

JUNE MEETING – Matt Leach – 'Victorian Banksias'.

Our speaker was Matt Leach, who is well known to our members. Matt is a horticulturist and among other things, looks after the gardens at the Kevin Hoffman Walk in Lara. His topic was the Banksias of Victoria.

Banksias were named for Sir Joseph Banks, the botanist who accompanied Cook on the Endeavour. He collected the first specimens from around Botany Bay in 1770. Robert Brown described 15 new species in 1810 and a further 9 species in 1830. Carl Frederick Meisner described another 10 species in 1850 Baron von Mueller and WA State Botanist Charles Gardner added several more. Western Australian botanist, Alex George, reviewed the Genus in 1981 and added a further ten new species making a total of 78.

In 2007, two botanists, Kevin Thiele, from the Western Australian Herbarium and Austin Mast, from the University of Florida published a paper suggesting strong evidence that *Dryandra* was actually a sub-group of *Banksia* rather than a true Genus. While this is challenged by Alex George and others it is generally accepted and brings the total of Banksias to 173.



An illustration from Florabase showing the 'new' relationship between Banksia and Dryandra

Banksias are found in all states of Australia, mainly on the east and west coasts. There are only two or three in South Australia and one in Northern Territory. There is one from Papua New Guinea and Irian Jaya. There are nine or possibly ten found growing naturally in Victoria. **Banksia canei** was first described in 1967 and is considered to be rare in Victoria. Called the Mountain Banksia, it is found in the sub-alpine areas of the Great Dividing Range between Melbourne and Canberra. It is a shrub to about 3m with narrow leaves and yellow inflorescences. It is frost tolerant, but slow growing and hard to maintain.

Banksia croajingolensis was first published in 2007 by Bill Molyneux and Susan Forrester. It is classifies as endangered due to its small population and restricted range. It grows along a single drainage line in the Croajingalong National Park and the total population is than 500 plants. Little is known about its characteristics in cultivation.



Banksia ericifolia was first collected by Sir Joseph Banks in 1770 and is introduced and established in Victoria. It can be found in the Riverina region near Echuca, in West Gippsland from Inverloch to Venus Bay

President: Bruce McGinness – <u>bsmcginness@gmail.com</u>	Secretary: Phil Royce: phil.i.royce@gmail.com
Treasurer: Frank Scheelings – <u>ftscheelings@gmail.com</u>	Editor: Ade Foster – <u>adefoster@internode.on.net</u>
Australian Plants Society, Geelong: P.O.Box 2012, Geelong . 32	20 Website: <u>www.apsgeelong.org</u>

and on the Otway Plains between Lorne and Apollo Bay. It is a large shrub to 6m but can be dwarfed in exposed situations. The tall inflorescences are red, orange or gold and are used extensively in the cut flower industry. It is a quick-growing, tough plant suited to many soil types.

Banksia integrifolia, the Coastal Banksia, is one of the four Banksia species originally collected by Sir Joseph Banks. It is widespread from Victoria to central coastal dunes Queensland growing from tο mountainous regions. It is a highly variable tree and, depending on situation, may be 5m or 35m. Old specimens have gnarled and twisted, grey bark. Leaves are dark green with a whitish underside and inflorescences are typically lemon/yellow. It is hardy and versatile in cultivation, salt tolerant and will grow in almost any soil.



Banksia integrifolia

Banksia marginata was originally described by Antonio Jose Cavanilles in 1800. More specimens were described by Robert Brown as a separate species. All were reclassified as a single species by George Bentham in 1800. With the common name of Silver Banksia, it is found from the Gibraltar Range in northern NSW through Victoria and Tasmania to the Eyre Peninsular in South Australia. In Victoria it grows in coastal, alpine and desert fringe areas. In cultivation it is somewhat variable growing from 20cm to about 12m. Some very large trees are reported from the Beeac area. It is a hardy and versatile plant, growing in most soil types. The inflorescences are about 10cm and lemon/yellow.

Banksia ornata was first described by F. Mueller in 1852. It ranges from the Eyre Peninsular in South Australia through to western Victoria and is known as the Desert Banksia. It is a shrub to about 3m with green leaves with serrated edges. The inflorescences are about 14cm and are usually grey/yellow appearing in

autumn and winter. It prefers full sun and doesn't do well in heavy soils or in coastal areas.



Banksia ornata

Banksia saxicola is a rare plant with a disjointed distribution. It grows on Mt. William in the Grampians and on Wilson's Promontory. Described by A.S. George in 1981, it was first thought to be a variant of *B. integrifolia*. On Wilson's Promontory it is an erect tree to about 13m, while on Mt. William it is a shrub to 5m. The leathery leaves are dark green with white undersides and new shoots are a deep maroon. The inflorescences are small and yellow, sometimes tinged with grey. It is frost tolerant, preferring a shady aspect and will grow in most soil types.

Banksia serrata was another species discovered by Banks. It was described by Carl Linnaeus. It is known as the Saw-toothed Banksia or Old Man Banksia and is found down the east coast of mainland Australia, Tasmania and Flinders Island. In Victoria it is found exclusively in sandy soils along the Gippsland coast. It is a gnarled tree to about 16m but in some coastal areas it occurs as a prostrate shrub. The inflorescences are creamy grey and appear in late spring through summer. It is a long-lived and easy plant in cultivation, preferring sandy soils and full sun or semi-shade.



Banksia serrata - prostrate shrub form

Banksia spinulosa var cunninghamii was first collected by Franz Seiber in 1823 and revised by A.S. George in 1988. It is found in south-east Queensland, along the Great Dividing Range in NSW and from Wilson's Promontory west to the Dandenongs. It is a multistemmed shrub to about 6m with green leaves which have a pale brownish underside. The large, 20cm inflorescences, which appear in autumn, are deep gold with red or purple styles. It is a fast-growing open shrub which needs a moist environment and requires some supplementary water over summer. It is frost tolerant and will grow in most soil types.



B. spinulosa var cunninghamii – Photo: oznativeplants

Banksia paludosa is also known as the Swamp Banksia or Marsh Banksia. The existence of this last 'Victorian' species is partly supposition on Matt's part. The distribution maps show it appearing in south-eastern coastal NSW stopping exactly on the NSW/Victorian border. As plants can't read maps, suitable habitat and common sense suggest it will be found in Victoria. It is a slow-growing shrub to 1.5m with green leaves which have a white underside. The inflorescences are very slender and pale or golden brown. It is a hardy, frost tolerant plant in cultivation, growing well in poor soils.

PLANT TABLE

with Matt Leach

The plant table tonight featured a myriad correas, and it was on these that Matt concentrated.

A very deep orange/pink form of *C. pulchella* triggered some discussion as to which particular cultivar it was. There are so many of this general colour and form, and all are wonderful plants giving a bright splash of colour in a winter garden.

Correa backhouseana is a coastal plant of southern Australia with a quite wide distribution. *Var. backhosueana* is found in Victoria and Tasmania, *var. coriacea* is from South Australia and Western Australia and *var. orbicularis* is found on Kangaroo Island. We had three forms of *C. backhouseana var. backhouseana* on the table - a large-flowered form from Ade's garden, 'Ivory Bells' from Roger's garden, and a small-flowered, compact form from London Bridge, near Port Campbell.

There were several *C. reflexa* hybrids and forms including a brightly coloured one from Belcher's Block at Batesford.

Roger also brought along two hybrid plants which have come up in his garden which he's called 'Salmon Glow' and 'Sheila's Gem'.



Correa 'Sheila's Gem'. Photo: Friends of KHW

As always there were many Grevilleas on the table. Roger's G. 'Lassiter's Gold' was a standout with huge, deep gold flowers. Others included *G. lanigera* Mt. Tamboriths form, *G. lanigera* 'Winter Wonder' *G. olivacea* orange form, *G. nivea* 'Scarlet King', *G pimelioides* and *G. fililoba* 'Ellendale Lace'.

Others of interest were *Guichenotia macrantha, Eremophila glabra*, a very deep coloured form of *Hakea* 'Burrendong Beauty' and an unidentified *Bossea* from Western Australia.

There were also two colour forms of *Kunzea baxterii*. This plant is well known to all of us and usually features bright scarlet flowers. There was also a delicate pink flowered form which originated from a single plant found near Esperance in WA.

PLANT OF THE MONTH – Hakea clavata

The door prize this month was won by Sue McDonald, who chose a Hakea clavata which was brought in by Roger Wileman. Roger writes ...

I first came across *Hakea clavata* at the Esperance lookout, Western Australia, in 1970. I was certain it was

a *Hakea* but not sure which one, as it looked more like a succulent.



Flowers and succulent leaves of Hakea clavata

There were many opened seed pods on these ancient plants, as the seed is released when the pods are mature. I searched and searched until I found two unopened seed pods, from which I obtained three seeds. Only two germinated. One grew poorly but the other seedling looked like it wanted to grow. It was planted in my garden at Leopold where it grew steadily and flowered three to four years later. Cuttings and seed were taken from this original plant. Although it is unlikely to be the first *H. clavata* grown on the east coast, it is certainly one of the very early plants.



Hakea clavata growing among rocks at Isrealite Bay

Hakea clavata has been described as small, stunted and slow growing and this would appear correct as it occurs along the coastal strip between Esperance and Israelite Bay (Sheila describes Israelite Bay as the worst place in Australia). Here it grows on and between the huge pink granite boulders, right down to the southern ocean. The conditions have reduced it to ancient, bonsai plants which, nevertheless, flower and set seed.

The *H. clavata* plants that I have planted in the Geelong area have grown strongly and steadily, with profuse flowering twice a year - in June and again in November. The flowers last for about four weeks, and fill the air with a beautiful scent.

I was back in Esperance in 2017 and I'm very confident that the original plants found in 1970 are still there.

UPCOMING EVENTS

JULY MEETING: Nicole Leach – Cooking with Australian Plants. Nicole will talk to us about the use of native ingredients in cooking and, hopefully, have some delicious examples for us to try?

August Meeting: AGM and Photo Competition. As an incentive to attend the AGM, financial members who come along will receive a gift ... a specimen of our Club Emblem, *Grevillea rosmarinifolia* 'Lara Form', one plant per family. Come along and get your Grevillea, now extinct in the wild, and help protect this lovely little plant from total extinction.



AROUND THE GROUNDS:

27th **and 28**th **July** - Cranbourne Friends Winter Plant Sale – 10.00 am to 4.00 pm. (Mel 133 K10)

THE FIRST AUSTRALIANS TOUR: by Bruce McGinness Geelong Botanic Gardens Saturday June 15th

As part of the APS Victoria COMM, a garden tour at the Geelong Botanic Gardens was organised. About 30 people turned up to listen to Liz and Sally explaining how the Wathaurong the traditional aboriginal people of the Geelong area used the plants in their everyday life.

Many indigenous rules apply to the harvesting of food which helped with their management of their land – What could be harvested and when? How much could be taken and how much left for next time?



Some of the plants described:

• Muelenbeckia florulenta. Tangled Lignum

This was harvested for seeds which are very small. Aboriginal mothers afraid of their children getting lost would tell them that the little birds flying into the lignum bushes were the spirits of children lost in there.

• Eucalyptus viminalis, Manna Gum

Lerps growing on leaves were a good sugar source and eaten like lollies.

Gynatryx pulchella, Native Hemp

The bark was used to make string.

- Goodenia ovate, Hop Goodenia
- Was used as a mild sedative
- Dodonea viscosa, Sticky Hop-bush

Was used for tooth aches, or scrunched to make an alcoholic drink

- Callistemon sp., Bottlebrushes
- Flowers were used to make a sweet drink
- Lomandra longifolia, Spiny Mat-rush Leaves were used for weaving baskets and eel traps
- Senna artemisoides, Silver Cassia
- Seed was used.

Callitris sp., Cypress-pines

Long straight stems were used for spears and the ends were lit and used as torches. Also used as cross bracing spars in canoes • *Exocarpus cupressiformis,* Cherry Ballart The fruit was eaten, and leaves used for snake bite treatment. Wood used to make bull-roarers.



Cherry Ballart Fruits – Photo: Noosa's Native Plants

• Eucalyptus calmaldulensis, River Red Gum

Very significant tree used by indigenous people all over Australia. The wood was used for didgeridoos and weapons etc., the bark was used for canoes.

• Xanthorrhoea australis, Grass tree

The flower stem used as the base for the fire making, or as spears. The leaves were used as knives or saws to cut. Bees feeding on flowers would be followed back to hive for honey.

- *Kennedia prostrata,* Running postman Nectar from flowers was harvested.
- **Acaena novae-zealdiae, Bidgee widgee** Leaves were used to relieve stomach upsets
- *Mentha australis,* Native mint Leaves were used to flavour meat



Mentha australis - Photo: Museums Victoria

• Themeda australis, Kangaroo Grass

This was cultivated for seed. Fields were managed for seed production by selective burning off.

Wild life attracted to grasslands this created were hunted. The grassy plains so desired by the early settlers were created by the Aborigines.

Microseris, Yam Daisy

This was one of the main aboriginal foods. The taproot was eaten raw or roasted. It was the major reason why the aboriginal people starved when the settlers stock destroyed their fields of *microseris*.

• Microseris walterii, Murnong

This plant was growing as a border around the vegetable garden in the middle of the gardens.

Main plant used as a food source in Victoria. According to flora of Victoria M. lanceolate is confined to the alpine and subalpine herb fields of the Victorian eastern ranges

Sarcostemma, Caustic vine

The caustic sap was used to treat scabies. It was also used to help with lactation - the sap was brushed on to a woman's breasts!

Arthropodium

Roots were roasted and eaten.

• Bulbine bulbosa, Bulbine Lilly

Roots were eaten.

Tetragona implexocoma, Bower Spinach

Leaves were cooked and eaten. Plants were encouraged to grow on stone or mud huts for roofing.



Bower Spinach – Photo: A.J. Brown

Weeping

• Pittosporum angustifolium, Pittosporum

- This plant had various medical uses.
- Eremophila

Used for treating infections.

• Ficus coronata, Sandpaper Fig

The rough leaves used to sand down spears.

Plants growing in the gardens, but not found in the Geelong area:

Araucaria cunninghamii, Hoop pine

The resin was used to plug holes in canoes and attach spear heads, mixed with kangaroo poo to make it soft

Brachychiton

The seed was ground up and used as a type of flour after the hairs surrounding the seed were burnt off.

• Macrozamia

The seed was used for food after leaching treatment in water

Native citrus

Fruit used.

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• Macadamia

Large tree in gardens—seed obviously eaten.

• **Castenospermum australe**, Black Bean Large seeds treated and eaten.

• Aruacaria bidwillii, Bunya Pine

Seed collected and stored, did not need to treated.



Liz also gave a brief introduction to Daniel Bunse, the first curator at Geelong Botanic Gardens. Bunse came to Geelong from Tasmania, and was a great supporter of fair treatment of aborigines. He teamed up with an aboriginal guide (Jemmy) who took him to many areas

around Victoria explaining the indigenous use of plants and their aboriginal names. He was a friend and supporter of local Aborigines who got in trouble with the law. He wrote a book called: *'The Language of the Aborigines of the Colony of Victoria'*.

MEMBERSHIP 2019/2020

Members are hereby advised that subscriptions for the 2019/2020 year were due on 1st July. Please fill in the form attached to this newsletter and bring it to the meeting on 16th July, or post it to APS Geelong, PO Box 2012, Geelong 3220. Alternatively, forms can be downloaded from our webpage.

Cheques should be made payable to APS Geelong. If you pay by electronic transfer please be sure your surname and 'membership' appears with the payment so we can identify who has paid.

Only members who have paid prior to the AGM are entitled to stand for election or to vote.

APS GEELONG ANNUAL GENERAL MEETING

Members are hereby advised that Australian Plants Society Geelong will hold its Annual General Meeting on Tuesday August 20th at The Ballroom, Hamlyn Park, Hamlyn Heights at 7.30 pm.

The format of the meeting will be

- 1. Welcome
- 2. Minutes of the previous meeting
- 3. President's Report
- 4. Treasurer's Report
- 5. Election of Office Bearers

All Committee positions will be declared vacant and elections will be held to appoint a new committee.

Nominations are sought for the positions of President, Vice-President, Secretary, Treasurer and four General Members. Nomination forms are available from our Secretary, Phil Royce at <u>phil.i.royce@gmail.com</u> Nominations will also be taken from the floor at the meeting.

You must be a current financial member to nominate for a position or to vote at the AGM. Membership form for the 2019/2020 year is attached to this document or available for download from our website ... <u>http://www.apsgeelong.org/join.html</u>

PLANT EXTINCTION CRISIS?

Ade Foster

Chris Walker-Cook sent me an email a while back alerting me to an article on the current worldwide plant extinction crisis. I'm grateful to Chris for the heads up, which has encouraged me to do more reading on the subject. It's really quite depressing!

It seems that plants are becoming extinct at a much higher rate than other life-forms. Teams at the Royal Botanic Gardens Kew and at Stockholm University found that more plants have gone extinct in the last 250 years than all the mammals, birds and reptiles combined. That's 571 plants known to be extinct against 217 species in all the other groups.

Obviously, I'm preaching to the converted here, but that's an astounding figure. And, given that plants provide the oxygen we breathe and the food that we eat it's also a frightening figure.

Most of the population could name an endangered animal - pandas, snow-leopards, rhinos – all get plenty of publicity. But how many, even among our interested and educated number, could name an endangered plant?

Australia has a long list of threatened plants. About 1150 species are listed as Endangered or Critically

Endangered under State and Federal laws. That's 5% of our known plant species. Many of these are very vulnerable indeed. About 20% of these plants survive in only a single population, and about 60% are known from five populations or fewer.

The miniscule distributions of many of these species make them highly vulnerable to human impacts or accidental damage. If the wrong patch of scrub is cleared for a development, if a bushfire burns an area or a small grassfire on a roadside reserve caused by a carelessly discarded cigarette and we could lose a species forever.

Our club's logo and floral emblem, *Grevillea rosmarinifolia* Lara form is a case in point. This lovely but inconspicuous plant was known from just one site along the Geelong/Melbourne railway line. In 1977 truckloads of clay and rocks were dumped on the site, and the plant was lost.

But there are some good news stories, too. Some years ago there was much excitement among members of the Geelong Field Naturalist's Club when a tiny *Pimelea* was found to be growing on a hill in Seaview Park in Belmont. It had previously been thought to be extinct. And, in 2011 a group of orchid hunters found a little Spider-Orchid at Inverleigh Common, which had not been seen for almost 90 years.



Arachnorchis pumila – Dwarf Spider-orchid, Inverleigh.

This website, Statewide Integrated Flora and Fauna Teams, or SWIFFT, lists rare, endangered and threatened plant species by local government area. It makes interesting, if depressing, reading.

https://www.swifft.net.au/cb_pages/threatened_flora_ by_local_government_area.php