of them were growing. In order to restore the original vegetation, I potted up seedlings that emerged after the foundation earthworks, sowed some seed that I collected, which, incidentally took more than four months to germinate and additionally, a few seedlings have come up along with many other plants where earthworks and tracks were unavoidably made during the building.

This spring has revealed many more species than I knew about on the block. The number of plants with blue or purple flowers is remarkable – about 25 at last count. There are two hoveas, *H. elliptica*, the Tree Hovea being quite tall and *H. chorizemifolia*, a small plant with Holly-like leaves. One of my favourites is one of the two purple Triggerplants, *Stylidium pritzelianum*. Its delicate flowers appear in November-December on many stems above whorls of soft, bright green leaves. These leaves also occur on the stems of mature plants. Also flowering at the same time is the other purple Triggerplant, *Stylidium amoenum* with one tall scape arising from a ground-hugging rosette of leaves.

Another feature of the bushland here is the number of Pea-flowered species, from medium shrubs such as *Bossiaea linophylla* to climbing or low-growing gompholobiums such as *G. polymorphum* in various colour forms; all yellow or shades of pink with orange and the pink *G. knightianum*. Several of these species are presently adorned with small, gauze bags to collect the seeds. I hope to plant the verge and the gravelly slopes around the house with these and other low-growing plants as we are obliged to keep vegetation to 10cm high around the house as a bushfire precaution.

Several of the blue or purple-flowering plants are in the Goodeniaceae family. *Goodenia eatoniana* has blue flowers and is low-growing as is the purple *Scaevola*

striata. The Karri Dampiera, *D. hederaceais* a beautiful, medium shrub which is covered with blue flowers for a long period in late spring-summer. There is one plant on my block, near the boundary. Another two were cleared. I have tried three times to grow it from cuttings with no success, so far.

A surprising discovery was the number of orchid species. Of about 22 in the immediate area, I have found 12 here. During October this year, after moving in, I was able to wander through the bush most days and every time I would discover a species I hadn't seen before. It is such a thrill for me to be living in a wonderful wildflower-rich area.

I have recently completed a painting similar to the one I did in 1990 with Perth bushland plants. Over a period of 12 months I painted 25 herbs or low-growing plants, all of which grow on my property:-

Elythranthera brunonis, *Crocea angustifolia* vars *angustifolia* and *platyphylla*, *Hibbertia amplexicaulis*, *Stylidium pritzelianum*, *S. amoenum*, *S. schoenoides*, *Pterostylis turfosa*, *P. recurva*, *P. vittata*, *Patersonia umbrosa*, *Boronia spathulata*, *Johnsonia lupulina*, *Conostylis setigera*, *Chorizema retrorsum*, *C. reticulatum*, *Scaevola striata*, *Caladenia brownii*, *Thelymitra benthamiana*, *T. antennifera*, *T. graminea* and *Sphaerolobium alatum*.

I've been on several excursions to exceptionally beautiful areas in the region with friends from groups I've joined since moving to Denmark, among them the granite rocks of Mehniup Hill, Overton Hill and the spectacular Mount Lindesay.

After the ASGAP conference I had the pleasure of visits from several friends including Study Group members, Liesbeth Uijtewaal and David Lightfoot and his family, almost as soon as I moved in, when the house was still in rather a chaotic state. I am getting settled in now and I would be very pleased to see old friends and new who wish to see this delightful part of the 'Wildflower State'.

I have attended meetings of the Rare Flora Recovery Teams in the Warren and, most recently, in the Albany region. Though Denmark is in the former region (just), I am more familiar with the flora and the people involved in the Albany area which includes the Stirling Ranges and Kamballup with rare and very endangered dryandras. Recovery programs are well under way for these species and a newly discovered population of *Dryandra pseudoplumosa* on private property, quite possibly the one where Ken Newbey collected it originally, has been fenced off.

Margaret Pieroni 16/12/2005

NOTES AND NEWS FROM MEMBERS

(From Barbara Buchanan, Myrree, Victoria, August 2005)

We are inside again today, I barely poke my nose out at all, because it is snow weather. There has been a lot of snow on the peaks and south of the Dividing Range but not much here at the moment. However, the garden is still surviving although with some losses. It is about 15+ years old and it is the older plants that we seem to be losing. Drought seems to be harder on the older ones More leaves to transpire and use more water?? Apart from actual deaths, we have removed a number of sickly plants, often riddled with borer. The other big problem is mildew, and with the wetter winter comes the mildew. I cheekily tried growing *eremophilas* in the dry season but they look sick now. *Dryandras* are not obviously susceptible, or perhaps they show it in a different way. Together with *banksias*, they can get yellow and brown areas which could be due to mineral deficiencies, eg magnesium and calcium, which I try to remedy and I think I get some positive results.

Among my older plants is *D. speciosa* which must be more than 12 years old. It is a thrill to still have it although I can't claim that it is one of my most eye-catching plants! For some years it has struggled between life and death but has survived and flowered. The foliage is, well, plain and homely compared with most *dryandras* and the flowers have to be lifted to be appreciated. I wish I had a means of growing it up high so that one could look up into the flowers.

My *D. catoglypta* has had two summers in the ground but not grown much since the first spurt of planting. I think that its slowness may be due to the difficulty of trying to penetrate our clay, yet I actually added a lot of sand to the area. It is now developing a bit of dieback Fingers crossed.

I've also added a second *D. glauca* because I buy a *dryandra* whenever I see one, and another *D. praemorsa* which I think will be Ray Purches' good form, one of which is flourishing after 5 or so years. I've also planted out another *D. formosa* which I had carried on in a pot since the *Banksia* and *Dryandra* weekend. On 12 April, ahead of any rain, I put in *D. subpinnatifida* var. *inermis* from the same source because it was looking extremely seedy and to my delight, it hasn't looked back. The rain did not start here until June, and mostly I don't try to plant without it. It was in a place where I could water, but only from a hand-held hose, but I felt it was do or die. I might have been overwatering the pot and it remains to be seen how lasting the growth on the plant in the ground is. The other *dryandras* from the weekend which were already in the garden came through the summer, and worse, the autumn without water but without significant growth.

I won't be going to the Perth Conference as we don't travel much any more. Even though I don't grow a lot of *dryandras* these days or see them in the wild, I am looking forward to the book, to do it all by proxy. Partly due to the *Verticordia* book, I have a collection of *verticordias* waiting to be planted when we get a load of sand. I picked up a few of the common ones here and there and then found a heap at the Adelaide plant sale. I actually had to select to keep the numbers down and I went for ones that flower in summer. Probably quite stupid in this climate, but you have to try.

(Thanks for the update Barbara and good luck with the new venture into *verticordias* as well.

(From Neil and Wendy Marriott, Stawell, Victoria, September 2005)

Nearly all my *dryandras* are coming on rapidly despite the continuing drought – all subspecies of *D. longifolia* for example are over one metre high in just over 12 months. Quite a few younger plants including *D. ideogenes* are either flowering or in bud. *D. sesilis* var. *sessilis* is already seeding with young plants around the base, just like in the wild. Cutting-grown *D. stricta* is 2 by 3 m with a mass of flowers. Despite the drought, we have been busy making lots of new gardens and planting out over the winter. Our beds are heavily mulched with washed river sand to retain moisture over summer.

(Subsequent to the above information, Neil was nearly burned out in the disastrous bushfires around New Year (see Neil's account from the latest Grevillea Study Group Newsletter elsewhere in the newsletter). Most of plantings including the Grevillea Living Collection and many of his dryandras were burnt but the house and nursery area were saved. This was devastating for Neil and Wendy after years of hard work and on behalf of Dryandra Study group members, I would like to pass on our best wishes and hope that the autumn rains will bring many surprises in the form of plants reshooting from lignotubers and masses of seedlings.)

(From Phil Trickett and Catriona Bate, Canberra, January 2006)

I am continuing to do lots of grafting trials, with some very promising results from my spring grafts. Various dryandras and banksias were grafted onto *Banksia integrifolia*, *B. serrata*, *B. aemula* and *B. cunninghamii* but *B. integrifolia* was the only successful stock. Many of the grafts on the other stock showed initial growth but all succumbed very quickly.

Many dryandras appear to be compatible with *B. integrifolia*, with *D. nobilis* subsp. *fragrans* the most notable. From three plants grafted in early October, all had struck and were growing vigorously within three weeks (compared with the normal 5 to 8 weeks). All are still alive and growing well. I planted one out in the garden in late November and it has more than doubled in size in the 6 weeks it has been planted.

Other species that have taken and are growing well are *D. foliosissima*, *D. longifolia* subsp. *longifolia*, *D. longifolia* subsp. *archeos* (growing very quickly), *D. borealis* subsp. *borealis*, *D. borealis* subsp. *elatior* (also growing very quickly), *D. fraseri* var. *ashbyi* (Eurardy form), *D. fraseri* var. *oxycedra*, *D. comosa* (growing very quickly), *D. wonganensis*, *D. tenuifolia* var. *tenuifolia*.

Over January I will try some different *Dryandra* species. I will aim to send you a progress report on this trial and an update on the survival of the spring grafts in April.

(Many thanks for this information, Phil and for continuing with your grafting experiments. You have some interesting plants there and very impressive rates of growth. It will be great if the apparent compatibility with *B. integrifolia* is borne out and we look forward to the April progress report).

(From Liesbeth Uijtewaal-de-Vries, Neer, The Netherlands, November 2005).

I have just returned from the Perth Conference and although the weather was sometimes pretty bad, I thought WA was fantastic. I still can't believe how many different plants I saw. It was so special to see *D. praemorsa* in the bush on the very first day of the pre conference tour to the south, simply growing among all the other plants just as if it's nothing special at all. It was amazing to be able to hop off the bus, investigate the road verges and discover lots of special little plants. The richness is incredible but it is very frustrating to see how much land has been cleared and will be cleared in the future. I'm still sorting and naming the photos I took in WA. They are all digital; I bought a digital camera before I left and it's been fantastic to work with. It's great to be able to review and re-live the flowers and scenery on the computer screen. I look forward to the *Dryandra* book coming out, not in the least to be able to identify some of the dryandras we saw – quite confusing in the end. It sometimes feels that they are all prickly, large and yellow!

Tony Parry and I hired a car for a week to travel around after the conference (Tony Parry is an English grower of Australian plants – ed.). We spent four days at Banksia Farm and three days at Hi-Vallee farm and had a great time. We saw so many special plants, climbed mountains, enjoyed the views and especially the two sunny days we had at last by the end of our stay. The weather was dreadful in general, unfortunately. On the last Saturday, I discovered my first *D. nana* on a track when Joy Williams came to pick us up again after our short last morning walk on their property. The plant was in full flower and was

thus easily recognised – a very special treat. Don Williams gave me some seed of *D. catoglypta* and I hope I can get it to flower for me.

During the Conference, Elizabeth George gave me the *Verticordia* stems she had on display for the Study Group night. I was very pleased with this as I love verticordias but felt it would be very hard to get roots on them as it would be two weeks or more before I would have the opportunity to propagate them. Yesterday (November 6), I found roots on six of the species, while five other species had not survived. It's just amazing how sturdy these little things can be! The hardest thing might be to keep them alive in humid spells but I will certainly be trying hard.

(Yes, Liesbeth, WA is indeed a wonderful place for plant lovers but it is a shame that you had a lot of bad weather. That was very impressive in propagating the *Verticordia* stems. We look forward to hearing of their progress as well as your dryandras. – Ed.).

Further information on growing dryandras in a glasshouse in the Netherlands

(This further information from Liesbeth Uitjewaal was extracted from several emails she sent me over summer. She has had remarkable success with growing Australian plants in pots and I hope to include a picture she sent me of one of her *D. drummondii* in full flower in the next newsletter – Ed.).

The weather here in November was incredibly warm. Normally, everything would be back inside the glasshouse well before November but this year we have kept them out in the fresh air. I'm not looking forward to trying to squeeze them back in again, however, as this year it will be a very tight fit. Especially when the weather is bleak, the plants in the glasshouse don't consume a lot of water so I only need to water them for a few hours per week. I wait for the weather to warm up a bit in spring before I begin potting up activities.

One exciting development is the building and organisation of a large new glasshouse where I hope to be able to put plants in the ground and maybe even create a bit of the Australian bush. (Tony tells me this was called a conservatory and they were very popular in England and Europe in the 18th and 19th centuries). It was formerly a large shed for our cows. We have now removed all the concrete floor and much of the sand which has been replaced with good quality topsoil. Paths have been dug and when all the work like building a terrace has been finished, I can begin planting out. That will be great. It's a bit of an experiment actually as I am not sure how my dryandras will like being grown inside out of fresh air all the year round. To begin with, I will try some surplus seedlings and see what happens.

Most of my dryandras are still growing well. *D. drummondii* is budding up in late January with lots of new buds around the old flower heads. Eight of the *D. catoglypta* seeds Don Williams gave me germinated by the end of January and so far all of the seedlings I grew from Study group seed are doing well too with no winter casualties. They are all in the glasshouse with plenty (well, the best I could do) of air movement to minimise the risk of fungal problems. Fingers crossed.

Liesbeth Uitjewaal.

Loss of the Grevillea Study Group Living Collection

At 4PM on the 31st December 2005 a bushfire started out on the plains 30 kms NW of 'Panrock Ridge' Stawell. Whipped up by howling northerly winds, the fire soon ran out of control through a large area of state forest and then on into the western side of our Black Range. On the east side of the range we could track the fires movement by the massive cloud of smoke gradually moving closer and closer. By 8 PM we thought we were to be spared as the fire front had passed to the SW of us. We went inside and had tea by candlelight as the power had gone out due to the fires.

However with the arrival of a SW change in the weather, all of a sudden the fire had changed direction and was coming up and over the mountains and running down the hills towards us. We had spent the day preparing for the worst – tested the sprinklers around the perimeter of the house, the generator fuelled up and set to run the pumps should the power go out again, tanks filled, hoses connected, buckets of water placed all around the veranda's and fire fighting clothes at the ready to put on. Within minutes we were being attacked by ember showers. A big outbreak took off down below the front of our house and we fought fiercely for about half an hour to get it under control. Embers landing close to the house were successfully doused due to the sprinklers, but the ember attack meant there were fires popping up everywhere further out from the house.

Then the main front hit – due to the area burnt out by the ember attack we had a good firebreak down from the front of the house. However this also forced the fire to sweep around the burnt area on two separate fronts – it took all our strength and energy to rush from one side of the house to the other fighting the front as it pushed closer and closer to the house. Then all of a sudden it got into the Grevillea Gardens – there was a massive roar as the grevilleas burst into flame – any attempts to save the area would have proved fatal. All we could do was watch as all our years of work went up in smoke!

At daybreak we were off around the property putting out the many dozens of still-burning stumps and trees. Now, three weeks later we are again threatened by the massive Grampians fires and amazingly have had to put out a number of stumps that have re-ignited under the howling hot winds. They must have been still smouldering under the ground!

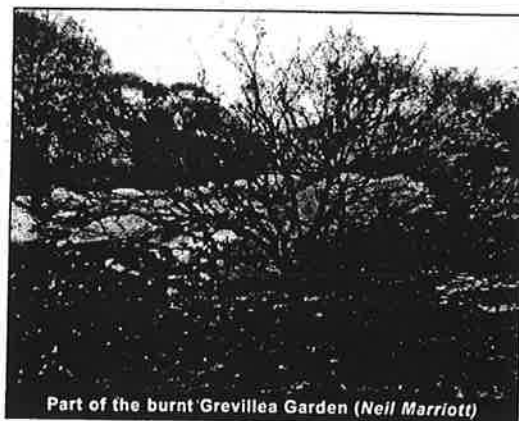
A few small areas of the Grevillea Gardens have survived, although many plants are brown and scorched. We are now hoping for a good autumn break so we can see just what species will re-shoot and what seedlings come up. At the moment I feel too flat to consider re-establishing the Grevillea Collection, perhaps it is time for this to be taken on by someone else. We will keep on growing plants but never again have such a large, comprehensive collection.

At one stage Wendy hurried back into the house to get us a drink – and quickly doused the candles still burning from tea. Also the house was full of smoke – we had left the air conditioner on and it had sucked in the dense smoke – and the smoke detectors were screaming.

By now the fire was on all sides of the house and we were really battling to keep it at bay. Garden after garden was being engulfed with flames 30 to 40 feet in the air. We discovered to our great dismay that most grevilleas are highly flammable whereas most acacias proved to be truly fire retardant! However this may well be due to the fact that the habit of most grevilleas is as dense ground hugging shrubs whilst acacias are generally taller and on a trunk. Anyhow they erupted into flame while none of the acacias burnt.

By now the fire had burnt right up to our nursery – the thought of our polyhouses and shade houses full of all our recently potted up new plants going up in flames urged us on, and we stood face to face with the fire and forced it back with the nursery hoses and backpacks. Many plants along the nursery edge are scorched but we saved the rest! We also managed to save most of the new gardens near the nursery. These were mulched heavily with washed river sand and this prevented the fire reaching the plants. Areas mulched with organic material on the other hand were all totally consumed by fire. Our rainforest gully in particular was so severely burnt that there is now little sign of the plants – the over-storey trees burnt so hotly at the base that many have fallen down.

Wave after wave of outbreaks kept us going without stop till 3.30 in the morning – just when we thought we had it all under control a huge outbreak exploded behind our sheds – a pile of railway sleepers had burst into flame! Finally doused, we staggered to bed at 4am for a couple of hours sleep.



Part of the burnt Grevillea Garden (Neil Marriott)

About the photos: David Randall's garden in Cobram Victoria

I was pleased to receive these two pictures of his garden along with those of many individual plants from David Randall in Cobram Victoria. David is a long term member of the group and was responsible for the first couple of indexes to the species listed or discussed in Newsletters. These were published as "Occasional Publications" of the group, the second being produced in December 1994 and covering up to N/L 26. I have continued the indexes, the most recent being that in N/L 49 and covering up to N/L 47. The indexes proved invaluable when I was compiling material for our book and they well served their aim of providing quick access to the mine of information on individual taxa which is scattered through nearly 50 issues of the Newsletter.

David began growing dryandras in the 1970s and was lucky in having two gardens in which to grow plants, his own, a normal houseblock in Cobram, and his mother's property with more land and better soil. I saw David's garden in the late 1990s and it was amazing just how many dryandras he had growing successfully and how healthy they were. The garden is mostly in full sun but as the soil is fairly heavy, David has built the beds up. The two pictures opposite show that this is still the case although David admits that they had the best rains for years in 2005 and this helped considerably. Before the rains he had lost *D. bipinnatifida*, *D. octotriginta* and one *D. nivea* to dryness while *D. borealis* subsp. *elator* had become overgrown.

The following species flowered for him last year, as shown by photographs:

D. arctotidis, *D. brownii*, *D. borealis* subsp. *borealis*, *D. plumosa*, *D. speciosa* subsp. *macrocarpa*, *D. shanklandiorum*, *D. squarrosa*, *D. viscida* (this last is quite rare in cultivation and David's plant was very healthy with dozens of flower heads). The following is the list of the current dryandras at his own and his mother's gardens.

Name	Size	Flowered	Set seed
<i>arborea</i>	0.3 by 0.4	N	
<i>blechnifolia</i>	0.4 by 0.7	Y	
<i>borealis</i> subsp. <i>borealis</i>	0.45 by 1.1	Y	N
<i>brownii</i>	0.4 by 1.1	Y	N
<i>catoglypta</i>	0.35 by 0.6	Y	
<i>corvijuga</i>	0.35 by 0.6	N	
<i>drummondii</i> subsp. <i>macrorufa</i>	0.7 by 1.5	Y	N
<i>conferta</i>	0.7 by 1.6	Y	N
<i>fraseri</i> var. <i>fraseri</i>	0.4 by 0.9	Y	N
<i>lindleyana</i> subsp. <i>lindleyana</i>	0.4 by 0.6	Y	N
<i>longifolia</i>	0.7 by 1	N	
<i>nivea</i> (2 plants)	0.7 by 1	Y	N
<i>obtusa</i>	0.4 by 1	Y	
<i>polycephala</i>	0.3 by 0.3	N	
<i>shanklandiorum</i>	1.2 by 2.3	Y	Y
<i>speciosa</i> subsp. <i>macrocarpa</i>	0.45 by 0.8	Y	N
<i>squarrosa</i>	3.9 by 5	Y	Y
<i>viscida</i>	0.8 by 1.5	Y	N
<i>acanthopoda</i>	2.6 by 2.5	Y	Y
<i>arctotidis</i>	0.35 by 0.8	N	
<i>borealis</i> subsp. <i>elator</i>	1.3 by 1	Y	
<i>drummondii</i>	0.6 by 0.9	Y	N
<i>formosa</i>	3.2 by 2.8	Y	Y
<i>fraseri</i> var. <i>fraseri</i>	0.5 by 1.1	Y	N
<i>fraseri</i> var. <i>oxycedra</i>	2.6 by 1.9	Y	Y
<i>lindleyana</i> subsp. <i>lindleyana</i>	0.4 by 0.7	Y	N
<i>longifolia</i> subsp. <i>longifolia</i>	1.6 by 1.1	Y	Y
<i>nivea</i>	0.3 by 0.35	Y	N
<i>nobilis</i>	0.5 by 0.4	N	
<i>obtusa</i>	0.2 by 0.3	N	
<i>pallida</i> (several plants)	1.9 by 1.6	Y	Y
<i>platycarpa</i>	0.6 by 0.55	Y	N
<i>plumosa</i> subsp. <i>plumosa</i>	0.55 by 1	Y	N
<i>praemorsa</i>	1.8 by 1.7	Y	Y
<i>polycephala</i>	1.9 by 2.1	Y	Y
<i>quercifolia</i>	1.4 by 1.8	Y	Y
<i>seneciifolia</i>	1 by 0.8	Y	N
<i>serratuloides</i> subsp. <i>serratuloides</i>	0.55 by 0.7	Y	N
<i>stiposa</i>	2.3 by 1.9	Y	Y

Garden of David Randall, Cobram, Victoria



The Meaning of Some *Dryandra* Names Dryandras named after people.

Although in our book we explain the meaning and origin of all the names given to species, subspecies and varieties of *Dryandra*, when a taxon is named after a person, we provide only bare details of who that person was as there is no space for more information. In this article, I will give brief biographical details of twelve people associated with *Dryandra* or after whom species were named. It is modified from an article I wrote for N/L 27.

The name *Dryandra*. The name commemorates the Swedish botanist, Jonas Dryander, who was the first Librarian of the Linnean Society and later, Librarian and Herbarium Keeper to Sir Joseph Banks. He was also a proponent of a new method of naming and classifying zoological and botanical specimens developed by the great Swedish botanist, Carl von Linné, better known as Linnaeus, and along with Daniel Solander was largely responsible for introducing the system to England. This involved a "binomial system of nomenclature" (the name of a plant is given in two parts, eg *Dryandra nivea*, the first part being for its genus and second being its species name), and a "sexual" system of classification based on floral parts such as stamens and pistils. This practical system proved invaluable for classifying the vast numbers of new plants being discovered at the end of the 18th century and later although it was later replaced by the "natural system" of Antoine de Jussieu. According to some authors, Dryander was responsible for supplying names and classification to many taxa that are generally attributed to Robert Brown, without acknowledgement of Dryander's work, and thus is perhaps worthy of greater fame than he has. The genus *Dryandra* was named by the botanist Robert Brown in a paper presented to the Linnean Society in London in 1809 and when the account was published in 1810, 13 dryandras were listed, all new to science.

Robert Brown. Brown was a Scottish botanist, widely regarded as one of the most astute botanists of the early 19th century, who proposed a new family to be called Proteaceae (after the South African genus *Protea*) in 1809 which included many Australian genera including *Banksia*, *Dryandra*, *Hakea* and *Grevillea*. Robert Brown gained fame as the botanist on the voyage of the *Investigator* under Matthew Flinders which circumnavigated Australia and resulted in the collection of some 4600 botanical specimens between 1801 and 1805. He continued to work on the Australian flora on his return and published two landmark papers in 1810 – the above paper establishing the Proteaceae family and his attempt to classify the Australian flora, *Prodromus Florae Novae Hollandie et Insulae Van-Diemen*, which described over 2000 species, more than half new to science. A supplement was produced in 1830, covering mainly Proteaceae including many new species collected by William Baxter. Altogether, 23 of Brown's *Dryandra* names from these two publications are still current.

***Dryandra baxteri* R.Br.** This was named by Robert Brown in 1830 in honour of the collector of the type specimen, William Baxter. Baxter was a gardener and plant and seed collector who visited Australia twice – in 1823-25 and 1828-29. He collected on Kangaroo Island, Wilson's Promontory, and extensively in Western Australia, around King George Sound, Lucky Bay and Cape Arid. In his venture during 1828-29, he was working on behalf of Charles Fraser and the Sydney Botanic Gardens as well as for the English nursery firm of Francis Henchman. Unfortunately, Baxter appears to have been less than honest in the division of material (which included "sacks of *Banksia* cones") and there was a violent dispute with Fraser before Baxter was forced to hand over the share for the Gardens. Nevertheless, Baxter was able to sell his seeds in England for 1500 pounds, an enormous sum for those days.

Baxter collected the type specimens of many Proteaceae, including seven species or varieties of *Grevillea*, numerous banksias and hakeas, and of course, this species in the vicinity of King George Sound as well as at least seven other dryandras.

***Dryandra brownii* Meisner.** The type was collected by the German botanist Johann Ludwig Preiss in October 1840 and described by C.F. Meisner in 1845. It commemorates Robert Brown already noted above. In addition to naming 23 dryandras, Brown or the gardener on the *Investigator*, Peter Good collected 11 of the type specimens of *Dryandra*. *D. brownii* was long neglected as an accepted *Dryandra* name and the plant was usually considered as a form of *D. nivea*. It is indeed fitting that the name has been restored by Alex George in his 1996 revision and will remain to remind us of this outstanding botanist.

***Dryandra drummondii* Meisner.** The Scottish-born James Drummond migrated to the then Swan River Settlement in 1829 as superintendent of agricultural operations and botanist and naturalist for the colony. As his position was initially unpaid, he lived on the proceeds of the sale overseas of seeds and botanical specimens. A thorough and energetic collector (who unfortunately did not often detail his collecting localities very precisely), Drummond ranged over much of Western Australia, from the extreme southwest to the Moore and Murchison Rivers in the north, and into the interior, and eastwards to the Barrens. He collected for or with such eminent overseas botanists as W.J. Hooker, John Lindley, Karl von Hügel and Ludwig Preiss as well as locals John Gilbert and Georgina Molloy. He is commemorated in more than 100 species in many genera, this species being named after him by Carl Meisner in 1848. Drummond is credited with discovering the type specimens of no less than 30 dryandras, not all of which are recognised as separate taxa today.

***Dryandra fraseri* R. Br.** Charles Fraser was yet another Scottish-born botanist who arrived in Sydney in 1816 as a member of the 46th Regiment. Appointed soon after as Superintendent of the Sydney Botanic Gardens, Fraser was to travel much in Australia, on Oxley's three expeditions of 1817, 1818 and 1819, and to the Swan River in 1827 where he collected the type specimen for this species as well as that of *D. bipinnatifida*. He twice visited New Zealand and Tasmania and later established the Botanic Gardens in Brisbane. Fraser did excellent scientific work and is commemorated by more than 30 species in a number of genera. Like Drummond, Fraser supplied seed overseas and was responsible for introducing a number of Australian plants to Great Britain, often through Scottish botanic gardens. Robert Brown named this plant in his honour in 1830.

***Dryandra hewardiana* Meisner.** The specimen on which this name is based was collected by Drummond some time prior to July 1847 and was described by Meisner in 1856. It commemorates the relatively little-known English botanist, Robert Heward who was a friend and biographer of Allan Cunningham and maintained an herbarium of Cunningham's specimens. He was also closely associated with Kew and the famous English botanist George Bentham.

***Dryandra kippistiana* Meisner.** This was another Drummond collection and was described at the same time as *D. hewardiana*. Kippist was the Librarian of the Linnean Society in London in the mid 1800s and was keenly interested in the taxonomy of Australian plants. He worked in collaboration with Carl Meisner and provided names for and in some cases descriptions of species when Meisner had not seen herbarium specimens. Some authorities believe that Kippist should be attributed sole authorship (recognised as providing the name and botanical description) of two dryandras, *D. tortifolia* and *D. vestita* for this reason, instead of "Kippist ex Meisn." which gives prominence to Meisner.

***Dryandra lindleyana* Meisn.** Ludwig Preiss collected the type specimen in July 1839 and it was named by Meisner in 1845, commemorating John Lindley. Lindley was for many years a powerful figure in English botany, first as assistant secretary of the Royal Horticultural Society and later as the first Professor of Botany at the University of London and later in the same position at the University of Cambridge. He took a keen interest in the Australian flora and named many species of Australian plants. He is probably best known in this regard for his "Sketch of the Vegetation of the Swan River Colony" published in 1840 in which a number of Proteaceae including four dryandras were described. One of these, *D. carduacea* is now regarded as a synonym of the earlier-named *D. squarrosa*.

***Dryandra preissii* Meisner.** Ludwig Preiss was a German-born botanical collector who worked in Western Australia between 1838 and 1842. At various times, he collected with W.A. resident collectors such as Drummond, Gilbert and Georgina Molloy. He was a thorough and meticulous collector, well ahead of his time, providing detailed descriptions of localities and even soils with his specimens and gathering duplicates of most. It is claimed that he took more than 200,000 plant specimens with him to London in 1842, many of which were used by Meisner and others in preparing the massive *Plantae Preissianae* of 1844-48. Preiss is commemorated in about 100 plant species and collected the types of five dryandras although not all are currently accepted names.

***Dryandra shanklandiorum* R.P. Randall.** This is a recently named species having been described in 1988 although it had been widely grown for many years as "D. preissii". The type specimen was collected on the property of farmers Wally and Betty Shankland in the Dowerin district of Western Australia. They have agreed to preserve the population of these plants on their property.

***Dryandra shuttleworthiana* Meisner.** Another Drummond collection, the specimen was gathered before the end of 1852 and described by Meisner in 1855. It commemorated Robert James Shuttleworth, conchologist and botanist, who was a correspondent of Meisner. Shuttleworth was a subscriber to James Drummond's collections and maintained a large herbarium which Meisner consulted. We know very little more about Shuttleworth beyond the fact that he spent a lot of his time in Switzerland and France, dying there in 1874.

Final comment. In any list of *Dryandra* names which include the "author" (the person who prepared the description of the species), the name Meisner crops up no less than 35 times, although not all his names are currently accepted. Who was Meisner? Carl Friedrich Meisner was Professor of Botany at the University of Basle and made a substantial contribution to the botanical literature for nearly 40 years. After 1861, he changed the spelling of his name to "Meissner", leading to much confusion as to how it should now be written - "Meisner" appears to be the current accepted version. He was a specialist in the Proteaceae but also wrote monographs on a number of genera outside of this family, and authored the substantial *Plantarum Vascularium Genera* over the years 1836-43. Many of his descriptions of the proteaceae appeared in J.G.C. Lehmann's *Plantae Preissiana* of 1844-48 and in Augustus and Alphonse de Candolle's monumental *Prodromus*, generally in the 1850s. Most of the dryandras he described were collected by Drummond and Preiss and often held in herbaria such as those of Shuttleworth. Meisner often commemorated these people in his names so it is a matter of some surprise that there is no "Dryandra meisneri". He is surely worthy of it.

Tony Cavanagh