

AUSTRALIAN NATIVE PLANTS SOCIETY AUSTRALIA

HAKEA STUDY GROUP NEWSLETTER No. 81

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Dear members,

Welcome to 2023 which I hope will be a great year for all of us growing Hakeas. The past year at Elliminyt has been full of frustration with the second half of the year cold and very wet. The rain finally ceased at the end of the first week of December and since then it has been exceptionally dry with only 12 mm recorded to the middle of February. The end result has been that the sandy soil has gone from saturated to extremely dry. So how do we cope in these situations?

For the established larger plants watering by hose is probably not very successful as you would need to put a lot on and then the plant is probably already able to cope with the conditions by having its roots deep down. However for the smaller plants applying water at regular intervals may become necessary. Sandy soils dry out quickly whereas with heavier loamy soils the moisture will be retained for a longer time. I began watering the smaller plants around the end of December when it was evident the top soil was quite dry. The temperature too had been on the rise to the low 30 degree C mark and there was no sign of rain in sight. Some things seem to grow despite the dry conditions. Two eastern Banksias have germinated from seed on the ground and the cherry tomatoes have come up everywhere as a result of the birds eating the ripe tomatoes in past years.

I have had some losses. I seem to be able to get to 162 species in the ground but the last seven seem to evade me as there are always some that seem to die each year. We have now been at Elliminyt for nine years and many of the Hakeas are eight or nine years old. To expect to grow them all successfully in this cold wet winter-spring climate is asking for a bit of a miracle. However we continue to experiment and with some being grafted or grown in large pots the magical number of 169 may be reached one day. It is inspiring to know that a number of members have 150 or more Hakeas growing in their gardens.

The end of the wet period and the onset of warmer days saw the loss of two Hakea polyanthema, two Hakea aculeata, two Hakea kippistiana and a Hakea eyreana. The first two would certainly not liked the saturated soil but with Hakea kippistiana which grows nearer salt lakes but in much lower rainfall areas I would have expected more resilience. The Hakea eyreana died from a poor root system. Despite the cold –wet conditions the flowering of many of the Hakeas was excellent. Over summer Hakeas linearis, leucoptera ssp. leucoptera, leucoptera ssp. sericipes, elliptica and kippistiana have flowered.

Vale Barry Teague.

Barry passed away in November of 2022 at Swan Hill, Victoria after trying to overcome cancer for the past couple of years. One of his last trips was to visit our garden here at

Elliminyt. Barry had a generous nature about him and although he had strong opinion on various subjects he was always there to help and promote the growing of Australian plants, especially Hakeas. Each year Barry would grow from seed hundreds of Hakeas and sell them to local people and other Australian Plants members who had come to know him. To Elva his wife we send our condolences. Elva has decided to continue looking after the large native garden they have at Swan Hill and we hope some of the local Australian Plant members will help. Unfortunately the propagation part will cease. Barry and Elva used to be part of our Hakea excursions to Western Australia and we will miss their presence.

Notes from members.

Phil Trickett and Catriona Bate have started replanting their garden after those terrible rains in 2022. Phil says he recorded some 2.6m of rain which made the soil so saturated that most plants died.

Tom Constant from Bullsbrook in WA has been working on his Hakea collection which now stands at approximately 41. He has a good success rate from propagation in late 2022 and hopes they will get through the summer for planting out in the autumn.

Financial statement.

Balance forward 1 st . October 2022	\$3988-93
Income, membership	160-00
Expenditure	
Newsletter printing and postage	35-00
Seed postage	19-90
Balance forward 1 st . February 2023	\$4148-83

Propagation.

Neil Marriott has raised eleven Hakea aenigma's from cuttings. Neil is in the process of transferring them to me, so if you are interested in having one please let me know.

The Melton – Bacchus Marsh APS group have potted up 400 Hakeas for their plant sale day on the 1st of April at Bacchus Marsh. They produce very healthy plants.

Ian Evans from Bendigo is continuing to propagate Hakeas by grafting them onto Hakea salicifolia rootstock. He has had considerable success with Hakea megalosperma. Ian recently has started to graft a lot more Hakeas including myrtooides, longiflora, multilineata and francisiana.

Seed bank.

Thanks to Peter Thomas from Townsville the seed bank has plenty of seed of Hakeas arborescens, persiehana and plurinervia and a small quantity of pedunculata. It is well worth trying these tropical species as they may prove to be hardier than we think. I grew Hakea pedunculata from Cooktown at Strathmerton in northern Victoria up against a north–east brick wall. It grew to 1.5m, flowered after four years but did not set seed. I would suggest growing them in large pots until they are about 500mm high before planting them out.

Fungal control.

Neil Marriott informs me that the Royal Botanic Gardens at Melbourne and Cranbourne have been using phosphorous acid (sold as Rid A Rot etc.) sprayed onto their Banksias to prevent phytophthora disease. As some of our Hakeas are also susceptible to phytophthora disease

and other fungi it maybe a good idea to spray some of our more delicate Hakea species too at six week intervals. I welcome any comment on this suggestion.

Phytophthora cinnamon is a vigorous pathogen which kills plants by attacking their root system. In Australia it is widespread and is most noticeable in the southern forests and heathlands of Western Australia, and in parts of the Grampians and Brisbane Ranges in Victoria. In other parts of Australia the flora does not appear to be so susceptible to the disease. The fungal spores and threads survive in infected soil and decayed matter for a long time, which could be up to at least thirty years. The fungus invades the fine feeding roots of plants, causing them to die and hence reducing the number of roots available to keep the plant alive. The fungus also has swimming spores which allow it to spread through the movement of water through the soil. Hence the fungus can be most active in warm to hot months when there is heavy falls of rain that allow it to spread.

So what are the signs of this fungus in our gardens? Usually it is the sudden collapse of a plant in summer over a couple of days due to the root system being so reduced as to not provide enough moisture to the plant. Plants that are partially resistant to the fungus may show stunted growth, dieback of growing tips, and leaves of infected plants may turn yellow with brown margins. Eventually they will succumb, but the latter description could also be due to nutrient deficiencies too, which sometimes make it difficult to determine the actual cause.

So what can be done to mitigate the effects of this fungus? Building up raised beds and improving drainage will help and doing something to kill the fungus in the soil. Alternatively planting fungus-resistant Hakea plants such as dactyloides, nodosa, petiolaris species, salicifolia, scoparia and drupacea. Those Hakeas believed to most susceptible include the grass leaf group of H bucculenta, francisiana, multilineata and possibly cucullata and lehmanniana. Grafting of these species would help to overcome the problem.

Collar rot.

This is another problem I have because of the high rainfall we receive here in Elliminyt. It is caused by the wood rotting fungus that invades damaged tissue. In my case plants with multi-stemmed branches close to the ground, where wind damage has broken off branches and allowed the fungus to enter. I am loath to do pruning as I look to see how big the Hakea can grow, but the result is a damaged plant that then requires major pruning for it to survive. I have included a photo of damage to Hakea megadenia but Hakea adnata has also been affected.

The Nodosa Group of Hakeas.

This group comprises H nodosa, propinqua and pachyphylla. They are found in the eastern states of Australia except Queensland in heathland and sometimes in winter-wet soils. All are easy to grow in well drained soils.

Hakea nodosa.

This Hakea tends to be a spreading to upright shrub to 2 m tall and 2m wide. The shrub is probably not lignotuberosus and the branchlets are ribbed. The leaves are variable, terete or flattened to 5cm long x 0.7-2.5mm wide and sometimes grooved below. Inflorescence consists of 2-11 flowers that can be cream white to deep yellow. The seed capsule 1.3-1.5cm long x 0.9 to 3cm wide is also variable in that the plant can produce two types. One has only a thin wood layer and opens on maturity to shed the seed. The other is a woody seed capsule with a rough tuberculate surface that does not open until the branch dies or is burnt. It is quite interesting to look at the variable features on this Hakea which make it easy to identify. Flowering is from May through to August and it can be found in the coastal areas from the Coorong in South Australia through to Port Philip Bay and the Dandenong Ranges in Victoria. Also in coastal parts of northern Tasmania. Hakea nodosa is easily grown in Elliminyt because of the sandy soils, high rainfall and relatively mild

summers.

Hakea pachyphylla.

A low spreading shrub or single stemmed upright shrub to 2m tall x 1.5m wide. It is not lignotuberous and can be found in winter-moist heaths to mallee heaths and also on sandstone. It is confined to the higher Blue Mountains west of Sydney, NSW. The branchlets are ribbed and can have a reddish color, which makes the plant look quite attractive. The leaves are terete, rigid, sometimes grooved below to 3.5cm long and 1.1-1.8mm diameter. The inflorescence consists of 3-6 yellow flowers which are very pretty against the reddish branchlets. The seed capsules are elliptic, large, roughly tuberculate 2.9-3.5cm long x 2.3-2.6cm wide. The short beak is also tuberculate. Flowers August through to September. I have two plants in a raised bed and both have set plenty of seed. Needs room to develop its full capacity and lovely features. Pruning helps to keep the plant tidy.

Hakea propinqua.

A plant variable in size, from a low shrub to a tall conical shrub to 5m tall. It is not lignotuberous and is found in sandstone derived soils from the lower Blue Mountains to the higher parts in open bush land. The leaves are terete, not grooved, to 7cm long x 1.0-1.3mm diameter. The inflorescence consist of 6-10 white flowers from May to July. The seed capsules are very large, broadly elliptic and coarsely tuberculate 3.5-4.5cm long x 2.5-3.0cm wide. Some people have confused it with *Hakea pachyphylla* where they occur together, but they are easily distinguished when in flower. A fast-growing *Hakea* here at Elliminyt in raised beds of sandy loam. The large corky fruit are a feature of this species. Cockatoos love to feed on the seed.

At the beginning of February we had a cold snap where the weather got down as low as 13 degrees C and later in the month 40mm of rain fell, which revitalized the garden. Since then we have had a warm spell with temperatures reaching 30 degrees C on some days. The two forms of *Hakea leucoptera* have finished flowering but in the last week of February *Hakea ruscifolia* quickly produced buds and is now in full flower. Known for the mass of white flowers that form along the branches it is a small plant that appears to be hardy and worthy of a place in our gardens. *Hakea linearis* with its masses of white flowers continues its summer flowering and grows into a large bush here and if you have space for one in your garden it will add color. It needs some summer watering so not suitable for hot dry climates.

The sun is coming out on this first day of autumn, there is still some weeding and pruning to be done and in a few weeks I hope to begin planting any *Hakeas* that I have grown from seed or purchased over the summer months. Some of the early flowering winter *Hakeas* are budding up.

Items from members on their *Hakea* successes or failures would be much appreciated.

I wish you all happy gardening.

Cheers, Paul.



Hakea ruscifolia



Hakea linearis



Hakea subsulcata



Hakea megadenia showing wind damage and collar rot