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Wildflower Society of Western Australia (Inc)

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WILDFLOWER SOCIETY OF WESTERN AUSTRALIA

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Front cover: Survey volunteers with several *Conospermum galeatum* plants. Photo Kim Dravnieks.

Inside front cover: Centre—searching for *Pimelea pelinos* near Esperance; insert—*Pimelea pelinos*. Photos Katie White. Below—Survey volunteers gathering for the Porongurups flora search insert—*Hibbertia porongurupensis*. Photo Kim Dravnieks.

Back cover: Cycle of flowering in *Banksia attenuata*. Photos Alex George.

Inside back cover: Top left—Bungendore Bush Breakfast; middle left—Armadale Branch table at the Breakfast. Photos Kim Sarti. Middle right—EPA Rally 13 February; below—EPA Rally with Judith Blyth banner. Photos Colma Keating.

Editing and Layout for this issue: Bronwen Keighery. **Proof reading:** Jim Barrow; Alex George; Brian Moyle and Kerry Smith.

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Honor Venning Library at Perry House is open on the first Saturday of each month, except January, from 1–3pm. Members may borrow.		
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Membership subscriptions

Category	Price#
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* Those in receipt of a means-tested Australian Commonwealth Government pension.

Please advise the Society Office if you have change your details (e.g. address, email etc).

To receive:

- a paper copy of our Newsletter **ADD \$16.50**
- Australian Plants **ADD \$24.20 to your fee (only as paper).**

Membership subscriptions now fall due on the anniversary of your membership. Members renewing by Visa, Mastercard, use the our email membership form on the Society's website OR Direct payment to Beyond Bank: Wildflower Society WA **payment** BSB 325-185 Account 04020093 with deposit reference "your name+m'ship".



From the President

I trust you all survived the festive season intact and continued to remain safe and healthy, despite the heat.

The last quarter was quite eventful, the **most significant of which was the attack on the Environmental Protection Act by the Cook Government**

following receipt of the Vogel Report which was tasked with identifying opportunities to streamline the development approval process. Whilst it was not all bad (it does recognise the weaknesses in the number and experience of staff of the Department of Water and Environmental Regulation), the threats to the rights of the community to know, participate and challenge conclusions made by the EPA and DWER as well as the powers and independence of the EPA are a real threat to our environment.

The Society is actively involved in the campaigning to establish with the Government that this is not what the community wants or deserves.



EPA Rally 13 February. A Mallee Fowl or Eddy Wajon?

Photo Bronwen Keighery.



Save the EPA—rally 13 February 2024. Around 500 people, many from the Society, stood in the hot sun at Parliament House on the first day of parliament in 2024. We waited for a representative of Government to accept a letter outlining the issues with the closed door review of the EPA.

The Government just ignored us. Photo Bronwen Keighery.

We need to let government know that they represent the people, not the big end of town that lines the government and party coffers. I would ask members to consider active involvement in this campaign as we seek to turnaround the direction of Government. Watch for notices on the web page and in your newsletters for opportunities to participate.

The State Council meeting at the end of November was interesting as one of the items addressed was Maintaining and Gaining Membership. It is clear that the involvement of the X, Y and Z generations requires a different form of organisation that has served us Baby Boomers for decades. As a Society, we need to recognise the impact of digital media, higher levels of education and their work-life balance are significant issues to these generations. They value experiences and have a high level of social consciousness and social justices. The younger of them have an entrepreneurial spirit and tend to be more individualistic and creative in their desired life experiences. As a Society we need to address these aspirations of these younger generations and work them into the programs and experiences that we provide and communicate them through the points of contact for these generations – social media, educational institutions, and the internet. The Society also needs to consider how it operates and adjust to the expectations of the younger generations. We are not alone in this journey, many traditional service clubs and interest groups face the same challenges. But to not act is not an option.

The issue of membership categories was also raised at the State Council and this issue will be addressed by the Management Committee going forward in 2024. We wish to simplify both the categories of membership and the costs associated with membership to make the options available much clearer. Watch for these changes on the website as they are progressed.

The Society has also been successful in receiving a grant from Lotteries West to assist with the relocation and expansion of the nursery that was previously operated by Northern Suburbs Branch at Landsdale Farm. With assistance from the City of Wanneroo, it is planned to complete construction of the new nursery early in 2025.

This facility will be accessible to all members of the Society and provides the opportunity to expand both the nursery production and propagation experience for members (see article



A Landsdale Nursery sale day.

page 18).

I trust you all continue to engage with the activities of the Society and its branches and bring forward any ideas you have for broadening of the wildflower experience to both members and the wider community

Brett Loney

2024 STATE CONFERENCE

The Society's 2024 State Conference which includes a State Council meeting and the Annual General meeting with conference papers on the Sunday, all being well will be hosted by York Branch and held on Saturday 29 and Sunday 30 June 2024. The Annual General Meeting will be held on Saturday 29 June after lunch.

CALL FOR NOMINATIONS MANAGEMENT COMMITTEE AND SUBCOMMITTEES

YOUR SOCIETY NEEDS YOU to assist with its continuation and its future. The Society's Model Rules and Guidance notes, Division 3, Clauses 31 and 32 outline the nomination for committee requirements, and as stated in the Society's By-Laws Part 4, we need a Management Committee of not less than six (6) nor more than twelve (12) ordinary committee members and one from each Branch

(and maybe two from some) would be fantastic. These positions are in addition to the office holders of President, Vice President, Treasurer and Secretary. Nomination forms for Management Committee positions as well as joining one of our Sub Committees are included with this Newsletter as separate forms. A 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 FRIDAY 31 MAY 2024).



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



NOTICE OF MOTIONS

The Notice Convening the 2024 Annual General Meeting (AGM) will be included in the May 2024 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.), PO Box 519, Floreat 6014 or enquiry@wildflowersocietywa.org. au **BY THURSDAY 28 MARCH 2024.**

CALL FOR NOMINATIONS FOR SOCIETY AWARDS 2024

There are three categories of Awards presented at the Society's AGM, which will be held on Saturday 29th June 2024. The closing date for nominations is TUESDAY 7 MAY 2024. Please mark your nominations CONFIDENTIAL and forward them to the Honorary General Secretary, Wildflower Society of WA (Inc.), either by post to PO Box 519, Floreat, WA 6014; or email marked "confidential" to enquiry@wildflowersocietywa.org.au. 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. A nomination may be made by an individual or by a Branch Committee. 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 nomination is approved by the Management Committee. 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 nomination is approved by the Management Committee. 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.

Conservation SubCommittee Report

The work of the Conservation Sub-Committee in advocating for the protection of vegetation has continued over the last quarter with 18 submissions being made on documents provided for public comment by the EPA, Appeals Convenor or DWER. As per usual, a number of these had closing dates for comment within the festive season. I would like to thank our project Officer, Katie Grayson, for the effort she put in over that time.

The end of the year has also rung in some changes of significance in our dealings with the regulators. The role of the Appeals Convenor that Emma Gaunt had held for a period of 10 years was vacated. The Society had a long association with Emma over that period and we had met on many occasions to discuss proposals with which the Society had issue. We will miss Emma's understanding and knowledge of the Society and its objectives. The Director-General of DWER, Michelle Andrews, also resigned towards the end of last year.

We wish both Emma and Michelle well in their future endeavours.

Sub-Committee members also had the opportunity to meet the new Director-General of Department of Biodiversity, Conservation and Attractions (DBCA), Stuart Smith in December. Amongst items discussed were: the funding of the Bush Forever program to allow land set aside for conservation to be managed by DBCA; review of reserve management plans for plans that had not been reviewed since their development prior to 2010; licencing and licence fees; and operation of the WA Herbarium. These issues have been of concern to members for a considerable time.



The webinar series continued through this quarter with a presentation by Nancy Scade on the use of native plants in home gardens (October) and Dr Stephen Hopper provide insight into the rare plants and communities on the Leeuwin-Naturalist Ridge. This series will continue in 2024 with

a small charge. This is hoped to encourage people who book to attend, at present all bookings are not honoured. Actual attendances varied dramatically from bookings and excluded people who could not book as the attendance limit had been reached. SEE WEB SITE FOR BOOKINGS.

Members of the SubCommittee have spent a considerable amount of time campaigning to protect two pieces of bush in the southern suburbs from development (Perth Surf Park and Lot 123 Mortimer Road, Casuarina) in the last quarter. Both sites represent examples of the Banksia Woodland TEC and include some protected species/wetlands. The Society will be extremely disappointed if these developments proceed. The Perth Surf Park could be located nearby in a cleared area that was a former sand pit. The Casuarina site contains some unique features that are not known to occur in any other location in the metropolitan area.

It was heartening to be advised the Commonwealth has assessed the Honey myrtle (*Melaleuca systema*) shrublands on limestone ridges of the Swan Coastal Plain as Critically Endangered under the EPBC Act. This plant community has been identified within the Manning Park Ridge area. Society member Cate Tauss has been studying and reporting on the area for many years. The State legal conservation status was Critically Endangered by the State Government under the Biodiversity Conservation Act.

We would encourage members to report any occurrences of roadside clearing they observe to the Convenor of the Sub-Committee at convenor@wildflowersocietywa.org.au together with any photographs that may be useful. We have received information from members that the incidence of roadside clearing is increasing but the Sub-Committee has observed a decline in clearing permits being issued over the last year.

Take care and keep your plant conservation work progressing.

Brett Loney, Convenor.



Treasurer's Note- New Society Account

Members, due to changes to Bankwest's banking policy the Wildflower Society has been obliged to change its bank accounts to the Beyond Bank. The last of our Bankwest accounts will be closed by the end of February 2024.

There are several places where direct deposit banking details are displayed where members can purchase memberships, newsletter/journal or make donations to the Society and the Bushland Conservation Fund.

The membership pages on the website, membership form and the donation pages on the website have all been updated with the new Beyond Bank account details for making direct deposits.

Please ensure that if you are making a direct deposit that you are using the new Beyond Bank account details.

Robert Atkins

Plant Survey Subcommittee Report

Priority Flora Reports 2023

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 Wildflower Society and DBCA. The current project, started in 2021, is funded by the Wildflower Society and run in conjunction with the DBCA Species and Communities Branch.

The aim of the project is to survey Priority 1 or 2 flora species in order to have them elevated to Threatened status or demoted to Priority 3 or 4 status.



2022-2023 *Brachyloma delbi* survey

Brachyloma delbi (Ericaceae, P1), was considered to be a very likely target as it: flowers early (Autumn/Winter) with red flowers; is a medium sized shrub with a very localised distribution around Kulin; and *Brachyloma* is a very distinct genus, so plants are able to be placed readily in this

Survey Method/Results

To establish the species information sheet on this species, Greg and Bronwen Keighery visited the bushland around Kulin in 2017 but were unsuccessful in locating the species. Brian Moyle visited and surveyed bushland around Kulin in 2022 and 2023

but was also unsuccessful in locating the species. However, he was able to visit the Kulin Herbarium and discovered additional information on the known locations of the species, which led to Brian and Greg re-visiting Kulin on the 16 & 17 May 2023.

Two mature *Brachyloma delbi* plants were observed during the surveys. The two plants were located in the Old Kulin Caravan Park. These were confirmed as *B. delbi* as they had the characteristic very short style (see photo) and short in-rolled leaves.

The first plant (photos opposite left) was growing under *Eucalyptus pileata* mallee on brown sandy clay. The plant had pale green-yellow leaves. A second plant was growing under mixed Mallee of *E. pileata* and *E. horistes* on lateritic yellow/brown loam. This plant had leaves with a distinct tinge of blue.

Both plants were single stemmed at the base and in full flower. Both sites were disturbed and had an understory of *Leptospermum erubescens*, *Styphelia serratifolium* and a variety of other shrubs.

Work by Brian and Greg in 2022 and 2023 covered all other areas of suitable habitats in and around Kulin. No further plants were located. Also, a Wildflower Society quadrat based survey of private bushland adjoining the Kulin water catchment undertaken in 2017 did not record any *Brachyloma* species.

It is possible that the species occurs after fire and this is why so few plants are found, but this does not seem to be the case in other *Brachyloma* species which are often common in their known localities.

Survey effort was 35 volunteer hours, by three people.

Discussion and Recommendation

Because we were unable to ascertain the preferred habitat of the species and the difficulty in observing the species except at close quarters (see Photo 1), this species is not a suitable candidate for further volunteer survey at the present time.

Recommendation: Based on our surveys the species should be upgraded to Threatened. At the minimum carry out additional specialised surveys in the area, during flowering. Seed from the two known plants should be urgently collected and stored. Formal protection be given to the site of the remaining population in the old Kulin Caravan Park

Greg Keighery, Brian Moyle and Bronwen Keighery

Reference: Cranfield, R. J. Two new species of *Brachyloma* (Epacridaceae) from the South West Botanical Province of Western Australia. *Nuytsia* 15(3): 331–336 (2005)



Above left: *Conospermum galeatum* plant in habitat. Left: Flowering spike. Photos Bree Phillips, Flora Conservation Officer Wheatbelt Region, DBCA.

2023 *Conospermum galeatum* survey

A Factsheet for *Conospermum galeatum* was prepared by the Society's Priority Flora Survey Coordinator, Jolanda Keeble, to assist volunteers with identification in the field. The species is currently known only from a few populations in the Wheatbelt area. Most records in Florabase occur in Quairading Nature Reserve (NR) and Wandoo National Park, and with one record for Charles Gardner Nature Reserve.

Conospermum galeatum grows in deep white and yellow sand and is thought to be a disturbance opportunist with a short-to-medium life span (10 to 15 years). (Lullfitz et al. 2008)

The goal for this survey was to establish if more plants of the target species occur in Charles Gardner NR, in areas that have been recently burnt.



Above: Charles Gardner NR. Photo Alison Bunker. Right: Map of recently burnt areas in Charles Gardner NR. Map courtesy of

Survey Method/Results

The survey was planned to occur over 2 days, on Monday 11 and Tuesday 12 September 2023. Bree Phillips, Flora Conservation Officer from DBCA–Wheatbelt Region, provided information for the locations to be surveyed.

Eight volunteers attended the survey on Monday 11 September 2023 (Brian Moyle, Erica Shedley, John Koch, Lauren Hinkly, Kim Dravnieks, Sandra Swain, Alison Bunker and Jolanda Keeble). Thirty minutes were spent looking at the target species in Quairading NR. Work then continued in Charles Gardner NR with Bree Phillips. Searches were made by walking the recently burnt areas in the NR, and adjacent previously burnt areas.

Volunteers spread out in a line to cover the area walked.

Nine volunteers surveyed between 8:00 am and 14:30 pm (6.5 survey hours) for a total survey hours: 59.5. Nine *Conospermum galeatum* plants were located in the reserve. *Jacksonia rubra* (P2) was also observed in the burnt areas.

With no more burnt areas to survey in Charles Gardner NR, six volunteers decided to assist the DBCA with monitoring of *Banksia cuneata* in a translocation site in Badjaling NR (east of Quairading) on Tuesday 12 September. The volunteers started at 9:00am. Two volunteers finished at 11.30am (2.5 hrs) and 4 finished at 13:00pm (4 hrs). Total survey hours: 21.

Discussion and Recommendation

In 2017, Fred and Jean Hort found 8 plants in an area of Charles Gardner NR that was burnt by the DBCA in 2015. This current survey has not relocated these plants. Nine plants were observed in the 2023 prescribed burn of the reserve.

The distribution of the observed plants is likely to be due to changes in vegetation structure and/or soil composition. Volunteers commented that the more northerly burn scars had a different vegetation than the more southerly burn scars, and similarly from east to west it was noted that the vegetation changed.

The 2020 DBCA ‘*Conospermum galeatum* Interim Recovery Plan No. 38’ states that “the target species is confined to two locations near Quairading and Tammin.” And “It is historically known from Bruce Rock, Naremben, Kellerberrin, Quairading and Tammin.” The current survey has not changed the fact that the species is confined to two locations near Quairading and Tammin.

Recommendation: Further surveys in suitable habitats between Bruce Rock and Tammin should be carried out to clarify the occurrence of this species. No changes in status are recommended

Jolanda Keeble

References

Lullfitz, B., Konnur, A., Alderton, J., Jolliffe, D. and Squire, M. (2008). Threatened and poorly known flora of the Yilgarn Region. Department of Environment and Conservation, Bentley, Western Australia.

Department of Biodiversity, Conservation and Attractions (2020) *Conospermum galeatum* Interim Recovery Plan. Interim Recovery Plan No. 389. Department of Biodiversity, Conservation and Attractions, Western Australia.



2023 *Drosera lasiantha* and *Hibbertia porongurupensis* survey

A Factsheet for both target species was prepared to assist volunteers with identification in the field. *Drosera lasiantha* (P2, photo left, Donna Matthews) is only known from the Porongurup Range and Mount Lindesay National Park, and *Hibbertia porongurupensis* (P 4, photo top right next page, Alison Bunker) is only known from the Porongurup Range.

The goals for this survey were to: re-locate and survey known

Drosera lasiantha and *Hibbertia porongurupensis* locations; and survey other likely habitats for both species.

Survey Method/Results

Sarah Barrett, Threatened Flora Officer from DBCA–Albany District, provided information on the locations to be surveyed (see Figures 3 and 4 below). Thilo Krueger, a PhD student at Curtin University (Perth, Western Australia) researching carnivorous plants, was present and shared his expert knowledge on the biology and ecology of carnivorous plants with the volunteers.



Volunteers arrived at a central meeting place in the Porongurup Range before travelling to the survey areas. Surveys were carried out by walking the identified areas, and recording and counting the number of species found.

On Saturday 28 October 17 volunteers met up with Sarah Barrett who led the survey for both days. Volunteers on this day were: Sandra Swain, Heather Anderson, Chiara Suergiu, Thilo Krueger, Lauren Hinkley, Kim Dravnieks, Donna Matthews, Alison Bunker, Peter Austin, Glenn Cook, Megan Lloyd, Fay Lewis, Peter Gillon, Anna Napier, Angela Hine, Judy MacKinnon and Lisa Braun.

Survey effort for Saturday was as follows: 17 volunteers contributing 8 hours (8.30am till 4.30pm). Total survey hours 144.5 hours.



On Saturday, all volunteers visited the type location of *Drosera lasiantha* and resurveyed this site (photo below Megan Lloyd). It was estimated that more than 5000 plants occur in this area. Three other locations were surveyed in the Porongurup National Park on the northern boundary of the park. Two of these locations recorded new populations of respectively around 1800 and 4000 plants. Two surveys were carried out north of the Porongurup National Park on private properties. Large new populations were observed at these locations (approximately 100,000).

Due to rain on the Sunday morning 29 October, 15 volunteers met up with Sarah and Thilo Krueger and visited another rare *Drosera* in the area (*Drosera x carbarup*, photo above right, Thilo Krueger).continued page 14

Events 2024

Keep your eye on the website and Branch emails for talks and walks.

Branch Contacts and Meeting Details

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

Armadale Environmental Centre Armadale Settlers Common Triton Crescent
2nd Thursday 7.15 pm for 7.30 pm PO Box 937, Albany, WA 6331
President: Roger Harington (Armadale.Branch@wildflowersocietywa.org.au)
Secretary: Debbie Walker (Armadale.Branch@wildflowersocietywa.org.au)

Darling Range Old Guide Hall (Paxhill), 5 Sanderson Rd, Lesmurdie
President: Lynda Tomlinson 0491605839 (lktom555@gmail.com)
Secretary: Lynda Tomlinson 0491605839 (lktom555@gmail.com)

Eastern Hills Octagonal Hall, 52 McGlew Rd, Glen Forrest
4th Friday 7 pm for 7.30 pm
President: Pamela Riordan
Secretary: Janet Atkins (eastern.hills.branch@wildflowersocietywa.org.au)

Kulin Herbarium, Resource Centre, Johnston St, Kulin 6365 PO Box 56, Kulin WA 6365 Secretary/
Treasurer: John Munro (johnmunro325@gmail.com)

Merredin Old North Merredin Primary School (now Public Library) Coronation St Merredin
4th Wednesday 7 pm C/- PO Box 95 Nungarin WA 6490
President: Mal Harper 0437388292 (wildflowersocietymerredin@gmail.com)
Secretary: Tracy Scott (tracyclone@activ8.net.au)

Murdoch Wetlands Centre Cockburn, Hope Rd, Bibra Lake 6163
1st Thursday 7.30 pm for 7.45 pm
President: Christine Polmear (murdoch.branch@wildflowersocietywa.org.au)
Secretary: Kim Dravnieks (murdoch.secretary@wildflowersocietywa.org.au)

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

Perth The Palms Community Centre, Nicholson Rd Reserve, Subiaco
2nd Tuesday 7.30 pm for 8 pm C/- PO Box 34, Melville WA 6956
President: Glenn Cook (perth.branch@wildflowersocietywa.org.au)
Secretary: Graham Zemunik (perth.branch@wildflowersocietywa.org.au)

South West Capes PO Box 784, Dunsborough WA 628
President: Kay Lehman (kaywinny@bigpond.net.au)
Secretary: Richard Clark 0427 385 551 (samolus@westnet.com.au)

York President: Eric Ayling (ayfo@wn.com.au)
Secretary: Ken Graham (yorkswa@gmail.com)

This species is only known from a single unprotected rail reserve and not yet listed as a priority flora species. Thilo informed volunteers that *Drosera x carbarup* is a self-sustaining hybrid between *D. nitidula* and *D. occidentalis* that rapidly reproduces via gemmae production each season and that there are tens of thousands of plants carpeting the few square metres where it is known to occur. Sadly the habitat is rapidly becoming infested by *Watsonia*. Thilo is working on having *Drosera x carbarup* being listed as a Priority 1 species.

When the weather cleared, volunteers went on the walk to Nancy's Peak and Morgan's View in the Porongurup National Park to survey for the *Hibbertia porongurupensis*. Some additional plants were mapped during the walk. Additionally, some new plants of *Ornduffia calthifolia* (T) were also mapped

Volunteers on this day were: Sandra Swain, Heather Anderson, Chiara Suergiu, Thilo Krueger, Lauren Hinkley, Kim Dravnieks, Donna Matthews, Alison Bunker, Glenn Cook, Megan Lloyd, Fay Lewis, Peter Gillon, Anna Napier, Judy MacKinnon and Lisa Braun.

Survey effort for Sunday was as follows: 14 volunteers contributing the following hours: 6 volunteers 4 hours (8.30am till 12.30pm); 4 volunteers 6.5 hours (8.30am till 3pm); 5 volunteers 8.5 hours (8.30am till 5pm). Total survey hours 92.5 hours.

Discussion and Recommendation

Drosera lasiantha was observed to occur in large populations in new localities that are on private property as well as in the Porongurup National Park. Populations have been located at: NE of Mt Barker; Twin Creeks Conservation Reserve; Mount Lindesay National Park where the population is healthy and contains >10,000 plants; and a smaller population further north along Granite Road. Hence survey effort has been adequate to make a recommendation about changing the status of this species.

Due to inclement weather on that day *Hibbertia porongurupensis* was only surveyed on the trail to Nancy's Peak and Morgan's View. Further surveys would be required before consideration of a change in Priority listing is warranted.

Recommendation: It is recommended to change the Priority listing of *Drosera lasiantha* from P2 to P4. There are currently 8 large and healthy populations of this species known in the lower Southwest both on conservation land as well as on private property, and there have been adequate surveys carried out in this regards. It is highly likely that there are more populations in suitable habitats in this region.

It is recommended that the Priority listing of *Hibbertia porongurupensis* not be changed. Further surveys are warranted. **Jolanda Keeble**

2023 *Pimelea pelinos*

A Factsheet for *Pimelea pelinos* was prepared by the DBCA to assist volunteers with identification in the field.

The species was originally recorded along saline lakes north of Esperance and south of Lake Grace. Eleven location records exist in the WA Herbarium's online resource Florabase, of plants collected between 1984 and 2002. Some of the location



records (i.e. around Lake Tay) are unconfirmed.

The goal for this survey was to 'Locate new populations at other suitable salt lakes in the area, including in DBCA managed Nature Reserves.

Survey Methods/Results

The survey was carried out on Sunday 18 June with 6 volunteers from the Esperance Wildflower Society (Katie White (leader) Ken Mills, Leanne White, Mary Hoggart, Katherine Walkerden and John Richardson). Six volunteers surveying 6 areas (6 survey hours). Total survey hours 60.

Five survey areas were located along Kendall Road salt lakes, one survey area was located along Norwood Road, inside Truslove Townsite Nature Reserve).

The known population on Scaddan road was still present, but some plants would have been recently impacted through routine maintenance of the road/drain directly adjacent. Only 1 plant was found flowering.

The target species was not found in the other locations surveyed.

Discussion and Recommendation

There are many locations of apparently similar habitat in the area surveyed that could potentially have individuals or populations of *Pimelea pelinos*. Last year's survey was carried out mid-July and this year's survey in mid-June which might have impacted on being able to find the species as it was not found to be flowering prolifically at the known population site on Scaddan Road.

The habitat at this year's survey sites was marginal in only one or two of the lakes, and mostly completely unsuitable (comment by Katie White).

Recommendation: It is recommended to resurvey around Lake Tay to verify the presence or absence of the target species. Further surveys in similar habitat around Lake Grace and Esperance will confirm if the status of this species should be changed to Threatened.

Jolanda Keeble



Armadale Branch Report

End-of-Year Christmas Party, Sunday, 10 December 2023

Sadly due to vandalism to the water tanks at the Environmental Centre, our End-of-Year Christmas Party was held at the Bedforddale Hall. However, while this wasn't welcome news from a vandalism point of view, it did allow us to enjoy the superb facilities at the Bedforddale Hall where the kitchen had recently been refurbished.

Most of our members turned up for this always well-attended annual event. The tables were laid out on the balcony where we enjoyed a very breezy afternoon looking out onto bush surrounds. As

always, the food delicious and was in abundance and nobody left the event starving! President Roger Harington and Steve Aldersea made short speeches thanking the committee members for their hard work—Helen Wildsmith, Linda Mason, Debbie Walker and Debbie Bettenay. Each was presented with a gift for their contributions during the year.



Photo left: sitting Helen Wildsmith, Alison Aldersea, Linda Mason, Norma Stevenson; satanding Sophie Xiang and Sue Radford. Photo right: sitting Michael Morcombe, Kim Fletcher, Irene Morcombe, Steve Aldersea; standing Debbie Bettenay. Photos Kim Sarti.

Murdoch Branch Report

The Murdoch Branch enjoyed good attendances for our meetings with invited speakers in the latter part of 2023. As mentioned in the last newsletter, Daniel Jan Martin, an environmental planner and designer working as a Lecturer in Landscape Architecture at UWA, spoke to us in October about the maps he creates to show the ecological, recreational and hydrological relationships around Perth, and the book he was involved with: *The Forests Atlas*. Our November speaker was Keith Lightbody, speaking to and showing us about Plant Macro Photography and all the options we have as photographers to get the best possible images. He spent time demonstrating these with an impressive camera set-up linked to his laptop.

As usual, our December meeting was our AGM and members night. After the formalities of report presentations, the 2024 Branch Committee was elected, being Christine Polmear, Diana Corbyn, Kim Dravnieks and Michael Davies returning as President, Vice President, Secretary and Treasurer respectively. Mathew Wood, Danielle Matthews and Felicity Bairstow all return in 2024, and we welcome two new members to join us on the committee: Christine Athanassiou and Angela Hine. Danielle Matthews agreed to be the Branch representative on the Management Committee for this year.

After the AGM was closed, Margaret Langley provided us with a bit of history of work undertaken many years ago for the Branch by herself, Diane and Gary Matthews, and Kathy and Kevin Collins of Banksia Farm, to prepare the leaves of all named Banksias (before *Dryandra* underwent a taxonomic name change) and present them on four large panels as reference material for members. With changes to storage facilities available to the Branch, it was agreed that a new home should be sought for these panels. Before they moved to the new location, however, high resolution photographs were taken



Returning committee members in 2024: Kim Dravnieks, Diana Corbyn, Michael Davies Danielle Matthews, Mathew Wood, and Felicity Bairstow. Photo 2023 Christine Polmear.

to maintain the ability for members to reference them. We hope to make these available to all via our Murdoch Branch page on the website. Angela Hine then presented a talk on her time at the Ravensthorpe Flower Show this year, encouraging everyone to attend this Show when they are able.

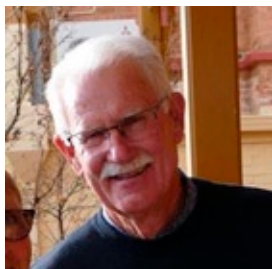
A very pleasant end of year wind up walk was held on Saturday 9 December at Canning

River Regional Park. Thanks to Danielle Matthews for liaising with Canning River Eco Education Centre. Everyone contributed on the walk, especially Mat Woods with his knowledge of wetland plants. Diana Corbyn reported the participants were pleased to see some mistletoe on the sheoaks, and they also saw flowering *Verticordia lindleyi*, *Melaleuca lateritia* and *Lobelia alata*. After the walk, the group retired to the Canning River Café, which was great.

We are looking forward to another year of interesting topics at our general meetings, and we plan to run another Plant ID workshop later in the year. If you're not subscribed to our Branch newsletter, keep an eye on the Branch page on the web for details of upcoming events and links to our recorded talks.

Christine Polmear, President.

Northern Suburbs Report



2024 has started with a 'bang' for Northern Suburbs! We received the news that the substantial LotteryWest grant application to relocate and build the new Northern Suburbs Branch Nursery has been approved. This will be the start of a very busy year for us, with the new nursery to be built from scratch on a site about 1km from the present Landsdale Farm location. The new nursery will be quite a lot bigger than the current facility and we are planning for it to become a 'Wildflower Society Nursery', with members from across all

branches invited to participate in the activities on offer. We are hoping that the project will be completed by the end of 2024 and that we'll be in a position to arrange a 'grand opening' event for all before Christmas (see following article).

On a less momentous note, the usual venue for the monthly guest speaker meetings – the Henderson Environment Centre in the Star Swamp Bushland, North Beach – will be

closed to the public from mid-April to end-June for substantial drainage and sewerage upgrades. We are currently looking for an alternative venue for the April, May and June meetings, or perhaps a different type of meeting or excursion in place of one or more of the regular meetings. Details of changes to venue or activity in these three months will be advised to all members who receive the monthly Northern Suburbs newsletter, as well as placed on the Wildflower Society of WA website.

So, it will be anything but ‘business as usual’ for Northern Suburbs this year, but monthly guest speaker meetings will continue in one form or another, the nursery at Landsdale Farm in Darch will be open every Thursday and Saturday, guided Northern Suburbs bushland walks will continue every Saturday and the big plant sales will be held in April and November. We look forward to an exciting and rewarding 2024.

Richard Curry

A new fit for purpose Wildflower Society Nursery

Since 1958 the not-for-profit Wildflower Society of WA has supported and promoted statewide the gathering of knowledge on our wildflowers (flora) as well as the conservation, growing and enjoyment of WA’s flora species. Throughout these years there have been groups, and later branches, with projects focused on propagation and supply of WA’s rich flora. Such projects include: work by Claire Welsh and others with the City of Perth to establish wildflower propagation space for the Society in their depot (now a housing estate); Eastern Hills yearly plant sales where the stock is supplied from members home-grown wildflowers; over the last two decades the Northern Suburbs Branch Nursery (photo page 4); and the York Wildflower Society Nursery (photo page 5).

The Society’s Northern Suburbs Branch Nursery has provided a unique resource

where the community can connect with and help protect rare and endangered WA plant species and WA’s diverse plants (photo left of some of these species, a page from the Lotterywest application). With the motto “Conservation Through Propagation” our dedicated volunteers at the nursery propagate, grow and educate the wider community, schools, tertiary students and local governments of the sustainability benefits to the ecosystem of planting a biodiversity of WA plants species.

The Northern Suburbs Branch nursery is located within the Landsdale Farm. This nursery is limited to a 250 m2 polytunnel that was not purpose built for our work. The nursery has outgrown these facilities because of: the increasing numbers of volunteers; the increasing size of the rare and endangered plant collection; and greater demand for our plant services and advice. There are also many



(L-R) *Verticordia cooloomba* – Priority 3, *Verticordia mitchelliana* subsp. *mitchelliana* – Priority 3 and *Verticordia staminosa* var. *cylindracea* – Threatened.



(L-R) *Chorizandra varians* – Threatened and *Pileanthus bellus* – Priority 3.



(L-R) *Thryptomene stapfii* – Threatened and *Hemilandra gardneri* – Threatened.



(L-R) *Grevillea calliantha* – Threatened and *Grevillea Airtella* – Threatened.

work health and safety issues such as the public having to walk through busy workspaces simply to visit, major volunteer overcrowding and unsafe, over 50 °C, volunteer work conditions in summer.

Of critical importance, and a threat to our future, is the continuing lack of a secure tenure at our current location within the Landsdale Farm. The Department of Education WA ceased funding the Landsdale Farm in December 2018. Subsequently the Landsdale Farm was leased to Strive Community Services Inc. Our negotiations with the new lessees, over many years and at considerable effort, has failed to produce a tangible written sub-lease.

As a consequence the Northern Suburbs Branch, with the backing of the Society Management Committee (Society governing body) the Branch entered into negotiations with the City of Wanneroo to locate a suitable site; and applied for funding from various sources for the construction of a new dedicated purpose built Rare & Endangered WA Plant Nursery. With the signing of a 15-year lease of land supplied by the City of Wanneroo the Nursery can be built. The Nursery will be located on the corner of Kingsway and Hartman Drive, Madeley, about 1 km from the current nursery in the Landsdale Farm. The 1,250 m² new nursery will be five times larger than the current nursery and located on a 3,000 m² site with ample room for an impressive stock garden and meeting room.

Details of the facility are outlined below, diagram left.

Overall Design

- Solve chronic overcrowding of community visitors, volunteers and plants.
- Reduce temperature and improves airflow for health & safety of volunteers and plants.
- Greatly reduce volunteer workload by eliminating continuous shifting of plants.

- Enable application to the Nursery Industry Accreditation Scheme, Australia.

Dedicated Larger Community Plant area

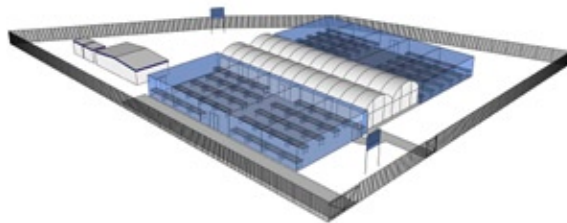
- Separate public visitors from workspaces.
- Allow acclimatisation and better survival of plants in outside environment.
- Enable labelling of every plant tube by eliminating watering difficulties.
- Greatly reduce plant disease & pest problems due to better spacing of plants and airflow.
- Space to display advice on soil types, plant selection, garden planting and more.

Larger Rare & Endangered Plant Collection area

- Increased numbers of Rare & Endangered species in conservation collection.
- Space to permanently house the entire Elizabeth A George *Verticordia* Collection.
- Greatly reduce serious plant disease & pest problems caused by overcrowding.
- Reduce chemical usage.
- Enable usage of waterwise drip irrigation reducing water consumption.

Larger Propagation area

- More workspace for the increasing numbers of volunteers.



- Increase aisle widths to improve volunteers' safety and plant trolley movement.
- Meeting & Computer Room
- Support community seminars, propagation workshops and taxonomic tutorials.
 - Allow on-site hosting of computers for volunteer work and plant identification.
 - Permit on-site on-demand printing of plant labels.
 - Provide air-conditioned refuge to work safely in summer for volunteers.

Heated Fog Room

- Dramatically increase propagation productivity during colder winter months.
- Allow the introduction of grafting techniques for challenging species for the first time.

Concrete Flooring

- Eliminate serious trip hazard of previous gravel floor.
- Provide disability access to entire nursery.
- Permit use of trolleys to shift soil and plants reducing heavy lifting by volunteers.

Equipment & Storage Area

- Improve organisation of equipment, propagation tools, racks, tubes and pots.
- Provide better security for volunteers' personal items.
- Upgrade chemical storage safety.
- Expand nursery hygiene facilities for sterilization of racks, tubes and pots.

Aisle Full Length of Nursery

- Enable delivery of pallets directly inside eliminating heavy unloading by volunteers.
- Facilitate easy transfer of plants into transport for off-site community events.

The car park and road access is scheduled to be built over the next 3 months (Feb-Apr) so it is hoped construction of the new nursery will commence in May this year.

Shaun Tennant

What is going on in *Hybanthus*?

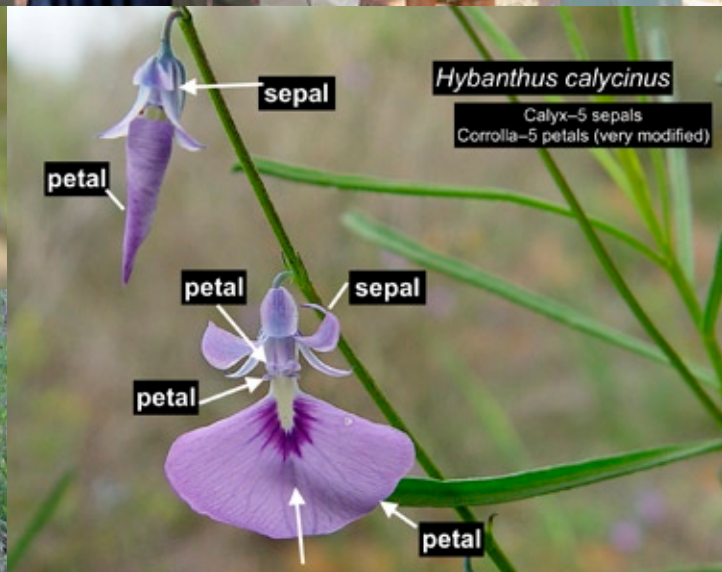
The Violaceae are a medium sized largely tropical to sub-tropical family of 23 genera and around 1,100 species, of woody tropical shrubs, vines and trees, except for the largest genus *Viola*. *Viola* with around 600 species is herbaceous and diverse in temperate, especially alpine, regions. The other 2 major genera were *Hybanthus* with around 125 species and *Rinorea*, a pan-tropical genus with around 250 species.

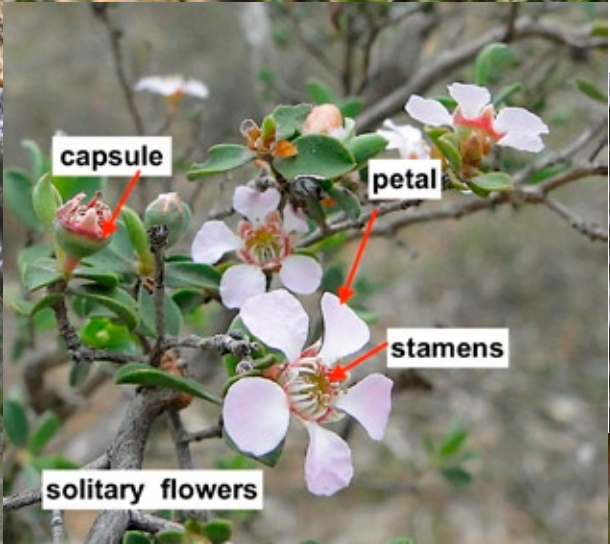
Hybanthus is characterised by the distinctive zygomorphic flowers (photos page 21) with the bottom petal substantially longer than the others, with an unusually distinct shape giving rise to common name Spade Flowers. However, this flower shape apparently linked a series of not closely related groups as recent studies suggest (Wallhert GA, Marcussen T, de-Paula-Souza J, Feng M & Ballard HE (2014)). *Hybanthus* contains many separate lineages (clades) of up to 9 genera. Of the 9 clades 7 are confined to the Americas, including the type of *Hybanthus* from Cuba. Two clades are found from Africa to the Pacific. These clades include the *Hybanthus caledonicus* clade (Australia/New Caledonia) and the *Hybanthus enneaspermus* clade (Africa/Asia).

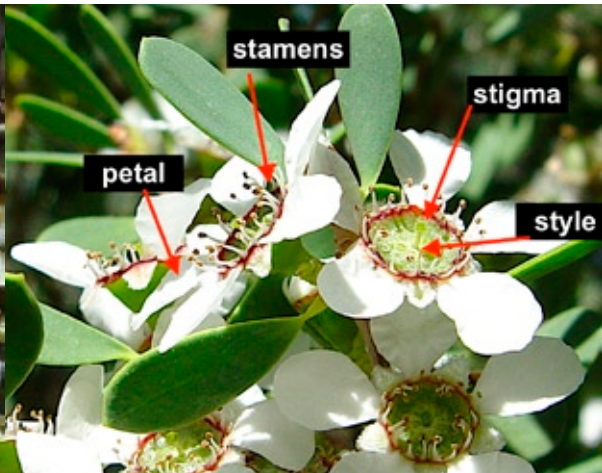
Following this study a series of papers has re-established some older generic names and created new genera especially in the Americas.

Lotterywest presenting the 'grant' to the Society. Standing behind President Brett Loney and Lotterywest delegate are: Shaun Tennant; Richard Curry; Christine Curry; Sally Page; and Kerry Smith.

Shaun, Richard, Sally and Joanne Burgess were the main workers on the development of the application and the project. Photo Post Newspapers.



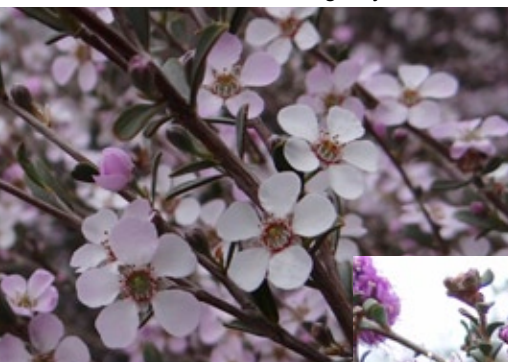




Clockwise from top left: *Apectospermum pinescens* plant; detail flowers and fruit; flowers; detail flowers *Gaudium laevigatum*; detail flowers *Kunzea recurva*; branch; flowers and pollinator *Pericalymma eliptica*; plant; *Leptospermopsis erubescens* plant; detail flowers and fruit.

Centre : flowers *Leptospermopsis nitens*.

Photos Bronwen Keighery.





Clockwise from top left: *Homalospermum firmum* plant; flowers; flowers and fruit; detail fruit; and plant resprouting after fire. Photos Bronwen Keighery.

Flicker & Ballard (2015) established a new genus *Afrohybanthus* for the tropical African centred clade (table, *Hybanthus enneaspermus* column). These were herbs to semi-woody shrubs, with a centre of diversity in East Africa, hence the generic name. They noted that this genus was defined by a series of characters from the Australasian group (Table). The genus as defined contains 25 species in basically tropical areas of Africa, Madagascar, southern Asia, northern Australia and the Pacific. None of the members of the *H. caledonicus* clade were placed in this genus.

Clade	<i>Hybanthus enneaspermus</i>	<i>Hybanthus caledonicus</i>
Distribution	Africa/Asia	Australia/New Caledonia
Inflorescence	Solitary	> 1 flower (dichasium)
Seed coat	Ribbed or smooth	Pustulate
Seed shape	Ellipsoid	Round
Seed colour	Pale yellow	Dark brown
Gland on bottom stamen	middle	Basal
Seeds per capsule	(6)-9-15 (18)	1-3 (6)
Base chromosome number	8	6

Recently Forster (2021) noted that as Flicker and Ballard (2015) had, that there are several already described genera available for species of the *Hybanthus caledonicus* clade from Australia/New Caledonia which included: *Pigea* Gilg. created in 1842; *Vlamingia* by de Vriese in 1845; and *Clelandia* by Black in 1923. Foster placed all temperate Australian members in this genus but also included all those previously in *Afrohybanthus*, but not the New Caledonian species of clade ‘caledonicus’. Forster also noted that the name *Afrohybanthus* was not the most appropriate name for this grouping, as several continents were involved.

All temperate Australian *Hybanthus* species will change genus to *Pigea*, (hopefully to be pronounced as PYE -GEEA) but I am not sure if this discordant name is much of an improvement. Looking at the current cladograms it is not clear that the final placement has been achieved. Further studies are needed, especially on the New Caledonian and tropical members. Florabase maintains *Afrohybanthus* for our tropical species.

References

Flicker, B. & Ballard, HE (2015). *Afrohybanthus* (Violaceae), a new genus for a distinctive and widely distributed Old World Hybanthoid lineage. *Phytotaxa* 230: 39-53.

Forster, P.I. (2021). Re-instatement of *Pigea* Gilg., an earlier generic name for the spade flowers previously included in *Afrohybanthus* Flicker (Violaceae). *Austrobaileya* 11: 26-33.

Wallhert, GA, Marcussen, T., de-Paula-Souza, J., Feng, M. & Ballard, HE (2014). A phylogeny of the Violaceae (Malphigiales) inferred from plastid DNA sequences: implications for generic diversity and intrafamilial classification. *Systematic Botany* 39: 239-252.

What is going on in *Leptospermum*?

The Tribe Leptospermeae of the family Myrtaceae contains 9 genera, including the well known *Agonis*, *Kunzea* and *Leptospermum*. It has long been known that many problems exist with the current boundaries of the genera of many Australian Myrtaceae and re-arrangements of these boundaries are not new. Thompson (1983 & 1989) in her

studies of *Leptospermum* segregated 2 genera—*Pericalyymma* and *Homalospermum* from the *Leptospermum* genus. Following on *Agonis*, considered a close relative of *Leptospermum*, was segregated into 3 genera—*Agonis*, *Paragonis* and *Taxandria*.

It has also been long considered that, even with Thompson's revision, the current limits of *Leptospermum* are poorly defined. A recent study by Wilson & Heselwood (2023) aimed to resolve this issue. The study clearly showed that *Leptospermum* as currently defined was polyphyletic comprising a series of lineages (clades).

There are a series of ways to make *Leptospermum* monophyletic (single lineage). The first option is to include it in an enlarged *Kunzea*. This is also the view of some botanists in New Zealand as natural hybrids have been recorded between *Leptospermum scoparium* and *Kunzea ericoides* and *K. sinclairii* (Harris et al., 1992), indicating a very close relationship between the two genera. However, the genus *Leptospermum* has priority being named in 1776, compared to *Kunzea* in 1828.

This is also essentially the argument recently published about including in *Melaleuca* the genera *Beaufortia*, *Callistemon*, *Calothamnus*, *Eremaea*, *Phymatocarpus* and *Regelia*. The authors here, however, argue that enlarging *Kunzea* currently of c. 50 species would be unwieldy and suggest it is better to ensure monophyletic lineages by having several segregate genera rather than one large genus. However, either scenario is valid, if the aim is to have monophyletic lineages.

The result is the following nine genera in the *Leptospermum*-like group in Australia, Two genera were distinguished by Thompson and the other seven by Wilson & Heselwood.

1. ***Aggregiflorum*** has 3 or more flowers in axils of short shoots. Bracteoles not papery. Fruits 3 locular. Ten species in NT, Qld, NSW and New Guinea.
2. ***Apectospermum*** flowers usually solitary. Fruit woody, persistent, fruit valves and persistent hypanthium not woody, exserted, and seeds ovate with a reticulate surface. Four species are found in the Southwest—*Apectospermum exsertum*, *A. macgillivrayi*, *A. sp.* Latham (B.L. Rye239088 & M.E. Trudgen), *A. spinescens* and *A. subtenuis*. One species that seems poorly placed in this group is *Leptospermum subtenuis* from east of Esperance. The taxonomy and species limits of members of this genus is challenging, Binks and Byrnes (2022) found little resolution of several phrase named taxa in this genus, including *Leptospermum sp.* Bandalup Hill, and this species was placed in *A. spinescens*. However, it is killed by fire unlike the strongly resprouting lignotuberous *A. spinescens* and the sex ratios of its flowers seem very different.
3. ***Gaudium*** has generally non-persistent fruits. Seeds with several vertical rows of loose cells sometimes forming a wing, hypanthium may be succulent. There are 22 species in the genus of which 21 occur in Eastern Australia and one (*G. confertum* from East Mount Barren) in Western Australia. The weed; Victorian Tea Tree, *Gaudium (Leptospermum) laevigatum* is in this genus.
4. ***Homalospermum*** with solitary flowers, axillary, seeds disc shaped with a marginal wing and central point of attachment. Anthers have 2 ridges on back. A single species in southern Western Australia.
5. ***Kunzea*** with sessile flowers, often clustered and terminal with conspicuous bracts. Flowers are rarely pedicellate. Stamens in 2 whorls normally longer than petals,

fruit are not persistent, usually a dry capsule but occasionally soft and indehiscent. Fifty species in Australia and New Zealand. The situation in New Zealand in *Kunzea* is complex with between 2 and 10 species recognised, apparently with little genetic differentiation between species. Separation of many Western Australian species is also often difficult owing to the numerous persistent hybrids (Sainsbury, 2019).

6. *Leptospermopsis* has a non persistent dry never succulent capsule, 3 or 5 merous. Seeds are narrowly obovoid, with no loose cells forming a wing. Eight species in Southern Western Australia—*Leptospermopsis erubescens*, *L. fastigiata*, *L. incana*, *L. maxwellii*, *L. nitens*, *L. oligandra*, *L. roei* and *L. sericea*.

7. *Leptospermum* has woody persistent 5 locular fruit, and woody hypanthium and valves. Seeds are linear, striate surface. Forty four species in Eastern Australia, Thailand, Phillipines, Indonesia, New Guinea, New Zealand, and the Cook Islands.

8. *Neofabrica* which has yellow or white flowers, solitary or in threes in upper leaf axils. Numerous stamens in several rows, with long filaments and basifixed anthers. Fruit a woody capsule. Fertile seeds ovate, winged. Three species in NE Queensland.

9. *Pericalymma*, not discussed by the authors but characterised by solitary or 2 flowers in upper leaf axils, divaricate branching of the stems, often swollen spongy stem, a 3 locular ovary forming a narrow soft persistent capsule. Three species in southern Western Australia.



The Future

The occurrence of polyploidy, hybridization and apomixes (seed set without pollination/fertilization) found in *Callistemon* and *Melaleuca*, also appears to be scattered through the tribe Leptospermeae, as noted in *Leptospermopsis* species by Binks and Byrnes (2022). This is and will make species level taxonomy a challenge.

Rampant hybridization is also a feature of *Kunzea*, and *Agonis*, which has and does make taxonomy of *Kunzea* especially challenging. Added to this is the observation that suckering is frequent in some *Kunzea* species, e.g., *Kunzea ericoides* complex, *K. micrantha* and *K. pomifera*, which enables maintenance and spread of localised forms and hybrids.

A potential serious issue is the beginnings of widespread naturalization of several eastern Australian species of *Kunzea* (*K. ambigua* and *K. ericifolia*) in areas rich in native

species. It may be too late but eastern Australian species of *Kunzea* should not be sold or used as garden plants in Western Australia.

References

- Binks, R. M. & Burns, M. (2022). Species delimitation, hybridization and possible apomixis in a rapid radiation of Western Australian *Leptospermum* (Myrtaceae). *Botanical Journal of the Linnean Society* 200: 378-394.
- Harris, W., Porter, N.G., Dawson, M.I. (1992). Observations on biosystematic relationships of *Kunzea sinclairii* and on the intergeneric hybrid *Kunzea sinclairii* x *Leptospermum scoparium*. *New Zealand journal of Botany* 30: 213-230.
- Sainsbury, R.M. (2019). *A Field Guide to Western Australian Beaufortias, Eremaeas, Kunzeas and Regelias*. Rob Sainsbury Wildflower Books. Bull Creek.
- Thompson, J. (1983). Redefinitions and nomenclatural changes within *Leptospermum* sub alliance of Myrtaceae. *Telopea* 2: 379-383.
- Thompson, J. (1989). A Revision of the genus *Leptospermum* (Myrtaceae). *Telopea* 3: 301-449.
- Wilson, P. & Heselwood, MM. (2023). Revised Taxonomy of the tribe Leptospermineae (Myrtaceae) based on morphology and DNA data. *Taxon* 72: 550-571.

Greg Keighery

Australia Day Honours 2024: Margaret Pieroni Medal of the Order of Australia (OAM)

Margaret is well know and admired in the Wildflower Society for her works and enthusiasm for our wildflowers. Her many achievements in the Society include—a black and white wildflower drawing for the Newsletter cover (before colour printing); illustrations for Society and other publications (illustration for pamphlet on the Brixton



Street Wetlands page 29); *Verticordia* paintings; *Dryandra* writing, illustrations and photos; designs for windcheaters. The list is very long.

Here is part of the article ‘A lifetime of love for nature and art leads to OAM for Denmark’s Margaret Pieroni’ by Stuart McGuckin in the *Albany Advertiser* on Thursday, 25 January 2024

After finishing high school, Mrs Pieroni completed a three-year course at East Sydney Technical College and then went on to work in advertising as an artist for two decades.

“Then in 1969 I was diagnosed with acute leukaemia which led to three years

of chemotherapy,” she said.

“After they finished that, Mum said ‘why don’t we go to Western Australia to see the wildflowers?’”

It was a bucket-list item for Mrs Pieroni who had heard of WA’s wildflowers from her mother whose father had visited the State during a trip across from NSW.

In 1973, she made the trip across the Nullarbor towing a caravan with her parents.

“When I got back home, my husband asked me if I liked WA and Perth and I said ‘yes’,” she said.

“Then he came over and had a look around, then came back and said ‘I’ve got us a house in Perth’.”

An initial enquiry to the WA Herbarium to see if they had any work for a botanical illustrator did not prove fruitful, but she was noticed shortly after joining the Wildflower Society of WA.

“I started doing illustrations for them and they got noticed by the botanists and the herbarium,” Mrs Pieroni said.

“I ended up doing quite a lot of work for the botanists for their papers and books.”

A 1991 exhibition at the Art Gallery of WA entitled Wildflowers in Art, which included a painting by Mrs Pieroni, led to the formation of the Botanical Artist Group of WA. The group produced a book called ‘Brush with Gondwanda’ in 2008.

Mrs Pieroni moved down to Denmark after having her “dream house” built on a block of bushland in 2005.

“I had been thinking about coming south because I couldn’t stand the heat and humidity in Perth,” she said.

“The block had two dryandra species on it and so I bought the block and built my rammed earth dream house.”

Dryandras have, and continue to be, a favourite of Mrs Pieroni.

“I got interested in them because my Mum and Dad joined the local garden club on the NSW south coast, then mum started doing flower arranging, particularly dried arrangements,” she said.

“So I was sending her things like dried paper daisies, and then I started growing a few dryandras in my Attadale garden which I would send over to her for dried arrangements.

“She did very well with them and won all the prizes.”

She then joined the Dryandra Study Group as part of the Australian Native Plants Society and eventually became its leader.

“I was growing more and more dryandras, and going out to find them,” she said.

“Only about half of them had been named so we were finding new ones all the time and rediscovering ones they had specimens of at the herbarium without knowing where they had come from.”

Eventually, all that knowledge led to her publishing a book with Tony Cavanagh dedicated to them in 2006, simply titled *The Dryandras*.

Back pain and faltering eyesight stopped Mrs Pieroni from painting and drawing flowers after a



bad spell in 2020.

She had promised herself that she wanted to stop working if her next piece would not meet the standard of the one she had done before it.

At the age of 87, which “she wasn’t supposed to reach” when diagnosed with leukaemia, she is still finding different species of native plants even on her own block of land. Last year, she found the 20th different orchid on the block but said many others would not come back.

She hopes her work will help the wider community realise how special native plants and wildflowers are, and that they do not just grow as a field of colour at certain times of year.

In a note to the Editor Margaret said she also added in the interview—‘It would be a tragedy if, in the future the only place you could see them was by looking at illustrations.’

Congratulations Margaret.

Australia Day Honours 2024: Judith Anne Blyth Medal of the Order of Australia (OAM)

Judith is well known in the conservation and peace groups in Perth.

Judith came to Perth with husband John Blythe in 1986 when CALM formed to work alongside Keiran McNamara as advisors to Barry Wilson, Director of Nature Conservation. Both Judith and John are avid bird watchers and active volunteers in what



is now Birdlife Australia. Judith has illustrated cards and publications for Birdlife and volunteered at the Conservation Council of Western Australia since 1986.

A speciality of Judith’s are banners (photo right, from Subiaco Post 9/12/2023)—more than a thousand have been painted for the many conservation battles in WA.

Judith is a regular at the Perth Branch of the Wildflower Society monthly meetings.

More banners have been made in support of her peace and anti-nuclear activities and she is/has been an active member of: ‘International Campaign to Abolish Nuclear Weapons’ (since c1980s); Nuclear Free WA (current); former Co-Chair, member and supporter ‘Anti-Nuclear Alliance of WA’; the Medical Association for Prevention of War (since 2005, 1995 to 2005 Administration Assistant); and People for Nuclear Disarmament (volunteer, 1980s-2019).

Congratulations Judith.

A GREAT 100 YEARS

Dorothy Perret (nee Card) celebrated her centenary on the 16th February 2024 with an open day at her Shenton Park house. Brian Moyle (photo left) and Bronwen Keighery attended. A wildflower posy was presented on behalf of Perth Branch and the Society (photo below right). Dorothy has been a member of the Wildflower Society nearly six decades, joining in 1968.



Dorothy was born in Wonthaggi, Victoria in 1924 and her mother died when she was twelve. She spent all her secondary schooling at boarding school followed by Microbiology at the University of Melbourne. In 1952 she headed to Britain and worked in the Lister Institute. Here Dorothy worked with

John Perret, John emigrated to Perth with Dorothy where they were married and lived in Floreat Park. Both John and Dorothy continued working in the field of microbiology. Notably Dorothy worked with Ida Mann on a study of Trachoma together they isolated *Chalmydia trachomatis* as the causative virus.

Later she moved to Shenton Park where she lives today. The house has the second oldest Olive tree in Perth but it is easily recognisable with the native plants out the front.

Dorothy has been a very active member of the Society and supported many of the campaigns in her quiet manner including: the Save Mount Leseur and the Save our Bushland Campaign. She was a member of the conservation subcommittee for many years and was the Society's representative to the Conservation Council of Western Australia over several decades.

Dorothy has been active in the Bushland Plant Survey Programme until about ten years ago, participating in the survey work as well as follow-up plant identification at the Western Australian Herbarium. She also was a volunteer at the Herbarium taking part in the specimen-mounting programme and the identification service for the Regional Herbaria. She also travelled to Ravensthorpe for many years to help with the identifications for the annual Ravensthorpe Wildflower Show.

Along with a few members of the Society she was part of a native plant growing venture in the Moore River area and also a farming enterprise in the Middlesex area near Manjimup.

Dorothy has always been a regular attendee at the Society's State Council and Annual General meetings as well as the Society monthly meetings in the hall at Meriwa Street and then as a member of the Perth Branch.

This is a summary of some of Dorothy's contribution to the Society however she has always been a quiet contributor, shunning the limelight.

The Society passes on its best wishes to Dorothy Perret on the occasion of her one hundredth birthday.

Brian Moyle and Bronwen Keighery



Drosera hortiorum – a win for citizen science

Drosera species, commonly known as Sundews, after the glistening secretions on their leaves, are carnivorous plants, capturing insects and digesting them in chemical secretions produced by the leaves. Approximately 115 of the 260 species known worldwide are endemic to our Southwest. Twenty species are local to the Roleystone area and are described on Roleybushcare's Flora Database.

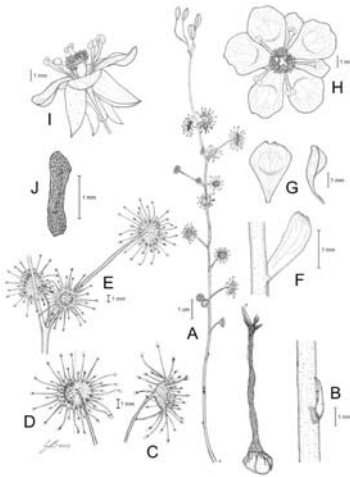
Following the talk by Jean Hort at the February 2023 Armadale Branch meeting, Fred Hort mentioned that several new *Drosera* had been described and one species had been named after him and his wife Jean. Jean had noted this specimen some 35 years prior, but Fred apologetically said he thought it unimportant at the time. In 2022, Jean remembered, and they revisited and collected specimens. Thilo Krueger, a PhD candidate at Curtin University who was researching *Drosera*, described and named the new species—*Drosera hortiorum* in recognition of Fred and Jean who are enthusiastic field botanists, nature photographers and volunteers at the Western Australian Herbarium. The species had actually been collected in 1901 but was misidentified as *D. microphylla* and not recollected until last year. Fred showed some photos of the new species, requesting that we keep a lookout for them.

After the February meeting, member Lee Hassan (Roleybushcare Flora Database curator), mentioned to Fred that she thought she had seen this species. Lee emailed photos to Fred who forwarded them to Thilo, who confirmed that this was indeed *D. hortiorum*, a Priority 2 species. This caused some excitement as it was only the 5th known location for this plant and would considerably extend its range. A visit to the site was arranged for August 2023.

I was fortunate to be asked to join the excursion. Sadly, Fred and Jean were physically not able to traipse over rough ground, but we later met up with them at a 6th site, one more accessible, where Thilo had noted plants in flower a few days earlier.

Lee had arranged, with permission from the Water Corporation, to visit an area which was within the Canning Dam catchment. So, on a sparkling morning after overnight rain, Lee, Thilo Krueger and I set out cross-country to a rarely visited rocky outcrop. I have been a frequent visitor to Boulder Rock all my life, but this area was exciting, showing no signs of the environmental degradation so obvious to the familiar visitor to Boulder Rock.

Drosera hortiorum is a free-standing plant about 15–25 cm tall, with its leaves single at the base (unlike the ubiquitous climbing *D. macrantha* with leaves in 3s)



Krueger et al (2023) Figure 8. *Drosera hortiorum* T.Krueger & G.Bourke. (A) habit; (B) stem base with cataphyll; (C) lamina, lateral view; (D) lamina, left half adaxial view, right half abaxial view; (E) group of leaves from upper node of the stem, consisting of one cauline leaf and two axillary leaves; (F) bract; (G) petals, left adaxial view, right lateral view; (H) flower, top view; (I) flower, side view; and (J) seed. (A–I) from photographs of living plants from the type location, Wandoo National Park, Western Australia; (J) from near York, Western Australia. Drawing: G. Bourke.

but with two tiny additional leaves in the axils at the top of the stems which distinguish it from *D. calycina*. The flowers are an almost iridescent rich reddish/purple, about 1 cm across with gold/green bracts. Sadly though, this day was not warm enough to open the blooms.

Lee and I identified a couple, but Thilo, the expert, identified 5 to 10 other plants, at each location, both adults in bloom and in bud. We identified over 375 plants before we abandoned GPS co-ordinates for each sighting. About 65% of the habitat was searched.

Thilo was a wealth of knowledge and generous with his time. He identified several other species other than the prominent *D. macrantha*. He pointed out the Pygmy Drosera, explaining that their prey was springtails, and that their tentacles are the fastest “movers” in the plant kingdom. With his interest initially “piqued” by the gift of a Venus Flytrap as a child, he had left his native Germany after school, trading Europe for the world Drosera hotspot in the Southwest. The second largest area for diversity of *Drosera* is our own Kimberley.

Thilo identified *D. rosulata*, with its red rosette of leaves which had finished flowering, *D. glanduligera* with closed buds in overcast conditions, climbers such as *D. macrantha* and *D. pallida* in bud and free-standing *D. stolonifera* and *gigantea* (with buds just opening). He explained that the ubiquitous *D. macrantha* almost certainly needs taxonomic revision and that many herbarium species are probably incorrectly labelled.

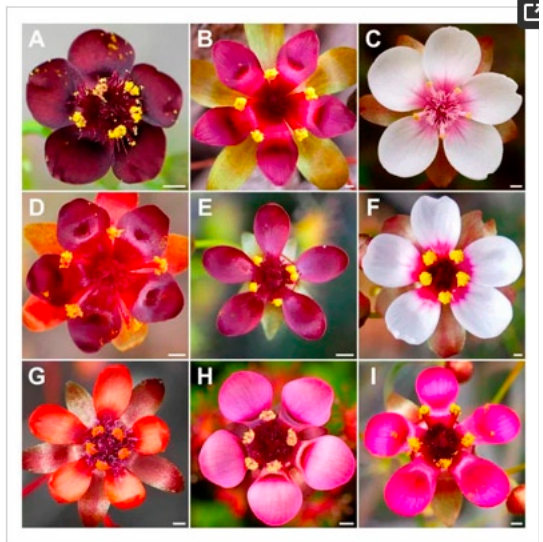
Four weeks later, I was again accompanying Lee on her monthly survey of the site. On a sunny day we were able to locate about 50 plants with open flowers. A brisk wind made photography difficult, but Lee obtained some good images. Thilo was informed. This being a newly described species, the duration of flowering is not known (Krueger et al, 2023 state that flowering has been recorded from June to September). So perhaps it has a long flowering period or was just responding to a recent period of cold.

Thanks to Lee and Thilo for allowing me to share this amazing experience.

Debbie Bettenay Other information at:

<https://www.abc.net.au/news/2023-01-28/new-species-of-carnivorous-sundew-discovered-on-social-media/101900468>

Krueger T, Robinson A, Bourke G, Fleischmann A. 2023. Small leaves, big diversity: Citizen science and taxonomic revision triples species number in the Carnivorous *Drosera microphylla* Complex (D. Section Ergaleium, Droseraceae). *Biology*, v. 12, 141; <https://doi.org/10.3390/biology12010141>.



Krueger et al (2023) Figure 4. Comparison of the flowers of all nine species of the *Drosera microphylla* complex. (A) *D. atrata*; (B) *D. calycina*; (C) *D. esperensis*; (D) *D. hortiorum*; (E) *D. koikyennuruff*; (F) *D. macropetala*; (G) *D. microphylla*; (H) *D. reflexa*; and (I) *D. rubricalyx*. Scale bar = 1 mm. Images: T. Krueger.

Understanding the interactions between climate and the natural environment during a period of rapid change.

This event on Wednesday 8 November 2023 was very well attended by members of the Armadale Branch was hosted by Associate Professor Dr Judy Fisher. Dr Fisher discussed key ideas, supported by the latest international science, on how to move forward as a community to improve outcomes for the natural world and people during a period of rapid change.

According to Dr Fisher, a rapid shift is occurring in how people are viewing and desiring interactions with the natural environment. As people become more closely



Armadale Branch members—Julie Rotering, Roger Harington, Judy Fisher, Linda Mason, Kim Sarti, and Gloria Sommerville at the Plenary Session. Photo S Byrne.

connected to the natural environment, it is important that our communications on its importance, and mechanisms to conserve and enhance its function, are presented to all.

Judy outlined how field data and science have identified the need to consider both climate change and biodiversity, particularly its loss in an interconnected manner while also considering positive influences of nature on society. Approaches, which consider climate alone have been shown to often have negative impacts on biodiversity.

Dr Fisher described a wonderful example of how she is helping to increase biodiversity in some of Perth's reserves by detailing how over the past few years she has been involved with the City of Mandurah. She has developed a system whereby she has walked most of the reserves contained within the City of Mandurah mapping out the vegetation types and condition, identifying the most prevalent weeds and then uploading all this data from a program that she has developed. The City's Environmental Department can then see at a glance at the data what the main problems are with weeds. This directs what money is available to controlling the problem weeds. Also, with the vegetation types being mapped out, it allows revegetation of the correct species of plant to be planted in each reserve.

Julie Rotering, Roger Harington, Judy Fisher, Linda Mason, Kim Sarti, Gloria Sommerville



Seed collecting at Bungendore Park

On 10 November 2023, a beautifully cool morning, a group of members gathered (photo left, Ben Fenu, Debbie Walker, Linda Mason, Laurie Mason, Gloria Sommerville, Sarah Mason and Kim Sarti) to do one of our two annual seed

collecting expeditions into Bungendore Park. In a very short time, we managed to collect some *Acacia dentifera*, *Melaleuca trichophylla* and *Trymalium ledifolium* as well as a few seeds of other miscellaneous species. Much of the seed observed still had a few weeks to ripen, so another trip was organised for Wednesday, 6 December. Of particular interest to me was cutting material of *Hemigenia incana* and *Grevillea wilsonii* both of which are now sitting in a shade house at the Australian Native Nursery hopefully thinking of putting on roots in about 3 months' time! In the past I have collected *Calytrix acutifolia* and grown this very successfully at the nursery but the type that Kim Sarti found this time is so vastly different from the original collected material that I had to put in a request to Bronwen Keighery to enquire as to whether this form of *Calytrix acutifolia* was actually just that. Botanist husband Greg Keighery had published a paper in *Nuytsia* (October 2001) on the subject of *Calytrix acutifolia* which was then split into four different species, so I was hoping that the specimens that we came across on this collecting trip was something new for the park. Alas it wasn't, and the material I collected was in fact just another variation of *Calytrix acutifolia* albeit in my opinion a nicer form and much showier. This form is very upright and open differing from the original material collected years ago which is low and weeping.

Our second trip on 6 December was again well attended with the same crew involved except that Ben Fenu wasn't in attendance, but Julie Rotering and Roger Harington were. It was again a beautifully cool day when we started but got increasingly hot as the morning went on. However, that didn't stop the intrepid collectors from gathering seed of numerous species including: *Beaufortia macrostemon*, *Acacia pulchella*, *A. lateriticola*, *Hakea* spp. and *Kennedia prostrata*. I was able to collect, with the eagle-eyed assistance of Laurie and Sarah, some more cutting material of *Grevillea wilsonii*, *Hemigenia incana* and *Lechenaultia biloba* along with *Astartea scoparia* (photo top left page 36). This time we managed to collect a good amount of *Acacia barbinervis* or 'nervous Barbie' as Kim Sarti calls it (a good way of remembering the name, photo below left page 36). We enjoyed a morning tea under the shade of the Jarrah and Marri trees and when we were finished our collecting, we headed to the Church Café in Armadale for lunch. It was a very



pleasant day with very pleasant company.

I have made some observations over the years of collecting cutting material from Bungendore Park. Not everything works, such as *Grevillea wilsonii*, that is a difficult plant to propagate from the wild, but I still keep trying! However, others such as *Babingtonia camphorosmae* are truly amazing. In the park when we were there, it was still sparsely flowering, it is largely a plant which most people would walk right by as it is not exactly a ‘show off’ in the park. It is not a difficult plant to propagate but with nursery conditions after two years of water, fertiliser and good soil, this is a standout plant with beautiful sprays of pink flowers and one that you would want in your garden. Another plant that grows well in the nursery for a short time is *Beaufortia macrostemon* which grows easily from cuttings or seed. In the park it is quite showy but very compact due to the lack of moisture it receives during the year. In the nursery it needs to be planted out as soon as the material has good roots as it doesn’t like the overhead watering system, but it is a stunning plant and would be a great addition to gardens where the soil type is to its liking. *Calytrix acutifolia* and *Lechenaultia biloba* are another two plants which under nursery conditions just get better and better so you can see the potential for many of our native plants to be superb garden specimens.

Linda Mason

Further to Linda’s report above, we came across a small population of a white-flowered shrub in a shallow winter-damp depression. Obviously, a myrtaceous plant, there was some discussion as to its identity as the flora checklist for Bungendore Park did not list any *Astartea*, *Kunzea* or *Scholtzia* species. Eventually the plant was identified as *Astartea*

scoparia.

The first botanical survey of the park was carried out by Jeff Lewis and published in November 1993. Over the 30 years since, branch members visit the park in different seasons so further species have been added to the checklist. Bungendore Park is a fairly large area covering an area of 498 ha so it is understandable that not every species has been recorded. The discovery of this *Astartea* species is a new record for Bungendore Park which is quite exciting.

Kim Sarti

New Members

We welcome these new and re-joining members from 21 September – 13 November 2023 to the Society and thank them for their support: Christine Athanassiou, Dianella; Mardi Bevan, Innaloo; Anthony Christian, Albany; Diane Edmonds, Shoalwater; Ian Hakanson, Hamersley; Michele Hay, Shenton Park; Dirk Kotzee, Floreat; Merilyn Major, Hamilton Hill; Maureen Munro, Margaret River; Jeremy Price, Morley; Janelle Repacholi, Palmyra; Marina Shelton, Nedlands; Sue Stevenson, Augusta; and Claudia White, Swanbourne.

Kerry Smith

Dryandra Not Just a Forest

Roger Underwood's latest publication from his York Gum Publishing: *Dryandra Forest-A silvicultural history* is this but also much more. Yes there is the story of the forestry practices over the last hundred years but it also includes social and industrial history and conservation (both plants and animals) and a tourism story across this period.

The name Dryandra was applied to the forest area from the 1930's when the Cuballing Forestry Depot was called the "Dryandra Settlement". The department named their sites after plants. There are twelve species of that plant genus growing across the forest. It was however the species of mallets (eucalypts) which was of interest to the forestry department and Roger describes the situation before the Forests Department

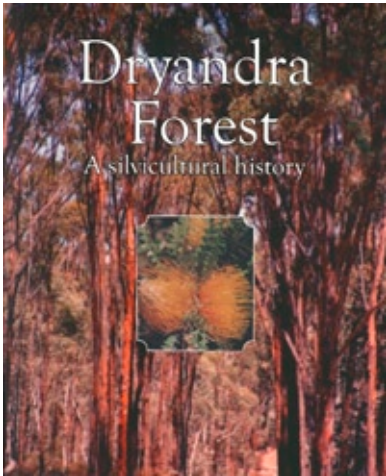
was formed in 1919 when it was open slather to harvest the bark of the mallets as they contained commercial quantities of tannic acid used for the tanning of leather.

Dryandra Village was the administration centre the department established in the forest and facilities were very spartan by today's standards for the families in their distinctive forestry department houses. These are still there today and are the basis of the Lions tourism village, with updated facilities.

The management of the forest for mallet production is detailed. This changed by 1960 when cheaper tannin was imported to Western Australia from South Africa. Roger describes forestry life, the nursery, forest replanting, notable foresters and their families.



Roger Underwood launching the book at Dryandra National Park. Photo Daniel Rooney (web sourced).



Roger attributes the efforts of George Brockway, and to some extent Charles Gardner, for the fact that the forest was not turned over to agriculture. By the 1970s tourism “discovered” Dryandra Forest. Most notably Kevin Coate, himself an ex-forester, set up a nature based tourism operation. The attractions apart from the forest were the numbat populations, other mammals, birds and the profusion of wildflowers.

In 2022 the Western Australian Government designated the Dryandra Woodland National Park so it should be safe for future generations.

This easy to read book is well illustrated starting with describing a lifestyle now almost forgotten. Future generations will be able to enjoy and further study this area less than three hours drive from Perth.

As Roger states in his preface he “intended to provide a companion to Vincent Seventy’s beautiful book *Dryandra – the story of an Australian forest.*” I believe he has certainly succeeded.

Brian Moyle

Tuarts on the Nullarbor

When driving across the Nullarbor in early January 2023 I had the opportunity to stop in at the old Eucla Telegraph Station. At the last Perth and Northern Suburbs Wildflower Society Christmas party in December, a slideshow of plant photos from around WA# included a photo of the Eucla Telegraph Station Tuart (*Eucalyptus gomphocephala*).

Now a quick check of Florabase will show you that Tuarts are not a normal feature of southeast WA, and my understanding is a Tuart was planted next to the Telegraph Station Master’s home, presumably some time between 1877 and 1927 when the telegraph station was in operation (does anyone have any information on this?). I wondered how the Tuart was going and so decided to go and have a look.

What I found was a very healthy looking stand of trees that covered an area of about 40 metres in

diameter. There were many trees, possibly up to thirty, with several young saplings close to the edge, clearly germinating from seed dropped by neighbouring trees. The older



trees have a sprawling habit, perhaps due to the exposure of the site to wind (in sand dunes approximately 700 metres from the coast) and were nothing like the tall spreading forms that Tuarts take along the Swan Coastal Plain. The trees appeared healthy and given the number in the group it appears they are quite happy so far from home. One photo shows the Telegraph Station Master's dwelling and the Tuarts in the background (photo page 36, middle) not the Telegraph Station as is commonly thought—the Telegraph Station ruins are nearby but only rubble remains). The other photo shows the Tuarts with the Station Master's dwelling to the right, and me to the left for reference (photo page 36). If you are passing by, I encourage you to drop in and have a look.

Glenn Cook text photos Megan Llyod.

Here Glenn was referring to the Perth/Northern Suburbs Branch Christmas gathering. A box of slides were found in the Office with a sheet of printed information about the slides. None of the people at the office could work out what they were so they were shown at the gathering to see if anyone else knew. Bronwen and Greg Keighery knew them well! At the ANPSA (then ASGAP—Associated Societies for Growing Native Plants) Conference held in Perth in 1991 this slide box was sold for \$25 (before the time of digital images). The slides were selected by Judith Brown (now Harvey) to illustrate the different plant communities across WA. Judith worked at the Wildlife Research Centre, and the slides were taken by staff at the Centre.

Perth Branch Report

Our July meeting saw Heidi Hardisty from the Friends of Lake Claremont talk about the transformation of Lake Claremont from a lake to a golf course and back into a lake in more recent times, with lots of work to restore the plant community. In August our meeting opened with a short focus presentation by Mark Brundrett on a recent Walpole Bioblitz he attended. This was followed by Alex George reminiscing on Perth's urban bushland and how it has changed during his lifetime. In September, after a quick venue change to Perry House due to our regular venue being unexpectedly double booked, we enjoyed a presentation by Dr Phillip Ladd of Murdoch University on the pollination and breeding systems in Fringe Lilies and *Arnocrinum*—distinctive local wildflowers. Our October meeting was held at the Bold Park Ecology Centre and began with a short focus session on wildflower pollination by Mark Brundrett, followed by our keynote presentation by Ryan Glowacki, acting Manager of Biodiversity at Kings Park, on the wonderful world of the urban bushland that is Kings Park. Back at the Palms in November, our meeting commenced with a slideshow of wildflower photos from a recent trip through South Australia, the Northern Territory, and Western Australia by Glenn Cook, followed by a fascinating presentation by Dr Lyn Abbott of UWA who spoke about her extensive work in soils and soil biodiversity.

As usual, our December meeting takes the form of an end of year gathering and BBQ dinner, along our with Northern Suburbs branch friends. This year it was the turn of the Northern Suburbs branch to be host, and we found ourselves at the Henderson Environment Centre next to Star Swamp Reserve in early December. A pleasant evening of bush walk, with David Pyke as guide, was followed by a BBQ dinner, and then a post dinner slideshow of old photos of bushland scenes around southwest WA from years gone by.

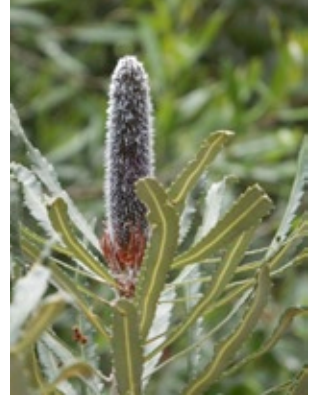
Perth Branch was active with wildflower walks in winter and spring, including a very well patronised excursion to Alison Baird Reserve in July led by Hans Lambers, a walk through Warwick Bushland in September, led by Mark Brundrett, and a walk around Baigup Wetland in Bayswater in early October, led by Penny Lee and Greg Keighery. Also in October, a coastal gardens excursion was held, where members visited Society members' gardens near the coast north of the river.

President Glenn Cook and committee member Mark Brundrett attended a State Council meeting in November to discuss issues relating to the society, and in particular the retention and recruitment of members. Although membership appears to be steady, it is always worthwhile considering what the Wildflower Society offers to encourage participation. And talking of participation, please keep in mind that the Perth Branch AGM is not so far away (at our April meeting), so please consider whether you would like to be involved in our committee. New voices are always welcome.

Glenn Cook, President

Six in one

We tend to admire our wildflowers just when they are, indeed, in flower, but I am sure that most of us also appreciate them at other times, such as those that have colourful new



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leaves (e.g. some *Dryandras*) or bark (e.g. *Salmon Gums*). Many *Banksias* have such features, an outstanding one being *Banksia attenuata* which, being common around Perth, we appreciate when its bright yellow flowers tell us that summer is approaching but take for granted at other times. Here, in fact, you get six displays in one species. First, it has small, silky buds that grow into larger buds with a very prominent geometrical pattern of the bracts that surround them. As they enlarge, the pattern becomes covered by the growing buds that are a beautiful green until quite a late stage. These open to a bright yellow, very attractive to birds such as honeyeaters and wattlebirds. Then they age to a deep orange brown which, if you put aside the idea of this being a yellow-flowered species, are attractive in their own right. Finally, these change to brownish grey, covered with the curly styles of the old flowers but usually with large furry follicles showing through.

In this species, some follicles open when mature, while others remain closed until burnt. But this is not the end of the show! *Banksia attenuata* is one that produces its colourful new leafy shoots just after flowering, so then you have the pretty pink woolly young leaves for some weeks. Photos back cover of *Banksia attenuata* with very young buds, patterned developing buds, green buds (with pink new leaves), fresh yellow flowers, old orange flowers, and fruit.

Interestingly, in my garden, honeyeaters visit and probe the old grey flower spikes, presumably finding tiny morsels such as grubs (I've never dissected one to find out).

So there you are, a banksia with many stages – just change your mindset that this species is attractive only at the bright yellow stage. Another species with many colourful stages is *Banksia menziesii*, beautifully painted by Philippa Nikulinsky in her book of that name. I'm sure you can think of other wildflowers that are attractive beyond the fresh flowering stage!

Alex George





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Join us in the Kimberley region of Western Australia, one of the most remote and unspoiled wilderness areas in the world. We explore Purnululu (Bungle Bungles) National Park, the Gibb River Road, Parry Lagoons (great for wetland bird watching), Drysdale River Station, Windjana Gorge and Silent Grove. There is also an optional full-day visit to the Mitchell Plateau to view Mitchell Falls.

14-Day Tanami Desert Expedition — Camping Tour
Alice Springs to Kununurra, 22 June - 5 July 2024 — Max 10 passengers

The Tanami Road crosses the vast expanse of the Tanami Desert and will delight nature lovers and bird watchers. On this trip we will explore some of the most isolated areas in northern Western Australia and the Northern Territory, including the West MacDonnell Ranges, Newhaven Station, Lake Gregory (Paruku) and Lake Stretch (Nyarna), Wolfe Creek Crater and Keep River National Park.

12-Day Western Explorer Expedition— Easy Camping Tour
Broome to Perth, 17 - 28 July 2024 — Max 12 passengers

We travel from Broome to Perth through WA's outback country. Rugged ancient landscapes including Karijini National Park, Mt Augustus and the Kennedy Ranges, are not places you can just swing by. Our 12-day tour from Broome to Perth coincides with the northern wildflower season and is an ideal way to explore all three destinations in one go.

Contact us for our full 2024 tour program • Free Call: 1800 676 016 • Phone: +61 8 9330 6066
Web: www.coateswildlifetours.com.au • Email: info@coateswildlifetours.com.au



Society Monthly Webinar Series

With the third Webinar this month it is well worth signing up for these on the Society website at www.wildflowersocietywa.org.au.

Presentations are live on the dates advertised on the website. Each presentation typically goes for about 45 minutes (with leeway) after a short introduction at 7:30pm. After the presentation, we have about 15 minutes of Q&A before concluding for the night around 8:45pm.

At the end of each month the presentation is able to be viewed on the website.



House-sitter needed

Jan Pittman is looking for a house-sitter to look after three kelpies (and her home!), in August this year (dates not finalised). She lives on 103 acres, of which 90+ acres is beautiful bushland, totally burnt in the Feb '21 fires but now beautifully recovered (see story in a previous newsletter by Jan, Penny and Pam, who've been monitoring the recovery). The very friendly kelpies require twice-daily walks, and feeding of course. Please contact Jan directly on 0408 024 854 or wildflowerart@gmail.com if you are interested.



Xerolirion divaricata

Photos: M. Williams

Vale *Xerolirion*

The monotypic genus *Xerolirion* (*X. divaricata*) was differentiated from *Lomandra* in having a divaricately branching habit (photo left from Florabase), caduceous leaves (not persistent like *Acanthocarpus* or *Lomandra*), terminal flowers, males in cymes and female flowers solitary. It shared with the related *Lomandra* in being a rhizomatous herb, dioecious, with distichous leaves (leaves in 2 vertical columns on opposite sides of the stem) closely sheathing the main stem.



This study has conclusively shown that *Xerolirion* is nested deep within *Lomandra*, something that has been shown previously but not as comprehensively as this study. *Xerolirion* is a distinct lineage but related to a group of species (e.g. *L. caespitosa*, photo left, *L. micrantha* and several eastern Australian species, especially *L. filiformis*) which have narrow leaves, flowers arranged alternatively on the rachis, floral bracts that do not completely enclose the flowers or pedicel, and an inner bract that is lateral to the outer bract.



Above: *Acanthocarpus canaliculatus* flowers, and *Chamaexeros fimbriata*. Photos Bronwen Keighery.

Xerolirion divaricata is still morphologically very distinct from these *Lomandra*s in its divaricate branching, reduced distichous leaves and campanulate flowers, and in having sepals and petals united at the base. This makes it look superficially like an *Acanthocarpus*.

While the new combination was not made in the paper, there seems little doubt that this will soon happen. The study did find that *Acanthocarpus* and *Chamaexeros* were distinct, so WA keeps a few genera still.

Greg Keighery

Reference: Gunn, B.F., Murphy, D.J., Walsh, N.G., Conran, J.G., Pires, J.C., Macfalane, T.D., Crisp, M.D, Cook, L.G. & Birch, J.L. (2024). Genomic data resolve phylogenetic relationships of Australian mat-rushes, *Lomandra* (Asparagaceae: Lomandroideae). *Botanical Journal of the Linnean Society* 204: 1-22.



ANPSA 2024

The ANPSA 2024 Biennial Conference, is proudly hosted by APS Victoria in the vibrant city of Melbourne.

Registrations are now officially open, and we invite you to secure your spot for this exciting event. Take advantage of the opportunity to connect with fellow Australian native plant enthusiasts and expand your knowledge.

Enhance your conference experience by joining one of our pre-conference or post-conference tours, designed to showcase the best of Victoria's landscape.

Additionally, we're thrilled to offer two days of excursion, Tuesday and Thursday during the conference week, allowing you to unwind and discover the beauty of natural landscapes, public and private gardens.

Register now and secure your place at the ANPSA 2024 Biennial Conference. We can't wait to welcome you to Melbourne!



