

Our Vision for the Future



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Australian Plants

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Cover: The Tailed Emperor *Polyura sempronius*, one of Australia's largest and most attractive butterflies, is pictured here in on *Brachychiton populneus* in Attila and Michele Kapitany's garden. Attila Kapitany

Australian Plants articles

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Editorial

Merle Thompson OAM

This issue of *Australian Plants* is breaking new ground. To the best of my knowledge, we have never had young authors before. Young in this instance means very young – two girls in their last year of primary school and two in year 7, the first year of high school (ages 11-13), one year 11 student and a university student.

You could be forgiven in thinking that the co-editors, long-term directors of the Australian Plants Society NSW and inaugural members of the conference planning committee, are being parochial in that we published two issues of *Australian Plants* relating to the Kiama conference and now this current issue includes presentations from the conference. Wonderful articles required the additional issue.

The conference committee wanted to include young people, initially thinking about older teens or 20s, but the speakers were far younger. The session in which they participated was so stimulating that we want to share it with everyone. It was inspirational to see young people stand in front of over 200 people and talk about their passions. Not only do they have passions – they take action, whether this be in practical projects, with advocacy or in protests, even at such a young age.

We didn't want participants to just say about the conference – "that was interesting". We wanted them to think about the implications for themselves and perhaps take their own action. How many have taken a leaf out of the students' books and are implementing positive actions?

It is for us all to consider and to take to heart the issues raised by the students. They, and all the other young people with similar convictions, need our support to maintain their drive and enthusiasm. This was just a small group from one geographic area - there are counter-parts across the nation. The "State of the Environment" report was very sobering reading. Young people are the ones with more to lose if habitat and species loss, deforestation and land degradation are not stopped. Our flora is impacted by all of these and the effects are exacerbated by climate change.

We owe it to our native plants, to our country and its environment and to the planet to address issues and to apply meritorious strategies.

The session in which the students was preceded by the biennial AJ Swaby address. At this conference the address was given by Costa Georgiadis, known to many readers as presenter on the *Gardening Australia* program on ABC television.

In his address Costa said that *"there's urgency around the challenges and the disturbances of climate but we cannot dump that urgency on our students that are here. We can't. It's not to say that things aren't urgent. It's not to say that if you read that state of the environment report you wouldn't be in tears at some of that information and I am. But we need to focus that energy and ensure that we don't place angst and undue weight of expectation on our next generation. What we need to do is dump in spades your enthusiasm your excitement and your knowledge of Australian native plants and combine that with the knowledge that they're receiving. The only urgency I want to see coming out of this room is your urgency to take your knowledge and make sure it's amplifying way beyond your usual scope of people. How can we share that knowledge."*¹



Another feature of each conference is the presentation of the Australian Plants Awards. In this issue, as is the usual practice, we publish the citations of the awardees so that others can learn of their wonderful achievements.

In this digital world it is websites that are used to reach the community. The Australian Native Plants Society Australia (ANPSA) has a new website and we include information on this together with a tribute to Brian Walters who has been the sole webmaster for over 30 years.

To round out the issue we have three general interest stories. By coincidence, two of these feature butterflies. This highlights the interdependence of plants and insects. The other item continues the theme of small gardens which featured in the last issue of *Australian Plants*.

¹ Note: Conference presentation recordings are available on APS NSW's Youtube channel: www.youtube.com/channel/UCSqvvYJSVpV-_MU-rQVAJug or enter 'YouTube Australian Plants Society NSW' into Google.

The students' presentations and their interactive discussion with Costa Georgiadis of the ABC's Gardening Australia program have the title 'Our Vision for the Future'.

The importance of biodiversity in your backyard, your community and country

Phoebe Cartwright

Phoebe is a Year 6 student at Kiama Public School. She also attends the High Potential Gifted Education program and the Visual Arts Gifted and Talented Program at Kiama High School.



Phoebe has a passion for both science and visual arts. She draws inspiration from the natural world for her art and loves learning about the environment.

Phoebe has a particular interest in fungi and the role they play in a healthy ecosystem.

I would like to acknowledge the Traditional Custodians of country throughout Australia and their connections to land, sea and community.

My name is Phoebe and I am a year six student at Kiama Public School. I will be talking about the importance of biodiversity in your backyard, your community and country.

While I have been lucky enough to grow up in Kiama, an area of amazing natural beauty, my childhood has been marked by seasons of drought, catastrophic bushfires and weather events that have been made worse by climate change.

While it is hard not to become overwhelmed at the state of the environment we are set to inherit, I encourage all of us to start right where we are, in our own backyards, to provide areas of biodiverse habitat in our own spaces. It is time for each of us to champion **sharing space, instead of just developing space.**

Biodiversity is the variety of all living things that exist within the environment; each part is equally as important as the other.

When one part of that ecosystem is unbalanced, it has a negative effect on everything within the environment. If we acknowledge that we are responsible for contributing to biodiversity in our environment, we can make amazing changes in the areas in which we live.

Why is biodiversity so important? Because biodiverse environments provide clean air, water and supply living things with habitat and food. Biodiversity through native planting helps to maintain healthy soil and regulates our climate.

The development of native ecosystems provide shade and help to manage local temperature extremes. So many of our ecosystems have become fragmented due to development, leaving many species of plants and animals vulnerable in our local communities.

So how can people my age protect and encourage biodiversity and habitat growth in our local area? Start by finding out about the native species that used to grow in your local area and make them a priority in your gardens.

In the Illawarra alone, there are more than 850 indigenous plant species that we can plant in our own spaces. By choosing from the plants that used to exist on the land we call home we start to recreate connections that originally existed between plants and local native wildlife.

Try to plant a few species in each layer in your garden, so local wildlife can feed, shelter or breed. By recreating the different layers in your backyard, you will encourage local wildlife to visit your garden. An example of plantings that are like bushland could include large acacias, banksias, bush peas, along with ferns, salt bushes and native grasses.

Native flowering plants will attract pollinators, while also providing food for birdlife. Encouraging pollinators will be beneficial if you grow your own fruit or vegetables as well. Installing fallen logs, rocks and leaf litter is a great way to increase biodiversity in your own garden. Doing so will provide shelter for insects, which will then attract birds and small mammals.



Gang-Gang Cockatoo in an Illawarra garden. Gang-gangs are endangered and gardens provide important habitat for them. Keith Horton

Providing areas of shelter and breeding sites will make birds feel more secure to live in your area. While installing nesting boxes for possums will provide shelter for our local species. Having a clean, safe water source will also help your backyard ecosystem to thrive.



A Water Dragon photographed in the same garden. Keith Horton

After you have improved biodiversity in your backyard, you could try encouraging others to do so as well. At school, we can talk to our principals and explain to them why the issue is important. Fundraising to buy more native plants to grow in schools would encourage biodiversity in larger areas of land in our communities.

Consider joining a volunteer organization, where the work you do is rewarded by a better environment to live in. This will also build connections with community and friends. Write to your local council or member of parliament to discuss how this issue worries you, and how it is affecting your community.

Improving biodiversity of our backyards, our communities and our country is achievable if we all chip in and do our part. Small changes repeated over and over can produce big results, which will go on to create and support a biodiverse local ecosystem.

Change can start with us, with you, and hopefully I have inspired you to do so.

A biodiverse garden

The following photos were all taken in one garden, that of Michael Swire, President of the Illawarra District Group APS NSW



Top row: Noisy Miner; Rainbow Lorikeet; Middle: Blue Tongue Lizard; Left: Variegated Wren

The role of native plants in health

Tessa Smith

Tessa is a Year 6 student at Jamberoo Public School.

Her love of debating and public speaking, combined with a passion for knowledge about medicine, sparked her interest in how native plants can be used to heal and repair different parts of the human body.



You are standing outside the school gates for the first time in your life. You are supposed to start Kindergarten today, but all you feel like doing is going home to play. Suddenly, a big Year 6 starts explaining how fun school is. Most words fly over your head but two are clear. **SCHOOL FOREST**. The next day you joyfully skip into school knowing that at lunch you will have the BEST time building bases and enjoying nature with your friends.

Jamberoo Public School is famous for its magical school forest where students of all ages eagerly await the time when they can be themselves in Mother Nature. These children construct bases, play 'houses' and have even concocted a trading system using nuts and berries. This imaginative and creative play time in my school forest is what sparked an interest in native species and how they might be used to treat the sick.

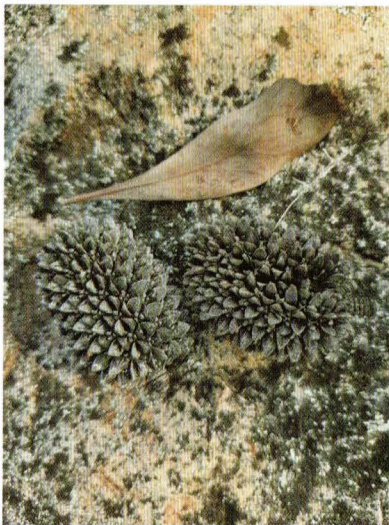




Inside the school forest.
Photos courtesy of
Jamberoo Primary School

In the past Aboriginal people used native flora for medicinal treatment. The land gave all that was needed to care for the sick and injured. Some plants were seasonal like fruit and seeds but others like roots could be found all year round. Different parts of plants were used for individual ailments.

This can be seen with the Drooping She Oak native to Queensland, New South Wales, Victoria, and Tasmania. The Victorian mobs used the cones from the tree which they ground up and applied to sores to treat rheumatism. The bark and wood were also used as a more generalised treatment.



Today, native flora is still used in various medicines, applying knowledge of plants as remedies based on Aboriginal methods. However, some are recent discoveries. Eucalyptus (*Eucalyptus globulus*) is an example of a medicine that was derived from Aboriginal ideas, adjusted to fit the needs of today. Eucalyptus oil is common in Australia and holds many medicinal applications. It is often used to alleviate cold and flu-like symptoms such as nasal

Allocasuarina verticillata, Drooping She-Oak.
Photo: Margaret Beal



Leaves and flowers of
Eucalyptus globulus.
Murray Fagg from
ANPSA website

congestion and is also used as a handy tick repellent. It can also be applied to sores to fight infection and relieve pain and treats arthritis and muscular aches.

But it is not just physical health that nature assists with aiding. Mental health is a significant aspect of our lives and is a growing problem in our busy, modern society. Now more than ever, it is important to maintain good mental health. Studies have shown that even something as simple as going for a walk through nature makes an impact. Flora improves concentration, lowers stress, and helps to increase your mood.



A walk through nature. Michael Swire

Yet deforestation is at a record high in Australia. Saving our grand, old trees whilst continuing to research in an environmentally friendly way, means the best physical and mental health outcomes for future and present generations.

Moving forward, we need to maintain this trend of learning from the past and the present. Knowledge is one of the most valuable gifts to give and it is vital to keep progressing. I would like to see more funding and facilities for research about native plants and their medicinal uses. There is so much that humans do not know and can find out if only the resources were in place. Implementing this means a better future for us all.

Ed: Some other plants known for medicinal purposes include:

Melaleuca alternifolia, tea-tree leaves applied as a paste to wounds as well as brewing it to make a kind of tea for throat ailments.¹

Native mints (*Mentha* spp.) were remedies for coughs and colds, while the gum from gum trees, which is rich in tannin, was used for burns.²

Kangaroo apple (*Solanum aviculare* or *Solanum laciniatum*): The fruit contains high levels of the alkaloid solanine, which can be infused with hot water to create steroids.

The bark of blackwood (*Acacia melanoxylon*) was infused and used to bathe rheumatic joints, or ingested as a mild sedative for rheumatism or indigestion.

Old man's weed (*Centipeda cunninghamii*): administered as an extract in water, or sometimes rubbed onto the skin for treating colds, coughs and chest infections, eye infections, skin complaints.

Hop bush (*Dodonaea viscosa*): The juice of the root was applied for toothache, cuts and on stonefish and stingray stings.



Dodonaea viscosa
Heather Miles

1. Marina Kamenev in an article 'Top Ten Aboriginal Bush Medicines' from an *Australian Geographic* website.
2. 'The Art of Healing' – *Conversations* 5 June 2018

Cultural Burning

Amber Sweeney

Amber is a Year 7 student at Kiama High School and is interested in all wildlife and plants.

Learning about the environment is very important to her, as she is concerned about what the future will hold for the planet and environment.

Amber aspires to become an environmental activist and is very interested in resolving ocean pollution and illegal fishing. She has participated in local contributions in events such as Stop Adani, tree planting, climate change marches and rubbish pickups.



Good morning everyone, my name is Amber Sweeney and I'm a year 7 student from Kiama High School. I was interested in coming here today because of my passion for the environment, and how I think it's important that we should all be concerned for the future of the planet, no matter what our age. I want to be an environmental activist when I grow older, and all I think is that we depend on the planet, so what's the point in growing up to be a dancer or an athlete when all we should be paying attention to is the health of the planet, because not many people realise it but our health depends on the earth's health, and currently we're not in a very good position for the future.

"Australian native plants" is a very wide topic and also a very important topic. Native plants create biodiversity in the ecosystem and give a source of food and shelter to animals that may otherwise become endangered.

Cultural burning is a very sustainable way of managing the landscape and also revives ancient practices. Cultural Burning is a cultural practice, created by fire to improve health and growth of the land and its people. Traditionally used by first nations people, cultural burning has been shown over time to have a really significant impact on the health of plants and animals in affected areas. The heat from a small, "cool" fire spreads slowly across the bushland in a small parameter of terrain. It is guided and kept in control as it spreads around lightly.

The invasive species die down and struggle to survive through the fire, whereas the seeds from the native species thrive off the cool heat, causing them to crack in half and begin their journey to grow. This forms the regrowth of herbs, grasses, native plants, bush tucker, medicine plants and encourages consistent sprouting of natives.

Cultural burning is a beneficial and less harmful way of hazard reduction burning, which damages invasive plants as well as natives. This type of burning makes it too hot which bakes the seeds and nutrition in the dirt. This is why cultural burning is needed to be done a specific way, because if it's too hot it will kill natives, but not only that, it will also bring up plants that are used to the hot fire, which will keep coming back up and taking over the natives if you continue to give it the hot fire that it wants. Bracken is an example of this. Bracken is a native fern which takes over choking out areas where it's not supposed to be, acting as an invasive native. But with Cultural Burning the cool fire thins out the Bracken and gives room to allow the natives to come through.

Cultural Burning has a lot of benefits. It helps to prevent bushfires destroying habitat, because there's no leaves to act as fuel for the fire to burn. The native plants that come up from cultural burning also attract wildlife, as a source of food and habitat for many different animals.

I believe if Cultural Burning became a regular routine in areas that need it, we would be able to see a big impact in the growth of native species, and in the health of the soil and land.

I claim as a kid, the future frightens me, and I believe it does for many other students and kids in my generation.

Native plants can be a very important contributor in maintaining the environment's health and as I explained earlier OUR health. Cultural burning could really make a positive impact in the future and I feel that is why we should practice it.

Thank you for listening.

Editor's note

In order to illustrate Amber's paper, I am drawing on the experience of friends who undertook a cultural burn on their property. The location is in the Central West of NSW and about 300 km from Kiama but it illustrates Amber's points perfectly. Notes and photos supplied by Rod and Alexandra Tuson.

Cultural Burning aids endangered butterfly at Kennedy Park, Mt David NSW

The Purple Copper Butterfly is a choosy insect. It lives only above 850m altitude, is "farmed" by a small black ant, and will only eat one subspecies of *Bursaria* leaves. The ants take the larvae to graze on the *Bursaria* at night to avoid predators. The caterpillars are small, and on old growth *Bursaria* the way to fresh leaves is blocked by tall grasses

and lichens which to a caterpillar is like barbed wire entanglements. It's a hard task to reach fresh leaves, often 3m from ground level.

After laying, the ants take the butterfly eggs underground to hatch and look after their every need. The caterpillars give the ants a sugary substance as they are being cleaned.

As numbers of butterflies started to decline, a plan was developed to stimulate fresh growth, and thus more caterpillar food. Soil temperature monitoring and control plots were established, and no fiery drippers could be used to preserve the developing caterpillars underground.



On a still and frosty morning a handful of dry grass was lit and a slow burn resulted, in the traditional Aboriginal manner of mosaic burning.



The thick grasses at the base of the Bursaria were cleared, the lichens were scorched and the old stems died back. New growth started from the established roots after good rain the following spring.

Safety was observed with two Rural Fire Service units on stand-by. The fires remained within the 5m square boundaries of the burn plots. Ten plots over the 68ha conservation area were burned covering differing aspects and microclimates. Ten control patches were monitored as well as the burn sites over a three year period.

Ed: The following photo was added with the witty comment: *The fire out and singed grass, some green still shows. After the fire was put out on this part a 'Littoria peroni' frog jumped out of the singed area- so not hot enough to cook a frog.*



The Purple Copper Butterfly
Paralucia spinifera.

Invasive non-native flora species and the effects they have on the ecosystem

Aleita Dummett

Aleita is a Year 7 student at Kiama High School.

She is interested in flora and fauna and aspires to become either a wildlife vet, or a vet at a zoo, with breeding programs helping to secure a future for animals at risk of extinction.

Aleita is already striving to achieve her dreams by helping her father, who is a WIRES volunteer and carer, to rescue and care for sick or injured native wildlife.



She has attended multiple climate action rallies and has written emails to politicians about taking serious climate action.

Invasive flora species. Are they something that you think or know a lot about? My name is Aleita Dummett and I am in year 7 at Kiama High School.

Today I will start off with defining a non-native invasive flora species, then I will give you some examples, tell you how this problem started, and end with some things we can do. Invasive non-native plants are a huge problem and they influence so many things. They directly threaten native flora, fauna and habitats. And when pesticides are used to control them, these poisons can have serious impacts on native animals and our health.

First of all, what is an invasive non-native flora species? The definition is a plant that spreads to an area that is beyond where it usually grows and puts native species and agricultural resources at risk.

What are some examples of problematic invasive plants? Some that many of you have probably heard of are blackberries, lantana and mimosa.

There are also invasive grass species.



Lantana
Kevin Mills



Removing lantana
at bushcare site in
Wollongong area.
Michael Swire

I am sure lots of you love to have a morning coffee, but did you know that the plant that supplies your favourite drink, arabica coffee plant, is also an invasive species in Australia?

Non-native invasive plants influence native flora and fauna in many ways. Firstly, did you know that there are more introduced plants found in Australia than native plants? We have so many incredible native flora species found nowhere else in the world, and people still choose to plant non-natives in their gardens, which sometimes become invasive. Some have been introduced deliberately and others accidentally. For example, many people plant non-native species in their gardens, not paying attention to the destruction they cause to the ecosystem. Those ornamental flowers that people plant quickly escape their gardens, growing in uncontrolled masses. They then start to kill off the native plants around them.

A lot of invasive non-native plants are pretty hardy and adapt to the unique conditions of Australia extremely quickly. They also spread super fast as they have few or no native predators to control them. This is why we humans have to do more to tackle them.

People believe that they are just one person, so their actions won't change anything. This is not true. There are, in fact, many things that we can all do. Here are a few:

- Firstly, pull out any weeds you see in your garden. Remember, if you are not sure if it is a weed or not, don't pull it out, check first. It could be a beautiful native plant starting to develop.
- Secondly, grow native species in your garden, instead of introduced plants.
- Finally, throw plant scraps in your green bin. Many non-native species start to take over areas as people just chuck their plant scraps over their fence, instead of placing them in their green bin or compost.

Thank you for listening to me this morning. Have a great day and enjoy the rest of the conference!



Glossy privet (*Ligustrum lucidum*) – another well known weed. foto: Kevin Mills.

Some other common weeds

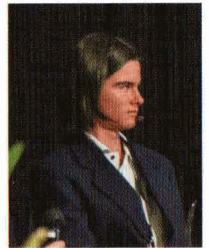


Clockwise from left: *Passiflora subpeltata*, a weed of significance in the Kiama area; *Anredera cordifolia* Madeira vine; *Cestrum parqui* – quite common around Sydney and Illawarra; *Ageratina adenophora* Crofton weed. Photos by Kevin Mills.

Bush regeneration and conservation

Josh Askew

Josh is a student in Year 11 at Kiama High School, studying English, Mathematics, Biology, Geography, Business Studies and Woodwork.



He has a keen interest in the health and longevity of the Australian native environment and is especially passionate about the fields of bush regeneration and conservation.

Having grown up being constantly surrounded by bushland through activities such as bushwalking and camping, he has a keen interest in seeing the few pockets of untouched wilderness left in his area, and across the wider continent, being given the opportunity to spread and thrive once more.

Josh has become involved in some personal bush regeneration projects both on his and family members' properties and feels that there should be more work like this being done around the country.

Hi, I'm Josh Askew and I am currently completing year 11 at Kiama High School. I have lived in Gerringong all my life and have always had a passion for the outdoors, especially the bush through activities such as camping and bushwalking. I believe that all our unique species of flora and fauna need our best efforts of protecting them from factors such as disease, feral species, and most importantly, habitat loss, in both our local government area, and across the wider country.

My key interests in the topic are bush regeneration and conservation, as I believe they are our best tool in both preserving Australian species and fighting against climate change. As the climate is becoming a bigger issue among Australian politics and is of national interest, it is vital that we undergo the massive task of reverting much of our unproductive cleared land back to the natural cycle that they were once a part of. Through doing this, Australia could become a leader in the race to save the planet, with the abundance of land our continent holds being paramount to the opportunities that lay ahead through conservation.

I am currently personally undergoing a couple of regeneration projects myself, slowly converting two weed ridden areas from invasive monocultures into biodiverse native habitats. I have made sure to plant only local native plants in these areas as to allow for our local species to interact with this vegetation as they naturally would in the old growth mature bushland. I plan to care for these zones until they are able to look after themselves, and I am trying my hardest to eradicate weeds such as the dreaded wandering trad, which just keeps growing back. Once

at a stage where I think the natives are established and not threatened by invasives, I will leave them to grow and proliferate by themselves.

On a wider scale, I would love to see a future where our local area has much more native bushland than we do presently, as most people here do not live within walking distance of a national park or conservation area, in contrast to much of the Shoalhaven region, where many of its townships are completely surrounded by either national park or state forest. I would love to see our region have at least a few bushland areas close enough to each township for residents to bushwalk or mountain bike through, as these areas not only bring benefits for the natural environment, but for our own health and wellbeing too. This will also allow for habitats along the south coast to expand further northwards, allowing for many threatened species to have a better chance of spreading and reproducing.

With 685 national parks across the country, Australia leads the world with the largest number of these conservation areas, however, in contrast to such a high number, these parks take up an incredibly small percentage of the continent. Therefore, I believe that this should not be where we stop. In my future I would love to see Australia as the nation of national parks, our national anthem says that we have 'boundless plains to share', so why shouldn't we share them with our native species?

Our country is known worldwide for its unique plants and animals. So we should capitalise on that, allowing for farmland that's going to waste, weed ridden and degraded to turn into a tourism hotspot with outdoor activities at its heart, aiding in rebuilding the economy following the pandemic.

Editor's note:

The photos right are "before and after" relating to regeneration work at Minnamurra Rainforest. This is an area not far from Kiama, where the conference was held and was included in the excursion program. The photos were supplied by Kevin Mills who has written the following about that work.

The value of the work of the Friends of Minnamurra Rainforest becomes obvious when dated photographs are compared. The following two photographs show an area where dense Lantana was removed early in 2018. About four and a half years later, the site is unrecognizable. The area is dominated by natives with almost no weeds (the few seen were annual herbs). These natives range from trees such as *Polyscias murrayi*, *Melia azedarach* and *Dendrocnide excelsa*, to the

dense groundcover of species such as *Panicum pygmaeum*, *Stephania japonica* and *Rubus rosifolius*.

The efforts of the Minnamurra Friends group have been outstanding; we recently celebrated our tenth anniversary. The work will be continuing in the new year and new members are welcome to join our friendly group of weeders and planters.



Date: 05.02.2018



Date: 19.11.2022

Left photos: a private regeneration project; Right photos: official attempts to educate people on conservation of special species. Photos by Michael Swire



Preventing extinctions and rehabilitating natural environments

Michael Gould

Michael is a student of Conservation Biology at the University of Wollongong, in the final year of courses, and aiming to complete Honours. The understanding and conservation of nature is a keen interest, and a passion about native plants, particularly orchids.



Michael is involved with Bushcare at Puckey's Estate, North Wollongong, and is an active member of Illawarra Intrepid Landcare. Michael is also a strong advocate for climate and environmental justice.

Good morning everyone. My name is Michael Gould, I am 22 years old and I'm a student at the University of Wollongong studying Conservation Biology in my final year. It's a real pleasure to be here today on Dharawal land and I really appreciate the opportunity to speak on this panel.

I've wanted to study biology for about as long as I can remember. Since childhood I've been passionate about animals and nature, and about biodiversity and conservation, which has led me to my current studies. Studying biology has given me a huge appreciation for the native plants and ecosystems that we have in Australia and my hope for my future is to be able to study native plants, threatened communities and threatened ecosystems.

I'm particularly interested in orchids and their mycorrhizal relationships as well as urban ecology.

As a young person I spend a lot of time thinking about my future and you probably won't be surprised to hear that climate change weighs heavily on my mind most of the time, especially when I'm studying and when I'm in nature. I often feel a sense of grief for the species we might lose to man-made climate change and the impact on all of nature, humans included. So, in my daily life I also volunteer as a climate activist, campaigning to end fossil fuel use to make sure we're on track for a safe climate in the future. This is for my future, the future of everyone else on the panel with me here today, and the future of generations yet to come.

I'm also a part of a local Bushcare group at Puckey's Estate in North Wollongong, and I'm an active member of Illawarra Intrepid Landcare, which I find incredibly rewarding. Bushcare and Landcare projects are one of the best tools I have for alleviating my climate and environmental anxiety.



Michael with Jan Arone, the Bushcare supervisor at Puckey's Estate, with an asparagus fern they had just removed.

As I'm sure you're all well aware, native plants and communities around Australia are threatened by a multitude of factors including climate change, deforestation, invasive species and pollution. It's going to be up to my generation and young people like me to prevent extinctions and to rehabilitate the amazing natural environments we have in Australia. This is an enormous responsibility, but I'm also confident that the youth of today have the vision and the passion to make this happen.

There are three main things we can do in Australia to achieve this in my view. Firstly, we need to change the way that we do business with the environment. An obvious first step is to end reliance on fossil fuels immediately. Beyond this, we need to really drastically reduce, or preferably to zero, the amount of native forest that we clear, and we need to start looking at an economic model where we reuse what we consume and stop viewing the planet as an infinite supply of resources. Our current system expects infinite growth from a finite world, which is quickly becoming untenable.

Secondly, an enormous part of restoring the environment in Australia is to give land back to Indigenous people and to restore their sovereignty and the agency to look after the environment, which they have been doing for countless thousands of years prior to European colonisation. This could look like allowing large-scale cultural burning, expanding the Indigenous rangers program to manage national parks, and to rethink the way that we manage our national parks and wilderness areas entirely.

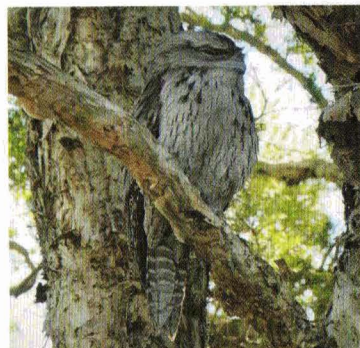
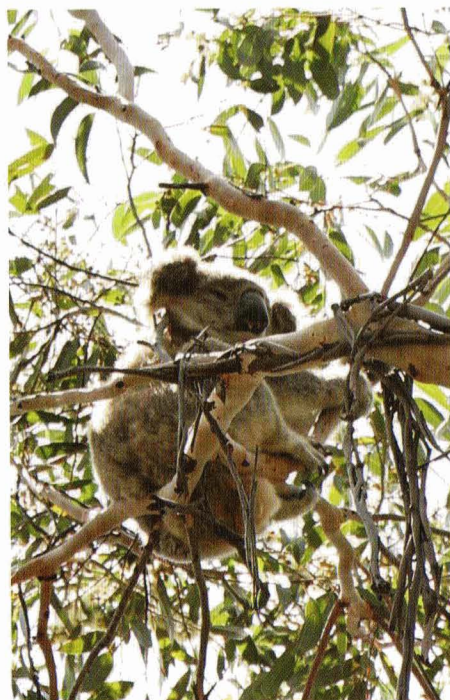
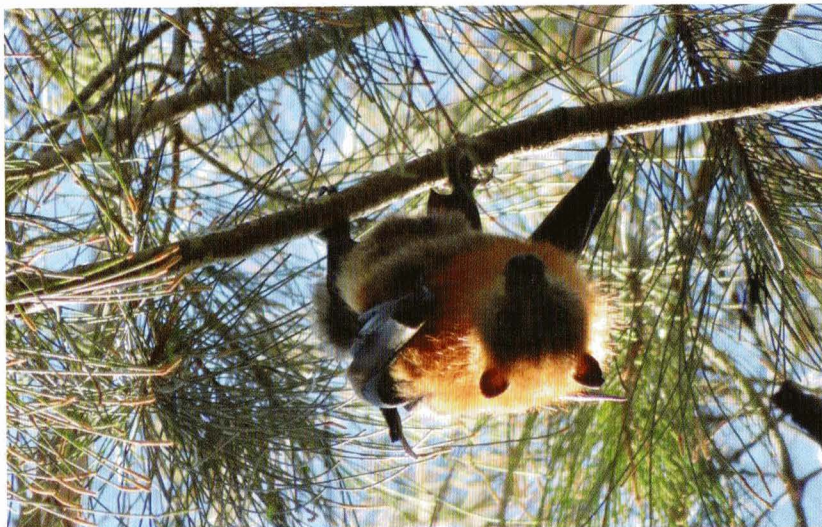
Thirdly, increasing community involvement in ecological restoration would be incredibly beneficial, not only to the environment, but to mental health and building community. As I've mentioned, my involvement in Bushcare and Landcare is incredibly fulfilling to me, but time and access is a major barrier for many people who might otherwise get involved. I think it would be great if there more paid positions available in Bushcare, bush regeneration, and natural areas restoration. Teaching students of all ages more about the environment and how to care for it would also do wonders for our collective ability to tackle the climate and environmental crises we're currently facing.



An Illawarra Intrepid Landcare event we held at Sharky's Beach in Wollongong.

I want to once again thank the Native Plants Society for giving me the opportunity to speak today, and I'd like to say how inspiring and heartening the speeches I've heard from the other panellists have been.

The following photos were supplied by Michael Swire. They show that, at least for the present, some habitat remains for these wonderful species.



Clockwise from left: Koala photographed in Heathcote National Park; Flying Fox at www.kiama.nsw.gov.au/Facilities/Parks-playgrounds-and-reserves/Spring-Creek-Wetlands, a reserve in Kiama; Tawny Frogmouth, photographed outside the Wollongong Botanic Gardens.

Australian Plants Award citations

At each Biennial Conference awards are presented to two persons who have been nominated by one of member societies of the Australian Native Plants Society Australia (ANPSA).. The awards are in the two categories of Professional and Amateur.

The awards are made to persons considered to have made an outstanding contribution to the knowledge of Australian Plants in the following categories:- (i) in the course of a notable professional career in a natural science field; (ii) through primarily amateur or voluntary work or interest in Australian plants.

At the Kiama conference in September 2022 the out-going President, Margaret Matthews, read the citations. Unfortunately, neither recipient was able to attend to receive their medal in person.

Margaret's speech is presented below:

It is my very great pleasure to announce the recipients of the Australian Plants Awards. Each member State and Territory is invited to nominate individuals who have made a substantial contribution to our knowledge of Australian plants.

The Awards are judged on several criteria including involvement in research, field work and study group involvement, publications, community involvement and conservation activities.

I'm really pleased that each member of the judging panel independently gave the highest score to the same person for both the Amateur Award and the Professional Award.

The Amateur Award is presented to David Pike from Western Australia.

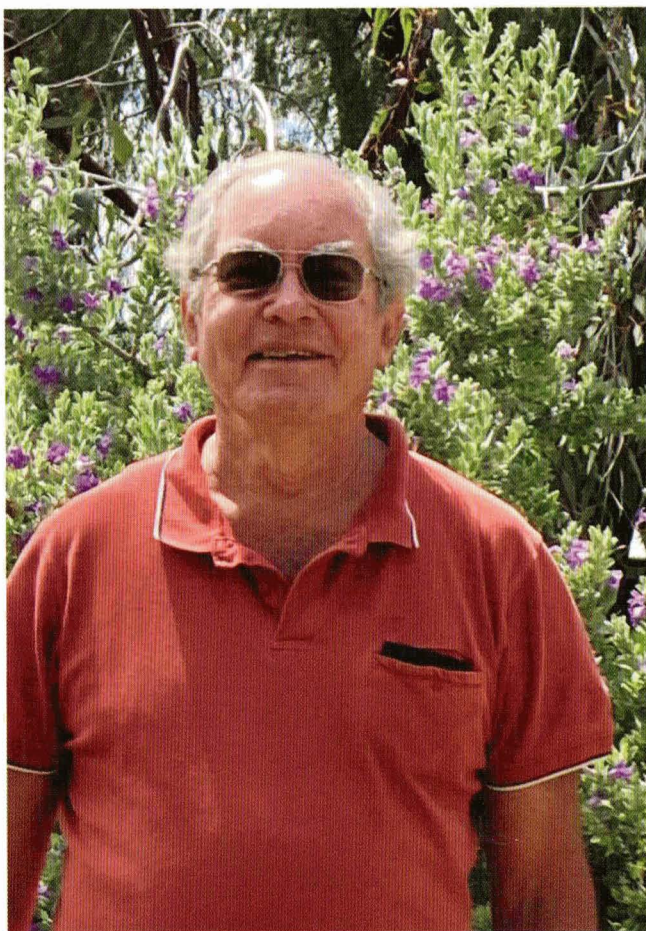
As a non-scientist, David Pike has developed a remarkable knowledge of Western Australian native flora and fauna (including invertebrates) and habitat over 40 years. Many scientists call on his local knowledge when undertaking surveys and publications.

David has been involved since the 1997 beginning of the Northern Suburbs Branch Nursery at Landsdale Farm which propagates rare and unusual WA native flora for public sale into home gardens. Around 20,000 plants are sold each year, with expert advice willingly provided by nursery volunteers on locations, species and growing. He is a key propagator and organiser, oversees the propagation of the *Eremophila* collection and takes a leading role in managing the Wildflower Society Northern Suburbs gardens at the Farm. David organises and participates in rescue and recovery activities, collecting species from

development sites for nursery propagation or transplanting to non-threatened locations.

David was active in establishing a botanical native garden at Yanchep National Park, located 50km north of Perth and as a member of the Friends of Star Swamp Bushland, a 96-hectare Class-A reserve in Perth's northern suburbs. David has also done critical work to preserve and enhance Koondoola Regional Bushland and Lake Gwelup Reserve.

In conjunction with WSWA, he leads a monthly guided walk and annual nocturnal and wildflower walks for the public through Star Swamp Bushland Reserve and David has led monthly guided walks through other bushlands including Lake Gwelup Reserve and Koondoola Reserve for 30 years.



David Pike

The Professional Award recipient is Judith Harvey, also from Western Australia.

Judith completed her Bachelor of Science at Murdoch University (Environmental Science, Murdoch University 1975–1977) and followed this with a Masters of Philosophy (Vegetation Science Curtin University 2011–2014).

Judith joined the Wildflower Society of WA (Inc) (Society) in 1980 when she was in her 20s. Almost immediately she became the Society representative on the WA Conservation Council, the peak group of environmental groups in WA and from 1985-8 she was Society Vice President.

In 1981 Judith began work with the then Department of Fisheries and in keeping with her conservation ethos she worked on native plant science including: vegetation description and mapping, fire ecology, conservation planning, and plant identification. She has been responsible for the completion of several important projects including WA's Vegetation Map.

Another focus of Judith's work was long-term ecological studies (>30 years) at three principal locations: Eneabba, Tutanning Nature Reserve, and Two People's Bay. Long term studies are rare in ecology.

After returning to WA in 2007 Judith again became active in the Society. As well as Committee roles and helping to organise the ANPSA Conference in Albany, Judith joined the Bushland Plant Survey Program (PSP) which is a citizen science program running since 1988. Judith accepted the position of Volunteer Coordinator of the PSP in 2011. However, like most employed positions in the Society much of the time spent on the program is in a voluntary capacity including as a leader in the field and the botanist support work.

Judith is a member of the Rottnest Island Volunteer Guides, focusing on botanical activities such as conducting plant surveys, monitoring populations, seed collecting and propagation of island plants, undertaking scientific studies, and revegetation. In the late 2010's the RVGA members worked on a comprehensive collection of the island's native and naturalised plants. Judith organized the PSP participation in this project, which has resulted in a book on the Island's flora and a field herbarium.

Plant identification sessions for each survey are carried out in the Reference Herbarium at the Perth Herbarium on Wednesdays for about 45 weeks each year. These sessions involve sorting and identification

of quadrat vouchers, field herbarium specimen selection, data entry and field herbarium specimen labelling. Thousands of specimens have been handled over the period. Judith focused on using these sessions to train new PSP volunteers in these tasks.

Judith [photograph below] is also an artist, creating lino prints and watercolour paintings inspired by WA wildflowers.



The ANPSA website

Compiled by Merle Thompson OAM, Co-editor

The nature and history of the website:

John Carter, Ben Walcott and Brian Walters – Website Managers have provided the following information

The ANPSA website is vitally important as a source of information on our native plants for plant society members and the public. The website contains incredible volumes of information on native plants and provides access to all the work of the many Study Groups over many years. This includes an accessible archive of past and present study group Newsletters.

To keep the website relevant, it must be kept up to date and constantly renewed. ANPSA has been most fortunate to have Brian Walters undertake this vital role. Brian created and has managed the website for the Society for many years and has worked tirelessly in this role..

The looming problem was, however, that Brian's website could only be managed by him as it had a unique structure. If Brian was sick or needed a break, no one else could load material to the website. At Brian's urging some years ago, the ANPSA Executive decided to engage Giraffe Studio in Canberra to develop a new website. This new website uses WordPress as a platform. WordPress is a free and open-source content management system used by many thousands of websites around the world. This system is sophisticated enough to suit the needs of the Society and yet can be managed by people who have minimal computing skills.

Giraffe Studio created the site and moved some material over from the old site to the new one. However, much material still needed to be incorporated into the new website. John Carter, Ben Walcott and Brian Walters (ANPSA webmasters) completed the task of moving all the newsletters and other materials over to the new site about a year ago.

In addition to general information, the website has some specific sections. The Plant Profile section contains page descriptions and photographs of over 600 interesting plants compiled by Brian. This section is often accessed by the public using Google searches for particular plants. It is important to continue to expand this section by adding plants and so all members are encouraged to send material, including photographs, to the webmasters (webmaster@anpsa.org.au) for inclusion in this section. The section on Study Groups contains information on each study group

and contains all their newsletters, articles and photos which can be accessed and searched. Some Study Groups post their Newsletters immediately on publication, but others wait one year so not seeing a recent Newsletter does not mean the Study Group is not active. In each Study Group's section, there is a simple online form to request further information on that Study Group which goes to the SG Leader. There is also a section on our Biennial Conference. In this section you can see some of the talks at the latest conference at Kiama and find out information about the next conference in Victoria in 2024.

We encourage members to use the website and to send comments and additions to webmaster@anpsa.org.au

A tribute to Brian

It is fitting at this juncture to pay tribute to the work Brian has done as virtually the only webmaster ASGAP/ ANPSA has ever had.

I have written two citations for Brian in the past. The first was in my then capacity of Secretary of Blue Mountains Group. This was the Group's successful nomination of Brian for Life Membership of the NSW Society in 1997. The preamble says 'This submission is in recognition of over 20 years of service to the Society in a wide range of positions and of Brian's promotion of native plants and of the Society to the public by many and varied media.' – 20 years before 1997.

Brian's active roles in the then Society for Growing Australian Plants NSW go back to 1976. The positions he held include:

1977–1979 Propagation Aids Sales Service

1980–1982 Seed Bank Curator

1982–1987 Program Convenor including recording speakers addresses and maintaining a library of these tapes as well as maintaining the Society's audio-visual equipment.

1990–1999 Editor of *Native Plants for NSW*.

1993 Member of the organising committee for the ASGAP Sydney Conference

Other activities included writing leaflets and producing an audio-visual on propagation. He was generous in his time in speaking at district group meetings and regularly conducted the "plant table" at Region meetings identifying specimens.

Brian's own garden was described by Peter Olde as a "magnificent garden set on five acres with superb specimens of interesting and rare plants...one of the best."

Within the national sphere Brian became a Study Group Leader in July 1976 when he took up a challenge to start a study group relating to genera within the family Myrtaceae. Brian established the *Beaufortia* Study Group and led it until 1985. In 1981 it became the *Beaufortia* and Allied Genera Study Group when he took in the *Eremaea* Study Group.

His influence went well beyond the Society. From the early 1970s Brian regularly contributed articles for general gardening magazines such as "Your Garden" " for a number of years, frequently illustrated by his own photographs. Over the years, Brian gave many interviews on ABC radio.

Even by the time that citation was written Brian had established the Society's home page on the Internet. "This has received many acclaims such as mentions in newspaper articles on innovative pages and requests for its use as an educational aid for schools." It was called SGAP On Line.

When I wrote something again in 2004 it contained key points out of that citation plus something on what he had done on the website. By that time the website included: Australian Plants on Line, a quarterly online magazine, and Gumnuts, an emailed newsletter which is sent to enthusiasts and professionals throughout Australia, Australian plants Photogallery, Links to the sites of the member societies and Links to other botanical and horticultural sites.

On a personal note, I wish to thank Brian for his patience and help when on innumerable times I have called on him for photographs to illustrate journal articles. The number, the range and the quality are all fantastic and he is always willing to give me permission to use them.

Merle Thompson OAM

The following are the reflections of others in ANPSA.

Ben Walcott, former President and one of the new webmasters:

Ben wrote "He deserves life membership if there was such a thing in ANPSA"

From Riita Boevink, Past President ANPSA:

"As the past president my role has been to find answers to the inquiries that arrive on the ANPSA website. I have found Brian extremely helpful as I have had reason to regularly rely on his knowledge of the website. He has thorough knowledge of the site and its contents. The inquiries received are often requests for permission to use photographs from the website for various purposes. I have been surprised how many of the photographs turn out to be taken by Brian. He has been unfailingly courteous and prompt in his responses on any issues."

Jane Fountain, Study Group Co-ordinator:

After I took on the role of Study Group Coordinator in 2015 I gradually became more acquainted with how ANPSA worked and realised much of the information I required was available on the website. I noticed how most of the superb photos for the Study Groups were attributed to Brian Walters the Webmaster.

Several times I had to contact Brian to add or delete a Study Group and his response was so quick and he was so helpful to the new leaders by giving advice on how to access the site. When I think how the Study Group Newsletters come thick and fast at times, I realise that Brian never misses adding them. He has also assisted those Study Group Leaders who would like their newsletter held back for a year, again, without missing a beat in remembering what needs to be added and when.

Whenever I promote the Study Groups I know I can recommend looking up the wonderful website full of easily accessible newsletters and much other information. Brian's prompt and reliable action has always been outstanding.

Lyndal Thorburn, Leader of the Eremophila Study Group:

Brian has been a fantastic resource for ESG. He is always very quick to respond and when I had the idea for the gallery he was the one who worked out how to lay it out so that we could upload the pictures and help users navigate effectively through the site to find what they want quickly, and yet get back to the start easily. He designed the classifications to standardise how different species are described, which helped with searching.

Brian also designed the way for us to show hybrids so that users could also look at the parent species. So we are starting to upload hybrids and each hybrid picture is linked to each of its parents. Really importantly, Brian installed the search system that allowed users to search and filter - so for example be able to search for a small eremophila with red flowers, for garden planning and ID purposes. He's been able to work out, within the limited capacities of the old site, how to enable us to draw attention to key initiatives, e.g. the research activity and our colouring book.

Finally, Brian's search framework across the newsletters also enabled users to easily find which old newsletter covered specific topics and it was possible to use Boolean searching to drill down and find quite specific topics. This made it very easy for me to find and reference previous discussions so I could refer to them in current newsletters.

Cool burn may breathe new life into endangered butterfly habitat

In order to provide a case study for Amber's article on Cultural Burning [pp 376-379] information was included on a project to encourage growth of the plant which is essential to the rare Purple Copper Butterfly.

The burn was conducted in 2017. Was it successful? The following is a Press Release from the Central Tablelands Local Land Services [CWLLS] in February 2020 with an encouraging update.

Intrepid volunteers and staff from Central Tablelands Local Land Services were excited to find an abundant gathering of Purple Copper Butterfly caterpillars at a location that has had no recorded sightings since 2009.

The location was one of a number of trial treatment sites where strategic ecological burns were conducted three years ago on small 5 metre by 5 metre patches of blackthorn, which is the only known feed source for larvae of the endangered Purple Copper Butterfly.

The aim of the cool burn technique is to promote the regrowth of native blackthorn and to reduce competition from grasses and weeds. The low temperature burns singe the mature bush without destroying the plant, prompting regeneration and new soft leaf growth which is believed to be particularly appealing to the young caterpillars.

"Many of the existing blackthorn shrubs were old and covered in lichen, we suspect making them less appealing to the butterflies," said Senior Land Services Officer, Allan Wray.

"The strategic burns promoted fresh regrowth and improved the general health of the shrubs which in turn should enrich vital habitat for the Purple Copper Butterfly."

Mr Wray said that the sighting of so many caterpillars was a great result for everyone who has worked tirelessly on this experimental project over the years. "It's quite encouraging to see these high numbers of caterpillars where we've not seen them in a decade," Mr Wray said.

"It's a positive start to the life cycle and we're all looking forward to September when the butterflies typically emerge and take flight."

One of Australia's rarest butterfly species, the Purple Copper Butterfly is only found in the Central Tablelands region in a few small pockets of native vegetation at elevations above 900 metres between Bathurst, Oberon and Lithgow.

What has happened since 2020?

The CWLLS's current website states that "During the 2019/2020 bushfire season, several populations of the Purple copper butterfly in the Lithgow area were impacted by bushfire during the time when caterpillars were known to be active.

Thankfully, surveys undertaken in September and October 2020 confirmed that the butterflies managed to survive the fires at most of the impacted sites, and we are hopeful to find at least low numbers at the remaining sites during the next flying season.

A threat to the butterflies after fire is the strong regeneration of a lot of weed species that can compete with the native blackthorn and reduce the quality of the habitat after fire. Timely weed control is therefore critical to ensure the best possible recover after fire."



But on the Tuson property the environmental officer who was assessing the situation couldn't find any caterpillars in December 2022 searches. Alexandra Tuson said that he thinks that is "due to the weird weather we've had this last eight months or so. The grass and weed growth is phenomenal." She added "it must be time for some more cultural burning next May perhaps". But the approval process took two years last time.

Some more mosaic burning in different places to the last burn will re-invigorate more fresh growth which will in turn assist in better nutrition for the caterpillars and more butterflies.



Photographs are from the website. Image on the right shows the larvae being escorted at night by the ants.

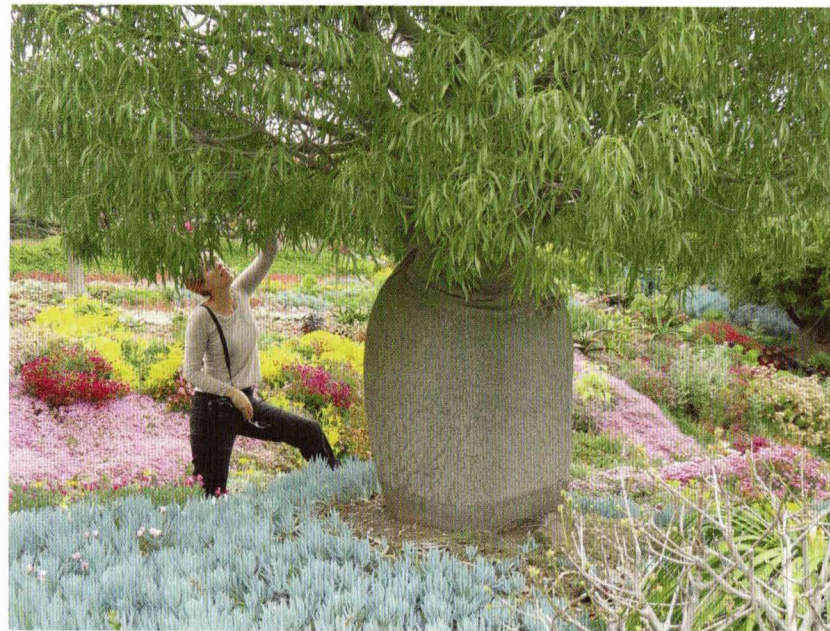
What's bugging my Bottle trees?

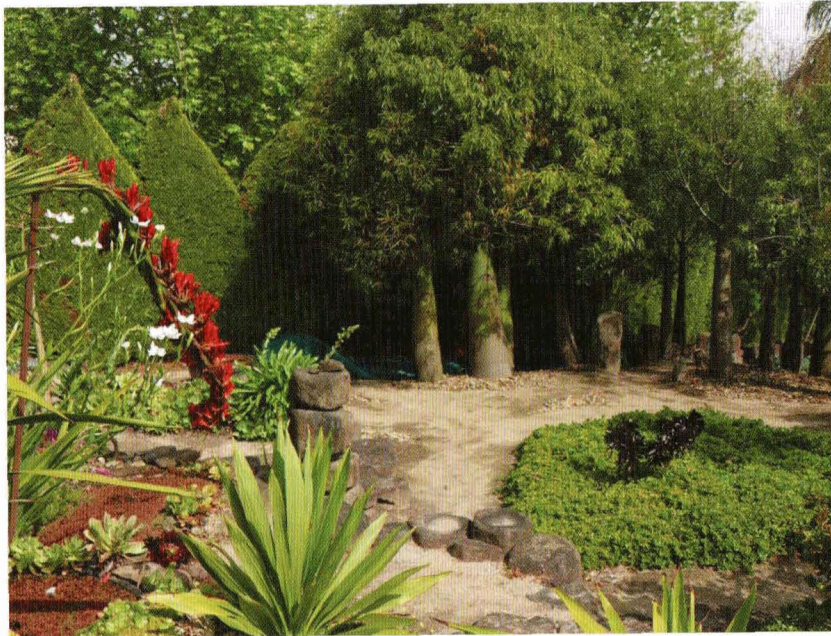
Attila Kapitany

Attila Kapitany is a passionate succulent grower and author. He has written many books and other publications on succulents from around the world. The last 20 years he has dedicated his work primarily to native xerophytes of Australia, especially those that are regarded as succulent.

Many people who grow dry-climate native plants especially succulents also grow Bottle trees and so may find this article of interest. My wife Michele and I both independently grow assorted succulents from around the world, with the greatest interest in growing more and more of our native species. We are slowly removing exotic plants then replacing them with native ones. The semi-succulent Bottle trees are a great example of this. As we have a large garden, we have planted over 100 of these trees amongst succulent ground covers. Some of these Bottle trees are now over 20 years old and with very large trunks, however the majority of these trees are only 10-15 years old.

The most popular and well-known species of Bottle tree *Brachychiton rupestris*, has closely related *Brachychiton* species that also develop as attractive trees with swollen trunks.





All photos by the author and from their own garden.

We have quite a collection of assorted brachychitons and a good number of these flower and fruit each year giving us much pleasure.

All of these trees are very hardy, low maintenance and relatively pest free; however we have noticed an increase of associated wildlife, from year to year, both good and bad. As a result of their flowers we have birds and insect pollinators that we have not had before. Small birds have also made nests in a few of the trees. Currently Michele has a sensor camera set up to capture a pair of Spotted Pardalotes that have dug and built a nest under a Bottle tree. Yes 'under' as these tiny but very attractive birds burrow in the ground to make nests.

One slightly less pleasing aspect of growing so many brachychitons is that small insects are also increasing their populations each year. One of these is a pest beetle called a Vine Weevil that comes out from under leaf litter on the ground, to climb each night to eat from new shoots and leaves. The trees' leaves are never stripped bare and much of their damage goes unnoticed by us. In recent years we have found other occasional insects in our special trees and we assume that the increase of visiting birds also include insect eaters that clean the trees of pests.

About 3 years ago we started seeing a small 8-20mm long 'grub' arrive in groupings that build a collective nest, so birds cannot easily get at them. These rather ugly 'grubs' strip leaves of their green, leaving a brown skeleton. Last year I had so many that I feared an invasion of sorts, as where there were one or two 'grub' nests in the first year this turned into 48 nests the following year. A few of the Bottle trees were starting to suffer and look unsightly.

I then researched this new pest and discovered it develops into a small moth that is not that ugly at all. I thought I can live with that ... at least the 'grubs' become something a little more pleasing. I researched further to learn it is called a Bagmoth or Bagworm. The rather unflattering name comes from the fact that this moth's larvae build a nest of leaves and silk that hangs in trees that look superficially like bags or sacks. After viewing images of how the larvae can build large nests over 20 cm across, while stripping trees of greenery made for a very displeasing sight. I then



decided to find and remove all Bagmoth larvae and their nests, as soon as I spotted them.

That was the summer or 2021, but in the following summer of 2022 I still found at least the same number of nests filled with larvae. Without the gory details I again dispatched them 'organically'. I guess that any neighbourhood trees in my area also have this pest and I will never totally be rid of them, as they keep migrating into our garden, but at least I will keep my populations to a minimum and the bottle trees looking great. Do watch out for these pests if you grow bottle trees.



There are over 1300 species of Bagmoth or Bagworm worldwide. The Bagmoth species found on our *Brachychiton* trees *Dichrocrosis clytusalis* is commonly called Kurrajong Bagmoth or Kurrajong leaf-tier.

Now a very big contradiction of sorts ... we also have some large 5-6 cm long green 'grubs', or should I be 'politically correct' and less derogatory and call them caterpillars or larvae. They are also on and eating various *Brachychitons*, especially my favourite Bottle tree. Voracious eaters with four large horns on their heads, eating large chunks or whole leaves. What a dilemma! First thought of course is to remove and exterminate, maybe 'exterminate' is too strong a word! Just remove them and not mention what transpires next. Yes!!

The larva of the Tailed Emperor butterfly *Polyura sempronius* is like a dragon and incredibly interesting as it changes its features as it grows.

These are called instar stages. Within days out of the egg, orange-black horns develop, followed by a much larger (disproportionate) head shield with longer yellow horns. Next, the larva develop what can appear as blue 'lights' on the longest two horns (as below), followed by two more short black horns seen at right.

I researched this large horny larva on line to confirm my thoughts that it turns into something of greater beauty.

I was already aware of this large tropical swallow-tailed butterfly, commonly called a Tailed Emperor or *Polyura sempronius*. Such a large multi-coloured butterfly that is rare in Victoria is an absolute treat to have in our garden. Excitedly Michele and I have monitored and cared for several larvae of this species through a most difficult winter and spring.



We started with a single female butterfly visiting in early 2022 and of about 30 odd eggs we ended up finding, at least 15 larvae survived to grow 10mm in length, before most of these were eaten by birds. We were not pleased! Several remained and survived to maturity. Today 21.10.22 it was a warm day and the first of the remaining larvae has begun to hang in preparation for transformation into a chrysalis.

The Tailed Emperor *Polyura sempronius* is one of Australia's largest and most attractive butterflies. It is a very strong butterfly capable of speed and is highly territorial, where males fight and attack competitors, but also other insects and even small birds. The females are slower, more graceful fliers that generally seek out or stay close to hostplants. Unlike most butterflies that like sweet nectar, this species prefers fermented or rotten fruit on which they can get drunk, but also fresh moist animal dung.

I have postponed my usual spring tree pruning, in case I mistakenly cut away branches with this butterfly's larvae or chrysalis as they are easily missed. We are both so excited that we are likely to have this butterfly species successfully having bred full cycle here. This could mean we will have very attractive butterflies this summer and a chance that a permanent population might eventuate.

In summary, when and how does one choose what to do when it comes to garden pests and how to deal with them? We hate one but love the other. This is not fair or balanced in any way!

So do you know what bugs me the most about garden pests – is that they are not really.....

Ed: Attila sent this article to me in late October. This addendum was date-appropriate then but not at the time the journal will be published. Nevertheless, I have included it for your interest. Or perhaps your disgust!

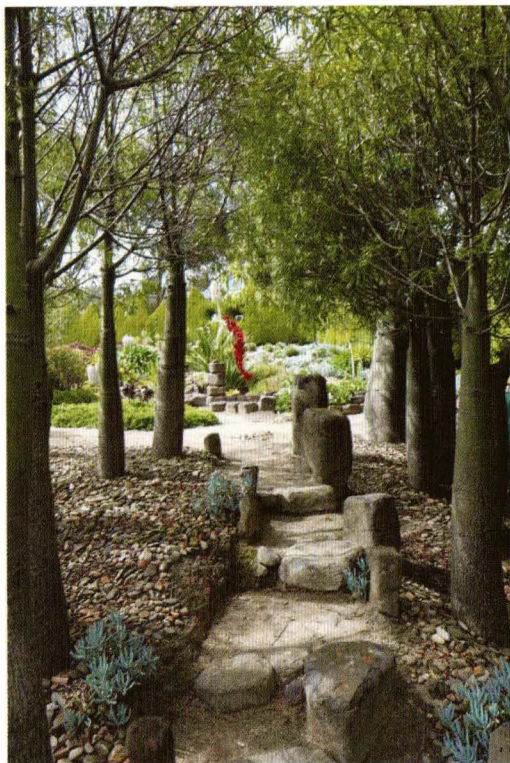
On a more ghoulish tone!

In a few days' time it will be Halloween, so in keeping with the above article topic I think it might also interest some readers who also like the bizarre, macabre and scary corpse related additional story.

Believe it or not- as already mentioned above this butterfly prefers alcohol over sweet soft drinks, also drinking from weeping wounds on trees. But more bizarre still is that the likelihood of one of these butterflies ever coming close to you or landing on your hand for a picture is almost impossible. Unless, of course, if you were dead. Yep, research it if you like and you will find that it likes to visit rotting corpses.

Oh, and by the way, by the next full moon on November the 8th we should have most our chrysalis having hatched so watch out.

Happy Halloween!!!!



Small dune garden in South West WA

Shirley Fisher

Shirley is a Long standing member of the Wildflower Society WA and has created three very different native gardens in WA

This garden is a smallish garden on the lee side of the sand dune in a coastal town in the South West of WA. Now the challenge of a small garden is to avoid displaying the whole garden at first sight. The next challenge is to find plants that will cope with a Mediterranean climate and dune sand.

But the biggest challenge was to rid the garden of a couch lawn which was done with a rotary hoe and hand sifting. On the plus side it had the borrowed landscape of trees up the dune slope overlooking the garden.

The garden was focussed up hill on a diagonal to create a greater feeling of space. To cope with the uphill slope, the garden was terraced with limestone blocks being in keeping with the coastal feel. But in the open spaces red gravel was used, rather than limestone paving, as it was a lot cheaper.

The plantings were all WA native coastal plants which all flourished well with little irrigation.

Trees and large shrubs: *Melaleuca lanceolata*, *Agonis flexuosa*, *Callistris preisii*, *Grevillea olivacea* and hybrids, *Spyridium globulosum*, *Olearia axillaris* *Thomasia solonacea*, *Alyogyne huegelii*.

Medium shrubs: *Pimelea ferruginea*, *Dodonea ceratocarpa*, *Agonis flexuosa* (dwarf form), *Westringea* sp. *Leucophyta brownii*, *Guichenotia ledifolia*. *Templetonia retusa*.

Ground covers: *Grevillea crithmifolia*, *Hemiandra pungens*.



Strap leaved plants: *Lomandras*, *Lepidospermas*, *Isolepis* and *Anigozanthos*

As the back of the house is North facing, shade was needed near the house. A Peppermint was planted and grew amazingly fast and very soon created that shade.

The Grevilleas very soon grew to make divisions in the garden and happily responded to pruning into shape.



A bird bath was created by shaping a hole in the sand and lining it with cement and some reinforcing. When dry it was lifted out as a bird bath



A medium low hedge of *Dodonea ceratocarpa* was planted and pruned to lead into a low area of the garden. This was planted with sedges and *Westringia*.

Some plants grew too well and needed to be removed as was *Melaleuca lanceolata* and some did not respond to coastal sand as the *Billardiera fusiformis* (Sollya) which was planted beneath a trellis hoping to hide an ugly fence.

The front garden was treated very differently. It was generously paved for car use. A large wedge of the space was planted with *Lepidosperma gladiatum* (sword sedge) and the edges with Pig face (*Carprobotus*) For shade Peppermints were planted with *Grevillea crithmifolia* underneath.

To screen the rooms from street lights *Grevillea olivacea* and *Adenanthos cunninghamii* were planted.

With the selection of coastal plants the garden at times grew too well and needed heavy pruning and culling over the 20 years of establishment. A happy outcome altogether.



Australian Native Plants Society (Australia) and member societies

Australian Native Plants Society (Australia) Inc. (ANPSA)

President: John Aitken

Secretary: Rhonda Daniels secretary@anpsa.org.au

Website: anpsa.org.au

Australian Plants Society NSW Ltd

President: Heather Miles office@austplants.com.au

PO Box 263 Cremorne Junction 2090

Website: www.austplants.com.au

The Australian Native Plants Society, Canberra Region Inc.

President: Lucinda Royston president@nativeplantscbr.com.au

secretary@nativeplantscbr.com.au

Website: nativeplantscbr.com.au

Society for Growing Australian Plants (Queensland Region) Inc.

President: Roger Kitchen

Secretary: Paul Taylor: PO Box 586 Fortitude Valley QLD 4006

Email: secretary@npq.org.au

Website: www.npq.org.au

Australian Plants Society, S.A. Region Inc.

President: Greg Kirby

Secretary: Leonore Swanson

PO Box 304, Unley, SA 5061; secretary@australianplantssa.asn.au

Website: www.australianplantssa.asn.au

Australian Plants Society Tasmania Inc.

President: Jenny Boyer jennyaboyer@gmail.com

Secretary: Mary Slattery

PO Box 1205 Gravelly Beach 7276

Website: www.apstas.org.au

Top End Native Plants Society

President: Russell Dempster

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