Corymbia maculata Spotted Gum and
Macrozamia communis Burrawang

South East NSW Group

Newsletter 198

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For your diary:

Next meeting,

Saturday, September 2nd
Garden Visit, Horse Island Bodalla RSVP required
Details on Page 2

Future meetings

October 7th
Bushwalk at Little Forest Plateau

November 4th
Garden visit Joan Lynch's garden and bushland Narooma

December 2nd
Latest news on Isopogons and Petrophiles Phil Trickett and Catriona Bate at Lesley and Norm Hulands Moruya Garden. Celebratory Pizza lunch.

February 3rd 2024
2024 Annual General Meeting

Details on these events will be presented in the newsletter closer to the day.

Dear Members,

As President of this group my monthly task is to write an introduction to the newsletter. I am often looking for things to say so I go back to the NSW Australian Plants Society website for inspiration. Once again I am reminded of the aims of the group and our values. This month we will be reminding you of a plant swap that is planned for December. John will provide the details but I urge you all to think about the benefits of participating in this activity.

Firstly, you will be using your native plant growing expertise and sharing this knowledge with others. You will be encouraging others to plant and grow native plants in their garden. You may even be producing plants that are at risks in an ever-changing environment and will be able to provide safe homes for them. It is also a chance to obtain some native plants and share them as gifts with others in your community.

This activity will be more fun and rewarding the more people participate so please think about joining us in December and bring along some plants. Even if you don't have time to grow from cuttings, I am sure you could find a plant that can be divided or refreshed. As Dylan demonstrated with the orchids a piece (keiki) of a plant is a potential plant.

(Di has been busy, and has successfully propagated the lovely pink flowered ***Epacris impressa***)

This month's newsletter also includes a diary section with upcoming events. We would love to see you at one or all of these activities.

That's all from me.

Di Clark

Committee News

Dylan has suggested that we consider establishing a "walkers" group, which would meet separately to our usual activities. The walks would be centred around identifying flowering plants, and as such, not much distance is likely. Members are asked to contact Dylan to register their interest, and if sufficient support is shown, plans will be developed. Email : **Dylan-morrissey@hotmail.com**

Proteaceae Working Bee

There will be no working bee this month as Di has taken some time out to visit family and travel north. There will be more days at the end of each month from September and hopefully we will have received some rain.

Plant Swap

Earlier this year, the Committee proposed, and advertised, that the group would hold a Plant Swap. It is confirmed that this will be included in the December meeting activities. Group members are encouraged to bring along any Australian plants they have propagated, and exchange with other members. You might have noticed over recent times that the range of plants commercially available has shrunk somewhat, but in our gardens there is sure to be some old time favourites which you grow. Please take the opportunity over the spring growing season to grow some excess plants to share the joy of growing Australian plants.

As Di's set up shows, successful propagation does not require fancy or expensive equipment

Next Meeting

Saturday 2nd September 2023,
Meeting at Christina Kennedy's Horse Island Garden

Arrive by 10.00 a.m.

Note that access to the garden is restricted, and only those who have registered will be able to access the garden.

We will gather in the clearing just before the access bridge by 10 a.m., where we will be met by head gardener Julian, who will provide access through the locked gate, and give details of where to park. **See map on page 3**

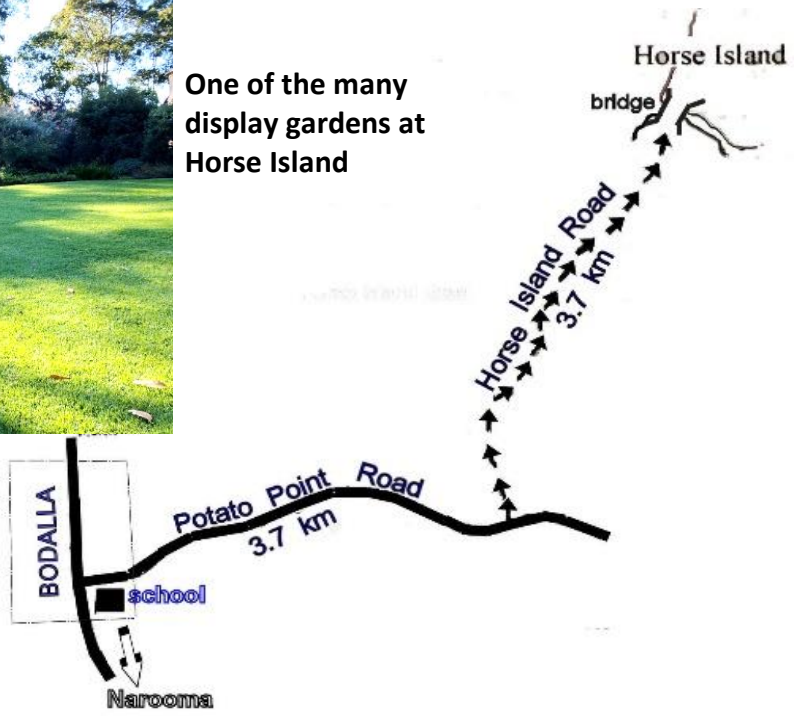
Note that the gate will be locked once all are across the bridge.

- **If you would like to attend, you must R.S.V.P. to Secretary Leonie Kestel, either by email, leonie.kestel@gmail.com**
- **or by text message on 0475 450 981,**
  no later than Monday 28th August, advising how many people will be in the vehicle which is given access to the garden.

Christina has generously offered catered morning tea.

The committee regrets that unless you are registered, access will not be available.

One of the many display gardens at Horse Island



Last Meeting, Dendrobium orchids, with emphasis on section Dendrocoryne. Orchid expert and E.R.B.G. horticulturist, Dylan Morrissey

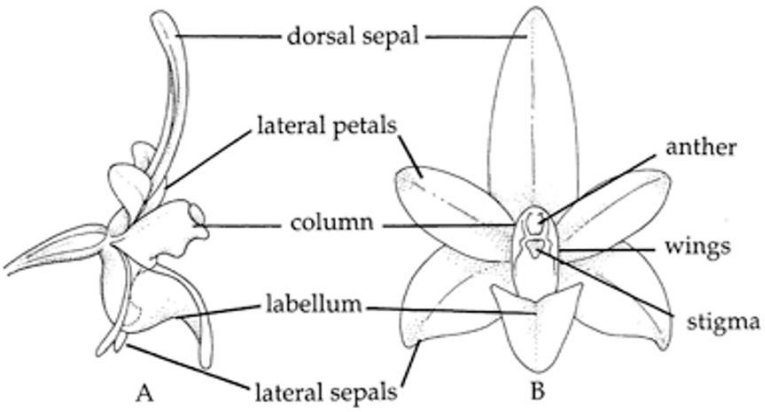
All photos with this article were sourced from Dylan's presentation.

Dylan opened with a broad description of the ORCHIDACEAE family, which comprises over 30,000 species, grouped into around 850 different genera. Orchids occur on all landmasses on earth, with the exception of Antarctica.

Australia has an incredibly diverse range of orchids, with about 1400 endemic species occurring in virtually all environments.

Orchids are identified by their floral characteristics:

- **Flowers are zygomorphic**, that is having floral parts of unequal size, so that the flower can only be divided into symmetrical halves by only one longitudinal plane.
- Flowers consist of 2 distinct rows of segments, 3 outer sepals and 3 inner petals. One of the petals is highly modified to form the labellum (lip)
- Female reproductive parts are fused into a column.

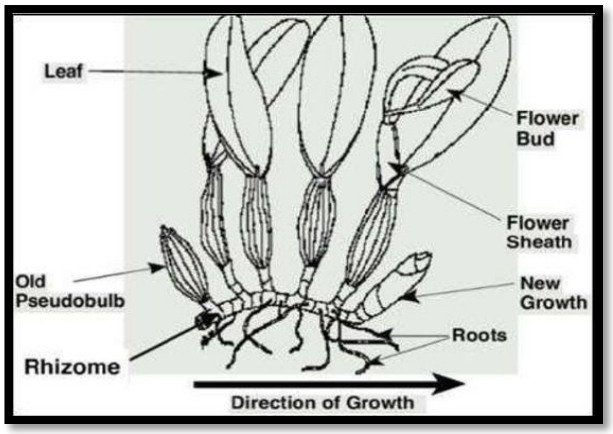


- Male reproductive parts are fused into the pollinarium. These are sited beneath an anther cap, which falls when the anthers pollen is receptive. Dylan demonstrated this process using a microscope to dissect a Cymbidium flower. When the cap fell away, the pollinarium, which is mucilaginous, stuck to his finger. When an insect is attracted to a flower, the pollinarium attaches to the back of the insect, and is carried away to fertilize another flower.

Epiphytic / Lithophytic Orchids exhibit 2 distinct habits of growth

Monopodial, where plants grow from a single point, and the stem elongates each year as the plant grows. These plants are usually found in high humidity environments that have reliable year-round moisture, negating the need for storage.

Dylan noted that Dendrobium only have sympodial growth



Sympodial, where plants have a distinct 'back' and 'front', with new lateral growths appearing each growing season, and maturing into new bulbs.

Old clump of *Dendrobium speciosum*, growing on an east facing granite tor.

Dendrobium is one of the largest of the Orchidaceae genera with over 1800 species represented within 21 sections, spanning from India, through south-east Asia to New Zealand, with a diverse representation in eastern Australia..

With such a diverse range, from hot tropical beaches to cold montane mountain tops, each species is highly adapted and diversified to its own environment.

Dylan's presentation focussed on the specific section of Dendrobium, the Dendrocoryne;

Almost all Dendrobium are epiphytic, (growing on other plants) or lithophytic (growing on rocks), and are mostly from areas that have highly seasonal rainfall. Plant growth is sympodial, with typically up to 6 leaves growing in 2 ranks at the end of pseudobulbs, bulbs or canes.
Leaves may be linear, oblong or occasionally terete. Flowers maybe borne singly or in many flowered spikes, and may present as either upward facing, or resupinate (literally upside down).

Before introducing the section Dendrocoryne, Dylan showed a range of highly coloured and specialised orchids with the **Section**, **Calyptrochilus**, (***Dendrobium cuthbertsonii***, ***D. smilliae***, the Bottlebrush Orchid, ***D. bracteosum*** and ***D. mohlianum***) these are found in northern Australian, New Guinea and the Pacific Islands.

Section Dendrobium, Soft Cane Orchids such as ***D. nobile*** from the foothills of the Himalayas and deciduous forests of China.

Section Densiflora, Hard Cane orchids from deciduous forests of India and China, includes ***D. lindleyi, D. farmer*** and ***D. densiflorum.***

Dendrobium densiflorum

Section Latouria from Papua New Guinea, featuring the highly unusual ***D. spectabile*** with corkscrew floral parts, ***D. engae*** and some highly modified hybrids, such as **D. Little Green Apples.**

The Australian **Section Phalaenanthe** contains the spectacular deep pink flowered Queensland Floral Emblem, Cooktown Orchid ***D. bigibbum***, which in its natural habitat is a fairly insignificant flowerer.

Dendrobium bigibbum

However over many years hybridizing has produced a dazzling range of large flowered plants with not only deep pink flowers, but even pure white.

Section Rhyzobium (**syn. Dockrillia**) contains species that we might be more familiar with, such as ***Dockrillia teretifolia***, Rat's Tail or Bridal Veil Orchid, ***D. pugioniformis*** Dagger Orchid and ***D. linguiformis*** Tongue Orchid, all of which can be found locally.

Dockrillia pugioniformis

Section Spatulatum holds the Antennae or Antelope Orchids ***D. antennatum*** and ***D. canaliculatum***.

Members might be confused by the naming of these orchids. Botanist David Jones proposed new names for most of Australia's orchids with papers published during the 1990's and early 2000's. Some Herbaria have accepted the proposed changes to Dendrobium / Thelychiton, whilst others still prefer to continue with the status quo. Both names are to found in various publications, so you may as well choose which one you prefer. **The Australian Orchid Name Index (2006)** Mark Clements and David Jones, published by the Centre for Plant Diversity Research/Australian National Herbarium lists all accepted orchid names at that time, including moving some Dendrobium to Thelychiton, whilst others moved to different genera, but it appears that the changes are not supported by molecular studies, so we will stick with Dendrobium for the species Dylan is addressing, to avoid complicating the issue.

Section Dendrocoryne from Eastern Australia and New Caledonia contains epiphytes or lithophytes with pseudobulbs with several nodes and 2-6 leaves at their apex. The labellum is trilobed with the side lobes more or less vertical. Often, the flowers appear quite closed, opening in bright sunlight, but closing in low light. Flowers are highly scented, and Dylan noted that this can be quite overpowering in enclosed spaces such as a glasshouse, or when brought indoors.

Some species displayed included ***Dendrobium adae*** (***Thelychiton adae***) Slender Cane Orchid, found in rainforests of Cape York Peninsula between 700 and 1200m above sea level. This epiphytic flowers in winter, being white to yellowish and smelling heavily of orange blossom.
The extremely rare Mt Finnigan Cane Orchid, ***Dendrobium finniganensis*** of far north Queensland grows as either a lithophyte or a terrestrial in between boulders and clumps of Lomandra.
Apricot Cane Orchid ***Dendrobium fleckeri*** (***Thelychiton fleckeri)*** relies on high humidity provided by mist, cloud and dew high in the rainforests of Queensland, above 800m elevation.
Usually found growing on Casuarina, the Oak Orchid ***Dendrobium jonesii*** (***Thelychiton jonesii)*** prefers high light and is happy in fairly unprotected conditions. Heavily scented white flowers of up to 30 blooms appear late winter and spring.
Lord Howe Island is home to the white flowered Drooping Cane Orchid, ***Dendrobium (Thelychiton) moorei***, which inhabits high altitude/high humidity conditions, flowering in autumn and early winter.

The specific epithet for Beech Orchid, ***Dendrobium (Thelychiton) falcorostrus*** refers to the hooked or beaked central lobe of the labellum. Found mainly on Antarctic Beech, ***Nothofagus moorei*** between Lamington N.P. and the Hunter River, in highland rainforest white flowers are borne through winter and spring.

Feathery and brilliant white, the showy flowers of Ironbark Orchid, ***Tropilis aemula*** pictured here, produce a heavy scent at night, suggesting moths might be a pollinator. This is another of the orchids which are found locally, from about Moruya, and north to around Gladstone in Queensland, and grows on mainly Ironbark trees, although further north ***Lophostemon confertus***, Brush Box and some **Callitris** are also hosts.

Square (tetra) pseudobulbs give name to ***Tetrabaculum cacatua*** (***Dendrobium tetragonum*** var ***cacatua***) Yellow Tree Spider Orchid, found at mostly higher elevations of NE Queensland. Preferring margins of dense rainforest, often around water, this is an epiphyte but occasionally found also on rocks. Closely related is ***Tetrabaculum melaleucaphilum***, which as the name suggests, grows on ***Melaleuca stypheloides***, but also use Casuarina and sometimes rocks as hosts.

Dendrobium kingianum (***Thelychiton kingianus***), Pink Rock Lily grows almost exclusively on rocks, forming large mats , and is found in the northern half of NSW, into southern Queensland. Late winter to spring flowering, plants exhibit great variance in both quality and quantity of flowers. Colours range from mostly pink through white to almost purple/black. This is probably second only to ***Dendrobium (Thelychiton) speciosum*** in its use in hybridising, with hundreds of named varieties, mostly superior to the parents in floral attributes.



Some variation in *Dendrobium kingianus*, a deep flowered natural plant, left, natural *D. kingianus* var *silcockii,* centre, and hybrid Inferno, right.

Dendrobium speciosum (***Thelychiton speciosus***), Rock Lily, is found along the entire east coast of Australia, from around Cann R. in Victoria to NE Queensland, from sea level to around 900m elevation, and inland as far as the western edges of the Great Dividing Range.

This is a highly variable plant, with canes ranging from a mere 100mm high to over a metre, and it seems that every plant ever collected has been given its own varietal name, an indication of just how variable plants are.

A hardy garden plant, it flowers from late winter through spring, with long sprays of up to 200 flowers, pure white through deep cream and yellow blooms, heavily scented and overpowering on humid days.

***Dendrobium speciosum* at Bodalla**

There are 9 recognised varieties/subspecies, each with distinct and overlapping populations, with intergrading between subspecies, as well as both primary and secondary natural hybrids.

Other popular subjects amongst growers include:

- the variety ***curvicaule*** with yellow golden flowers in log foxtail racemes up to 850mm in length,
- var. ***blackdownensis***, with lovely red new growth on developing leaves, and a compact habit with yellow flowers about 40mm across,
- the very popular and prolific var. ***grandiflorum*** from around Rockhampton, with very large 80mm golden orange flowers in racemes up to 500mm long,
- var. ***hillii*** which is a large growing plant, with pseudobulb stem growth up to 1 metre before the leaves appear. Clear white flowers are small but prolific

A naturally occurring hybrid of ***D. speciosum*** and ***D. kingianum***, the Delicate Dendrobium ***Dendrobium*** x ***delicatum*** is found sporadically where their ranges overlap in SE Queensland. As both parents are highly variable, there is an equally variable range of morphological differences in each population. This plant is extremely easy to cultivate, with perfumed flowers of pure white through to dark purple from late winter.

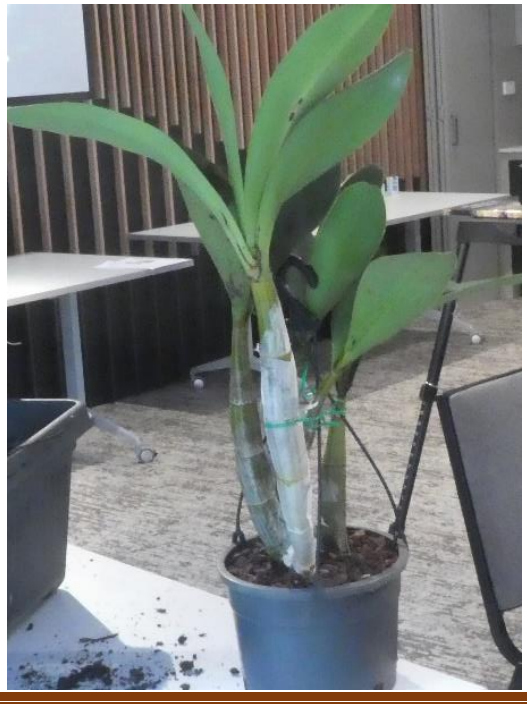
Growing these plants at home is not all that difficult, provided a few common sense precautions are considered. The most important of these is the plants need a winter rest, with no watering and no fertiliser. Plants don't like frost, or full afternoon sun. Once the soft new foliage is damaged, there is no further growth until next season.

- After flowering, start watering and feeding regularly, then stop around Easter in our conditions.
- Be aware that if plants are too dry, they are susceptible to mealy bug attack.
- Also be on the lookout for **Dendrobium Beetles**, larvae of which enter the pseudobulbs where the leaves emerge, and burrow into the pseudobulb tissue.

After a short break, Dylan demonstrated repotting of an old clump, explaining that the plants, as with all monocots, make new roots each year, so can be treated rather heavily, with removal of all old roots if they show any damage from poor drainage.

Best practice is to not divide into too small a clump, leaving 3 or more backbulbs to maintain nutrients to the vigorous new canes. Repotting is required every 2 or 3 years, depending on the quality of bark used, as this material breaks down over time, reducing air availability to the roots, and may cause rotting.

Make sure that the bark used is specifically recommended for epiphytic orchids, as this will have been treated to remove resins and dust, ensuring uniform size.



Repotted plants will need to be staked until plants have produced sufficient roots to support the new canes.

Show and Tell

Before breaking for lunch, we were treated to a lively discussion, with some interesting plants displayed. **Alison** started proceedings ***Banksia*** '**Giant Candles'** with flower spikes up to 30cm long, an interesting form of ***Grevillea arenaria*** with deep pink tepals and glossy green foliage, said to have been sourced through the ERBG nursery, a lovely spray of cheery, colourful ***Chorizema cordatum***, and ***Philotheca myoporoides*** **"Winter Rouge"** with deep pink buds opening to display clear white petals.

Husband **Chris** brought along a pot of healthy ***Pterostylis oblonga***, which from 3 tubers has increased abundantly over the past couple of years. Plants occur naturally in coastal forests from Coffs Harbour to south of Nowra, often growing among ferns, and as such are often overlooked.

Hakea ilicifolia

Phil and Catriona have a varied collection of unusual plants, among them a couple of very prickly Hakeas from W.A. ***Hakea ilicifolia***, a robust shrub up to 3m., carries clusters of white flowers within the foliage. Occurring in heaths and open forest along the southern coast, it generally grows on sand over gravel soils, and needs good drainage as a garden plant, although not many have the space for a large very prickly plant. Similarly prickly is ***Hakea florida***, a sparse open shrub to 2.5m which bears showy strongly scented flowers through late winter and spring. Also found in southern areas of W.A., this one also grows further inland on lateritic based soils overlaid by sand. Happy in full sun or semi-shade, ***H. florida*** does need good drainage to thrive, and accepts summer watering (rainfall?) better than many Hakeas.

Unusual among eastern states Grevilleas, Phil displayed the rare ***Grevillea acerata***, which occurs only in the Gibraltar Ra N.P. and nearby areas. This is a small shrub of around 1m, is related to ***G. buxifolia***, and was formally separated in 1986. The plant requires good drainage, and is happy in semi-shaded sites. Phil's plant is one he has grafted for hardiness.

***Grevillea acerata*, showing the stylar appendage, a feature of the *G. buxifolia* complex**

A similar plant, ***Grevillea ecorniculata*** (***G. buxifolia ssp ecorniculata***) grows as a small shrub, 1 – 2m, in dry heath and woodland around Sydney and adjacent tablelands. The plant makes an attractive shrub, with well displayed terminal flowers. Flowers without terminal horn appendages on the styles (e, without and corniculata, horned) differentiate this plant from ***G. buxifolia***. Phil recommended both of these Grevilleas as great garden plants, but they are rarely if ever commercially available. Propagation is possible using semi-hardened new growth.

Conflorescence of *G. ecorniculata* Note the style, which is rounded, without the appendage apparent in G. acerata above

***Acacia pravissima* 'Little Nugget'** is a dwarf form of the once popular Ovens Wattle, which grows in the highlands from Tumut down to Gippsland. Plants can reach 6 – 8m high, but the dwarf forms are more spreading, rarely attaining more than half a metre in height, up to 2m spread. As a garden plant, this is a hardy and long lived wattle, provided the soil is well drained. It copes with semi shade and dryness once established, and produces an attractive weeping plant in a tall container, where the branches develop a pendulous habit.

Dodonaeas are not often grow these days, which is a shame, as many are very hardy and long lived shrubs. The plant on display is a seedling of ***D. boroniifolia***, Fern-leaf Hop Bush, which germinated in Phil's garden after the recent fires, and is now a 1.5m shrub with attractive, finely pinnate foliage similar to many local Boronias, hence the epithet.
A feature of Dodonaea is the colourful fruit on female plants, and was a stunning feature on this specimen. Fruits which are in full sun are bright red, whilst those which are hidden and therefore shaded, were a delicate shade of green.
Seed germinates readily with hot water treatment.

Norm and Lesley's display included the brilliant yellow flowers of ***Grevillea flexuosa*** which is one of Norm's successes following a grafting day with Phil. The plant is now well established, with attractive divided foliage on zig-zag branches. Flowers, as shown in the photo, are well displayed above the foliage, starting cream and ageing to yellow.

Desert Cassia, ***Senna artemisioides ssp filifolia*** is a very adaptable plant which thrives in dry conditions and full sun. It is a shrub of 1 – 2m with attractive grey foliage and yellow buttercup flowers which just seem to keep on coming. Plants do struggle if the soil is wet, so raising the garden bed would improve health and longevity.

***Chamelaucium* x *Verticordia* 'Paddy's Pink'** is an upright small shrub to about 1.5m, with bright green foliage and through late winter and spring, masses of lovely pink flowers held above the foliage. These flowers attract many native insects, and are excellent as cut flowers.
Plants will grow best in full sun, although adapt to semi-shade.
Well drained soil is necessary, and plants will survive dry spells once established.

John's collection of N.S.W. Grevilleas demonstrated the value of these plants as horticultural subjects, and he commented that it's a pity most seem to be attracted the many new large flowered hybrids flooding the market.

The rare ***G. shiressii*** shown here is restricted to wet sclerophyll forests on Hawkesbury sandstone, where it grows along creek banks. Given this, it is a wonder that it adapts to any garden situation, and is tolerant of full sun and dry soils. It is a largish shrub, to 2m high but spreading wider, so needs a bit of space. Foliage is dark green, the leaves up to 15cm long and 3cm wide with prominent venation. Flowers, a translucent purple/green combination, are well hidden within the foliage and difficult to see as the photo demonstrates, which renders the plant less attractive to growers who like to see their plant flowering. However, through winter to summer, the plant is alive with smaller honeyeaters who appreciate the plant for its food source.

Grevillea sericea (Silky Grevillea) was once a popular garden plant, an adaptable shrub to around 1.5m, with well presented terminal flowers of varying shades of pink. Foliage is fairly open, with thin leaves about 3-5cm long. This plant hybridises readily and is a parent of many cultivars produced in past times. Another form, ***Grevillea sericea* 'Collaroy Plateau'** has outstanding horticultural attributes. The foliage is shorter to around 15mm long and about 10mm wide, which gives the impression that it might be a hybrid of ***G. speciosa***. Flowers are spider-like, typical ***G. sericea***, bright pink and terminal and are borne throughout the year. Both these plants are long lived and hardy in the garden, adapting to full sun or semi shade, but do need to be tip pruned to maintain a tidy compact habit. Both propagate readily from firm new growth, and cuttings can be obtained by any member who would like to try growing them.

A form of ***Grevillea granulifera*** from Mt George, mid north NSW coast, often grows on forested ridgetops, developing into a shrubby plant to around 3m. Upper surface of the leaves is finely granular to touch. This is a very tough garden plant, but rarely cultivated as it is not all that showy. Flowers although prolific, are not very brightly coloured. But that does not stop the birds from delighting at the feast. We should ask, why do we grow plants?, if not for the wildlife they bring to our gardens.

Those seeking a tall slender Grevillea for a sideway would be well advised to try ***Grevillea oleoides*** pictured right. This plant is from the forests around Sydney, an open shrub about 2.5m tall but only 0.5m wide after 8 years in the garden. Bright red flowers are well displayed despite being within the sparse foliage, and are a favourite of birds seeking the abundant nectar. Plants are happy in shade, and equally at home in sun, making this adaptable plant an ideal subject for background planting.

The low growing ***Grevillea filipendula*** is a great plant for spilling over a rockery wall. This densely foliaged plant grows less than 30cm high, with a spread of about 1m. after 6 years. This plant is often noted as ***G. diffusa ssp filipendula***, and sometimes is also included as a form of ***G. capitellata***. Plants grow naturally around Mt. White near Gosford, and are well behaved garden plants. The outstanding feature is the small burgundy flower conflorescences which dangle attractively on long slender peduncles.

To finish the session, a quick mention that August is the start of Hovea season. The genus comprises about 40 species, 28 of which grow in N.S.W. Commonly known as Rusty Pods, you might have noticed the ***Hovea longifolia*** flowering in gardens and bush tracks at the ERBG.

However, on display today was the Western Australian ***Hovea elliptica***, pictured at right, which grows in the wetter southern forests, often in deep shade. As a garden plant, it is very happy in a sheltered garden, such as a fernery, fairly erect growing to around 2m., and presents its flowers most attractively on arching stems. Plants grown in open positions are more compact, and will let you know if the ground is getting a bit too dry for their liking.
Garden plants produce plenty of seed, as the flowers are eagerly sought by all manner of insects, and the seed germinates readily if treated with hot water until they swell. Seed left too long in hot water may be damaged, so you need to keep an eye on the seed as it swells, and then plant into the propagation mix straight away. A nearly 100% germination can then be expected.

Science Week Threatened Species and Botanic Gardens Seminar at ERBG, August 12.

This event, organised by ERBG, proved very popular, with around 50 people seated to listen as **ERBG Manager Michael Anlezark** introduced presenters and proceedings.

Michael opened with the question: What are we (ERBG) doing about conservation ?

Commenting on whether Botanic Gardens are really interested in plant conservation, of course ! he suggested, but noted that there was no one co-ordinating efforts, and that there is no reliable information about which threatened species are being held in Botanic Gardens.

He pointed to a draft Strategic Plan for ERBG, with a vision to inspire the appreciation and conservation of our region's plants through active conservation programs and education.

Horticulture and conservation are at the core of ERBG activities, and the Garden strives to be the best it can, showcasing the horticultural value of plants and demonstrate that it is serious about conservation of the 100 or so threatened species in the now expanded region which the garden collection encompasses. He stated that plant collection of these threatened species, as well as the up to 3800 species recorded over the greater south coast area, is a valuable resource for the future, and remains a priority as the ERBG continues to develop.

In leading regional threatened species conservation, plans are advanced to establish a garden which incorporates as many threatened species as can be successfully grown in a horticultural display. There are administrative hurdles to overcome, such as scientific licencing protocols set by National Parks bureaucrats, which might delay conservation efforts, but working with other Botanic Gardens in sharing plant material, Michael hopes that most of those plants which are able to be grown, will become available to ERBG in the not too distant future. Sharing of resources and expertise in this way will safeguard collections at various sites.

The strategic plan highlights the need for promoting sustainability in all aspects of ERBG operations, and provide environmental education, demonstrating what can be achieved by looking at big picture issues and acting decisively at a local level. He pointed to the activities of the retail shop at ERBG as to how every product is assessed for sustainability before being stocked.

The Botanic Gardens of Australia and New Zealand (BGANZ) is a peak body of Gardens which aims to co-ordinate efforts to ensure gardens are the best they can be within available resources. Over the years this body has waned, but Michael has in recent times vigorously pursued re-establishment of a more locally focussed branch, **BGANZ NSW and ACT**, to better co-ordinate efforts of the 30 gardens in NSW and ACT. 21 of these gardens has joined, with Michael as Chair of the Group, and Dylan Morrissey has accepted the role of Secretary. Others on the board include representatives of Wollongong, ANBG, Mt. Tomah, RBG Sydney Domain and the developing Picton Botanic Gardens. The group has in preparation a Discovery Guide, which details the features of 20 NSW Botanic Gardens. It has already undertaken some training and workshops for staff, as well as developing a database of threatened species held at each garden.

A Victorian Botanic Gardens program, 'Care for the Rare' has established multi-site conservation collections of Victorian threatened species, and the best of this model is being incorporated into a NSW program, **"Share the Rare",** benefits of which are hoped to get all Gardens interested in the concept of conservation with a consistent approach to collection and display of such plants. Genetic values, such as choosing plants which show traits considered advantageous at ex-situ sites, might prove better adapted to changing climatic conditions. Translocation of these plants might lead to better outcomes in future site rehabilitation following damage due to fires and other climatic events.

Eastern Quoll, Photo WWF

Finally, **Michael announced "Breaking News",** of an important conservation opportunity for ERBG, as a potential future release site for endangered Eastern Quolls, with an inspection soon by WWF personnel to consider the viability of the site.

Trisha Kaye, ERBG Herbarium Curator then addressed the issues surrounding the expansion of the ERBG collecting region from being Eurobodalla centric, encompassing around 6000 sq km, to now take in the whole NSW South Coast region, comprising over 14000 sq km. With varied geology and diverse topography, the area displays unique climatic variations driving unique biodiversity.

Hot spots in the region include Mt. Imlay, Pambula rhyolite, Tuross Wadbilliga, Diamond Creek west of Moruya, Pigeon House Range, the Budawangs and Morton N.P.

Of the threatened plant species recorded, 39 occur in the far south, with 17 unique species,
the central area (the original collecting region) is home to 47, with 18 unique spp.,
and the extended northern area contains 45, with 24 unique species.

Of the 100 or so locally recognised threatened species, 25% occur mainly on the south coast, and up to 50% have a significant presence here.

Families with the greatest number of threatened plants include **Orchidaceae**, (19), **Myrtaceae** (14) including some Mallee Eucalypts, **Rutaceae** (10) especially **Zieria** species, **Fabaceae** (8), **Proteaceae** (6) and **Rhamnaceae** (6) mostly **Pomaderris**.
Other than the orchids, which require specialised growing conditions including specific mycorrhizal associations, ERBG expects that many of the threatened species could be included in the planned Threatened Species Garden.

Trisha showed a unique video of the region, with featured hotspots highlighted. **Pambula rhyolite** is home to ***Zieria formosa*** the majority of which grow on the Lochiel property of long time APS Member Sue Sullivan, and are protected under a conservation covenant***, Z. parrisiae, Z. buxijugum, Leionema ralstonii, Acacia constablei, A. georgensis*** and ***Westringia davidii***.

Wadbilliga, with its rugged valleys difficult to access, might secrete many rare plants. Those currently known include ***Eucalyptus parvula, Dampiera fusca, Westringia kydrensis, Pultenaea parrisiae*** and ***Eucalyptus stenostoma***, possibly the most attractive of all local Eucalypts, with slender plum coloured branches covered in powdery white bloom to protect from sunshine, plum coloured new growth, and bunches of fruit shaped like little apples, also plum coloured and with white bloom. This tree is killed by fire and relies on a good store of seed to ensure future generations. As such, too frequent fires might put the isolated populations at risk.

Deua N.P. has similar areas of rugged terrain, but is more accessible due to the number of fire trails established within the park. Botanist Phil Gilmour was a prolific collector within the park, and is honoured by ***Pomaderris gilmourii*** var. ***cana***, and more recently by ***Grevillea gilmourii***, which was raised to species status by Peter Olde, leader of the Grevillea Study Group. This plant was previously included as a subspecies of G***. barklyana***, before being offered species status with the ***G. macleayana*** complex. Due to its isolation from all other populations, and with some morphological differences, Peter felt that it deserved recognition as a separate species, and this was confirmed with a paper in Telopea, Journal of Plant Systematics in June 2022.

Closer to the **Eurobodalla Coast**, we find ***Correa baeuerlenii, Pomaderris bodalla*** and the midge orchid ***Genoplesium vernale*** first collected by ERBG Herbarium's June Wallace in 1986 and officially named in 2000, and the now endangered Scrub Turpentine ***Rhodamnia rubescens*** which is threatened by Myrtle Rust. There is some hope for this plant with rust resistant clones being trialled.
The **Budawangs** and **Morton N.P.** hold, among others ***Pultenaea baeuerlenii, Epacris (Budwangia) gnidioides***, and the mallee Eucalypts ***E. sturgissiana*** and ***E. langleyi***.
The **Jervis Bay** area supports the Villous Mint Bush, ***Prostanthera densa, Melaleuca biconvexa*** and ***Banksia vincentia***, which recent research suggests should be included in the ***B. spinulosa*** complex.

Trish noted that the rationale to expand the region to include the whole south coast is that it is a recognised biological area, and therefore makes scientific sense.

The final session of the day was a presentation by Dylan Morrissey on the special attributes of Mt. Imlay or its local indigenous title Balawan . As Dylan described, Mt. Imlay is not just a piece of some larger mosaic of habitat, but entirely its own tapestry of life, woven together and draped over a mountain that stands alone in the landscape. At 886m., it is unique because of its geology, and that it stands high above the surrounding landscape, attracting and holding coastal moisture to provide a wetter environment at the summit and slopes. Cloud

is often noted to obscure the summit. The mountain, some 20km south east of Eden, presents a challenging walk to the summit from the carpark, which is at 600m. The last 300m climb is quite strenuous, and might take 3 hours to cover 3km.

Since the 2019/20 bushfires, which obliterated the forest on and around the mountain, the regrowth has been prolific, with ***Eucalyptus sieberi*** and ***Acacia terminalis*** so thick that even the feral deer abundant in the area have difficulty getting off the roads. At the summit, where some endangered plants eke an existence, regrowth of shrubs has been bountiful, with many thousands of ***Boronia imlayensis*** (below) and ***Hibbertia circinata*** regenerating from an extensive seed bank, but unfortunately phytophthora is wreaking havoc, and many of the young plants are showing signs of stress, particularly the Hibbertia.

Other plants which call the summit home include the very threatened ***Eucalyptus imlayensis***, which sets very little seed, and all the mature plants were killed during the fire. Resulting regeneration has been strong from large underground lignotubers, but genetic studies show that most plants are clones of a few old plants. Of the 48 plants known to survive, there is just 17 genetic clones. The lignotubers range in size from 1m^2. to a massive 235m^2

Research suggests that the slow growth rate of these plants might reflect an age of thousands of years for the very large specimens.

Also close by, the Shaggy Pea ***Oxylobium ellipticum*** might prove to be a unique taxon which warrants renaming to reflect this. ***Persoonia brevifolia*** has only 3 known populations, and seen just twice on Mt. Imlay in the last 25 years. Growing in a gully on the western side of the mountain is the only NSW population of ***Olearia rugosa*** ssp ***distalilobata***, a Victorian species. With few populations, the leafless ***Tetratheca subaphylla*** is likely to become extinct due to it susceptibility to phytophthora. ***Epacris microphylla***, which we recognise from heaths as a small subshrub, on Mt. Imlay reaches 3m high and probably deserves formal recognition as a new species. The unusual greenish purple flowered alpine ***Prostanthera walteri,*** pictured, is only found on Mt. Imlay and the nearby Nalbaugh Plateau.

Phytophthora presents a very real threat to the many susceptible species which call Mt. Imlay home, and access to the walking track calls for all visitors to step into a biological bath to clean any possible pathogens from foot ware before entering the park. As phytophthora is right across the mountain, Dylan suggests it is more important to clean shoes when leaving, to minimise disease spread.

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