

AUSTRALIAN PLANTS SOCIETY AUSTRALIA

HAKEA STUDY GROUP NEWSLETTER No.71

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Dear members,

The extremely dry conditions across much of Australia means many of our *Hakea* species are under stress. I have recently taken a trip through Central NSW and inland Queensland and saw first-hand just how dry the country was. It will take a number of years of good rains to restore the flora to a healthy state and initiate germination of new plants from seed.

The route taken did not take me through areas where *Hakeas* grow mainly, however there were a number that I stopped to look at. *Hakea decurrens* ssp. *decurrens* grows in one location beside the Newell Highway north of Coonabarabran in Piliga scrub. In past trips I have watched the population diminish due to road works and very dry conditions. On this trip there were none alive and I fear it may be gone forever. Fortunately a number of members have it in their gardens where it seems to be tolerant of varying climatic and soil conditions provided it is well drained. If you disturb its roots it will sucker.

Thanks to the help of APS Qld. Rockhampton members I was able to locate *Hakea trineura* in the wild. It occurs in a very small area of about 30 klms radius at Marlborough on serpentine soils. Just looking for the right soil conditions is a challenge as serpentine soils are spasmodic in occurrence and you have to find soils that have creamish gravel on the surface. It also appears to grow with a number of other native plants, probably *Acacia decora*, a broad leaf *Olearia* and a grass tree (*Xanthorrhoea* species). These could be indicators to find *Hakea trineura*.

The *Hakea* itself is multistemmed and has upright green leaves with three very visible green longitudinal veins. It is also lignotuberous, which distinguishes it from its closest relative *Hakea archaeoides* which has no lignotuber but a single stem. *Hakea trineura* does not appear to grow much bigger than two meters, probably because of the soil it grows in and fires. There were signs of some recent flowering but the plants were very reluctant to set seed, maybe due to the fact it can reproduce from a lignotuber after fire. It is classed as endangered so we should endeavour to establish it in our gardens. I am not sure what the lack of serpentine in our soils will do to the growth of the plant but we will only find out by growing it.

The Rockhampton group members also asked me to look at a population of about twelve plants of *Hakea lorea* ssp. *lorea* which grows some thirty klms to the west of the city. The soil here was clayey, brown in color and seemed to lack much nutrient. The oldest plants were probably over a hundred years old and had pendulous leaves of uniform length of about 55 cm. They looked so unusual against the open background of a few eucalypts, exotic trees and shrubs. They were not in flower as the dry conditions meant they were conserving moisture. I did see some lone *Hakea lorea* ssp. *lorea* on my travels through Queensland and I am surprised that it can be so spasmodic. However it is more frequent in occurrence in Central Australia and even across Western Australia to the shores of Exmouth gulf.

On the way home through NSW I stopped at Catherine Bay to have a look at *Hakea*

bakeriana. This magnificent Hakea with bright green terete leaves and red flowers hidden in the foliage needs to be grown in more of our members' gardens. The large corky seed capsules are also very ornamental. This species is restricted to the Newcastle area and is being threatened by urban development. It is one of the species that I want to see in our Botanic gardens. Refer to photo in previous newsletter.

Another Hakea that was growing with bakeriana was the low form of Hakea laevipes ssp. laevipes. I have two plants of this in our garden but had not seen it before in the wild. The plants are lignotuberous. The leaves have prominent longitudinal veins and are wider at the outer part of the leaf. The flowers are cream and appear in the late spring.

The Kennedy Garden.

The winter in Elliminyt has been exceptionally cold and wet. There has been a lot of gale force winds, which has tested the tenacity of the root systems of our plants. Fortunately I drove star steels into the ground when they were small so that the wind effect on them as they grew larger would be minimised. It is probably better to put wire guards around them when planted than green plastic as the small plants are then encouraged to develop a better root system.

The winter flowering season began with Hakea acuminata and then bicornata, verrucosa, subsulcata, petiolaris sub species, scoparia and the northern form of lasianthoides. By the beginning of spring a lot more Hakeas were in flower including bucculenta, grammatophylla, cucullata, rugosa and the cream form of francisiana. Hakea acuminata was still flowering and looks as though it will be at least another two months before it finishes.

News from members .

Tom Constant from Bullsbrook has had considerable success with growing of Hakeas. His sandy soils are ideal for most of them and as his property slopes down to a creek he can choose the appropriate position for each species. Recently he put photos on the internet of cinerea and waylunga (the northern form of Hakea lasianthoides I believe) in flower. He has also had success with Hakea costata and myrtoides setting seed. Tom has added some eastern species in Hakeas divaricata, eyreana, leucoptera ssp leucoptera and vittata to his collection of about seventy species.

Brendon Stahl from Colac has lost Hakea neurophylla to the cold wet conditions. This species needs well drained conditions.

At Gilgandra I called in to see Una and Keith Gaff who have a small property on shallow sandy soils. They have been growing some of the inland Hakeas for many years. The drought has been particularly bad and to keep their Hakeas going they have built small ponds around each plant and fill these up once a month so that they receive a good soaking. Some of the Hakeas they have are multilineata, francisiana, minyma, lorea ssp. lorea, divaricata, bucculenta, mitchellii, purpurea and one from the south west of WA- oleifolia which seems to defy its cooler climatic conditions to grow in much dryer and warmer conditions.

John Nevin has not put any new plants in the ground this year as the Armidale area of NSW is experiencing its worst drought on record. At present there is not enough water to keep small plants going over this coming summer.

I visited the garden of John and Annette Houseman at Wauchope and had a look at their surviving Hakeas. Most were planted back in 1991 so the remaining species look old with dead branches and gnarled trunks. Those still surviving were sericea, eriantha, bucculenta, salicifolia ssp salicifolia and newer plantings of Burrendong beauty and ochroptera. Sadly Hakea laurina and francisiana had died due to the drought. The normal rainfall is about 1150mm but so far this year only 300mm has fallen. The wet season is due to start shortly. The soil is a red mountain loam which drains easily and can support a whole variety of plants from cooler climates to rainforest. They

have no frosts. I enjoy looking at what they grow as the warm temperate climate could be a test for the plants from hot summers and lower rainfall areas.

Pam Yarra from Heathmont, Victoria has just been down the Canning stock route and at the Willuna end found *Hakea rhombales* not looking too healthy. Fires have burnt many populations and others were not flowering due to the drought. It apparently does not have a lignotuber, so has to reproduce from seed. In our southern gardens it is slow growing but will survive. It is tolerant of mild frosts and has red flowers. However north of the divide it does quite well. It has been grown to produce seed at Kingaroy in Queensland.

Welcome to new members.

We extend a warm welcome to David and Lindy Hanscombe, Mandy Thomson and Rebecca Ladner .

Possible Book- *Hakeas* of Australia.

Apart from the late Ivan Holiday's booklet on *Hakeas* there has been no complete book on *Hakeas* incorporating text and photos of each species. Work has begun on writing the text and taking photos. At this stage I have put in to the computer the headings and paragraph sub headings of 169 species and sub species plus the hybrid *Hakea burrendong* beauty. I will gradually add more detail on each species as time permits. Royce Raleigh has been to Western Australia taking photos and will continue with Central Australian and eastern Australian species as they flower.

Membership.

Thanks to your support we have around 100 members. Most are currently financial. Those whose subscriptions are due will have received a separate note from myself inviting them to renew during September.

Financial statement.

Balance as of 31 st . May 2019	3568-14
Income, subscriptions	82-00
Expenditure	
Printing and postage N/L No.70	71-44
Balance 30 th . September 2019	3578-70

Seed bank.

When picking *Hakea* seed capsules from plants that retain seed it is wise to pick older capsules as the seed in the younger capsules may not be mature. I believe this is especially so in the species with large seed capsules as they may take up to two years to mature. Where seed is not retained the seed is usually mature just before the capsules open and is often indicated by the capsules starting to turn brown.

The seed bank has quite a quantity of seed of the non-rare species at present, so I urge members to take advantage of it. Seed is wanted of *macrocarpa*, *eneabba*, and *brachyptera*.

I will finish this newsletter with the description of three *Hakeas* which are not well known but deserve to be planted in our gardens. Generally the popular species are those that have colourful flowers such as *francisiana* or vivid white as in *Hakea costata*.

Hakea brachyptera.

This was featured with a photo in the previous newsletter. It grows in sandy loam soils around Borden in Western Australia. Due to agricultural and roadside clearing it is now becoming endangered and hence we should try to grow it in our gardens to ensure its survival.

It grows as a dense rounded shrub up to 2 meters high and 2 meters across. The greenish terete leaves are fairly rigid, 3-9.5cm long and about 1.0mm in diameter. It has profuse scented white flowers in sessile axillary clusters which are partly hidden within the bush. The seed capsule is oval in shape, 2.5-3cm long and 0.8- 1.0 cm thick. The stem of the seed capsule is at right angles to the capsule whereas in another similar species, *Hakea polyanthema* the stem is straight. To collect seed you will need gloves and look in the lower part of the bush. I suspect that it is probably pollinated by insects or small mammals. In our gardens it would require a well drained loamy to sandy soil in a sunny location. It is tolerant of frosts down to minus 4 degrees C.

Hakea vittata.

A plant from the Coorong, Kangaroo Island and Adelaide hills which grows in sandy to loamy soils which often have limestone underneath. It is a variable in height from a prostrate plant to 2 meters in height. The terete green leaves are 2-8cm long ending in a sharp point and have a broom like appearance because of the way the leaves are clustered. The flowers are white. The seed capsule is 2.2 – 3.0cm long with a broad beak and horns can be prominent and incurved. It does well in gardens with well drained soils, a sunny position and is frost tolerant. I understand native flora nurseries at Murray Bridge and at Stirling in South Australia have this plant for sale.

Hakea macrorrhyncha.

This plant grows in granitic soils on the boarder of NSW and Queensland in the Torrington, New England and Girraween NPs at high altitude of around 600-1000 meters above sea level. The climate is warm in summer but can be very cold in winter with snow on the ground. Rainfall is probably in excess of one meter. This hakea can grow to 6m tall but is usually shorter and narrow in width. The terete dark green leaves are 4.5 -9.5cm long with a groove below. The vivid white flowers with a deep pink pedicel are very attractive in late spring. The seed capsule is larger than that of *macraeana* and *constablei* by its much longer beak. Appears to be a hardy plant suitable for cool and dryer and warmer climates where the soil is well drained and with adequate moisture. Has grown to 1.2m here at Elliminyt in less than 1.5 years.

Photos below are of *Hakea varia* and *subsulcata* taken by Margaret Pieroni, the fungus *Gymnopilus junonius* growing on a dead branch of a living *Hakea francisiana* by Glenda Datson, and a flowering *H. lissocarpa* in Hans Griesser's garden. For many prickly Hakeas, their flowering makes up for it! Have members come across fungus on their Hakeas? Please let me know.

I hope the rains come soon as many of our members are in drought conditions. The fires in northern NSW and Queensland will also have impacted heavily on our flora including the Hakeas. The cold wet conditions here will probably not abate till November and hence putting plants in the ground or thinking of propagating will have to wait to warmer days arrive. The Hakea collection here sits around 160 species and subspecies and hopefully some of the remaining nine species will be added in the autumn. I hope you all enjoy the spring and early summer in watching your Hakeas flower or adding additional species.

Cheers, Paul.



Hakea varia



H subsulcata



Gymnopilus junonius on H francisiana



H lissocarpa