

AUSTRALIAN PLANTS SOCIETY AUSTRALIA

HAKEA STUDY GROUP NEWSLETTER No. 66

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Dear members

Christmas is over and so it is time to write to you again about Hakeas. Wherever we are, gardening presents its challenges, and so it is here in Elliminyt. We had very wet months in September and November 2017 of over 100mm and then dry periods in between with hardly a shower. Since then we have had 11mm over summer. The native plants had to put up with wet feet and then dry, so it must have been difficult to adjust to this weather pattern. I have had to water the smaller plants from January onwards at about weekly intervals, but I try to water before a hot spell so that they have adequate moisture during the hot days. Overall most of the Hakeas have survived except for a *Hakea laurina* which was affected by wind, a *Hakea lissosperma* which does not like hot weather anyway, and a broad leaf *Hakea multilineata* which I suspect succumbed to the big wet. I was away in Hobart when we had one of those real scorching hot days, some of the locals say it reached 42 degrees C. Looking at some of the scorched leaves on plants it was certainly very hot.

The Hakeas I planted in June all survived. I placed green plastic bags around them to protect from wind and cold. They did not put on much growth till the spring but since then have put on upto 500mm in growth. The collection stands at about 158 species at present out of a possible 169.

There has been some outstanding flowering species. *Multilineata*, *lasianthoides* (the Walyunga form), *brownii*, *carinata*, *undulata*, *oligoneura*, *macreana*, *teretifolia*, *microcarpa*, *neurophylla* and *ochroptera*. However the amount of flower does not generally transmit into large quantities of seed. Of those listed above *teretifolia*, *undulata*, *oligoneura* and *microcarpa* have plenty of seed capsules, but *multilineata* (6), *neurophylla* (4), *ochroptera* (2) and the rest none.

#### **Propagating.**

In early December I put seed of 71 species into vermiculite in punnets and hoped for a good germination rate. However whilst the days had warmed up the nights remained in the 10-13 degree C. range and hence germination was not very good. However the far inland and northern species such as *stanleyensis*, *grammatophylla*, *chordophylla*, *arborescens*, *stenophylla* ssp. *stenophylla* and *purpurea* germinated in about five days as these species have to get going quickly after a good rain event. About twelve days later the Victorian form of *teretifolia* ssp. *hirsuta* appeared. The importance of warm nights above 15 degrees C or the use of bottom heat is essential for germinating of most Hakea seed.

#### **Letters from members.**

Hans Griesser sent me some photos of a Hakea seedling that had broad juvenile elliptical leaves which gradually reverted to long oblong leaves as the seedling grew bigger. Hans was asking if there could be a cross between *bucculenta* and *francisiana* as the original seed came from a *Hakea francisiana* but with a *Hakea bucculenta* nearby. Whilst I am familiar with hybrid forms between

laurina and petiolaris and between petiolaris and myrtoides (Burrendong Beauty), I am not aware of too many Hakea species forming hybrids. The other Group that has hybrid forms is the Olivacea where on the perimeter of occurrence of one species and the beginning of another you can find crosses between olivacea and florida, florida and ilicifolia, and ilicifolia and horrida. To determine what species the plant is you need to look at the seed capsules as the leaves can form shapes between the two species.

Recently Hans wrote to say the hybrid plant had not put on any growth over summer, possible due to the roots being pot bound, however other Hakeas he had planted and watered weekly over summer were growing very well. Last November his 3m high Hakea florida was a mass of flower and Hakea linearis had flowered in December.

#### **Financial report.**

Balance forward 30 <sup>th</sup> . October 2017		3399-57
Income; Subscriptions	90-00	
Expenditure:		
Printing and postage Newsletter No. 65	207-99	
Balance		\$3281-58

I welcome Peter and Andrea Shelly and Verna Aslin as new members.

#### **Frost.**

Last year we had two frosts of about minus 4 degrees C. Whilst tips were burnt on some species the two most severely affected were Hakea clavata and Hakea stenophylla ssp. stenophylla. Where these grow naturally the nights can be cold but they are never frosty. These species need to be grown up against a brick wall so that some heat radiation is transmitted or have protective covers put over them. Tropical species would also need protection.

#### **Hakea collina.**

By chance I began corresponding with some people out near Quilpie where this species grows naturally in breakaway country. One person on a large station, interested in the environment was able to send me some seed which germinated in four days. I am looking forward to having this species back in the garden as it is a nice rounded green shrub with white flowers with a touch of pink. It should be terribly hardy as it grows in stony soils in country that is often in drought.

#### **ANPSA Conference, Hobart, January 2018.**

I enjoyed the conference but it also gave me the chance to catch up with members of the Hakea Study Group. As the conference was in Hobart seeing Hakeas in the wild was limited, however on the trip up to Mount Wellington at about the 600 m elevation Hakea lissosperma was quite prevalent growing amongst dolerite rocks. Here the climate is very cold in winter and only warm in summer.

The Tasmanian garden some 40 klms east of Hobart has good specimens of Hakea epiglottis and lissosperma growing in quite heavy clay loams where quarrying had been carried out. I was interested in the variation in the length and diameter of the terete leaves of Hakea epiglottis which from looking at previous garden specimens was not evident.

The other garden which had a number of Hakeas was Inverawe Gardens at Margate. Here Bill and Margaret have not only grown some of the Tasmanian species but had also included some mainland species such as francisiana (SA and WA), cinerea (WA), drupacea (WA) and sericea NSW .

Before I left Hobart I went out west of Hobart to have another look at the 70 plus Hakeas Tony and Ann Crawford are growing on their property. Some have been there for ten or more years

and have grown quite large. However it is always interesting to see how Hakeas from other climates and soils are progressing. *Hakea archaeoides* from the warm temperate area inland from Port Macquarie in NSW has flowered and is producing seed. *Hakea lasiocarpa* from south west WA is usually a tall shrub in winter wet depression but here it is prostrate and planted near the septic system. Nevertheless it is very healthy, has flowered and produced seed. There were some lovely low bushy plants of *Hakea pachyphylla*, a plant from the lower Blue Mountains. It too has flowered over many years and produced seed. Lastly there was a tall plant of *Hakea hookeriana* from the Fitzgerald NP in WA which again had done exceptionally well and flowered.

#### **Hakea epiglottis.**

In the last newsletter Hugh Stacey drew our attention to male and female plants of *Hakea epiglottis*. Hugh stated the female plant had less than three flowers in each bundle whilst the male had three or more flowers per bundle. I had a look at my plants when in flower and considered they were male as the number of flowers appeared to be more than three. In early late December I was doing some pruning and discovered one had two seeds on it. So I do have a female or bisexual plant.

#### **Hakea crawl 2018.**

I have been in touch with some of the WA Hakea Study Group members and suggested we have a look at the Hakeas in the Albany area from about 100klms east to Denmark and Mount Barker in the west and north west. The proposed dates are the weekend of the 6<sup>th</sup> and 7<sup>th</sup> of October. If you are interested please contact me. These weekend excursions are always great for gaining knowledge and making friends.

#### **Hakea linearis.**

The type specimen of this *Hakea* was collected by Robert Brown in King George Sound in 1801. It is the only *Hakea* described in the Linearis Group, so what makes this *Hakea* different to many others? Well for a start off it flowers between October and May when most Hakeas in WA are not in flower. The plant I have in Elliminyt has been flowering since the beginning of December and probably will continue for a few months yet. It has quite showy white flowers. It grows between Busselton and Albany and slightly inland favouring Eucalyptus woodland in sandy soils that are moist. Its shiny thin green leaves are linear, 2-8cm long x 2-7mm wide. They can be entire but more likely to have 1-5 toothed serrations with a long mucro. The seed capsules are obliquely obovate 1.5 - 2.5cm long x 0.7-1.0cm wide. *Hakea linearis* can grow to 3m and would make a great plant for a semi shade spot which has access to some moisture. I hope to see this *Hakea* next time we are in the Albany area. It can be confused with *Hakea varia* but generally it has longer leaves.

At this point I probably should list from previous observations which Hakeas flower in January and February. They are *arborescens*, *ceratophylla*, *elliptica*, *kippistiana*, *lasianthoides*, *linearis*, *preissii* and *ruscifolia*.

#### **Hakea ambigua and falcata.**

These two species are very similar and overlap in distribution in the Stirling Ranges. *Hakea falcata* occurs in the Augusta- Busselton area and east to the Stirling Ranges. I have looked at plants along the Denmark- Mount Barker Rd. where it grows in Eucalyptus *marginata* woodland in laterite loam soils near water courses. I planted a couple of seedlings here in June last year and they have grown quickly to over a metre high.

*Hakea falcata* has linear to narrow obovate leaves 5 -14cm long x 3-9mm wide. There are three veins running the length of the leaf above and below with an acute point on the end. The secondary veins are pinnate and not readily visible. Inflorescences are in leaf axis with 25-40 flowers, cream in color. Seed capsule obliquely narrowly ovate and curved to a sharp elongated beak. The seed capsule is smooth and I understand the seed is retained on the shrub.

*Hakea ambigua*. This species occurs in the Stirling Ranges where it grows on slopes with rocky quartzite sandy soils in woodland and heath. Its bright green leaves are broad linear to oblong elliptic with three (rarely 7) longitudinal veins on both sides and are 2-11cm long x 4-20mm wide. The tip of the leaf is pointed with secondary veins visible. The flowers can vary from cream to white with up to 20-30 flowers in each inflorescence in the leaf axis. The seed capsule is obliquely ovate 2.3-4cm long by 1.1 -1.5cm wide, slightly curved at apex with a long beak. The flowers of *Hakea ambigua* are slightly sweetly scented. Apart from being confused with *Hakea falcata* it can also be confused with *Hakea cygna*, but if seed is present there is a big difference in shape.

#### **Hakea lasiantha.**

This is another *Hakea* from the Albany area. I have seen acres of it off Cheyne Beach Road growing in grey sandy loams which can be quite moist in winter. Up against the coast it is quite prostrate compared to inland populations where 3m in height is not uncommon. The leaves are elliptical, 2.8-6.3cm long by 7-17mm wide, thick and stiff with a blunt apex. The young growth is rusty brown and hairy. Inflorescence consist of 3-8 creamy white flowers in the leaf apex. The seed capsule is narrowly elliptic resembling the shape of the leaf, 2.6-3.3 cm long by 1.0-1.1 cm wide. I have noticed that seed capsules often are invaded by grubs, reducing considerably the amount of viable seed. This species seems to tolerate hot days much better than other *Hakea* species in the Albany area. Here in Elliminyt they are out in the open and show no sign of leaf burn.

The drawings in Jennifer Young's book on *Hakeas* of WA is an excellent reference for these species and others mentioned in this newsletter from WA. There are perhaps only a couple of Study Group members growing *linearis*, *lasiantha*, *falcata* and *ambigua* in their gardens and I hope I can encourage you to include these in your *Hakea* collection where the climate is satisfactory, .ie. gardens in cooler climates with 600 mm plus rainfall. Unfortunately I do not have good photos of these but hopefully after the next WA trip this will be rectified.

#### **Photos.**

I hope some members saw the photo of *Hakea fraseri* in one of the New England gorges on Facebook. It depicted the *Hakea* growing in harsh rocky conditions on a precipitous slope. The botanist who took it probably came to the realization why it is not grown more- it's just too hard to collect seed and the cockatoos probably get there first. Fortunately it can be grafted.

Photos on the back page of this newsletter have been forwarded to me by Victoria Tanner (*H. candolleana*), Craig Alison (*maconochieana*), Elva Teague (*erecta* and *rhombales*). I thank them for their generosity.

I have been watching a number of *Hakeas* grow from seedlings to mature plants. Often the initial leaves bear no resemblance to the final leaf shape. *Hakea erecta*, *ridiga*, *eneabba*, and *cygna* are just some where the leaf changes shape as the plant grows.

For members in Victoria and those wishing to do some visiting, the Melton and Bacchus Marsh plant sale is on the 12<sup>th</sup>. May from 9.00am to 1.00pm. There is usually a large variety of *Hakeas* to purchase.

The next newsletter will be in June, so I hope those experiencing very dry conditions have an early autumn break.

Cheers, Paul.



*Hakea maconochieana*



*Hakea candolleana*



*Hakea erecta*



*Hakea rhombales*