### HAKEA STUDY GROUP NEWSLETTER No. 59

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Dear members,

I apologise for being late with this newsletter, however, my modem ceased operating and it took six weeks to fix. Two of the new modems they sent out did not work and each took eight days to arrive by post. It was very frustrating just when I needed the computer to be operational.

The weather here has been very erratic. There was no rain in October until the last day when 18mm fell. There were numerous warm days well above the average and I had to water the smaller plants that had just gone in the ground. Normally we would receive about 100mm for the month. The inland members gardens have been experiencing very dry conditions and the possibility of a very hot summer will see many plants needing the addition of moisture. Outback Queensland in particular is in the throes of a severe drought and the Hakeas from that region such as maconochieana, collina and ivoryi will be greatly stressed as well as being prone to damage from goats.

Along the east coast from Gippsland to northern NSW there has been plenty of rain and gardens have been subject to very wet conditions. In Western Australia Jennifer Young has reported that good winter rains have transformed the northern sand plains into a blaze of flowering plants from Exmouth to Kalbarri.

Our garden in Colac continues to thrive. I have now planted 120 species of Hakea and still have another twenty to go in when they are big enough. I usually plant out when I see the roots coming out the bottom of the tube even though the height of the foliage may not be much more than 100mm. I feel much more confident that they will survive when they are in the ground. Of the remaining twenty eight species another fifteen are now in propagation mode.

How do you grow northern Hakeas in a cool climate? At Strathmerton the summers were hot and provided you kept moisture up to them they survived but did not always put on a great deal of growth. In winter it was a case of putting heavy plastic around them to try and keep the frost and cold out. Here in Colac the conditions are even more challenging. I have planted Hakea lorea ssp. borealis, Hakea macrocarpa and Hakea stenophylla ssp. stenophylla (from Exmouth, WA) inside the large hot house with the hope of the added warmth they will not only survive but prosper. I also planted another plant of Hakea stenophylla ssp. stenophylla out in the garden with a green plastic plant guard around it. It just survived the only frost we had of minus 3 degrees C, with the existing growth burnt off and reshooting from the base.

## News from members.

Brendan Stahl who also lives in Colac has successfully grown Hakea bucculenta and Hakea scoparia to flowering stage.

Kevin Collins wrote to me about a prostrate form of Hakea nitida which he has grown and I believe originated from Cheyne Beach in Western Australia. He has suggested I try to grow it and see if it keeps this prostrate form. Cheyne Beach area is very windswept so there is quite a

lot of heathland and plants tend to be prostrate. Hakea prostrata got its name from a coastal form but we know from experience it can grow up to 2m high.

#### Propagation.

Now that I am back to propagating smaller numbers of Hakea species I have reverted back to the saucer method of placing seed between moist kitchen paper towelling and placing inside a plastic bag with ends tied with a peg and label. This usually results in much quicker germination in most cases provided you can keep the overnight temperature up around 20 to 25 degrees C. In the latest batch Hakeas lorea, grammatophylla and polyanthema had formed roots within a week.

I have received a small quantity of seed of Hakea chromatropa from Western Australia. It is proving difficult to germinate, which suggests it may germinate only when certain climatic conditions occur. As there are only a few plants on a roadside it is imperative that we get it into cultivation as road works could easily wipe it out. Propagation by cuttings may be more successful.

This Hakea was featured on the TV program "Gardening Australia" when Alex George was interviewed a few months back. Apparently the flowers initially are white but turn a pinkish red with age.

Hakea epiglottis ssp. milliganii. I also received some seed of this species which grows on the west coast of Tasmania in serpentine derived soils where the rainfall is upward of 2500mm. I put seed in vermiculite and they germinated quickly when the nights were quite cold as I expected similar conditions in its natural environment. I have now potted six plants on and after planting two here will distribute the remainder to members who have cold winters and not too hot summers. It may in due course prove to be more hardy than we think.

#### Seed.

The seed bank has nearly 100 species of Hakea available to members. I would like to thank Tom Constant, Alex George, Kevin Collins, Margaret Pieroni, Dick Burns and Graeme Woods for donations of seed.

I hope also to have seed of Hakea divaricata later this year. It grows in sandy soils overlying clayey soils from the Alice Springs to Ayers Rock region of the Northern Territory.

## Financial report.

Balance	forward a	s of	1 <sup>st</sup> .	July	2015	3012-80
Income.	Subscript	ions				535-00

Expenditure.

Printing and postage of newsletter No.58 77-96 Balance as of 31<sup>st</sup>.October 2015 3469-84

I thank everyone whose subscriptions were due for renewing. I have acknowledge many of the renewals but there are a few still left to be done. Most are now paid up for a number of years.

# Ulicina group.

In the Hakea revision published in 1999 the sulcata group of Hakeas was included in the Ulicina group which now comprises 25 species or 15% of the Hakea genus. The definition states they are shrubs, without corky bark, leaves simple, flat or apparently terete (but 3-12 angled in cross-section) with longitudinal veins at each angle to give sulcate appearance, non-petiolate, not stem clasping, entire with at least marginal veins and midvein visible below. My aim is to deal with a number of Hakeas in the previous sulcata group where their identification depends on the shape of the cross-section of the leaf. It is quite

fascinating under a microscope to see just how well defined these angles and grooves are. Some of these species grow in the same area, so it is important to have identification information.

Hakea gilberti.

Terete-like leaves 2 to 9cm long tapering to a sharp point. In cross-section the leaf is rectangular with an angle at each corner and a top and bottom midvein making six longitudinal veins and groves. It grows on the Darling escarpment from north of Perth to south of Bunbury. It grows to about a metre in sand or clay.

Hakea invaginata.

Again the terete leaves are 7 to 22cm long ending in a sharp point. The leaf cross-section is circular with five midveins and deep grooves. Found inland from Eneabba extending across the wheat belt to Lake Grace. It grows in sandy soils and can reach 1.6m in height.

Hakea lehmanniana.

The terete leaves are 2 to 7 cm long but triangular in cross-section having three longitudinal veins and three shallow grooves. The flowers can be bluish in colour. Can be found from the Stirling Ranges along the coast towards Esperance. A lovely small plant suitable for loam to clay loam soils.

Hakea meisneriana.

The terete leaves are circular in cross section having ten longitudinal veins and shallow groves. Another Hakea from the wheat belt. The foliage tends to be narrower and broom like with rusty new growth. Grows in loamy soils to 2m in height.

Hakea pycnoneura.

This species has strap like leaves 9 to 20cm long, 2 to 7mm wide with one to three longitudinal veins above and three to five longitudinal veins below. There is a short leaf form at Mount Ragged east of Esperance and the long leaf form occurs north of Geraldton.

Prefers sandy loams but will grow well in well drained clay loams too. Height to  $1.5\mathrm{m}$ .

Hakea scoparia.

This hakea is probably the most widely distributed of the sulcata group with long terete leaves 12 to 27cm long. The circular cross section has five longitudinal veins and five wide grooves. It can be found across the wheat belt of WA and grows into a large shrub.

Hakea subsulcata.

Again the slender terete leaf is circular in cross-section 3 to 12.5cm long with twelve longitudinal veins and shallow grooves. It is found in the drier part of the wheat belt extending from Corrigan towards Southern Cross and Ravensthorpe in lateritic gravelly loams.

Hakea sulcata.

The leaves here are 2 to 9 cm long with a hexagonal cross-section having six longitudinal veins and shallow grooves. The seed capsules are the smallest of the genus being only about 3mm long. It is a coastal species to 100kms inland and grows from Jurien Bay to Israelite Bay in a range of soils, some of which can be water logged in winter. It reached 1m in height at Strathmerton after twelve years.

# Future of our flora.

Recently I heard that the last stand of Banksia oligantha in the wild had been destroyed. Being in a reserve did not ensure its survival.

If the report is true then it is a great tragedy. There are a number of Hakeas that also sit on the point of extinction and I am greatly

concerned for their survival. It is therefore imperative that Study Groups continue to propagate and introduce plants into members gardens where the soil and climatic conditions are suitable. I once believed that having them in Botanic Gardens would help to ensure their survival, however I have witnessed even there changes in management have seen endangered species removed in remodelling of gardens. We are the custodians of unique flora but our efforts to preserve it have in many cases not been up to expectations.

#### Photos.

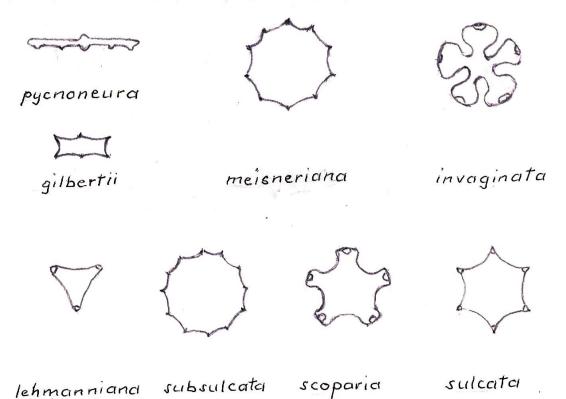
I have inserted some photos of Queensland Hakeas. Unfortunately the species from inland Queensland are under considerable stress from drought. They all make lovely garden plants. The photos come from Lorna Murray and I thank her for the chance to insert them in this newsletter.

I hope I now have my computer problems behind me. Hakea terete-folia, microcarpa, decurrens ssp. decurrens, myrtoides, laevipes ssp. laevipes, and prostrata (really prostrate) have already flowered even though they are only one year old. Other Hakeas are putting on quite a bit of growth so I hope we get some summer rain to keep them going.

I had intended to attend part of the ANPSA conference in Canberra in November, and include it in part of the trip to northern NSW. However the planned works in northern NSW have been delayed and it was no longer feasible or economical to attend just to give a talk on Hakeas for 15 minutes. The Study Group leaders meeting was on a Monday night and my talk scheduled for Friday afternoon. I know some members of the Hakea Study group were hoping to catch up with me, so I hope I have not disappointed them too much.

I wish you all a very happy Christmas and may 2016 see you enjoy good health and success with growing of Hakeas.

Regards, Paul.







Hakea collina Hakea ivoryi



Hakea maconochieana



Hakea trineura