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AUSTRALIAN NATIVE PLANTS SOCIETY AUSTRALIA
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Dear Members.

January 2015 has arrived with major variations in our weather, hot days, bush fires and now days of rain and cool weather. Our Australian plants have to adjust to a wealth of climatic conditions. Here in Colac it has been fairly mild. The drier than normal conditions continued through November and December with maximum daytime temperatures seldom reaching 30 degrees C. In early January there were three days of temperatures in the high thirtys but then the rain came and we are back to cooler weather. Rainfall for January was 70mm.

The Hakeas have put on a fair degree of growth, most tripling their height since they went in. Out of ninety species only two have died probably due to poor root development and wind. Colac is a windy place and most of the Hakeas have been subject to strong winds. I have been planting the taller species such as macraeana, salicifolia fine leaf, drupacea and oleifolia on the perimeter to hopefully deflect some of the wind across the property.

The original two truck loads of native mulch have been spread over five sheets of newspaper on the garden beds and has been very effective in reducing weed growth. I was hoping for another truckload of native mulch but had to settle for a load of pine bark which is now being spread on the remaining raised up beds. I am putting it on thinly as I want any moisture to go through to the soil below. The pine bark will take longer to break down too. In non urban areas where bush fires could occur I would recommend a gravel mulch as wood mulch burns and only does more damage to the plants.

Propagation.

The hothouse measuring 3m x 3m was erected in November and since then a lot of seeds of different genera have been planted in punnets. The original 70 species of Hakea were planted in perlite. However, gale force winds caused the sides of the hothouse to flap too much and up ended the Hakea trays. I scooped up the seed with the perlite mixture and planted them into two large trays. So far 40% of the seed has germinated and I have all these seedlings with different leaf shapes appearing. The challenge ahead is to work out which species they are. However after repairs to the hot house I did re-sow another 70 species in vermiculite and these are now germinating. With a bit of luck I may be able to cross check with the unnamed species to give them a name. I do not expect all species to germinate over summer as some may be triggered by seasonal temperatures. It is interesting to note species from Central Australia, sub tropical and tropical species such as minyma, leucoptera and stenophylla ssp. stenophylla are more likely to germinate over summer as this is when rains occur in their natural environment.

One of the problems with propagating from seed is to know exactly when and how much water to add to the propagating mixture so that it is not over or under moist. I have filled up another punnet with vermiculite and no seed and inspect its moisture level to decide if I need to add water or not. Damping off can be a problem especially with Hakeas and Banksias.

Bush Fires.

Many of our members live in areas which can be impacted by bush fire. This January the bush fire in the Adelaide hills swept through the property of Hans Griesser. The house was saved because it had European trees around it, but the native section of the garden was badly burnt despite the grass having been mown to a lawn surface. The taller Hakeas survived because there were not too many lower branches and all the heat was at ground level. However the smaller and prostrate plants were badly burnt. Hans will in due course let me know what Hakeas he wants to replant and I will try to fulfil his order from the seed bank. One of the special ones that got burnt was Hakea purpurea, however I do have a cutting grown one which I will get to him. Australian plants have adapted to bush fires so I am hoping there will be some that will reshoot despite their badly burnt appearance. Hans said a bush fire went through there in 1982 and the house was saved in that instance too. Let's hope there are no more.

Letters from Members.

Graeme Krake from Brogo writes to say that he has difficulty growing inland Hakeas due to humidity and summer rainfall in his area. Nevertheless he has done remarkably well having some 155 species. It has been a very wet summer so far in the south east of NSW.

Tom Constant from Bullsbrook writes that his new garden of Hakeas is thriving, especially now that they have got their roots down on to the moist clay.

Peter Cox from Drouin requested information on Hakea "Mini Prini". From what I have researched it is a low growing form of Hakea laurina. which some nursery has given the name "Mini Prini". I do not like plants being given names that have no meaning as to what they are. Hakea laurina low form would be much more appropriate. I wonder too how long some of these forms have been trialled as to be proven to retain their height.

Requests for Hakea Seed.

Some members now have significant collections of Hakeas in their gardens. Others are seeking specific Hakeas because they have a particular interest in that species. However there are a number of Hakeas which are rare, do not set seed or are difficult to get seed of, which I have not been able to fulfil their requests. These include aculeata, arborescens, aenigma, asperma, bicornata, chordophylla, chromatropa, divaricata, edniana, eneabba, epiglottis ssp. milliganii, fraseri, gilbertii, meisneriana, pedunculata, pulvinifera, rigida, spathulata, leucopteris ssp. seripes, kippistiana, recurva, recurva ssp. Arida, and trineura. If you can help with seed or cutting material it would be much appreciated.

I thank Victoria Tanner for sending seed of purpurea, actites, gibbosa, propinqua, sericea and leucoptera ssp. leucoptera.

Financial Statement.

Balance forward. 31st.October 2014	$3213-51
Income from membership subscriptions	$ 50-00
Expenditure	
Printing and postage of newsletter No. 56	$ 113-26
Balance as of 1st. February 2015	$ 3150-25

Hakea bakeriana.

The following article from Hugh Stacy appeared in Native plants for NSW in October last year and I believe all members of the Hakea Study Group should have the benefit of reading it as Hugh has gone to some length in observing and recording its growth and flowering pattern. It is a great plant to grow and always looks pretty whether in flower or not.

I wish you all success with your Hakeas and that they continue to grow and flower. It is still very mild here at the beginning at February which is great for getting out and enjoying gardening activities.

Please continue to look at what is pollinating your Hakeas as the more information we have will aid future research and knowledge.

Please also keep your letters coming in about your successes and failures in growing Hakeas.

Cheers,
Paul.

Paul

The Flowering of Hakea bakeriana
Enjoyment for half a lifetime

by Hugh Stacy

Despite being one of the finest wildflowers of eastern Australia *Hakea bakeriana* still seems little known and remains uncommon at present in cultivation. Needlessly so, for it grows readily from seed or cuttings and has proven to be long lived. In 1975 I planted a seedling (from seed collected at Doyalson on the NSW Central Coast) in sandy loam 60 cm deep over sandstone chips providing good drainage. Photos show several flowerings of this plant at least 35 years later.

This hakea has outstanding features. Individual flowers are larger than those of other hakeas and of many grevilleas; style and ovary are 45 mm long and perianths 12 mm. Huge fruits swell to 7cm long, 5 cm wide and 4 cm thick. New leaves, fresh green needles 7 cm long, ageing darker, pliable but pointed, enhance multiple stems of the young bushy shrub with a mallee habit. After about four years a few flowers appear, naturally low down on older wood; observers at this stage may feel that foliage obscures them enough to spoil the show. But wait! This is only a beginning, merely immature flowering. Later flowers at these locations will be better revealed when stems enlarging begin to lose leaves, a process which quickens once the first fruit sets. Then these stems grow taller with new flowers appearing annually higher up on each stem, while lower down flowers recur in much the same places axially and new flowers develop nearby in different positions around the thickening stem. Overall more flowers are carried each year on stems growing taller to a natural limit of 3 m or so in cultivation and measuring 50-60 mm in base diameter (image 1).

Flowering occurs from April to July in an interesting way. The basic conflorescence normally consists of six single flowers, each on a pedicel 10 mm long. All emanate from separate points along and around a little stalk, or rachis, which may be 3-10 mm long. These persist and from the base of many next season other conflorescences may grow, with rachis and buds initially enveloped by minute bracts which are soon shed (see image 4a). First flowers on a stem are usually from a single sessile rachis. After flowers fall a new little trunk begins to grow underneath it, from the top of which new rachises sprout somewhat laterally. Years of flowering produce an integrated structure resembling a tiny tree perhaps 20 mm high and wide with trunk square to stem and complex branches made up of dozens of rachises. When a number of conflorescences develop together on one of these miniature flower factories, multiple rachises appear to radiate nominally from a common centre, as do the styles, producing spherical clusters easily 11 cm diameter; the one in image 2 contains over 170 flowers. Low down on very old stems some trunks of these little trees grow from swollen humps (see image 3).

As buds develop so individual flowers attract attention, green limbs on pale perianths on red pedicels. Flowers higher on the plant show perianth tubes changing from pale green to pink, with bright green limbs matching young green leaves, and tepals of pale cream inside emphasising rich pink styles (image 4). Massed clusters in full sunlight are darkest pink (image 6), while opening flowers (image 5) show

shades of pink gradually deepening as exposure to sunlight increases; those lowest, only 15 cm above ground, are nearly white.

All this happens in a seasonal cycle, expected and repeated as years go by. Just as change drives interest in any garden, so the very regularity of repetition gives assurance and security to those who spend leisure time there. This plant brightens winter days as subtle pinks and greens softly dress the old grey sombre fruits, those rugged investments made to protect the next generation.

The year-old seedling of 1975 is gone now after 40 years of living for its progeny. Weakened by recent drought its massive lignotuber succumbed to termites below ground. It has given pleasure for half a lifetime, contributing its share of beauty to the world. But our search for beauty is personal and lifelong.

The British poet laureate Robert Bridges asserted

Verily by Beauty it is that we come at Wisdom,
yet not by Reason at Beauty.

He also observed, aptly for *Hakea bakeriana*,

Best is mature; tho' Beauty is neither growth nor strength;
for ugliness also groweth proudly and is strong.

Notes for Photos

1. Rough fruits contrast with delicate flowers on old stems. Note this photo was taken in the shade.

2. A spherical cluster 11 cm in diameter containing over 170 flowers. Will the bee (near centre) surfing the tepal sea touch stigmatic periscopes on leaving?

3. Low buds developing: green limbs on pale periaths on red pedicels; limbs swell before tubes extend. Note humps under clusters.

4. Higher clusters become denser as stem grows: a smaller cluster merges above. Back-light reveals past flowers behind present ones, also trunks of flower factories.

4a. Enlarged detail: five flowers (one hidden); two conflorescences as yet only buds with bracts; several old spurs; on right one old rachis sits atop a trunk forming under it. Note 10 mm main stem is already leafless.

5. Low flowers opening a month after the buds of image 3: shades of pink deepen in higher clusters, but the lowest are nearly white.

6. Flowers in the brightest light and exposed to sunlight for longer achieve the richest colour.

References

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2. A.M. Blombery: *Australian Plants Vol. 5,* pp 352-4 (1968)

3. I. Holliday: *Hakeas,* pp 22-3 (2005)

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5. P.H. Weston: *Proteaceae, Australian Plants Vol. 14,* pp 259-63 (1988)

Photo 1

Photo 2

Photo 3

Photo 4

Photo 4a

Photo 5

Photo 6