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ASSOCIATION OF SOCIETIES FOR GROWING AUSTRALIAN PLANTS

HAKEA STUDY GROUP NEWSLETTER

NUMBER 38

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Dear members.

What a hectic four months it has been since the last newsletter. We have had six weeks in the Kimberley's and Pilbara and concluding with a quick trip through part of the southern region of Western Australia before heading home. We stayed home just long enough to get our garden back to order and then it was off to Eremophila weekend in Horsham and a three day Hakea crawl. One week later we were on the road again to visit the Armidale group and on to our fourth sons place at Nana Glen near Coffs Harbour for a grand daughters birthday. So I have plenty to write about from our travels and the Hakeas we came across.

Here at Strathmerton we are going through our 12<sup>th</sup> year of drought. After good rains last summer, it dried up and apart from 20mm in May and 40mm in July all we have seen is an occasional shower. The ground is bone dry and already we have had a very warm October. I just hope we have big soaking rains before the heat of summer arrives. Nevertheless our Hakeas have survived with some additional watering to the smaller ones and those from wetter climates. There were only a few frosts and the worst would have been minus 2 degrees C.

Most of the Hakeas have flowered but there have been a couple of notable events which I must tell you about. In 2007 we had a few flowers on Hakea lorea ssp. lorea from Central Australia and seed did not form due to frosty weather. This year the first flowers appeared in May and there has been spasmodic flowering right through into November. In early October we looked at the lovely long flower racemes and compared them with the ones we had seen around the northern part of Australia. Along side these loreas are specimens of the southern Queensland form of lorea ssp. lorea which has greener finer leaves. John Nevins found flowers on these too much to my delight. The interesting comparison is that the latter has much smaller number of flowers which radiate out giving a circular flowering raceme appearance on a much thinner stalk and probably only about one sixth of the total number of flowers of the northern Australian species. I had always wondered why the southern Queensland form had been linked to Hakea fraseri and that answer was about to be solved.

In late September the first flower buds on Hakea fraseri began to appear and as time went on I countered over one hundred on the plant occurring in the leaf axis and along the stem. They were circular in shape due to the way the parts of the green/white flower spread out. The flowering reached its peak in mid October and now I can see some seeds forming. Time will tell if they develop to maturity. Lets hope we are successful as we need to get this plant into many gardens of Hakea growers. So at this point we should not forget those who made this event possible. To the Armidale group members who got permissions to get material and to Sara Caldwell and her propagating team at Mole Station, I say a very big thanks.

Hakeas shall remain Hakeas.

Last year I forwarded Peter Olde material from various Hakeas so that DNA testing could be done in America to determine the relationship between Hakeas and Grevilleas. The results that came back show a chart with a short stem and many radiating lines from a central point that bear no resemblance to the normal chart that we are used to seeing. One of the radiating lines is a Hakea clade, so the good news is that unlike the move to join Banksias and Dryandras together, Hakeas will remain Hakeas.

The Hakea crawl.

Three couples participated on the first two days and Peter Olde joined us on the last day when we went to Max Ewers place. It was a very successful event and hundreds of photographs were taken as many of the Hakeas were in flower. At the Kennedy arboretum the main interest was in the corkwood group as many of these were in flower and the opportunity was there to look more closely at the distinguishing features. Others of particular interest were *Hakea rigida* and *preissi*. We then moved on the next day to visit the young garden of Bob and Beth Stewart at Maryborough where Hakeas are being grown on quartzite soils. The Hakeas are planted in built up mounds as the depth of a soil to the hard rock pan underneath varies across the garden. Some are going quite well, but others are struggling under the harsh conditions. There has been little rain over the past year and the sub soil moisture is not there.

After the *Eremophila* weekend at Horsham we headed some 200klms west to Max Ewers garden at Lucindale in South Australia. Here the deep grey sandy soils resemble the sandy soils of WA and how well do the Hakeas grow. Our interstate visitors were "blown away" by the vigour and flowering spectacular of Max's plants. With good rainfall and cooler climate most of the Hakeas grow exceptionally well. We saw most of the Hakea species in flower except for the northern Australian species. Some that were of particular note were flowering plants of *Hakea rhombales*, *orthorrhyncha* ssp. *orthorrhyncha*, *aculeata*, *bicornata*, various colour forms of *francisiana*, *cuculata*, *megalosperma*, *plurinervia* and *archaeoides*. We went down row after row of Hakeas and had a great time discussing the features of these plants. At the end of the day Max invited us to his nursery where many Hakea seedlings were bought. The day finished with a lovely BBQ tea. Thanks to Max and Bob and Beth for allowing us to visit their gardens.

Trip to the northern NSW plateau and coastal areas.

Now that my fourth son and his family live at Nana Glen near Coffs Harbour, I have the pleasure of being able to look more closely at some of the Hakeas of NSW. At Armidale I was able to look at the progress of the Hakeas in the Barbara and John Nevin's garden and also in the garden of Julia and Bill Rose. Despite the really frosty harsh winters I am always surprised by what is able to be grown with a bit of protection.

On the road across to Dorrigo the lignotuber form of *Hakea dactyloides* known as *laevipes* ssp. *laevipes* can be found as soon as you enter the sandstone areas of the plateau. I also found it in similar soil conditions north of Nana Glen. In swampy areas *Hakea microcarpa* occurs and populations can be found just west of the turn off to the New England NP.

At Dorrigo I drove past the turn off to Mt. Nimble where *Hakea ochroptera* can be located. I had bought a plant from Max for my son to put in his garden as I know it

will grow there very well. As my son is interested in natives we drove north of Nana Glen to look at some of the flora and found *Hakea eriantha* and *sericea*. The boat shaped fruit of *Hakea eriantha* make it easy to identify but I still have trouble distinguishing *sericea* from *decurrens* ssp. *physocarpa*. The terete leaves joining the branch are decurrent on *decurrens*, but *sericea* also has a similar leaf to branch attachments even though it may be not as pronounced. After comparing all the features I came up with the following more significant differences.

	<i>sericea</i>	<i>physocarpa</i> .
New young growth	tomentose	glabrous
Gynoecium	4-7.5mm	9 -12mm
Pedicels	villous, white	pubescent
Follicle	deeply wrinkled	discrete warts

Tomentose; a deep covering of intertwined hairs. Glabrous: without hairs,

Villous: covered with long shaggy hairs. Pubescent: a dense covering of short soft hairs. Gynoecium: length of flower from base to pollen presenter.

So next time you come across one in flower, get your lens out and see if you can pick up the differences. The book by Gwen Harden and others on the Proteaceae of NSW has excellent descriptions, drawings and definitions of all the *Hakeas* of NSW including a few introduced species that have become naturalised.

Over on the coast north of Woolgoolga *Hakea actites* grows in sandy loams that can be quite moist after rains. Its seed follicle is quite blunt in respect to *decurrens* or *sericea* which have a much more pointed appearance and hence can be easily recognised.

The big trip to WA

Thelma and Malcolm Vandeeper from Adelaide have been *Hakea* enthusiasts for a long time and we have had a number of trips with them to the west and elsewhere. This time we decided that we had to see the Kimberley's and hence set off in late July up through the centre to Katherine and then across to Kununurra. Along the way we stopped to look at the *Hakeas* beside the Stuart Highway and armed with a list of type species from the herbarium, the task of finding specific species was made relative easy. However this group of *Hakeas* are not easy to identify in many cases due to many similar features.

The first we encountered was *Hakea eyreana*, 5.6 klms south of Heavitree Gap. These were some 4m high and had finished flowering quite some time ago, so there was little seed to be found. *Hakea eyreana* is more common to the south east of Alice Springs in the "channel country" as its name suggests. Branchlets are densely white tomentose and the leaves terete compound and densely white pubescent. Undivided base from branch to compound leaves leaf is 0.8 to 2.5cm. Flowers 35 to 105, rachis 55 to 160 mm. Flowers greenish yellow to yellow.

At the tropic of Capricorn some 40 klms to the north of Alice Springs, *Hakea divaricata* can be located beside the highway. The compound leaves of southern forms are much shorter and could be confused with *Hakea eyreana*, but as you go further northward, they become longer. Branchlets are red and mostly glabrous. Compound leaves and occasionally simple and usually glabrescent, undivided base 2.5 to 9cm long which can be an identification factor. Flowers 65 to 120, rachis 50 to 140mm long.

*Hakea macrocarpa* can be found from south of Ti Tree and then all the way up the highway to Katherine and across through the Kimberley's to Broome. It is not always easy to pick up when not in flower from the road as it tends to be a straggly shrub and has long strappy leaves up to 35 cm long and 3 to 15mm. wide.

*Hakea lorea* ssp. *lorea* is one of the most wide spread Hakeas across the centre and northern part of Australia. It does vary in the colour of the long terete leaves as the central Australian forms tend to be more grey green than green. The terete leaves tend to be more upright than forms I have seen in Qld. Branchlets are densely appressed pubescent to woolley tomentose with the possibility of simple glandular hairs. Leaves are singular or with up to six segments. Leaves can be up to 68cm long. Flowers 15 to 200, rachis 50 to 250mm long. Follicles to 40mm long.

*Hakea lorea* ssp. *borealis* is found in disjunct populations across the more northern part of Australia in a band stretching from around Boorooloola across to Kununurra and around Mount House and Mornington Stations in the Kimberley's. We found it in the Keep River NP on the NT/ WA boarder. It differs from *lorea* ssp. *lorea* by having only simple leaves and follicles 40 to 60mm long.

*Hakea chordophylla*. Just to make things difficult this species is very similar to *lorea*. We came across it in the Tenant Creek area. It tends to be a taller plant and the terete leaves tend to be uniform in length and pendulous. Length 30 to 42cm. The branchlets can be glaucous or glabrous, or with dense simple glandular hairs or at other times with appressed glandular hairs only around the leaf base. Flowers 35 to 70, rachis 70 to 130mm long. Follicle size similar to *lorea* ssp. *lorea*. Flowers yellow green to yellow. I try to avoid using botanical descriptions, but in the above cases there appear to be no alternatives. The book by Gwen Harden and others on Proteaceae of NSW has good explanations and drawings of these terms. If any member has a simpler way of identifying these species I would be glad to hear from them.

*Hakea arborescens* is wide spread across the northern part of Australia, growing in a wide variety of soil types and extends down the WA coast nearly to Port Hedland. It seems to be very drought tolerant and is easy to identify by its narrow lanceolate leaves and obovate shaped seed follicles. It seldom grows more than 3.5 m tall and tends to be an upright shrub. It has very small white flowers.

#### Financial report.

Brought forward from previous newsletter, dated 30<sup>th</sup>. June, \$1665 - 14

#### Receipts

Subscriptions. \$240

#### Expenditure

Newsletter No.37 printing and postage \$86

Ink replacement and other postage \$12

Current balance. \$1807 - 14

#### Letters,

Thankyou to Carmel Spark, Jeanette Devlin, Graham and Denise Krake, Geoff Cooke and Hans Griessner for writing to me about your Hakeas and other matters pertaining to growing of them. I will include more about members reports in the next newsletter. Welcome to new member Brendon Stahl, 9 Parkers Rd., Deans Marsh, Vic.

I have endeavoured to include some coloured photos of Hakeas which I hope you will enjoy. Thankyou Cathy Powers for offering your computer skills to make this happen. In the past fortnight we have had 66mm of rain, so the November rains have given the garden some relief from the drought.

Regards and a happy Christmas to all,

Paul Kennedy





**Hakea divaricata**



NOTE: stem length of leaf greater than 2.5cm. No seed follicle



**Hakea eyreana**  
Fruit & leaf

NOTE: stem length less than 2.5cm



**Hakea macrocarpa**  
Fruit





**Hakea chordophylla**  
Fruit



**Hakea chordophylla**

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**Hakea fraseri**  
In flower at Strathmerton

