Dianella admixta

AUSTRALIAN PLANTS SOCIETY

SOUTH EAST MELBOURNE REGION INC.

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MARCH NEWSLETTER 2019

Meetings are held on the first Tuesday of each month, February to December except November.
The venue is the Hughesdale Community Hall, Cnr Poath and Kangaroo Roads, Hughesdale (MEL 69 C7)
Visitors are always very welcome.

COMMITTEE:

PRESIDENT:	John Thompson thomme@netspace.net.au
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SECRETARY:	Helen Appleby
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Please forward any newsletter contributions, comments or photos to Marj at 36 Voumard Street, Oakleigh South 3167 or to the email address above.

Note: Deadline for the APRIL newsletter is March 21st

Tuesday 5th March 2019

8pm Hughesdale Community Hall
Cnr Kangaroo and Poath Roads, Hughesdale

Our speaker for March will be Marj Seaton with Norm adding his bit as required. They will talk about their trip through Arnhem Land in July/August 2018.

Plants will of course feature, but also some of the aboriginal customs and art, old and new, as well as fishing for barramundi.

John has been laid low after an appendix operation. As a consequence, assistance will be required in the putting out of and packing up of the tables as he will not be able to do this.

RAINFALL RECORDS for 2019

The following are our rainfall records for 2019 (in mm).

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Oakleigh South	**11.4**												
Highett	**7.5**												
Hampton													
Cranbourne South	**30**												
Caulfield Sth	**5.6**												
Elsternwick	**7**												

FEBRUARY MEETING

WHAT FUNGI DO IN ECOSYSTEMS: A talk by Dr Sapphire McMullan-Fisher

Sapphire initially described the three kingdoms of life: Eukaryotes (includes plants and animals), Prokaryotes (bacteria, archaea) and Fungi, so fungi are not plants or animals but have their own category.

Many fungi consist of a **mycelium**, a mass of individual threads called **hyphae**. The hyphae explore their habitat for food which they digest by absorption using enzymes. These degrade the more complex molecules, so that the mycelium can capture and exploit resources in the surrounding substrate. Hyphae of different species can intertwine and co-exist in the soil.
Photobionts: these capture carbon and other molecules and use light as the basis of life eg algae, bryophytes, cyanobacteria. Lichens are amalgams of mycobionts (fungi) and photobionts such as algae or cyanobacteria. There are three main types of lichens – crustose, fruticose and foliose



(above, left to right).

Cyanolichens (ie lichens with cyanobacteria as their photobiont) are found on barks and roofs and are pollution sensitive. Some cyanobacteria can fix nitrogen especially when there is rain in a cloud forest.

Herbivores: ruminants have gut microbes and these provide a habitat for anaerobic rumen fungi which break plant material down to allow digestion.

Carnivores: there are over 200 different fungi which create traps to catch and digest nematodes.

Recyclers: fungi are critical in ecosystems as decomposers, saprotrophs (organisms that feed on decaying matter) and rotters recycling nutrients back into their environment. Invertebrates play a part by chopping and chewing material in which hyphae exist eg borers in logs. Insectivorous birds then eat the invertebrates. Unfortunately, we are losing invertebrates from our ecosystems which we need to look at. Fungi also help make hollows in trees – pathogenic and decomposing fungi get into damaged areas and invertebrates and vertebrates then make use of these hollows, often enlarging them to suit their needs. It is important that we don't "tidy up" standing dead wood.
Fermentation: eg moulds and yeasts. These are active in producing beer, bread, cheese, chocolate and antibiotics.
Endophytic fungi live symbiotically with the majority of plants by entering their cells and are utilized as an indirect defence against herbivores. Endophytes are not well understood but may also have a role in improved drought resistance and tolerance. Some may also sequester carbon. Most plants are not 'born' with endophytes but seedlings pick up spores released by actinomycetes (disc fungi) through their roots or stomata. Some plants have endophytes only in their roots, others only in their foliage.

Mycorrhizae are partnerships that form between fungi and plants. The fungi colonize the root system of a host plant thus increasing the surface area of the root system providing increased water and nutrient absorption capabilities. Because they already have proteoid roots, Grevilleas (and Proteaceae generally) do not have fungal partners. Healthy mycorrhizal networks are carbon sinks where the soil stores 70% more carbon than trees. A healthy tree can have up to 80 different fungal

partners and these provide a communications network linking plants. They produce chemical messages in response to insect attacks and play a part in sharing sugars.

Fungi as food: Ground dwelling marsupials love truffle type fungi and play a significant role in dispersing spores. As our country dries, spores are not spread as readily as in moister conditions, so we need these small animals to help in dispersal.

Weedy fungi: examples include Favolaschia calocara from Madagascar and Myrtle Rust.

Favolaschia calocara arrived in Australia in the 1990's and is spreading rapidly. It generally has no specific host and appears to be replacing native fungi. (There is a native Favolaschia which is uncommon and its distribution is unknown).

Myrtle rust affects Myrtaceae and it is extremely important that we report any outbreaks. Any plant affected must not be added to compost or rubbish, and it is important that we clean our shoes, clothes , tripod legs etc. after bushwalking.

Fungicides
Most are for 'prevention' rather than specifically treating disease. Systematic use can mean resistance builds. They are often broad spectrum and affect other fungi.

Mulching:
If too deep, mulching can reduce fruiting of ectomycorrhizae. Homogeneity of the substrate favours a lower diversity of species like stinkhorns. We are encouraged to leave occasional stumps (to 1.5m) as well as leaving timber on the ground, to allow different fungi to colonise.
Q: Can we use inoculum to improve new, imported soils when landscaping?
A: Not recommended as the ones we have are imported and often only from pine trees.

If establishing new areas, Sapphire recommends encouraging ground dwelling marsupials, adding some remnant mulch, adding compost and also collecting different fungi fruiting bodies and adding to sand which can then be spread after giving time for hyphae to develop.

FEBRUARY SPECIMEN TABLE

Although January has been sizzling, there were quite a few specimens on the table.
Mandy: Although the leaves are rather similar the flowers of *Thomasia solenacea* and *Chorilaena quercifolia* are quite different. The Thomasia is growing in full shade, is quite drought tolerant and strikes easily. The Chorilaena (left) would make a dense hedge and can be cut hard. *Calytrix fraseri* (right) with its purple flowers is most attractive – summer flowering and long lasting purple flowers but touchy in the ground so grow in a pot. Mandy brought in three wattles (you can have them every month of the year) – *A. uncinata, A. harveyii* and *A. gilbertii. A. uncinata* is a low weeping open tree, *A. harveyii* is just starting to flower and will do so for a long while, *A. gilbertii*

Has small white flowers all summer and bronze new growth. *A* single flower of *Grevillea bipinnatifida* showed the lovely colour variation and prickly foliage for which this plant is well known.

Lance provided us with a pot of the red currant bush, *Coprosma quadrifida (right).* He has this cropping up on his dam wall, sadly with soil too hard for him to dig any up. The berries are edible.

John and Marj both brought in the popular red *Rhododendron lochaea*

and *Backhousia citriodora* though I don't think anyone availed themselves of the opportunity to make lemon myrtle tea from the latter at supper. Both rhodos had the straight corolla. This species comes from the high peaks behind Cairns and is not so easy to grow in sandy soil – good in pots though.

John's specimens also included the grey *Maeriana oppositifolia* (no extra water, prunes well), *Grevillea globosa and G. armiggera* as well as *Persoonia pinifolia (below, left).* This last is a local

plant but hard to propagate, done usually from seed. It has soft pine-like foliage and golden terminal flowers. Grows 2 - 3m wide and high. *Ptilotus divaricatus* is a scrambling ptilotus, 1.5m high and with pale round flowers. John's final piece was of *Scaevola aemula* - a short lived low growing plant with purple flowers .Propagate from cuttings for continuity. Could be a good basket plant.

Marj has two colours of *Xerochrysum bracteata* – yellow and lemon everlastings which she recommends growing from cuttings regularly as they can get

leggy. John commented on her *Isotoma axillaris,* noting that the sap can strongly irritate the eyes. He also commented on the colour ways of Goodenias. Marj had *Goodenia mcmillanii* with its pink flowers, but John also commented on the white flowers of *G. albiflora* as well as the more common yellow species.

The small bright blue flowers of *Halgania preissiana* (left) and red/white *Epacris longiflora* completed the selection for tonight.

Photo of Scaevola aemula by John Thompson.

<u>An experiment</u> - Marj Seaton

Following the Fred Rogers seminar last year, I thought to investigate growing cuttings of Goodeneaceae from cuttings. This had been a keen topic of conversation at the seminar following a talk by Hazel Dempster of WA.

Using a mix of three parts perlite to one part of vermiculite, I tried leaves of *Goodenia "Lighten Up",* a variegated form of *Goodenia ovata, Coopernookia georgii* and *Velleia foliosa.* They were all put on a propagating table under a tree, not covered in any way. They were sprinkled daily to keep them moist. After three months the results were as follows: Coopernookia – all failed. Velleia – most leaves eaten in some way by insects but nearly all had substantial roots. Same for the variegated Goodenia.

In that time only two of the cuttings showed any sign above ground that they were growing, though they didn't appear dead!

They have now been potted up and have to grow on. The process has been slow but the advantage is that many more plants can be obtained from limited material.

Pick of the Bunch - February 2019

Specimen grown by John Thompson

Scaevola aemula R. Br. Fairy Fan-flower

Scaevola aemula is a spreading to slightly ascending herb. It can be prostrate - 0.6m in height by 0.6m - 2m in width. It has a wide distribution being found in WA, SA, Vic, Tas and NSW. Consequently there are a number of different selected cultivars available. It has gained popularity in Europe as a potted plant. Flowering is from mid spring onwards often flowering for a period of several months. Flower colour is purplish blue but can be white or pink.

A full sun aspect with good drainage is recommended to ensure a floriferous display. Propagation is from seed or cuttings with the latter being the easier method.

Scaevola is a member of the Goodeniaceae family. A family of 12 genera with c. 400 species, mostly in Australia and New Guinea but also South-east Asia, the Pacific, New Zealand and Chile; 12 genera and c. 380 species in Australia. Other members of the family include *Coopernookia*, *Dampiera*, *Goodenia*, *Lechenaultia* and *Velleia*.

The genus name, *Scaevola* - is from a Roman surname (from the Latin; *scaevus*, which means left-handed). This refers to the one-sided feature of the fan shaped corolla.
The surname belonged to <u>Gaius Mucius Scaevola</u>, a legendary assassin said to have burnt his right hand away as a show of determination during the early years of the Roman Republic.
The specific epithet is from the Latin; *aemulus*, striving to, emulating, rivaling, a reference to the similarities between it and *S. cuneiformis.*

March Meeting

Supper: Mandy Louden(Please bring milk)
Write-up: John Thompson

DIARY

2019:

March 2	APS Maroondah, one day event and APS Vic Committee of Management
March 2,3	Open Studio: Mandy Louden's,1 – 4pm. 3 Royal Tce, Highett (Mel 77 F8)
March 5	Marj Seaton: Arnhem Land
April 2	Trevor Blake
May 7	Christine Huf. "Forensics and the Plant World"
June 4	Chris Larkin and Janet Hodgkiss: "Pruning Australian Natives"
June 15	APS Geelong host APS Vic Committee of Management Meeting
July 2	TBC
August 6	AGM, Members' slides and photo competition
September	Mike Beamish: The Pilbara

Plant Sales and Shows 2019

March 16, 17	Friends of Cranbourne Gardens Plant Sale 10 - 4
April 13	APS Yarra Yarra Native Plant and Book Sale, 10 – 4, Eltham Senior Cit's Centre
April 27	APS Geelong plant sale at 'Wirrawilla', 40 Lovely Banks Road
May 4	APS Mornington Peninsula Plant Sale, Seawinds, 10 – 3:30

PROMOTIONS

MELBOURNE INTERNATIONAL FLOWER AND GARDEN SHOW
PRESENTED BY LAWN SOLUTIONS AUSTRALIA

27 – 31 MARCH 2019
ROYAL EXHIBITION BUILDINGS
& CARLTON GARDENS

7.

PHOTO GALLERY

The Peter and Betty receive a regular blog from Geoff Park of "Natural Newstead". Geoff has been writing his blog for over 7 years and has written over 1800 entries. His specialty is birds but he is also interested in insects and all sorts of wildlife. Google "Natural Newstead" if you are interested in reading more or in subscribing to his posts. He has kindly given permission for this item (from early February) to be reproduced in our newsletter:

The Mulberry tree in our yard is a boon for various species of birds at this time of year.
Frustratingly it draws Blackbirds from far and wide, but **Silvereyes** are a more welcome sight as they arrive in small groups to feast on the ripening fruit.
A pair of Silvereyes is nesting at present under the canopy of a grapevine next door. Many birds will synchronise their breeding with food availability and the Silvereyes have adapted well to the summer treats on offer in local gardens. While the grapevine shaded nest site is a good option the sitting bird still needed to cool itself during short bursts of incubation.

Mandy had this visitor holding onto her outdoor blind cord:

A koala (temporarily named Keith) has been released back into the wild at Ray and Eva's garden. It stayed around for about one day then moved on.