

# Wildflower Society of Western Australia Newsletter

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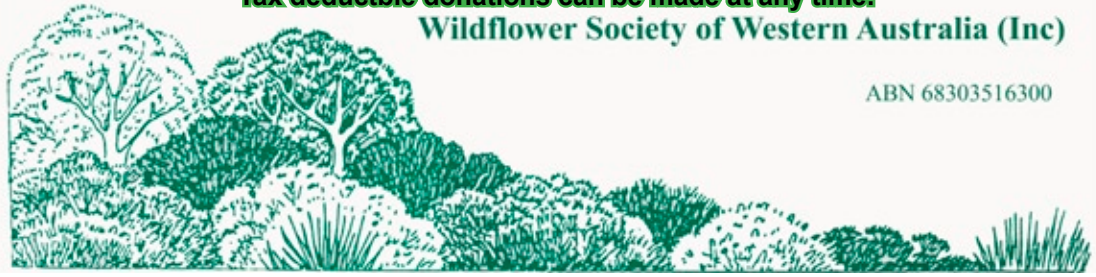


# Wildflower Society Bushland Conservation Fund

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**Wildflower Society of Western Australia (Inc)**

ABN 68303516300



# WILDFLOWER SOCIETY OF WESTERN AUSTRALIA

The newsletter is published quarterly in February, May, August and November by the Wildflower Society of WA (Inc).

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## Fire and south coast wonders

A number of plants have seed that germinate in response to fire and/or grow prolifically with the added light after fire. Two of these species are illustrated on the front and inside front covers.

**Front cover:** Large Flowered Scaevola (*Scaevola macrophylla*) on the road into Cape Riche. Inserts show detail of the front and back of the flowers. This spectacular plant has seed that germinates in response to fire.

**Inside front cover:** Large healthy *Cephalotus follicularis* pitchers in a recently burnt area along the road into Cheynes Beach. Insert shows the strange *Cephalotus follicularis* flowers produced in summer.

**Back cover:** top—*Kunzea pauciflora* (Priority 4 confined to area) dominated heath on the Mt Melville walk; inserts detail flower heads and flowers; and below—Cheyne Bay looking along the beach to Cape Riche (direction small yellow arrow page 44). Brown dead sea grass leaves cover much of the beach. Photos Bronwen Keighery.

**Layout and edits for this issue:** Bronwen Keighery. **Edits/Proof reading:** Alex George and Jolanda Keeble.

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<b>Vice President</b>	<b>Brett Loney</b>	<b>0417 977 548</b>
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**Phone:** (08) 9383 7979 (24-hour) **email:** [enquiry@wildflowersocietywa.org.au](mailto:enquiry@wildflowersocietywa.org.au)

**Honor Venning Library** at Perry House is open on the first Saturday of each month from 1–3pm and when the Office is open. Members may borrow.

**Website:** [www.wildflowersocietywa.org.au/](http://www.wildflowersocietywa.org.au/)

### Membership subscriptions

Category	Newsletter	
	web only	paper
Individual	\$55	\$70
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Junior	\$10	\$25
Affiliated Group	\$55	\$70

\* Full-time students, and those in receipt of a means-tested Australian Commonwealth Government pension.

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Membership subscriptions now fall due on the anniversary of your membership.

Those members wishing to renew by Visa, Mastercard, save yourself postage by using our email membership form on the Society website OR Direct payment to WSWA, Bankwest BSB 306-058 a/c 4197355 **with** a reference with deposit: **your name + type of payment** (in this case: m'ship).

Please advise the WSWA Office separately if you have changed your details (e.g. address).



## Farewell and thanks to Kevin Thiele

When Kevin took on the role of President he was uncertain as to how long he would be able to fill the position. Well after two and a half years, the time for his departure has come. Work and family commitments as well as plans to leave WA for the east (his homeland) have brought him to this position. As a consequence Kevin chaired his last Management Committee (MC) meeting as President of the Society on 24 November 2021. Brett Loney, as Vice President, chaired the MC meeting on 19 January 2022 and is now the Acting President.

Kevin's Presidency has been an interesting and active one. Many thanks for all that you have done in your time with the Society. The members of the MC are very appreciative of the effort you put into improving the governance of the Society and believe it will serve the Society well as it moves forward. The zoom meetings established under your presidency are productive and focussed, especially with a 9.30 closure and inclusion of many without the need to leave home. We aim to continue the Priority Flora Survey Program that you initiated as it proved to be a valuable adjunct to the overall plant survey programs in the Society's portfolio. Also of particular note is your role in the development, workshopping and finalisation of the Society's position paper on prescribed burning (see page 9).

All the best from all at the Society as you pursue your interesting botanical career.

### Management Committee

## President's Report

At the end of 2021, the President, Kevin Thiele, advised the Management Committee that he would have to step aside due to his increased professional workload associated with the role he had been appointed to with the Federal Government. Brett Loney, as Vice-President will step into the role until the Annual General Meeting in June 2022 when a new president will be appointed. The Society is grateful for the effort Kevin put into improving the governance of the Society and the program to survey priority species to confirm the level of threat was consistent with the level of priority given to them through legislated protection. Kevin's work for the Society also allowed it to establish a position on prescribed burning which has been included in this newsletter.

The end of 2021 was a busy period for the Society in many ways and it generally reflected as much the times we are in, as well as the increased activity within the Society.

The Management Committee has worked over the last 12 months to update the Society's Constitution, Bye Laws and Guidelines to reflect the changing requirements of



Kevin at the opening of the Armadale Branch 60th Anniversary festivities. Perhaps his last Society event. Photo Kim Sarti

legislation as well as changes within the way the Society operates. These documents are now available for members on the Society website (<https://www.wildflowersocietywa.org.au/members/wswa-governance/>).

The ongoing changes in COVID requirements are under constant review by the Management Committee and have been kept updated on the website. (<https://www.wildflowersocietywa.org.au/branches/>) Members are asked to make themselves aware of the requirements with respect to the Society's activities and take account of them when participating in functions and projects conducted by the Society or its Branches. Please be aware that these requirements are not decided by the Society but reflect those specified by the State Government.

From 1 January 2022, new workplace health and safety requirements have come into effect. While most Society activities currently address the revised requirements, Branches and project coordinators should be familiar with the requirements and make sure that the requirements are addressed in the registration and familiarisation of volunteers involved in the particular activity being carried out. A copy of the revised requirements is described at the Department of Mines, Industry Regulation and Safety website. (<https://www.dmirs.wa.gov.au/safety-regulation/main-responsibilities-and-duties-under-whs>)

## WILDFLOWER TOURS LESUEUR AREA



Joy and Don Williams will be conducting wildflower tours in the Lesueur, Alexander

Morrison, Coomallo, Badgingarra, Eneabba and 'Hi-Vallee' areas again this wildflower season.

All size groups; 1 to several days.

Explore with knowledgeable local guides. All interest groups – wildflowers, birdwatchers, nature lovers, photographers and bushwalkers – catered for.

Accommodation and transport can be arranged. Camping available.

Further information and bookings:

Ring Joy or Don on 08 9652 3035

Mob 0427 230 345 OR write to

'Hi-Vallee', Badgingarra WA 6521

E-mail: [hivallee@westnet.com.au](mailto:hivallee@westnet.com.au)

Year 2021 produced a bumper year for wildflowers and wildflower tourism. This was reflected in contributions to the Society's Facebook page with a multitude of contributions from members and the general public. The contributions continue because, as we know, wildflowers do still flower into the summer period. The Facebook page is a great way of communicating our appreciation of wildflowers to the broader community. A special mention is made to those members who assist members of the public in identification of plants that they photograph and wish to identify. Your provision of this service for the Society is greatly appreciated and increases the appreciation of our wildflowers by those seeking assistance. It also demonstrates the value of FloraBase (<https://florabase.dpaw.wa.gov.au/>) in assisting in the identification and understanding the flora of Western Australia.

In the last quarter of 2021 the Society had the opportunity to comment on two documents for which public comment was sought. The Department of Water and Environmental Regulation (DWER) released a draft Native Vegetation Policy for Western Australia which described the policy, strategies and actions

proposed to protect the native vegetation in Western Australia with particular focus on the Wheatbelt and Southwest. The second document related to fire as a key threatening process on which comment was sought by the Threatened Species Scientific Committee. The Society provided comment on both documents (see <https://www.wildflowersocietywa.org.au/conserve/role-of-the-conservation-subcommittee/>) with assistance from members of the Conservation Subcommittee.

The Society continues to push for a more focused effort on conservation of vegetation cover through the process of permitting clearing. The Society believes that approval to clear land is a privilege not a right and that applications to clear land should have to demonstrate why approval should be granted, rather than groups and individuals in the community, like the Society, having to demonstrate why approval should not be given (as is now the case). To this end, the Society achieved some coverage of its concern regarding extension of activities in the interpretation of exemptions under the Clearing Regulations to avoid the need to apply for clearing permits before carrying out clearing works. The issue has also been raised with the Director-General of DWER and the Society will continue to raise the issue when revisions of Clearing Regulations are proposed and any other opportunity arises. The Society is particularly concerned that clearing permit applications are currently accepted for assessment without an accompanying flora survey or an explanation of what opportunities to avoid, minimise, mitigate or offset the need to clear have been considered.

As some members are aware, many of the covenants applied through the Remnant Vegetation Protection Scheme 30 years ago, have, or are close to, reaching maturity. The Society has been advised that a key aspect of converting those covenants to a permanent covenant on the relevant land title is the need to have a formal land survey of the area to be covenanted. As a result, the Society is seeking funding assistance to be made available by the Government to assist landholders who wish to transfer those covenants and protect their remnants in perpetuity.

Lastly on a brighter note, the Society has welcomed the formal declaration of Dryandra as a National Park. This area, northwest of Narrogin has been the site for the successful reintroduction of a number of threatened species into the wild and is a fine example of the Wandoo woodland of the western Wheatbelt. We look forward to being able to appreciate its wildflowers (and little furry creatures) for many decades to come.

**Brett Loney Vice President**



A Wandoo (*Eucalyptus wandoo*) trunk in a Wandoo woodland. The bark is various shades of cream, grey, pink and amber. Photo Bronwen Keighery.



## 2022 Annual General Meeting Matters

The Society's Annual General Meeting (AGM) will be held on Saturday 25th June 2022. Whether this will be a face-to-face gathering or via teleconference is still to be decided. We will keep you informed of the arrangements.

**ALL Nominations and notices of motions MUST be sent to Honorary General Secretary of the Society by the dates underlined below at PO Box 519, Floreat 6014 OR [enquiry@wildflowersocietywa.org.au](mailto:enquiry@wildflowersocietywa.org.au).**

## Nominations for ALL Committees

YOUR SOCIETY NEEDS YOU to assist with its continuation and its future.

The Society's new Bye Laws Part 4, outline the requirement for a Management Committee of not less than six (6) nor more than twelve (12) ordinary committee members, one maybe two from each Branch would be fantastic. These positions are in addition to the President, Vice President, Treasurer and Secretary.

Any member who wishes to be considered for election to the committee at the annual general meeting must nominate for election by sending **written notice of the nomination** to the Secretary **at least 28 days before the annual general meeting (i.e. by Saturday 28 MAY 2022)**. The written notice must include a statement by another member in support of the nomination **OR you may also use** the separate Management Committee and Subcommittee nomination forms in this Newsletter.

## Notice of Motions

The Notice Convening the 2022 AGM will be included in the May 2022 edition of the Society's Newsletter. Please note that any motions to be dealt with at the AGM need to be included with the Notice Convening the AGM and should, therefore, be forwarded to the **Honorary General Secretary, Wildflower Society of WA (Inc.) by 17 MARCH 2022**.

## Nominations for Society Awards 2022

There are three categories of Awards presented at the Society's AGM. The **closing date for nominations is Tuesday 3 MAY 2022**. Please mark your nominations CONFIDENTIAL and forward them to the Honorary General Secretary. Members should consider resubmitting a previous nomination if it was unsuccessful.

### *Wildflower Society Award*

The criterion for this award is that the person or group should have advanced the aims of the Society. The recipient does not necessarily have to be a member of the Society but most are. Nominations should be no more than two pages long. Individual members and Branch Committees can nominate someone. A sub-committee of the Management



Committee is established specifically for this award after the deadline for nominations. None of this sub-committee's members can be nominators or potential recipients.

### ***Honorary Life Membership***

This award is not restricted to one member per year nor is it necessarily made annually. A member nominated for this award should have rendered special or meritorious service to the Society and must be nominated by a member of the Society. The Management Committee accepts or declines the nomination. Honorary Life Members do not pay the annual fee but are entitled to the benefits and privileges of an Individual Member. Nominations should not be more than one page in length.

### ***Meritorious Award***

Nominations for this award are made by Branches and are for services to the Society at a Branch level. The Management Committee accepts or declines the nomination. There is no restriction on the number of Meritorious Awards given each year, and Branches may nominate more than one member. **Kerry Smith, Honorary General Secretary**

## **Live Location–Albany**

Circle June 25 and 26 in your diaries and prepare to come for a winter retreat at the 2022 AGM and activity day in Albany. We have booked the Le Grande Motel for the Saturday meetings and dinner with the idea that doing it all in one place makes it simple for visitors. The accommodation at the motel is good. There is a caravan park, an Accord park called Albany Holiday Park, a few hundred metres back up the road (walking distance) with a wide range of self-contained accommodation, camping and van spaces. Both have websites.

Not all our plans are firmed up yet, (ideas welcome) but on Sunday we expect to be out at King River Hall and explore from there. That is also near two caravan parks if you favour them to stay in. Do consider booking well ahead as Albany has been rather popular. Winter might slow that down but best not to take chances. If you have trouble finding information about these locations feel free to email Sandra at [Torbaylaurelwood@bigpond.com](mailto:Torbaylaurelwood@bigpond.com). We look forward to seeing you all down here in the southland!!!

**Sandra Swain**

## **Public Liability Insurance events >one day &/or 500 patrons**

It is timely to remind program and event organisers on our insurance obligations, set out on page 17 of the Society Guidelines. The Society's Public Liability Insurance covers members and the public attending events on our premises.

The standard Public Liability policy covers:

- events and fundraising, where the daily attendance does not exceed 500 (note that this is the total for the entire event, not the number on the premises at any one time).
- Society-organised and supervised excursions limited to one day in duration and not requiring overnight stay.

Events where daily attendance is likely to exceed 500, and Society-organised excursions that go for more than one day (e.g., most plant surveys in regional areas, and

the State Conference/AGM in locations where overnight stays are likely) are not covered by default, but can be covered if the insurer is notified and may incur an additional premium (usually between \$90 and \$150); this should be taken into account when budgeting.

The Society Management Committee pays the annual insurance Public Liability insurance premium and has resolved that any additional premium applying to events/activities/excursions that exceed the policy limits and approved by the Insurer are paid by the committee, program, subcommittee, or branch conducting the event/activity/excursion.

**Robert Atkins, Hon. Treasurer**

## Fire and the Southwest Flora

In this Newsletter the Society publishes its Position Paper on prescribed burning (page 9), it will also be placed on the website. Article/s in the last Newsletter and this Newsletter include aspects of how each plant responds to fire. For this Newsletter the articles and/or photos (and their captions) are listed here to direct you to a number of aspects of plant fire responses in our Southwest bushland. Fire is an integral part of the landscape and environment of Western Australia, has been present for a very long time. Many plants can survive fire—Karri (page 12), Jarrah (pages 9, 11), Sheoak (page 9,11); or thrive for a number of seasons after fires—*Gyrostemon* species (photos, pages 10, centrefold), *Kennedia coccinea* (photo, pages 8, 9), *Scaevola macrophylla* (article page 18 & front cover); or thrive for just a year—*Austrostipa compressa* (page 35). Other species are fire-sensitive to varying degrees and must be protected from fires that are too hot, too frequent, and/or too extensive.

Reproductive strategies are highly variable. Below a number of important strategies are outlined.

### ***Obligate Reseeders***

These species regenerate from seed after fire, they do not resprout from a bulb, rhizome or lignotuber (perennating organ). As a consequence the time to maturity of the plant is very significant, as seed needs to be stored in the soil or on the plant (serotiny, see below) for future fire events. Examples include: *Banksia (Dryandra) sessilis* (article page 30); *Chamelaucium uncinatum* (article page 15); *Gyrostemon* species; *Kennedia coccinea*; and *Scaevola macrophylla*.

### ***Serotiny***

Seed is stored on the plant and is released after fire as well as on the death of the plant for other reasons. *Taxandria spathulata* is a serotinous obligate seeder (article page 41, photos centrefold & inside back cover).

### ***Resprouters***

These species can sprout/resprout from a bulb, rhizome or lignotuber (perennating organ) after fire. They will also reproduce from seed. Examples include: *Allocasuarina fraseriana* (Sheoak page 9,11); *Cephalotus follicularis* (inside front cover); *Eucalyptus marginata* (Jarrah pages 9, 11); and *Stirlingia latifolia* (photos, page 11).

**Bronwen Keighery**

## Wildflower Society of Western Australia (Inc) Position Paper: Prescribed burning and the sustainable management of ecosystems in Western Australia.

### *Background*

This position paper has been developed by a Wildflower Society of Western Australia (Inc.) (Society) Working Group established at the Society's State Council meeting in February 2020, which resolved:

“That the Society write a Position Paper on Planned Burning in the sustainable management of natural ecosystems in WA.”

This Position Paper provides the Society's considered view on prescribed burning and its impacts on sustainable management of natural vegetation in Western Australia.

### *Scope*

This Position Paper is relevant to Southwest Botanical Province of Western Australia including: Avon Wheatbelt; Coolgardie; Esperance Plains; Geraldton Sandplains; Jarrah Forest; Mallee; Swan Coastal Plain; Warren; and Yalgoo bioregions (see page 14 explanation of bioregions). Western Australia's Desert (arid lands) and the Kimberley botanical provinces are not considered here, as these areas have very different fire ecologies, issues and challenges.

All public and private lands within the area of interest are in scope, but the Position Paper focuses on public lands managed by government agencies.



*Allocasuarina fraseriana* (Sheoak) and *Eucalyptus marginata* (Jarrah) are here resprouting after a very hot fire. This fire began as a prescribed burn that burnt beyond its planned boundaries. A Jarrah has also died.

*Kennedia coccinea* grows rapidly from the soil stored seed. Photo Bronwen Keighery.



### ***The Society's Position***

1. The Society recognises that fire is an integral part of the landscape and environment of Western Australia, has been present, at varying frequencies, intensities, seasons and extent for a very long time, and is an important tool for managing the incidence, extent and severity of wildfire and the health and integrity of natural ecosystems.

2. The Society understands that many plants, animals and ecological communities in Western Australia can survive fire, in some cases thriving in the years immediately following fire, but also that many species are fire-sensitive to varying degrees and must be protected from fires that are too hot, too frequent, and/or too extensive.

3. The Society believes that a careful balance must be struck between protection of people, their communities, assets and property from wildfires on the one hand, and protection of the natural environment on the other.

4. The Society recognises that Aboriginal people used fire for tens of thousands of years, with profound impacts, for cultural reasons and to manage their environment, and that fire ecology in many areas has changed substantially since these practices were curtailed following European colonisation.

### ***The Society is concerned about the following current aspects of fire management in Western Australia.***

1. Prescribed burning as currently used in the Southwest of Western Australia is too blunt an instrument for the management of wildfire and protection of human and environmental assets.



This *Gyrostemon* (erect orange plant) germinated, grew and flowered after a very hot fire.  
Photo Bronwen Keighery.

2. Mandated annual targets that set the total area or proportion of areas to be burnt through prescribed burning, coupled with funding limitations for land and fire management agencies, create incentives that result in prescribed burning being over-used, poorly targeted, and inadequately managed.

3. Current ignition patterns often result in very intense prescribed burns that may compromise important biodiversity values over short, medium and long terms.

4. Insufficient research has been conducted in Western Australia to ensure that current prescribed burning regimes are a net positive rather than a net negative for natural ecosystems.

5. Some ecosystems have a feedback between prescribed burning and wildfire in which prescribed burning increases the overall flammability of the system, while other ecosystems may have the opposite feedback (with prescribed burning reducing the flammability of the system). The degree to which different ecosystems in Western Australia have positive or negative feedbacks is currently poorly understood.

6. Insufficient research has been conducted in Western



*Stirlingia latifolia* flowering after a very hot fire. Photo Bronwen Keighery.

Australia on interactions between prescribed burning and climate change, including drought, resulting in compounding damage from these stressors to natural ecosystems.

Recruitment failures of fire-affected species are likely if prescribed burning occurs during or immediately before serious drought, and this needs to be accounted for during fire planning.

7. Insufficient research has been conducted in Western Australia on ways to reduce weed invasion following prescribed burning and wildfire.

8. While some areas are burnt too frequently, other areas (particularly small and isolated nature reserves in the Wheatbelt) are burnt too infrequently, leading to senescent vegetation and loss of diversity.

9. Insufficient resources are currently made available for rapid-response, at-source fire suppression, particularly in remote areas. This should be used as the primary strategy for managing wildfire throughout the south-west of Western

Australia, with prescribed burning a secondary strategy where appropriate. Every large fire starts as a small fire, and resources should be adequate to detect and respond to these small fires before they become unmanageable.

10. Insufficient resources are currently made available for monitoring and maintaining reliable statistics on prescribed burning, including patch size, distance between patches of burnt and unburnt vegetation and fire intensity in burnt patches. 'Area burnt' is a poor indicator of the impact of prescribed burning.



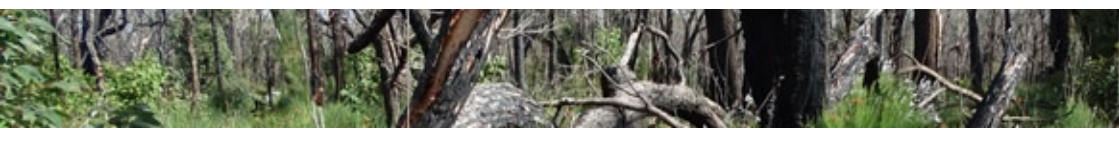
*Stirlingia latifolia* is synchronising mass flowering after a very hot fire that reduced each plant to its soil protected lignotuber/rhizome. Sheoak and Jarrah are here resprouting from after the fire. Photo Bronwen Keighery.



*Eucalyptus diversicolor* (Karri) shedding the protective thick bark after a very hot fire. Photo Bronwen Keighery.

***The Society recommends that:***

- i. research into positive and negative feedbacks of fire in Western Australian natural ecosystems be undertaken as a matter of urgency;
- ii. mandated targets for annual areas of prescribed burning be replaced by finer-scale targets, incorporating the protection of both assets and other infrastructure, and biodiversity;
- iii. all targets for prescribed burning take into account long-term seasonal weather forecasts, with prescribed burning not undertaken during or immediately after prolonged and serious droughts;
- iv. research into the impacts on biodiversity of intense prescribed burns be urgently undertaken;
- v. adequate resources be made available to build an effective rapid-response fire suppression capability throughout Western Australia (including in remote areas);
- vi. prescribed burning be used as a secondary rather than a primary management tool for controlling wildfires;
- vii. adequate resources be made available for collecting better data from every prescribed burn, as a basis for understanding changes in ecosystem health;
- viii. Indigenous communities be closely involved in co-design and co-implementation of fire management policies and practices in environments where they have maintained or can restore close links with country;
- ix. until conditions 1 to 8 are met, prescribed burning be scaled back in areas not immediately adjacent to sensitive built and natural assets, as a precautionary measure; and
- x. a formal, independent, science-based review of the prescribed burning regime currently applied in the Southwest Western Australia is urgently needed.





## Events 2022

Keep your eye on the website and Branch emails for notes as to when live meetings may resume.

### Branch Contacts and Meeting Details

**Albany** Dept. Biodiversity, Conservation & Attractions Conf. Room, 122 Albany Hwy, Albany.  
3<sup>rd</sup> Tuesday 7.30 pm PO Box 937, Albany, WA 6331  
Secretary: Wendy Minchin 9845 1220 ([albanyherb@outlook.com](mailto:albanyherb@outlook.com))

**Armadale** Environmental Centre Armadale Settlers Common Triton Crescent  
2<sup>nd</sup> Thursday 7.15 pm for 7.30 pm  
President: Roger Harington ([Armadale.Branch@wildflowersocietywa.org.au](mailto:Armadale.Branch@wildflowersocietywa.org.au))  
Secretary: Debbie Walker ([Armadale.Branch@wildflowersocietywa.org.au](mailto:Armadale.Branch@wildflowersocietywa.org.au))  
PO Box 859, Armadale WA 6992

**Darling Range** Old Guide Hall (Paxhill), 5 Sanderson Rd, Lesmurdie  
President: Lynda Tomlinson 0491605839 ([lkto555@gmail.com](mailto:lkto555@gmail.com))  
Secretary: Lynda Tomlinson 0491605839 ([lkto555@gmail.com](mailto:lkto555@gmail.com))

**Eastern Hills** Octagonal Hall, 52 McGlew Rd, Glen Forrest  
4<sup>th</sup> Friday 7.30 pm (winter 7 pm) for 8 pm PO Box 111, Glen Forest WA 6071  
President Penny Hussey; Secretary Janet Atkins ([eastern.hills.branch@wildflowersocietywa.org.au](mailto:eastern.hills.branch@wildflowersocietywa.org.au))

**Kulin** Herbarium, Resource Centre, Johnston St, Kulin  
1<sup>st</sup> Tuesday 12 noon PO Box 56, Kulin WA 6365  
Contact and Secretary: Robin Campbell ([robin.campbell@westnet.com.au](mailto:robin.campbell@westnet.com.au))

#### **Merredin**

Vice-president: Mal Harper 9041 1421 ([malharper@gmail.com](mailto:malharper@gmail.com))  
Secretary/Treasurer: Tracy Scott C/- PO Box 95 Nungarin WA 6490

**Murdoch Branch** Cockburn Wetlands Education Centre, Hope Rd, Bibra Lake 6163  
1<sup>st</sup> Thursday 7.30 pm for 7.45 pm  
President: Mathew Woods ([murdoch.branch@wildflowersocietywa.org.au](mailto:murdoch.branch@wildflowersocietywa.org.au))  
Secretary: Kim Dravnieks ([murdoch.secretary@wildflowersocietywa.org.au](mailto:murdoch.secretary@wildflowersocietywa.org.au))

**Northern Suburbs** Henderson Centre, Groat St, North Beach  
4<sup>th</sup> Tuesday 7.30 pm PO Box 25, Greenwood WA 6024  
President: Richard Curry 0408 923 610 ([randccurry@gmail.com](mailto:randccurry@gmail.com))  
Secretary: Christine Curry 0430 013 364 ([randccurry@gmail.com](mailto:randccurry@gmail.com))

**Perth** Subiaco Community Centre, Bagot Rd, Subiaco (just east of Rokeby Rd)  
2<sup>nd</sup> Tuesday 7.30 pm for 8 pm C/- PO Box 34, Melville WA 6956  
President: Graham Zemunik ([grah.zem@gmail.com](mailto:grah.zem@gmail.com))  
Secretary: Graham Zemunik ([perth.branch@wildflowersocietywa.org.au](mailto:perth.branch@wildflowersocietywa.org.au))

**South West Capes** President: Kay Lehman ([kaywinny@bigpond.net.au](mailto:kaywinny@bigpond.net.au))  
Secretary: Richard Clark 0427 385 551 ([samolus@westnet.com.au](mailto:samolus@westnet.com.au))  
PO Box 784, Dunsborough WA 6281

**York** President: Pat Mcgregor ([mcgregory@iinet.net.au](mailto:mcgregory@iinet.net.au))  
Secretary: Kathy Boladeras, 35 York Rd, Cold Harbour WA 6302  
email: [carlee@activ8.net.au](mailto:carlee@activ8.net.au)

## Bioregions and Provinces of Western Australia

Bioregions are large, geographically distinct areas of land with common characteristics such as geology, landform patterns, climate, ecological features and plant and animal communities. The bioregions as described in the interim Biogeographic Regionalisation for Australia (IBRA, the interim biogeographic regions are commonly called bioregions) are the National Reserve System's planning framework. IBRA is progressively updated as new scientific knowledge is acquired.

In Western Australia the boundaries of the IBRA regions are broadly compatible with the earlier Beard's phytogeographic regions and are grouped in three botanical provinces of Beard (Beard 1980).

The boundaries of the bioregions' are related to patterns seen in the plant and plant community biodiversity.

There are 25 bioregions grouped in 3 provinces.

### Northern or Kimberley

**Province:** Dampierland (DL); Northern Kimberley (NK); Ord-Victoria Plains (OVP); and Victoria Bonaparte (VB)

### Desert or Eremaean

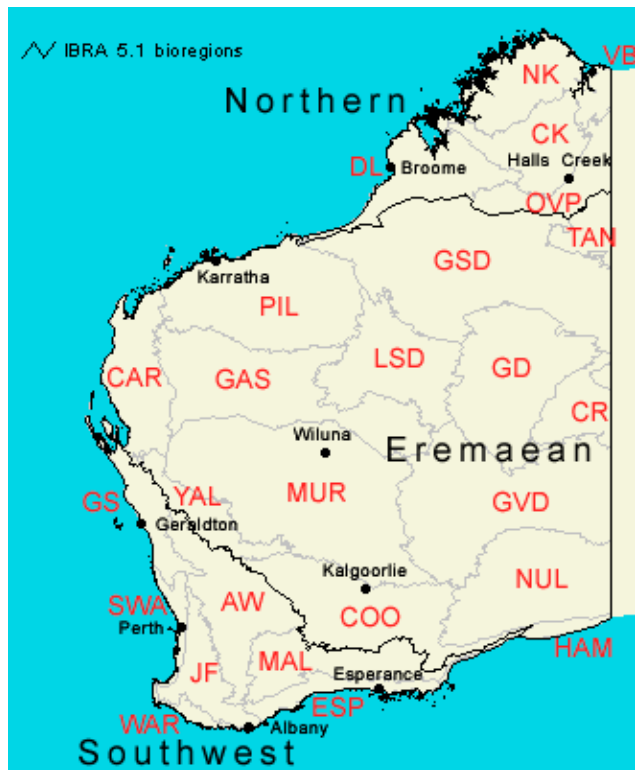
**Province:** Carnarvon (CAR); Central Ranges (CR); Gascoyne (GAS); Gibson Desert (GD); Great Sandy Desert (GSD); Great Victoria Desert (GVD); Hampton (HAM); Little Sandy Desert (LSD); Murchison (MUR); Nullarbor (NUL); Pilbara (PIL); and Tanami (TAN).

### Southwest Province

**(SW):** Avon Wheatbelt (AW); Coolgardie (COO) (placed here from Desert Province, plants most similar to SW); Esperance Plains (ESP); Geraldton Sandplains (GS); Jarrah Forest (JF); Mallee (MAL); Swan Coastal Plain (SWA); Warren (WAR); and Yalgoo (YAL) (placed here from Desert Province, plants most similar to SW).

Adapted from websites—<http://www.environment.gov.au/land/nrs/science/ibra/> and from old web site not connected anymore—[australias-bioregions-maps](http://australias-bioregions-maps); <https://florabase.dpaw.wa.gov.au/help/ibra/>

**Bronwen Keighry**





Flowers of a Geraldton Wax found growing naturally in bushland in Yurine Swamp Nature Reserve. Photo Bronwen Keighery.

on calcareous soils inland extending from north of Gingin to Watheroo, north of Moora.

There are two discrete subspecies; the restricted Kalbarri form (tall slender few branched shrub with large broad leaves, large terminal heads of flowers with strongly ribbed floral tubes) and the widespread southern form from Dongara to Perth, which contains numerous variants, including several isolated inland populations on dunes.

The species can be found as native populations in the Swan Coastal Plain and Geraldton Sandplains bioregions. However, because of its widespread



Native Geraldton Wax flowers and pollinating wasp, east of Cervantes. The wasps also visit weedy Wax. Photo Bronwen Keighery.

## Separating Native and Weedy Geraldton Wax Plants

Geraldton Wax (*Chamelaucium uncinatum*) is a widespread and variable species occurring in many discrete and overlapping populations along the coast between Kalbarri and Fremantle (see map below). The type collection was made on sandy hills near Fremantle, so perhaps the common name is misleading! There are also a few scattered populations

*Chamelaucium uncinatum*



cultivation and the ability to set many fruits, the species has established many weedy populations both within and outside the natural range on the Swan Coastal Plain, Jarrah Forest and Avon bioregions. The species invades natural plant communities, Banksia low woodland, Tuart tall woodland and Coastal Heath. The Herbarium has voucher records of weedy populations from: Wannamal; Bullsbrook Nature Reserve; Yanchep National Park Entrance; Burleigh Park, Chittering;





Weedy Geraldton Wax shrubs on the Dandaragan Plateau (subregion of the SWA bioregion). An abandoned Wax plantation is visible in the top right hand corner behind the fence. A range of different coloured Wax plants has seeded into the verge on a number of occasions. The spread has been magnified by a recent fire in the bushland verge that killed Wax plants. Both native and weedy Wax regrow from seed in large numbers after fires. Photo Bronwen Keighery.

Talbot Road Reserve, Shire of Swan; Woodvale Nature Reserve, Troy Avenue, Marmion; Blue Gum Lake and Wireless Hill, Applecross; Devil's Elbow, Peppermint Grove; Boomerang Walk, Kings Park, Perth; Shenton Bushland, Nedlands; Yalgorup National Park; one km N. of Quairading on Tammin Road; and Wambyrn Nature Reserve, W of York.

In the Perth region native Wax only grows on the Quindalup Dunes by the coast, hence any plants or populations away from this landform can be assumed to be cultivated or weedy. The only exception being in Nine Mile Lake Reserve, NW of Gingin where it grows on a calcareous dune over Muchea Limestone around Yurine Swamp (now called Nine Mile Swamp). The local form in Bold Park is referred to as Wembley Wax. This is the nearest remnant population to the

Two Wax sprays from Bold Park;  
LHS cultivated specimen; RHS  
native Wembley Wax. Photo  
Greg Keighery.



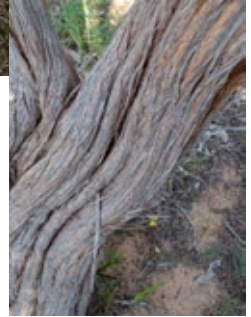
type, the next occurs north around Two Rocks.

Cultivated Wax plants in the Perth area have large often coloured flowers (pink, purple or white, see below LHS), which flower over a much longer period from winter through to late spring than the local form, which has pale pink flowers.

Plants that have seeded into bushland, vacant lots and road-verges revert to pale pink flowers (see below, upper RHS), but retain the lengthy flowering period. These plants have longer mature



A Geraldton Wax shrub in Yurine Swamp Nature Reserve. Shrubs can get very large as seen by the trunk pictured in the insert. Photo Bronwen Keighery.



leaves (30-40 mm) compared to 12-20 mm for the Wembley Wax in Bold Park. They also have very discrete gaps on the stem between the leaves. The Wembley Wax has small pale pink flowers (petals 4-5 mm long compared to 7-9 mm for the cultivated forms), with short leaves crowded at the ends of the branches (opposite, lower LHS and bottom RHS on opposite page). Geraldton Wax plants tend to be larger and less spreading than Wembley Wax plants.

Hybrids between Geraldton Wax and Clockwise from top LHS; *Chamelaucium* "purple pride"; reverted wild form of Geraldton Wax; Wembley Wax (note very crowded leaves and in late bud compared to weedy and cultivated forms); hybrid between Geraldton Wax and Wembley Wax from slopes above quarry; Geraldton Wax "Alba"—white cultivar. Photo Greg Keighery.





Wembley Wax have been found around the Quarry in Bold Park (central lower plant page 17, bottom LHS ). This illustrates the issues with non-local plantings both in gardens and in remnants with significant local provenance plants and unnatural disturbance in urban remnants.

**Greg Keighery**



## Large Flowered Scaevola

*Scaevola macrophylla* (Large Flowered Scaevola) is one of the highly localised and rare species from the Cape Riche area (opposite, as well as front cover, inside front cover). This is a truly beautiful plant with an interesting history linked to the Wildflower Society in a number of ways.

Described in 1854 as *Molkenboeria macrophylla* by de Vries from a Drummond collection, labelled as Swan River, New Holland, made in 1848. Then (fortunately for the pronunciation/spelling challenge) combined into *Scaevola* by George Bentham in his treatment of the family in *Flora Australiensis* in 1868.

An undated collection in Melbourne Herbarium was made from Cape Riche in the Nineteenth century. This species was then lost and presumed extinct until rediscovered at Cape Riche by long time Wildflower Society member Eileen Croxford in 1987 and again in 1990. Now in 2021 there have been two sightings after a planned burn!! The first in April was brought to the wider world's attention after a photographer placed a photo on the Wildflower Society's Facebook Page and Hazel Dempster (Eileen's daughter) identified it and it was brought to Sarah Barrett's attention at DBCA Albany ([abc.net.au/news/scaevola-macrophylla-wa-wildflower-near-albany/100091714](https://www.abc.net.au/news/scaevola-macrophylla-wa-wildflower-near-albany/100091714)). Then in October we saw the amazing plant on Sandalwood Road. Were they the same plant, who knows? With only four known sightings before this year it well illustrates how restricted some of our plants are. For us it demonstrated that searching for the thousands of plants in our bushland is best done by looking for: different habitats such as different rock and soil surfaces; wet, damp and dry areas; and regenerating burnt areas. AND stopping the car and walking along made tracks opens the plant world for you.

A reason for this long absence is that the species is both highly restricted in range to the Cape Riche area and appears to be a short-lived post fire specialist. Plants germinate profusely and will flower the spring after a summer fire (or earlier). They then survive for several years after until the surrounding vegetation outcompetes them. Then it will exist as seed in the soil between fires that may be up to 50 years apart.

The species is a Threatened species, ranked as critically endangered at both the State and Federal level and has had an interim management plan written for it in 2010 (Robyn Luu & Andrew Brown. (2010) *Scaevola macrophylla*; Interim Management Plan 306, Department and Environment and Conservation, Kensington).

This stunning plant would obviously make a contribution to any garden, with a base of large ovate lanceolate leaves, slender hairy stems to 70 cm tall bearing a crown of large blue and white flowers. It is closely related to the widely grown *Scaevola auriculata* from the Porongurups, but this is a spreading perennial. Probably grows well from seed treated with smoke water, in full sun and could be a striking bedding plant. There are many more plants out there possibly suitable for cultivation.

**Greg and Bronwen Keighery**

## Priority Flora Survey Project 2021 (ongoing)

The Department of Biodiversity, Conservation and Attractions (DBCA) maintains lists of Threatened and priority flora. Many Priority 1 or 2 flora species are poorly known and surveyed. The goal of the project is to perform sufficient survey of selected Priority 1 or 2 flora species (and other priority species) to determine if they should be listed as Threatened, or the priority status changed, with the survey of known populations and location of new populations.

This project is a much scaled-down version of the Rare Flora Search and Rescue project (2016–2018) that was managed by WWF in conjunction with the Society and the Department of Biodiversity, Conservation and Attractions (DBCA). The current Society project is funded by the Society and run in conjunction with DBCA.

In 2021 six priority listed species were surveyed. Jolanda Keeble oversaw the survey sessions and prepared the reports for the first five of these plants and Graham Zemunik performed these tasks for the last species. Jolanda organised the project's overall administration.



***Marianthus dryandra***—Conservation Code: P2 (LHS, photo by Jolanda Keeble)

A Factsheet for *Marianthus dryandra* was prepared to assist volunteers with identification in the field. The species was collected in the Dryandra State Forest on 19 October 1987 in *Eucalyptus accedens* (Powderbark) and *E. astringens* (Brown Mallet) woodland. An earlier survey by DBCA was unsuccessful in locating the plant. The areas surveyed consisted of open Mallet woodland with a sparse understorey. No plants have been found over several survey efforts at the type location, and no other plants have been seen both by DBCA staff and by this survey, it is likely that the species is rare and we recommend that additional surveys be done in other areas of brown mallet/wandoo woodland in Dryandra State Forest to ascertain if other plants may be present.

***Beyeria apiculata***—Conservation Code: P1 (RHS, photo by Joan Sharpe)

A Factsheet for *Beyeria apiculata* was prepared to assist volunteers from the WA Naturalists' Club with identification in the field. The species was known from 4 locations in the Wongan Hills area (FloraBase records). The species was known to occur on Mt O'Brien (private property) from the 2018 survey.





This current survey confirmed the lower boundary on the eastern slope of Mt O'Brien and found 2 additional locations for the species, one of which is within the Wongan Hills Nature Reserve and one is on private property. That is, the current number of known populations has increased to 6, with good-sized populations in Wongan Hills Nature Reserve and on Mt O'Brien. It is likely that the species might be found in similar habitat in the area, which additional surveys can confirm. The main risk to the populations is inappropriate fire regimes. It is recommended that *Beyeria apiculata* be changed from P1 to P3.

***Lechenaultia longiloba***—Conservation Code: P4 (opposite page, top LHS, photo by Alice Stubber)

A Factsheet for *Lechenaultia longiloba* was prepared to assist volunteers with identification in the field. The species occurs in the Geraldton Sandplains Bioregion and flowers between July and October. The goal for this survey was to establish if the species still occurs at known locations or has disappeared from there, and to survey additional habitat where it might occur. From the 6 known *L. longiloba* population locations, only 2 populations were relocated. The main population is confined to the Burma Road Nature Reserve. The surveyors found that although the other areas surveyed were suitable for *L. longiloba*, no plants were found. Comments were made about the weed infestations and long-unburned status of some of the localities. It is not shown that *L. longiloba* is a fire dependent species. *L. longiloba* is rather a disturbance opportunist species as it is confined to the tracks in the Burma Reserve, and along the roadside verge on Allanooka Springs Road. Suitable habitat in a 48 hectare area has been searched and found not to support other populations. The main threat to the species is increased fire risk and grading of tracks. It was recommended that the P4 listing be changed to P2 as the species is currently only known from 2 locations, one of which is in a Nature Reserve.

***Hibbertia sandifordiae***—Conservation Code: P1 (RHS, photo by Megan Lloyd, most of the petals have fallen)

A Factsheet for *Hibbertia sandifordiae* was prepared to assist volunteers with identification in the field. The species was originally recorded on a private property (2009) and later also found in the Denmark Catchment State Forest. A total of 5 populations were recorded by 2020. The species can be confused with *Hibbertia commutata*, *H. semipilosa* and *H. pilosa* that also occur in the area. The surveys recorded four new populations of *H. sandifordiae* in Jarrah/Sheoak Woodland over Banksia habitat in Denmark Catchment State Forest as well as one population in Mt Lindesay National Park. It is likely that further surveys in the wider area of similar habitat and sandy-gravelly soils will reveal new populations of this species. The species does not appear under imminent threat and suitable habitat can be readily found in the Southern Jarrah Forest Biogeographic Subregion. It was recommended that *Hibbertia sandifordiae* be changed from P1 to P3.





Above: A *Lechenaultia longiloba* from population four.  
Photo Alice Stubber.

RHS top: Searching for *Lechenaultia longiloba* in Burma Road Nature Reserve. Photo Megan Lloyd.

RHS below: planning the search for *Hibbertia sandifordiae*. Photo Megan Lloyd.

Below: *Isopogon* sp Canning Reservoir. Photo Lee Hassan.







## Bushland and fire in remote bushland with very few weedy species

RHS Holland Track (north of Hyden-Noresman Rd)—A hot fire killed the dominant Tamma (black sticks) and most of the ground flora (3 views above). The erect orange plants are *Gyrostemon ditrigynus* that comes up after fire. Plants live about five years, flowering, fruiting and dropping seed to wait in the soil till the next fire. Plants have female flowers (fruit middle top) and male flowers (middle below). They are wind pollinated and produce many anthers per male flower. The yellow bush is *Glischrocaryon flavescens* that has regrown from rhizomes; the mauve is *Cyanostegia angustifolia* and the blue is *Dampiera eriocephala*. The later two have grown from soil stored seed.

LHS Cape Riche bushland (article page 41)—top, through to bottom right hand corner recently burnt bushland with another orange *Gyrostemon* species (*G. sessilis*). Female (fruit) and male flowers are shown on the LHS and are arranged very differently to those of the other species. *Pimelea calcicola* (LHS centre) and *Goodenia scapigera* both regrown from seed. Unburnt bushland from the same area with *Lambertia inermis* (red), *Eucalyptus pleurocarpa* and *Taxandria spathulata* (white) and insert (RHS below LHS). Both *Lambertia* and *Taxandria* are reseeders.









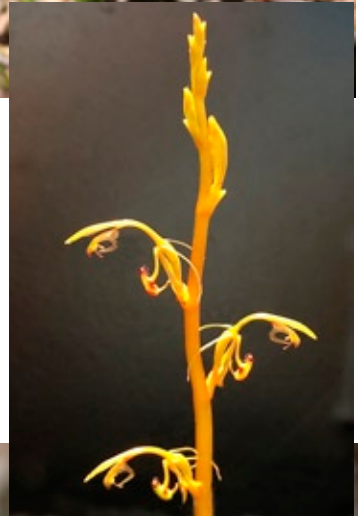
LHS top—Cousins Debbie Bettenay (kneeling) and June Slender alongside a Star Sun Orchid with buds.

RHS (top)—Star Sun Orchid in full flower.

RHS centre—*Spiculaea ciliata* in full flower, using water stored in its fat stem to survive in early summer and take advantage of the active pollinator. Photo Kim Sarti.

RHS bottom—A Bee Fly resting on *Calytrix* 'fruit'. Photo Kim Sarti.

LHS bottom—The same Bee Fly collecting nectar and pollen from a *Stylidium* flower. The Fly has a deposit of pollen on its abdomen. Photo Kim Sarti.



***Isopogon*** sp. Canning Reservoir–Conservation Code: P1 (RHS, photo by Lee Hassan)

A Factsheet for *Isopogon* sp. Canning Reservoir was prepared to assist volunteers with identification in the field.

The species is known from 2 locations in Jarrah, Marri and Sheoak open woodland. The species was recorded along the Brookton Highway and in the Dwellingup State Forrest. The survey was not completed due to heavy rainfall and will be continued in 2022.

***Acacia unguicula*** (Nyingarn Wattle)–Conservation Code: T (RHS, photo by Graham Zemunik)

*Acacia unguicula* is only found on Mt Singleton at Ningham Station. At the request of the Station Manager the Society surveyed this area to ascertain the current status of the species in the wild. Previous information indicated the species occurred in three populations (four subpopulations), with 77 mature plants (DEC 2008). Our survey recorded exact numbers of plants in most areas. In the patch to the east of the Mt Singleton summit not all individuals were counted and for some large patches the population size was estimated. Hence the total number of plants observed has a lower (494) and upper (525) estimate. Habitat type and soil substrates varied, but plants were more often found at the margins of York gum woodlands, where the soil transitioned from a clayey loam to a rocky-clayey loam (20–40% rock cover). Nonetheless, some plants were found in areas without any rock cover as well as areas with substantial (>75%) rock cover. It is recommended that the current listing be maintained as the species remains very restricted in distribution on a pastoral lease with the main threat being grazing impacts from goats. Goats are currently being controlled on the station.

**Jolanda Keeble, Graham Zemunik and Bronwen Keighery**



## Mapping Threatened Flora: Star Sun Orchid *Thelymitra stellata*

Since late October 2021 I have been involved in searching for the Star Sun Orchid *Thelymitra stellata* (photo opposite page), a Threatened Flora species (formerly known as Declared Rare Flora). Both searches were co-ordinated by Kimberlee Kucera from Department of Biodiversity, Conservation and Attractions (DBCA).

The search began in the Gosnells Regional Open Space with Rachel Fitzgerald from the City of Gosnells. As this reserve is contiguous with the City of Armadale's Canning Mills Road reserves, the search was extended into this area, to a site where the Star Sun Orchid had been recorded flowering on 4 November 2020 by Lee Hassan.

Sophie Xiang and Lee Hassan joined Debbie on the day along with June Slender (Debbie's cousin, photo opposite page), who lives opposite these reserves and walks there regularly. Kim was armed with detailed maps (GPS co-ordinates) and site markings

from three previous surveys in 2002, 2005 and 2007 – in all, five sites were surveyed. It was a difficult search, as non-flowering plants have palish green leaves, without identifying features, and several other *Thelymitra* species, including *T. crinita* (slightly rounder and higher up, purple at the base, ensheathing the stem). The Leopard Sun Orchid *T. benthamiana* and others co-habit here. In several areas there were NO confirmable sightings, despite a plethora of plants having been recorded previously. We had no details of the season to assist us. Had a burn happened? Had it been exceptionally wet? This habitat, under low shrubs and prickly *Dryandra (Banksia) sessilis*, over gravel (occasionally blue), is unattractive. This winter had been exceptionally wet and most other orchid species were having a bumper flowering season. At the site of last season's blooming, we probably identified the leaf.

As we were approaching despondency, a couple of plants with buds were located. Sophie's photo (page 24, top of page LHS) of Debbie with one discovery shows the difficulty of the 'needle in the haystack' task, even with GPS co-ordinates! These two plants were recorded in flower some two weeks later (page 24, top of page RHS). These plants are relatively close to a parking area off the road. Lee later located, recorded and mapped, a second plant in this general area.

Whilst checking the flowers with June later, we met, and liaised with, the team from Biologic, the professionals hired to confirm our sightings. Another leaf identified by this team later proved to be *T. benthamiana*.

A few days later we reconvened in Bungendore Park, being joined by Debbie Walker and Roger Harington. Again, no confirmable sightings were made, despite Lee's excellent recall of the spot where *T. stellata* flowered last year. Perhaps they do not flower every season.

Luckily, we hit the jackpot deeper in the Park. One plant was in flower (chewed sadly!), but we found at least two other flower stems in close proximity. Kim elected to place these plants in protective cages for future follow-up as they are remote. On later date, Kim, assisted by Armadale's Bushcare crew located some plants flowering in another site. These too are now protected but I am unable to confirm if any of the plants set seed.

The Canning Mills populations are close to a busy thoroughfare road and the bush here needs burning so we must watch closely how this is managed. Plants were located during the searches so they still exist in these areas. However, compared to historical records, the number of plants would appear to be substantially reduced. **Debbie Bettenay.**

## Stinton Cascades in High Summer

Kim Sarti reminded me that we are needing photographic records for a forthcoming pamphlet on orchids, and that he needed photos of Elbow Orchid *Spiculaea ciliata* (photo page 24) which flowers in November-December. With the onset of hot weather, I generally do not venture up to the rocky outcrop above my house. However, I soldiered up to check one hot evening. The *Borya* and *Drosera gigantea* were brown and crackly crisp but the Elbow Orchid was resplendent, and present in large numbers. I notified Kim and we arranged an early morning venture as 38°C heat was forecast; even at 8:30 am the trip was unpleasant. *Verticordia huegelii* (see top opposite page) and *Verticordia pennigera* were blooming with *Calytrix depressa* fading.



We dropped to our knees amongst the ants and spines to photo spindly *Spiculaea*, all up some 12 cm tall. By the time it commences flowering the leaf is brown and desiccated, the stem, which becomes broader as it ascends, holds water and nourishes the bizarrely-shaped flowers, which are insect-like and are pollinated by male wasps lured by pheromones. The flowers were perfect and draped with fine cobweb silk.

With Kim almost prostrate I wandered off, soon noticing an unusual pollinator zooming between the *Stylidium* flowers (photo page 24). It was about 2 cm long, brilliantly turquoise on the thorax, with white-tipped wings which resembled helicopter rotors in flight. It buzzed audibly and flew fast and had large laterally placed eyes with very short antennae.

With Kim now upright and stabilised on his feet the insect obligingly paused on *Calytrix* and he was able to get photos that Jean Hort later identified as a Bee Fly *Comptosia decedens* (photos page 24). In Kim's photo, the bee's hairy bluish body covered in pollen can be seen with its proboscis in *Stylidium* aff. *repens* which it was almost exclusively visiting (page 26). Lee Hassan has since identified it as an unnamed species *Stylidium* sp. 'Boulder Rock'. What a shame that we had missed the great pollinator count!

We wilted under the harsh sun, but a couple of special natives had "made our day"!

**Debbie Bettenay**

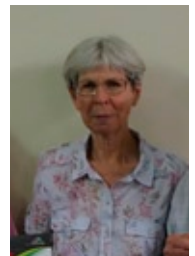
## Murdoch Branch

At our October meeting Paula Lourie gave us an update on Samson Park, Fremantle's Secret Gem, which is benefitting from a very active Friends' Group. In November Alex George, our Patron, spoke on Emily Pelloe's book *Wildflowers of Western Australia*, published in 1921. This was the first popular book of our wildflowers and was beautifully illustrated with her own paintings and drawings (see Society Newsletter November 2021). A revelation to many of us

at the meeting.

The December AGM saw Mathew Woods returned as President, Kim Dravnieks as Secretary and Felicity Bairstow as Treasurer. Other Committee members are Diana Corbyn, Michael Davies, Christine Polmear and, new recruit, Lanie Cottam. We thanked retiring member Ross Young, Marri Leaf editor for the past year. Following the AGM Sophie Xiang and Eddy Wajon showed us some wonderful wildflower photographs.

Our Christmas windup was a walk in Harrisdale Swamp, Bush





Forever Site 253, in the northern part of Jandakot Regional Park. Debbie Walker (photo page 27 & 38) from the Armadale Branch was our guide and we really appreciated her maps and flora list and in depth knowledge. We were surprised to see so much in flower. Some that caught our eye in the *Banksia* woodland were *Pimelea angustifolia*, *Verticordia drummondii* and *Arnocrinum preissii* (photo right). In the damper areas *Stylidium utricularioides*, *Siloxerus*



Tiny annual *Siloxerus humifusus*. Photo Bronwen Keighery.

*humifusus* (photo left) and *Thysanotus arbuscula* stood out. Blue Banded Bees were much in evidence and seemed

to favour mauve flowers. We followed the walk with brunch at the Timber Cafe, a pleasant end to the year.

**Mathew Woods**



Hardy perennial *Arnocrinum preissii* flower. Photo Bronwen Keighery.

## Northern Suburbs

Northern Suburbs branch is cautiously launching into 2022, as we wait to see what COVID has in store for us all over this year. Guest speakers for the monthly members' meetings will be arranged just a few months ahead for the moment, but the weekly guided walks through various bushlands in the Northern Suburbs will continue. Details of these activities are on the Society website. The branch Nursery at Landsdale Farm remains open on Thursdays and Saturdays, with volunteers still hard at work learning and experimenting with growing new species and busy propagating stock for the **annual April Plant Sale on Saturday 23 April**.

Overall, 2021 proved to be a very successful year. Two plant sales were well attended by many people interested in adding to or beginning their native garden. Three local schools benefited from grants to establish or add to native garden areas in their schools and Northern Suburbs nursery was very pleased to assist with the provision of suitable plants and to provide expert advice from our volunteers. Feedback has been that these garden areas are doing well.

The 2021 guest speaker program wound up with a couple of different but very interesting speakers. In October, taxonomist Kelly Shepherd from the WA Herbarium took us into the complexities of Family Goodeniaceae and her DNA work over the past decade on unravelling the more than 420 species across 12 genera. DNA research has resulted in a tree with 3 major *Goodenia* clades – A, B and C - with some sub-clades, and those wanting to delve in can find detailed information, through a google-search, on Kelly's research work. In November, John Viska from the Australian Garden History Society introduced us to the use of West Australian and Australian native plants in early colonial



*Nuytsia floribunda* flowers.  
Photo Bronwen Keighery.

gardens in and around Perth. John told us about the interest in Australian plants in 19th century Britain, including propagation of Marri (*Corymbia calophylla*) at Kew Gardens from seed collected by Georgiana Molloy at Augusta. Local 19th century magazine illustrations and paintings, as well as diary entries from the early colony settlement, show gardens where *Nuytsia floribunda* (photo left) and other local trees had been retained in garden design. Plants advertised for sale included Snakebush (*Hemiandra pungens*) and Native Hibiscus (*Alogyne huegelii*), lighting the way for later landscape architects like Marion Blackwell to feature WA plants in garden designs and for our

own Northern Suburbs nursery to contribute to the interest in growing West Australian plants.

**Christine Curry, Secretary**



## Perth Branch—Honor Venning Library Update

It has been a while since I last reported on the library and yes, I am still its Honorary Librarian. I guess it is in my genes that I do enjoy the organising, cataloguing and referencing of the library's stock. And for the moment and whilst the COVID situation has settled in WA I have returned to taking books and other library information on the topic of each meeting to the Perth Branch meetings as it is Perth Branch that supports the library and its collection. I have to confess I wonder for how much longer I will be able to attend the

meetings in this way as who knows how COVID will hit us once the borders open.

The Library's catalogue is available on the Society's website as a very large excel spreadsheet so if you, like some of our members in recent times, have trouble locating the title/topic you seek then please email me here at the Society Office ([enquiry@wildflowersocietywa.org.au](mailto:enquiry@wildflowersocietywa.org.au)) and I will see what I can do to assist.

The Library collection continues to grow, sadly some items from member deceased estates and as some of you would know, some of our Branches also have their own library collections that are augmented by those items that we already hold in the Honor Venning collection. I keep a growing list of member requests for out of print items when they cannot be fulfilled from the second hand stock available and the second hand booklist is also on the website. Interestingly some new members who have popped into the Office recently have been most interested in both the library and the second hand books. Reference access to the Library is available to members and non-members on Tuesdays and Thursdays when the WSWA Office is open and on the first Saturday afternoon of each month from 1 - 3 pm, except January. Borrowing library items is available to WSWA members only. **Kerry Smith, Honorary Librarian, January 2022**

## Perth Branch—Not just for Cockies

A recent paper on Parrot Bush *Banksia (Dryandra) sessilis* (Heidi Nistelberger, Sarah Tapper, David Coates, Shelley McArthur and Margaret Byrne. As old as the hills; Pliocene Palaeogeography processes influence patterning of genetic structure in the widespread common shrub *Banksia sessilis*) was the background to a presentation at Perth Branch by Heidi. This was such an interesting result for a common and “typical” shrub of the Southwest that a longer précis is given here.



Three Carnaby's Black Cockatoos in *Banksia sessilis* var. *cygnorum* Neerabup. Photo Bronwen Keighery.

*Banksia sessilis* var. *sessilis* flowers and leaves in Perth's Jarrah Forest. Leaves are broad and blue-green. Photo Bronwen Keighery.



The paper looked at the chloroplast (always inherited from the mother) and nuclear DNA of *Banksia (Dryandra) sessilis*. The chloroplast DNA found 2 major groups were present; one on lateritic uplands (var. *sessilis* photo opposite & page 31 bottom & var. *flabellifolia*) and the other on coastal limestones and sands (var. *cygnorum* photo above & page 31, top) & var. *cordatum*), with separation of these groups occurring approximately 3 million years ago!

Nuclear DNA found 3 major groups: one on the laterites of the Darling Plateau; one southern coastal sites; and the other on northern coastal sites. There was some mixture along the Darling Scarp, not unexpected, as there are mixtures of the varieties *cygnorum* and *sessilis* on the Ridge Hill Shelf and along rivers in the Perth area.





*Banksia sessilis* var. *cygnorum* flowers and leaves in Mosman Park. Leaves are narrow and deep green. Photo Bronwen Keighery.

and limestones about 3 million years ago, about the time the Swan Coastal Plain bioregion was forming. In summary the genetics suggested that two major groups, ?subspecies could be found, correlated with geomorphologies, with more recent separation based on climate.

This study supports the concern that the distinct forms (often unnamed) of many widespread species (e.g.: *Acacia pulchella*, *Philotheca spicata* etc. etc.) found on the Plain could be relatively old and distinct. The precautionary principal suggests that these should be treated as very distinct entities for regeneration and conservation purposes and not indiscriminately lumped under a widespread species making them of “little concern”.

**Greg Keighery**



*Banksia sessilis* var. *sessilis* from an eastern isolated population at Yorkrakine Rock. Photo Bronwen Keighery.

Genetic data suggests that presence on tertiary laterites probably came first (the data suggesting that the northern var. *flabellifolia* may be the oldest form) then spreading to sands



*Banksia sessilis* var. *cygnorum* plants on the Swan Estuary in Mosman Park. Photo Bronwen Keighery.







*Themeda triandra* flowering stems. Photo Alex George.

## Two grasses for year-round display

Like many plants, most grasses have a particular flowering season and for the rest of the year show only their leaves (or die down, to await the next growing season). Many, of course are annual. Here we have some



*Themeda triandra* flowers  
Photo Alex George.

perennial species that display all year round, their flowers persisting for some time as they go to seed and looking little different from the flowering stage. Two grasses that are particularly good in my garden in Kardinya are Lemon Grass, *Cymbopogon oblectus*, and Kangaroo Grass, *Themeda triandra* above & right). Both form small clumps. Lemon Grass has flowering stems up to 70 cm tall with a fairly tight panicle of fluffy flowers. Kangaroo Grass can be variable in habit. Mine have slender flowering stems to 1 metre tall that wave gracefully in the breeze, the flowers retaining their rusty colour for many weeks.

Once established, neither species requires summer watering. If there's a good shower of rain they produce new flower stems. Mine also self-sow, although, curiously, I find them difficult to transplant.

Very old stems may be cut individually, but if a clump becomes untidy, e.g. with old leaves, then it may be trimmed almost to ground level and within a short time will produce new leaves and then flowers.

*Austrostipa elegantissima* seed mass.  
Photo Alex George.



Feather Speargrass, *Austrostipa elegantissima* (opposite & page 32 bottom RHS) also produces its fuzzy flowers from spring to mid-summer but they then break off and drift away, sometimes high on a breeze. It also self-sows around the garden. It will grow as a clump or, if there is nearby support, will scramble up to 2 metres.

**Alex George** *Austrostipa elegantissima* detail seed head. Photo Alex George.



## 2021 Western Australian Landcare Awards

Two Society members received awards at a November 2021 event in Kalamunda.

### **Australian Government Individual Landcarer Award: Margaret Moir.**

Dedicated conservation and environmental champion Margaret Moir has been recognised for almost three decades of work and leadership. Margaret is been active in weed identification and management. Through her work in the Southwest, Margaret River area resident Margaret was instrumental in development of the first workshops on river restoration and best practice property management. She was the inaugural President of the



Brian Moyle, Margaret Moir and Shirley Fischer at a Southwest Capes Branch meeting when Margaret was President of the branch. Photo Richard Clarke.

Cape to Cape Catchments Group and has served on a number of committees representing the environment, and was responsible for obtaining a National Heritage Trust grant with matching funds from the AMR Shire to produce the Cape to Cape Landcare companion. A 20-year war on invasive plants and pests such as foxes, around Margaret River as a volunteer working in conjunction with the local shire council and Nature Conservation Margaret River Region.

### **Australian Government Landcare Farming Award: Sylvia Leighton and Peter McKenzie.**

Botanist, conservationist, TAFE lecturer and land management educator Sylvia Leighton and Wilyun Pools farm partner Peter McKenzie, who has a farm forestry and agriculture background. They have sought to balance farming and conservation values in restoring their 1214 hectare property at Wellstead that was cleared for agriculture in the 1960s by Ms Leighton's family.

**Adapted by Bronwen Keighery from Landcare website and web sourced newspaper articles.**

## Conservation Subcommittee

Dr Fiamma Riviera joined the Wildflower Society in late October to fill the role of Project Officer to the Conservation Subcommittee following Graham Zemunik taking up full-time employment. We thank Graham for his contribution in that role, but he is not lost to us as he remains as a member of the Subcommittee and continues his services to the Society's office and the Perth Branch.

The Subcommittee continues to focus its effort on comments and appeals associated with applications for clearing permits and review of projects referred to the EPA. While we rarely succeed in having permit applications refused, our comments and appeals do influence changes in the area cleared and the conditions applied to clearing permits. Our comments on levels of assessment for proposals referred to the EPA may have influenced the level of assessment for projects referred but our effect here is harder to judge.

The Subcommittee is also seeking any information regarding road verge clearing that is being carried out in their area, with accompanying pictures and dates if possible. The Subcommittee wishes to determine the extent of clearing being carried out by Local Governments within the exemptions provided in the Clearing Regulations from information gained.



Excellent road verge preservation along the Holland Track. Photo Bronwen Keighery.

The rising issue of the establishment of mountain bike trails in A-class reserves continues to gain momentum with the funding of these works by the State Government. Currently the Subcommittee is working with local community groups in Cockburn, York and the Porongurups to assist them in their negotiations with their respective local governments and the Department of Biodiversity Conservation and Attractions regarding planned trails in their areas. The Society has also appealed the approval of clearing permits for clearing permits in Albany and Mount Barker. The Subcommittee has also drafted a Position Statement on Mountain Bike Trails for consideration by the Management Committee in the near future. Any comments on this issue can be directed to the Society's office by email ([enquiry@wildflowersocietywa.org.au](mailto:enquiry@wildflowersocietywa.org.au)) for consideration by the Subcommittee.



The Subcommittee has been following the progress with the development of the Yule Brook Regional Park and tracking clearing that is occurring within the area proposed for inclusion in the park. The clearing has been occurring within the buffer of the Alison Baird Reserve (photo below). Representations to DWER regarding the clearing have not borne fruit to date.



*Banksia* woodland in the Alison Baird Reserve after a very hot fire. A series of hot fires have reduced the *Banksia* canopy. The grass is the annual *Austrostipa compressa*. After fire all the seed in the soil germinates for one of the few grasslands found on the Swan Coastal Plain. The white headed plants are the weed *Ursinia anthemoides*, many annual weeds are favoured by frequent fire. These weeds can then create a fire hazard. The proposal for the Yule Brook Regional Park is needed to better protect and manage this fantastic area. Photo Bronwen Keighery.

The Subcommittee has been working up a position paper on protection of native vegetation and a strategy to seek its support from other like minded conservation groups, and the community more broadly. Progress with this strategy will be reported in future additions as it is developed.

Lastly, members of the Albany Branch have, finally, been consulted by Main Roads over issues they have raised associated with the Albany Ring Road development. Interestingly, it took the lodgement of an appeal against the granting of a clearing permit to get Main Roads to the table to discuss the issues.

**Brett Loney**

## Bushland Plant Survey project

The bushland plant survey project Wednesday volunteers celebrated the end of the year with a lunch at Secret Garden in South Perth (photo below).



Christmas lunch for Wednesday group anticlockwise from right—Brian, Margaret, Glenn, Jolanda, Alan's spot, Mel, Geoff, Wendy, Margaret, Bill, Hazel, Alison, Bronwen and Greg. Alan took the photo.

It has been a busy year with several bushland surveys carried out: Greenhills, a private property near York; the Wooroloo prison bushland; and Rosehill Farm in Dongolocking. The first half of this year was taken up finalising the plant IDs from surveys carried out in 2020, databasing this information, preparing plant labels, mounting specimens, making a field herbarium and organising that the plant specimens from previous surveys were moved to the regional herbaria.

We have also finalised reporting on two large projects: a remote location in Hamelin Station (Shark Bay) for Bush Heritage the longest running of the two; and a funded project for the Wheatbelt NRM on baseline data for areas of Eucalypt woodland in the Wheatbelt. The summary from the report is given below.

“Wheatbelt NRM contracted the Plant Survey Program of the Wildflower Society of WA to survey woodland patches on private property as baseline for monitoring vegetation changes in the short, medium and long term due to management interventions such as fencing, weed control and feral animal control.

Twenty-four quadrats were surveyed on 8 properties in 6 shires. Eight days of survey by 15 WSWA survey participants and 4 NRM survey participants produced 747 records of flora & biological soil crust (not fauna), 236 fauna records and a total of 244 taxa with 10 species of *Eucalyptus* trees, 6 mallees, 45 shrubs, 3 sedges, 25 grasses and 145 herbs. There was one priority species, *Eucalyptus erythronema* subsp. *inornata* (P3), and 48 species not native to WA. Based on tree cover and size, 21 out of the 24 quadrats could be classified as the Eucalypt Woodlands of the Western Australian Wheatbelt threatened ecological community (TEC).”

The work in the Wheatbelt woodlands was supported in the field by Plant Survey

volunteers: Graham Zemunik, Vanda Longman, Margaret Larke, Alison Bunker, Alice Stubber, Audrey Sole, Jenny Kikeros, Vanessa Clarke, Anne Rick, Greg Keighery, Georgina Lambert, Bronwen Keighery, Deb Archer, Judith Harvey, Jolanda Keeble and UWA students; and on Wednesday in the Herbarium Cyril Kelly, Kaye Kelly, Mel Baister, Margaret Langley, Hazel Dempster, Glenn Cook and Geoff Corrick. Judith Harvey, Vanda Longman, Greg Keighery and Anne Rick were employed on the project. Greg donated his project income to the Plant Survey program's ongoing work.

Early this year we will be buying some new equipment to assist our Wednesday volunteers with identifying plants as we have been successful in obtaining money through a grant application from the Australian Government Community Grants Hub.

### **Bronwen Keighery and Jolanda Keeble**



#### **and from Jolanda Keeble**

It was my first year as survey coordinator and a steep learning curve made easier with the help of the survey committee members. In particular Judith Harvey and Margaret Langley have been invaluable in assisting me in this role. I am looking forward to continuing this role next year, and keep learning new skills.

## **Armadale Community Citizen of the Year 2021 Award**

At a ceremony hosted by the City of Armadale on Australia Day 2022, Roger Harington was amongst the finalists for the Senior Community Citizen of the Year for 2021 for Armadale.

Whilst Roger did not win the award, both he and fellow Armadale Branch members were really pleased that he had been nominated for his active citizenship and outstanding contribution to community.

Roger has demonstrated active commitment and involvement in local bushcare and environmental groups including:

- Armadale Branch, Wildflower Society of WA – from being a branch member, Roger was elected President in 2017 – a position he currently holds.
- Armadale Settlers' Common Working Group – which involves the management and protection of this large reserve (approx. 383 hectares) in Bedforddale.

- Armadale Environmental Centre Management Committee – the Environmental Centre is the home of all community-based environmental groups and reserve custodians in the City of Armadale that use the buildings at the centre for meetings, displays and conduct training sessions.

- Armadale Bushcare and Environmental Working Group – which is an umbrella group of environmental and bushcare groups within the City of Armadale. Roger provides





a link between the groups he represents relating to environmental awareness and the protection and rehabilitation of the natural environment within the city.

- Landcare SJ – Roger is an active board member of this Serpentine-Jarrahdale group that conducts field days, workshops and training for sustainable agriculture as well as conservation and restoration of habitats for native flora and fauna.

Roger has shown initiative over the years in a wide range of volunteer pursuits with a positive approach and actions. He is always ready to be involved in any area that he believes needs support. Totally committed to whatever organisation he belongs, Roger has gained well-deserved respect in the community. Roger's leadership and passion has had a profound impact in his endeavours, in particular to our unique and precious bushland environment and Armadale Branch members congratulate him on his achievement.

## Armadale Active Citizenship (Group or Event) Awards

At a ceremony hosted by the City of Armadale on Australia Day 2022, the Armadale Branch was amongst the finalists for the Active Citizenship (Group or Event) Award of the Year for 2021.



From left Roger Harington, Sue Radford, Debbie Walker and Kim Fletcher accepting their Branch award.

The branch's active citizenship involvement and outstanding contribution to community was recognised through it being awarded the Active Citizenship (Group or Event) Award for the Year. Branch president, Roger Harington, accepted the award on behalf of the branch, which was presented by the Armadale Mayor, Cr Ruth Butterfield.

Formed some 60 years ago, the Armadale Branch operates under the Wildflower Society of WA's four ideals of Knowing, Growing, Conserving and Enjoying our Western Australian flora.

Armadale Branch is well known for promoting the value of our natural bushland

and associated conservation issues, and for conducting events that are well organised. Community engagement in displays at shopping centres, local community markets, exhibitions and local schools enable branch members to share their knowledge and passion for WA's wildflowers and raise environmental awareness.

Branch members have demonstrated active citizenship through their participation with like-minded community groups in the revegetation and protection of the natural environment within Armadale city. Many members serve on these community-based environmental groups or are Reserve Custodians of a small neighbourhood bush reserve to assist the City of Armadale's bush crew.

On 28th March 2021, 60 years to the day of the branch's formation, a celebratory tree planting took place at the Armadale Environmental Centre. Six trees of local species were planted, one for each decade. Armadale Mayor Cr Butterfield, planted the first tree. The second tree was jointly planted by family members of inaugural president Rev. Ewan Watts. The third tree was planted by inaugural members Irene and Michael Morcombe and the fourth tree was planted by Roger Harington, current branch president. The fifth and sixth trees were planted by student representatives from Armadale Primary School and Pioneer Village Primary School. In September the 60th Anniversary exhibition of wildflower art, photography and other artworks was held in the Armadale District Hall. To complete the experience for those attending, other events and activities such as bushwalks, talks and entertainment were included over the weekend.

The effects of exposure to nature are well documented – from increasing happiness and physical health to lowering stress. The public bushwalks conducted by the branch provide participants with opportunities to get out and enjoy the wonderful beauty of Western Australia's unique wildflowers. These outdoor activities benefit a range of areas affecting public health and social wellbeing and by making people feel better emotionally, it enhances the community life of Armadale.

Branch activities and events continue to raise the awareness of the importance of the conservation and good management of our remaining unique bushland heritage.

**Both articles and photos from Kim Sarti**



## **COVID Preparation for Branch Meetings 2022**

### **Management Committee Briefing Note: COVID Preparation for 31st January 2022**

ISSUE: The WA Border relaxes in 2022. The WA Government will mandate certain restrictions to mitigate the spread of the virus. Inevitably some of these will apply to "public indoor places" Wildflower Society events and premises may or may not come under the definition of places where restriction would apply.

So far, the list of venues, that proof of vaccination is mandated for, is compiled by the Government and it specifies certain types of venues that have high numbers of

visitors. We do not fit this category as we have low numbers. If we decide to ask for proof of vaccination, without it being mandated for our business, then we must consider discrimination and other laws. See.... <https://humanrights.gov.au/about/covid19-and-human-rights/covid-19-vaccinations-and-federal-discrimination-law>. Given that companies such as Woodside, Rio Tinto and BHP have mandated vaccination proof for their offices, although not mandated by the Government to do so, I think the discussion over whether we can or not, is unnecessary.

The Society hold indoor functions at a variety of venues across the State with usually low numbers which can however be within reasonably confined spaces. While the membership covers all adult demographics it tends to bias to the “senior” end of the scale and therefore the more vulnerable.

Mask wearing in all indoor public venues in the Perth, Peel and Southwest regions is currently mandatory and, in my opinion, likely to remain the case in these regions and extend state-wide for many months to come, so this is not a point of decision making for the Society at this time.

#### OPTIONS CONSIDERED:

1. Mandate that all people who attend the premises for talks, research, and volunteering, show proof of double vaccination.
2. Commence the proof of double vaccination from Monday 31st January.
3. For those that are vaccination exempt they must show a certificate to that effect EVERY time they attend our premises [Medical vaccination exemption certificates can have expiry dates] AND wear a mask.

## Quaalup Homestead 1858



### Wilderness Retreat Your perfect place to stay in the Fitzgerald River National Park

With over 1800 plant species, including some rare or endemic species like the Qualup Bell and *Hakea victoria*, abundant birdlife, famous Point Ann beach with its Southern Right Whale Nursery and the beautiful scenery of heathland and mountain ranges, this National Park is really worth a visit.

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The Society would adhere to any Government mandate that is stricter or additional to these provisions.

**RECOMMENDATION:**

That WSWA implements the following:

1. Mandate that all people who attend the premises for talks, research, and volunteering, show proof of double vaccination.

2. Commence the proof of double vaccination from Monday 31st January.

3. For those that are vaccination exempt they must show a certificate to that effect EVERY time they attend our premises [Medical vaccination exemption certificates can have expiry dates] AND wear a mask.

Note: The Society adheres to any Government mandate that is stricter or additional to these provisions.

**Robert Atkins, Hon. Treasurer**  
**18 January 2022**

## Spring at Cape Riche



An compact-headed pale blue variant of *Scaevola crassifolia*. The weedy White Cabbage Butterfly was collecting nectar from the flowers. Photo Bronwen Keighery.

The Cape Riche Bushland is well worth exploring (map inside back cover). There are two sign-posted walk trails about half a kilometre before the end of the main entrance road that are a delightful spring walk (inside back cover). The Coastal Cliff Top Trail showcases both unusual and widespread south coast species and communities (photos opposite, page 41 & inside back cover). Along the Coastal Cliff Top Trail you can see the rare State priority listed ecological community *Taxandria spathulata* Heath. This community is an open heath dominated by

*Taxandria spathulata*, with a sedgeland that includes *Schoenus* sp. Cape Riche Cushion and *Mesomelaena stygia* on clay loam overlying spongolitic plains. The community is vulnerable to inappropriate fire regimes with *Taxandria spathulata* being a serotinous



A view of the Coastal Cliff Top Trail over unburnt heath. Insert: A view from the beach towards the heath on the Coastal Cliff Top Trail (in direction longer yellow arrow on map page 45) . Photos Bronwen Keighery.

obligate seeder. This community (photo above) is a component of the ‘Proteaceae Dominated Kwongkan Shrublands of the Southeast Coastal Floristic Province of Western Australia’ EPBC Listed TEC.



Left: Spectacular *Goodenia scapigera* plant growing on the road verge. The smoke from an adjacent fire appears to have stimulated soil stored seed to germinate. The plants are large and floriferous with the extra light, water and nutrients in the road verge. Above detail of a flower. Photos Bronwen Keighery.



## Coates Wildlife Tours

**Specialists in Nature Tours since 1986 (Small groups 6–12 passengers)**

### **10 Day Wildlife of the Southern Forests (Accommodated) Tour**

**Perth - Perth - 25 March - 3 April 2022**

The south-west of WA is one of the world's major biodiversity hotspots. A large proportion of Australia's south-west's beautiful landscapes and natural attractions are protected, which means they're also the best places to observe native flora and fauna.

We have chosen a selection of some of the regions finest natural highlights on this ten-day tour.

### **13 Day Pilbara Reef & Ranges (Accommodated) Tour.**

**Perth to Newman 25th April - 7 May 2022.**

Head north of WA for sea birding colonies on coral islands, marine life, coral reefs & Karijini's gorges. Abrolhos Islands, Shark Bay, Ningaloo Reef and Karijini National Park.

### **15 Day Western Wanderer (Easy camping) Tour.**

**Perth to Broome 28 May - 11 June 2022.**

Highlights include, marine life, coral reefs, (Abrolhos Islands, Shark Bay). The Karijini National Parks gorges and the history and wildlife of the Marble bar area.

### **Lake Eyre Basin and Flinders Ranges Expedition**

**12 Day Small Group (Accommodation & Camping) Tour**

**Alice Springs - Adelaide 18 -29 July 2022**

This tour covers some of South Australia's most historic outback locations in the Lake Eyre Basin and both the North and South Flinders Ranges. Both the Flinders and the arid lake Eyre basin offer vastly different examples of our great country and provide an opportunity for a wide range of arid zone flora & fauna sightings.

### **10 Day W.A.'s Mid West Wildflowers (Accommodated) Tour.**

**Perth to Perth 17 - 26 Sept. 2022.**

See botanical hotspots north of Perth during wildflower season. The trip covers a diverse array of landscapes with the farmlands of the wheat belt before covering the highlights of the Kalbarri National Park and the northern sand plains around Eneabba, Badgingarra and the Mt Lesueur National Park.

**Contact us for our full 2021 tour program:**

**Free Call: 1800 676 016**

**Web: [www.coateswildlifetours.com.au](http://www.coateswildlifetours.com.au) • Email: [coates@iinet.net.au](mailto:coates@iinet.net.au)**



Across the road the Konkoberup Hill/Mount Melville Circuit Trail does a loop around the mountain. Konkoberup is a Noongar word, derived from ‘konk’ that refers to Uncle. The signs and trails were established by the Wellstead Historical and Heritage Committee.

It is most fortunate that so much of this area remains as bushland being habitat of many highly localised and more common plant species. Unfortunately the bushland areas are a series of unvested reserves (31240, 14943 and rubbish reserve 40481) prone to all the proposed uses and lack of sensitive management that such areas attract. The Albany Coastal Parks and Reserves Management Plan (number 90 of 2017) proposed that these reserves be amalgamated into a conservation park, however, this has not happened. It seems very sad that such a well-known floristically diverse site as Cape Riche with many rare and restricted plants (for example *Scaevola macrophylla* front cover) and the site of many early collections of our flora is still relatively un-protected.

**Greg and Bronwen Keighery.**

## Memberships

We welcome these new and re-joining members from 1 September 2021 – 30

November 2021 to the Society and thank them for their support.

Sean Anderson	Leeming	Carmen Lawrence	North Fremantle
Julie Broadfoot	Duranbah, NSW	Suzie Lintern	Waterford
Helen Bumbak	Carnarvon	Wendy Low	Medina
Swee Chuah	Palmyra	Bruce Lugton	Wembley
Lanie Cottam	Parmelia	Katharine Miller	Beckenham
Colleen Cousens	Chidlow	Heather Morton	Greenwood
Hans Dames	Stoneville	Christine Oates	Edgewater
Tania Daymond	Highgate	Pauline O'Brien	East Fremantle
Bernard De Bunnetat	Torbay	Linda Pemberton	Edgewater
Katherine Dines	Mt Lawley	Stephanie Pontet	Brentwood
Angie Doust	Craigie	Philip Raymont	York
Rosemary Dower	Nollamara	Verelle Roocke	Margaret River
Marlene Dry	Noranda	Jeanette Scanlan	Ballajura
Lorraine Duffy	Dunsborough	Tracey Smith	Girrawheen
Helen Ferguson	Nannup	Chris Spiker	Margaret River
Belinda Gibbon	Craigie	Peta Stewart	Ocean Beach
Susan Glasson	Tarcoola Beach	Susan Stubbings	Mt Nasura
Alex Griffiths	Gooseberry Hill	Katy Svalbe	Quindalup
Ai Hayami	Harrisdale	Michelle White	Orange Grove
Doug Holmes	Armadale	Maggie Wood	Lathlain
Val Humphrey	Bassendean		
Kerry Jenks	Beechboro		

Opposite: top—A Google aerial Cape Riche area; middle—Walk Trail guide; and below—a community dominated by *Taxandria spathulata*, a component of the Proteaceae-dominated Kwongkan (better known as Kwongan) Shrublands, insert close view of *Taxandria spathulata*. Photos Bronwen Keighery.





