



ISSUE 79 // 2024

Conservation BULLETIN

Rainforests

Refuges in a
warming world

Sanctuary in the suburbs

Where 140 species of birds sing

Creature of the night

Saving the Southern Bent-wing Bat



TRUST FOR
NATURE

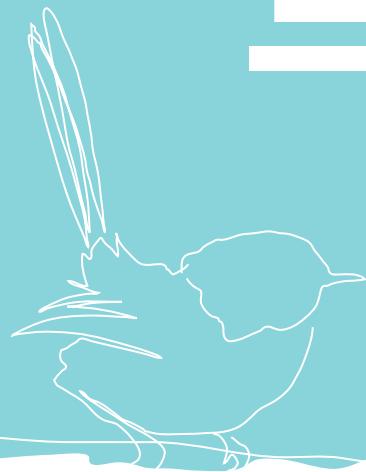


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Trust for Nature (Victoria) is a not-for-profit organisation that works with private landholders to protect native plants and animals. Two-thirds of Victoria is freehold, making the protection of habitat vital in preventing extinction. We work with landholders to place voluntary conservation covenants on properties and buy and sell land which has conservation values through our Revolving Fund.

Patron: The Honourable Margaret Gardner, Governor of Victoria.

Trustees: Lisa Darmanin (Acting Chair), Nina Braid, Andrew Brookes, Sonya Rand, Jill Smith AM.

Recognition of Traditional Owners: Trust for Nature recognises the continuing spiritual and cultural connection of Traditional Owners to Victoria's land, wildlife, freshwater and saltwater environments. We are committed to helping Traditional Owners conserve, restore where possible and protect natural environments, wildlife and cultural heritage values.

Front cover: This Eastern Yellow Robin is one of more than 140 species of birds recorded on Kim Wormald's property. Image: Kim Wormald, Lirralirra.

From the CEO



From your backyard to the world

Think global, act local. It's a phrase you hear often in conservation, and for a reason. As a supporter of Trust for Nature, you might embody this ethos too.

Whether you're a landholder who has protected your land forever with a conservation covenant, bought a conservation property through our Revolving Fund or directly from a covenantor, volunteered at one of our reserves, or made a donation, you are helping keep nature healthy at a local, and global level.

Every patch of habitat that we protect and look after helps our local environment, keeping air, water and wildlife healthy. Habitat safeguarded through Trust for Nature, guided by our Statewide Conservation Plan, helps protect threatened species and ecosystems, ensuring Victoria's native plants and animals have a more secure future. This act also contributes to national and global targets to protect 30% of the world's land area for nature by 2030, fighting the entwined problems of climate change and biodiversity loss.

You'll read examples aplenty in this issue of our Conservation Bulletin. Consider the cave in south west Victoria that is owned by Trust for Nature, one of only three maternity sites for the critically endangered Southern Bent-wing Bat. This globally unique bat lives only in Victoria and South Australia, and by protecting these caves, and the habitat where the bat finds food, we can ensure the species continues.

The same is true of the Lima Stringybark. Over 95% of its remaining habitat occurs in a tiny area near the Strathbogie Ranges on private land; and we'll meet Ben Petrides who is one of the custodians for this gum tree. Or Kim Wormald, whose conservation covenant at the foot of the Dandenong Ranges helps connect the last remaining habitat on the floodplains in Melbourne's south east.

Trust for Nature is uniquely placed to contribute to helping nature, thanks to the power of conservation covenants, and you'll read in this issue about how covenants preserve the incredible dedication and work that goes into looking after nature when properties change hands.

There's never been a more important time to connect what we do locally to the big picture. The five-yearly Victorian State of the Environment report, released at the end of 2023, paints a sombre picture of nature in our state, with worsening trends for the health of habitat and threatened species. The report identifies that protecting habitat on private land is key to halting decline of biodiversity.

I'm thrilled by the recent progress to accelerate the impact of our work, particularly the exemption from land tax for covenanted land which commenced on 1 January this year, or our partnership with the Victorian Government and Cassinia Environmental to restore at least 20,000 ha of habitat through the BushBank Program. If you've ever thought about protecting nature on your land, now is the perfect time – and we would love to hear from you.

We could not achieve such impact without the expert guidance and generous dedication of our Board of Trustees. This year we say farewell to Chair Gayle Austen, Dr Charles Meredith, Jennifer Wolcott and Binda Gokhale who have worked tirelessly to advise and steer Trust for Nature over many years. We thank the outgoing Trustees for their passion and wish them well.

Thank you for your ongoing support, and happy reading!

A handwritten signature in black ink, appearing to read "CP".

Corinne Proske
CEO, Trust for Nature

News and updates

Conservation incentive

We're thrilled by the Victorian Government's decision to exempt land protected under conservation covenant from land tax. The change, which came into effect on 1 January this year, will encourage more Victorians to protect their land for nature's benefit. It may also help landholders who are currently paying land tax on a covenanted property, or those who are exploring the possibility of covenanting land that is not their primary residence. To apply for a land tax exemption you will need to contact the State Revenue Office. Read more at: trustfornature.org.au/news/land-tax-exemption-for-covenanted-land-in-victoria-from-1-january-2024

Celebrating women in conservation

On Friday 1 March we celebrated the 13th Celebrating Women in Conservation Breakfast, co-hosted with Bush Heritage Australia, at the Glasshouse in Melbourne. An opportunity for the environment and conservation sector to come together, this year we were inspired by keynote speaker Anna Rose, CEO of Environmental Leadership Australia, which she founded in 2019. Anna shared her unique insights from over two decades as a leader in conservation on how we can move beyond past divisions to create a more united approach to climate change and nature loss. Thank you to all who came along and made the event such a success.

Recognising Traditional Owners

We've made some changes to the deed for our conservation covenants to better recognise Traditional Owners. While Trust for Nature and landholders have been partnering with First Peoples across the state for years, our covenant deed wasn't explicit about the role Traditional Owners play in healing Country. After several years of consultation, the new deed will enable more opportunities for cultural practices on covenanted properties, such as cultural burning. The changes do not affect earlier covenanted deeds, and cultural practises can only be undertaken by mutual consent of landholders and Traditional Owners.



Can you help fund conservation on private land?

Landholders can now make a huge contribution to safeguarding Victoria's nature by paying for a conservation covenant on eligible areas of their land. While our aim is to protect as much habitat as possible to safeguard Victoria's wildlife and plants, the costs of covenanting are considerable and demand for new covenants currently exceeds the available funding, which often comes via competitive grants. Now, landholders are invited to pay for the cost of their covenant, which will ensure we are able to meet new demand, and see greater conservation gains across the state. Trust for Nature staff assess potential sites to determine if they are eligible for covenanting. Costs for initial assessment and documentation are \$5,000 and costs for covenant registration are \$25,000. Register your interest in protecting habitat on your land at: trustfornature.org.au/what-we-do/submit-your-expression-of-interest.

Image: Ben Williams.

Contact your regional team member

From 1 January 2024, a new structure came into effect for the Trust for Nature regional operations team. This means that across Victoria, there are now dedicated Conservation Program Managers able to support existing covenantors with their land management queries. See below for contact details:

| CATCHMENT | CONTACT NAME | PHONE | EMAIL |
|--------------------------|----------------|--------------|---------------------|
| Port Phillip Westernport | Rachel Douglas | 0437 564 325 | racheld@tfn.org.au |
| Corangamite | Jo Day | 0428 502 423 | jod@tfn.org.au |
| Glenelg Hopkins | Adam Merrick | 0458 965 333 | adamm@tfn.org.au |
| Wimmera | Fiona Copley | 0408 177 989 | fionac@tfn.org.au |
| North Central | Gabi Bridge | 0421 925 154 | gabib@tfn.org.au |
| Mallee | Greg Ogle | 0408 550 186 | grego@tfn.org.au |
| Goulburn Broken | Shelagh Curmi | 0407 521 154 | shelaghc@tfn.org.au |
| North East | Shae Brennan | 0447 001 434 | shaeb@tfn.org.au |
| East Gippsland | Ben Williams | 0476 666 138 | benw@tfn.org.au |

News and updates



Averting the risk

Already, Victoria has lost more than 80% of the native vegetation which once occurred across the 14 million ha of privately owned land, and habitat continues to be destroyed, threatening wildlife and reducing the health of our environment. But conservation covenants are a vital tool to prevent that destruction. New analysis by Trust for Nature, using Victorian Government data, shows that nearly all the habitat protected through conservation covenants in 2022-23 had a medium-to-high risk of loss. Without the protection of a covenant, these areas would more likely than not have been destroyed over the next 50 years. But thanks to the landholders who volunteered to safeguard habitat on their properties, that risk has been averted, ensuring wildlife and plants have homes forever.

Protecting our iconic estates

Supported by the Victorian Government and guided by our Statewide Conservation Plan, Trust for Nature is working with landholders to protect 40 covenants covering more than 1,350 ha of the state's most precious landscapes through our Iconic Estates project. To date, we've safeguarded 400 ha, and we're looking for more sites to protect. Through the project we're also engaging with Traditional Owners to collaborate on keeping Country healthy, including hosting a women's field day in northeast Victoria which brought together Aboriginal and non-Aboriginal women to learn about native plants and their uses. Contact Catherine Crowden, catherinec@tfn.org.au, for more information.

Burning success

Trust for Nature acknowledges that cool burning has been used by First Peoples to care for Country for millennia. Over many years, we have partnered with Traditional Owner groups and agencies like the Country Fire Authority to use fire as a management tool. Thanks to previous support, Trust for Nature has a Cool Season Burning Policy which allows us to deliver burns on our own reserves. In 2024 we are training more staff to build our capability to deliver cool burns on private land thanks to the generous support of the QBE Foundation. We would love to be able to expand on this program, and support more landholders to use fire to manage their covenant. If you are interested in learning how your support could assist the development of this program, please contact trustfornature@tfn.org.au or (03) 8631 5888.

Custodians of nature

Sitting on top of a hill watching the moonrise on their property on Taungurung Country, Liz and Rick Tudor were surprised to hear footsteps in the dark.

A moment of uncertainty shortly led to joy when they spotlighted a Koala climbing one of the trees nearby. It's just one of delights of their property at Samaria, 56 ha of which they are protecting with a conservation covenant through Trust for Nature. Birds are numerous and in spring the hillsides bloom pink with Violet Kunzea.

"We wanted to ensure it is preserved in its current state," says Liz. "We see ourselves as custodians of the land, not as owners."

Liz, a vet and teacher at the University of Melbourne, and husband Rick, a former school principal, discovered their love for nature and passion for outdoors early on through camping and being out in the bush. Liz learned a lot from Rick, who trained as

a botanist, and Liz is a keen birdwatcher. "I'm never happier than sitting quietly with my binoculars and seeing what's around."

Founders of the Melbourne Indigenous Transition School, which provides boarding and schooling for Aboriginal and Torres Strait Islander high school students from remote and regional communities, Liz and Rick have enjoyed sharing the natural wonders of their property with students on school camps.

As generous supporters of Trust for Nature, Liz and Rick believe they have a responsibility to look after the land.

"Our health depends on the health of the environment. Our responsibility as custodians of the land is what has drawn us to Trust for Nature. We're just a part of the land and we have to play our part in caring for it."



Fight to save a creature of the night



In Victoria there is a special bat that not many people know about, but which a group of dedicated scientists and land managers are working desperately to save – the Southern Bent-wing Bat.

“They’re special because they’re critically endangered and they have a very restricted distribution, which is unusual among bats,” says Dr Lindy Lumsden, Science Leader at the Victorian Government’s Arthur Rylah Institute and Chair of the Southern Bent-wing Bat Recovery Team. “They do amazing things such as fly huge distances to find food, eat over half their body weight each night and like other small bats they’re vital for maintaining balance in ecosystems by eating insects.”

Lindy has been researching bats for almost 50 years. When she started, bats weren’t really on anyone’s radar. “Nobody knew anything much about them,” she says. “There was no one else in Victoria working on bats at the time, so everything I was learning was new and exciting. I got hooked on them because they’re such amazing little creatures, and I am still passionate about learning more about them and protecting them.”

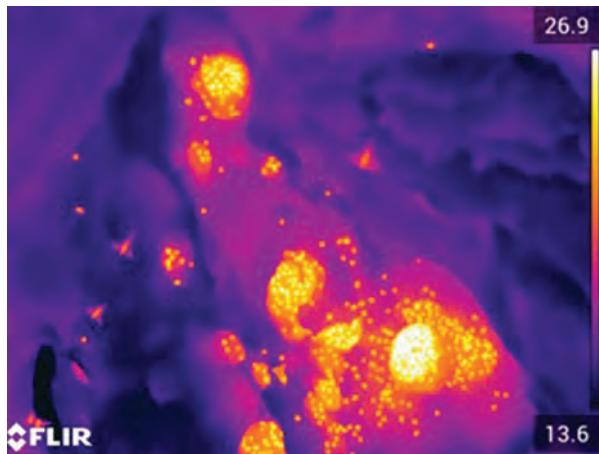
One cave is critically important for the survival of Southern Bent-wing Bats in Victoria. This cave, an undisclosed location in southwest Victoria that is owned by Trust for Nature, is one of only three known breeding sites for the Southern Bent-wing Bat.

Just getting to the cave is half the adventure, involving clambering up and down cliffs and a perilous scramble along the boulder-strewn, wave-swept coast.

“It’s a really spectacular, exposed coastline,” says Adam Merrick, Conservation Program Manager for Glenelg Hopkins at Trust for Nature. “Waves come thundering in and the weather can be really squally.”

The team set out to arrive before sunset because that’s when the bats come out. For a quarter of a century, Lindy and her team of scientists have been counting Southern Bent-wing Bats here, trying to understand how many there are, why they have declined and current trends.

Once at the cave, the scientists set up high resolution thermal imaging cameras to count the bats as they fly out to forage for the night. These days software is used to automate the counting process, a far cry from trying to hand count these zippy, 16-gram mammals in semi-darkness as scientists did twenty years ago.



Scientists use thermal cameras to count the pups on the cave roof. Image: Lindy Lumsden.

Inside the cave it is a special place. “There are piles of guano on the cave floor,” says Adam. “It’s a smelly, humid, unusual environment to be in.” Here the scientists use thermal and infra-red cameras to photograph the ceiling where the tiny naked pups are left in creches by their mothers.

“Counting pups that are twice the size of your little fingernail on a cave roof 45-metres above, in complete darkness, has its challenges,” Lindy says. It’s a challenge for people, but somehow the mother bats can find their own pup among hundreds of others when they return to the cave before sunrise. The

counting team must be out before then, leaving the cave by two or three in the morning after spending the night underground.

Lindy’s team have shown about 18,000 Southern Bent-wing Bats use the cave, a bit under half their estimated total population which has fallen from more than 100,000 in the last 60 years. Members of the Southern Bent-wing Bat Recovery Team are trying to find out why, and the team is guiding the recovery actions.

Southern Bent-wing Bats are among the third of Australian bats that roost and breed in caves. They use caves to roost during the day after foraging for insects at night. Individual bats will use a number of caves across their range, but when it comes time to give birth to a single pup in summer, the mothers choose one of three caves, including the Naracoorte Caves in South Australia, where visitors can watch them in incredible detail while they are roosting in the cave, via infra-red cameras linked to the Bat Observation Centre.

The warm, humid air in maternity caves is vital to the pups’ survival, which can’t regulate their own temperature, and the bats are extremely vulnerable to changes to this environment.



Above: Mother bats leave their pups in creches when they go out to forage. Image: Steve Bourne.



The warm, humid air in maternity caves is vital to the pups' survival, which can't regulate their own temperature, and the bats are extremely vulnerable to changes to this environment. "One of the most important things people can do to help these bats is not go into caves where there might be bats," Lindy says. This is important any time of the year, but especially during winter when the bats enter torpor to save energy. Waking the bats up by visiting a cave causes them to use up their valuable fat reserves and if they can't replenish this because there are fewer insects in winter, could cause them to starve to death.

The recovery team is not yet certain why the bats are declining. Apart from disturbance, loss of feeding habitat and drought are key suspects. Scientists are keeping a sharp eye out for White-nosed Syndrome, a fungal disease that has devastated bats in North America, and could be catastrophic if it arrives in Australia. This could be spread by people entering caves with contaminated equipment from overseas.

Recent GPS tracking by Amanda Bush, as part of her PhD at Adelaide University, is revealing just how far these tiny bats travel to forage in a night – on average 35 km from their cave roosts, and sometimes up to an amazing 85 km. That's important information because knowing where the bats forage will help organisations like Trust for Nature protect and restore their remaining habitat on private land in Victoria. Protecting habitat on private land in Victoria is important for ensuring the bat's survival.

"Southern Bent-wing Bats are one of our priority species in south west Victoria, where much native habitat has been lost, degraded and fragmented like elsewhere in the state. Information gathered by the scientists will help us work with landholders to protect habitat for the bats," says Adam.

Trust for Nature has been improving the cave site through fencing to remove cattle, replacing covers in the cave roof to keep the environment stable, and restoring vegetation on the property, which Adam hopes will provide habitat where the bats can forage near to their maternity site.

For now at least this remarkable species has a secure place to raise the next generation, and scientists are learning more about how to protect the Southern Bent-wing Bat all the time.

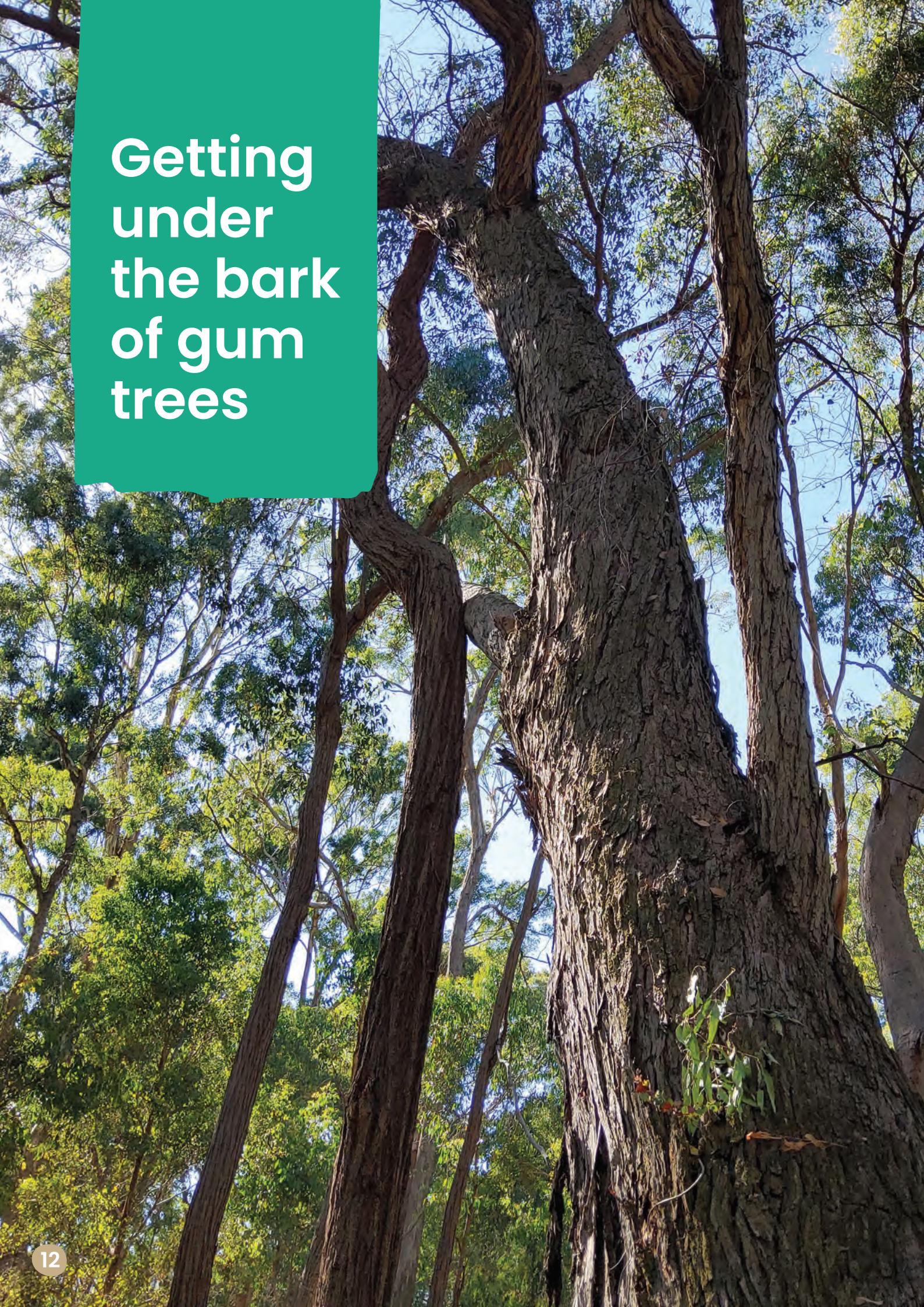
The Southern Bent-wing Bat National Recovery Team is made up of members from the Arthur Rylah Institute for Environmental Research, Australian Speleological Federation, Department of Agriculture, Water and the Environment (Australian Government), Department of Environment and Water (South Australia), Department of Energy, Environment and Climate Action (Victoria), South Australian Museum, Limestone Coast Landscape Board, Glenelg Hopkins CMA, Naracoorte Caves National Park, Nature Glenelg Trust, The University of Adelaide, The University of Melbourne, Wildlife Health Australia and Zoos Victoria.

Above: Southern Bent-wing Bats can fly up to 85 km in a night to find food. Image: Steve Bourne.



Image: Lindy Lumsden.

Getting under the bark of gum trees



One gum tree can look very much like another. Maybe you know your River Red Gums, or can pick a Manna Gum out of a lineup, but for a lot of us the extraordinary diversity of gum trees – the eucalypts – remains hidden.

Eucalypts are of course one of the defining features of Australia's environment. There are around 800 species across Australia and almost 300 in Victoria alone. Visit a forest or woodland anywhere in the state and you'll almost certainly find eucalypts. They shape ecosystems and provide vital habitat for wildlife, plants and fungi. They provide food: their leaves, nectar, the nutrients in their wood. Insects making a home in their leaves, bark and branches are in turn food for other species.

But this ubiquity disguises the fact that many eucalypts are at risk of extinction. In Victoria, more than 70 species and sub-species are recognised as threatened. These include 27 that Trust for Nature has identified as priorities for conservation on private land.

Take, for instance, the Lima Stringybark. This endangered eucalypt has rough, brown bark, can grow up to 30 m tall, and grows in forested valleys.

Lima Stringybarks are found only in a tiny area near Lima on Taungurung Country in the foothills of the Strathbogie Ranges. Their habitat is now severely fragmented and degraded, and young trees are struggling to survive. There are thought to be fewer than 1,500 trees left in the world, most of them found along roadsides or on private land. None live in public conservation reserves.

One of the largest remaining populations is protected by Ben Petrides and his family through Trust for Nature.

"You definitely feel a sense of responsibility to ensure the tree is protected," says Ben.

"It's quite a privilege to have on our property a species that only a handful of people have seen in their lifetime."

Left: The endangered Lima Stringybark is found only in a tiny area near Lima.

Growing up in Melbourne, Ben discovered the magic of the Strathbogie Ranges through school camps. In 2018, he and his family found the 100 ha property at Lima – 23 ha of which are protected under a conservation covenant.

"My wife Tess and I were looking at a property around the corner when the planets aligned. We drove up the driveway and saw the Strathbogie Ranges and fell in love. We're conscious of protecting the area for future generations and having space for flora and fauna to prevail. We enjoy the birdlife and all the types of flora and fauna."

Ben's property is home not just to Lima Stringybarks but seven other species of gum trees, including Broad-leaved Peppermint, Red Stringybark, Red Box, Bundy, Eurabbie and Yellow Box.



Above: Landholder Ben Petrides on his family's property in Lima South.



How do you tell them apart?

"Birdwatchers talk about the vibe or the overall impression you get when you look at a bird," says Shelagh Curmi, Conservation Program Manager for the Goulburn Broken catchment at Trust for Nature. "It's the same with gum trees, you get a feel for what they look like."

The boxes and peppermints are easier to distinguish by their bark, but when it comes to telling apart the Lima and Red Stringybarks it becomes much more difficult. Both have the reddish, stringy bark that gives the stringybarks their name. Their leaves, at least from the ground, look identical. And to make it more challenging, the different gums seem to like growing together.

The trick, it turns out, is that the Lima has flowers and gumnuts in groups of three, while the Red has groups of seven, nine or 11. The trouble is, those flowers and gumnuts can be ten metres or more up in the air. Cue stumbling around with binoculars tilted to the canopy, neck aching.

Over 95% of the Lima Stringybark's remaining habitat is found on private land, and for that reason it's one of 27 species of eucalypt identified as a priority

for protection under Trust for Nature's Statewide Conservation Plan. Others include species like the critically endangered Bellarine Yellow Gum, found only on Wadawurrung Country, or the endangered Warby Range Swamp-gum found in endangered spring soaks on Yorta Yorta Country.

"Recent research indicates that only a quarter of the evolutionary diversity of eucalypts in Victoria is protected in existing reserves on public land," says Dr Doug Robinson, Chief Conservation Scientist at Trust for Nature.

"Protecting habitat on private land is critical to ensure that the other three-quarters of eucalypt diversity in Victoria is maintained and flourishing."

This diversity has real benefits for nature. One group of eucalypts, including gums, boxes and ironbarks (a group belonging to the subgenus *Syphomyrtus*) tends to grow on more fertile soils and has more nutrients

Above: Shelagh Curmi tapes a Lima Stringybark to identify it for the landholder.



in their leaves. This in turn means these trees support a greater variety of insects and spiders, birds and tree-dwelling mammals. Some eucalypts are mainly pollinated by birds, others by insects, which turn shapes the communities of wildlife that live among them.

The threats facing eucalypts at risk of extinction are many. Small populations render them vulnerable. Grazing, weeds or lack of genetic diversity make it difficult for seeds to germinate and saplings to flourish. Land-clearing on private land and roadsides continues. Changing water flows and availability, a warming climate, and new pests and diseases are emerging threats.

"For these species with small populations and distributions, protection is the most important thing landholders can do to ensure their survival. By improving habitat through weeding and keeping stock away we can help young saplings get a roothold and preserve the genetics of these species," says Doug.

It's not just looking after species that is important, but individual trees. Big, old trees play a particularly vital role in ecosystems. The hollows that provide homes for many species like owls and gliders can take decades to centuries to form.

"Old trees are irreplaceable. They're long-lived, keystone features of habitat and as conservation practitioners, we always need to think about how best to assist their survival and health. We can help ensure their health for another generation or two."

So next time you encounter a gum tree, pause for a moment. Feel its bark, breathe in its scent, listen to the breeze in its leaves, and wonder at the variety of this extraordinary group of trees.



**Yarra Gum**

Eucalyptus yarraensis
Endangered

**Black Gum**

Eucalyptus aggregata
Vulnerable

**Kamarooka Mallee**

Eucalyptus froggattii
Critically endangered

**Bellarine Yellow-gum**

Eucalyptus leucoxylon subsp. bellarinensis
Critically endangered

Saving our gum trees

Trust for Nature has identified 27 species and sub-species of eucalypts that are a priority to protect on private land. Discover some of them on the map below. All images: Dean Nicolle.

Warby Range Swamp-gum

Eucalyptus cadens
Vulnerable



Lima Stringybark

Eucalyptus alligatrix
subsp. limaensis
Endangered



Buxton Gum

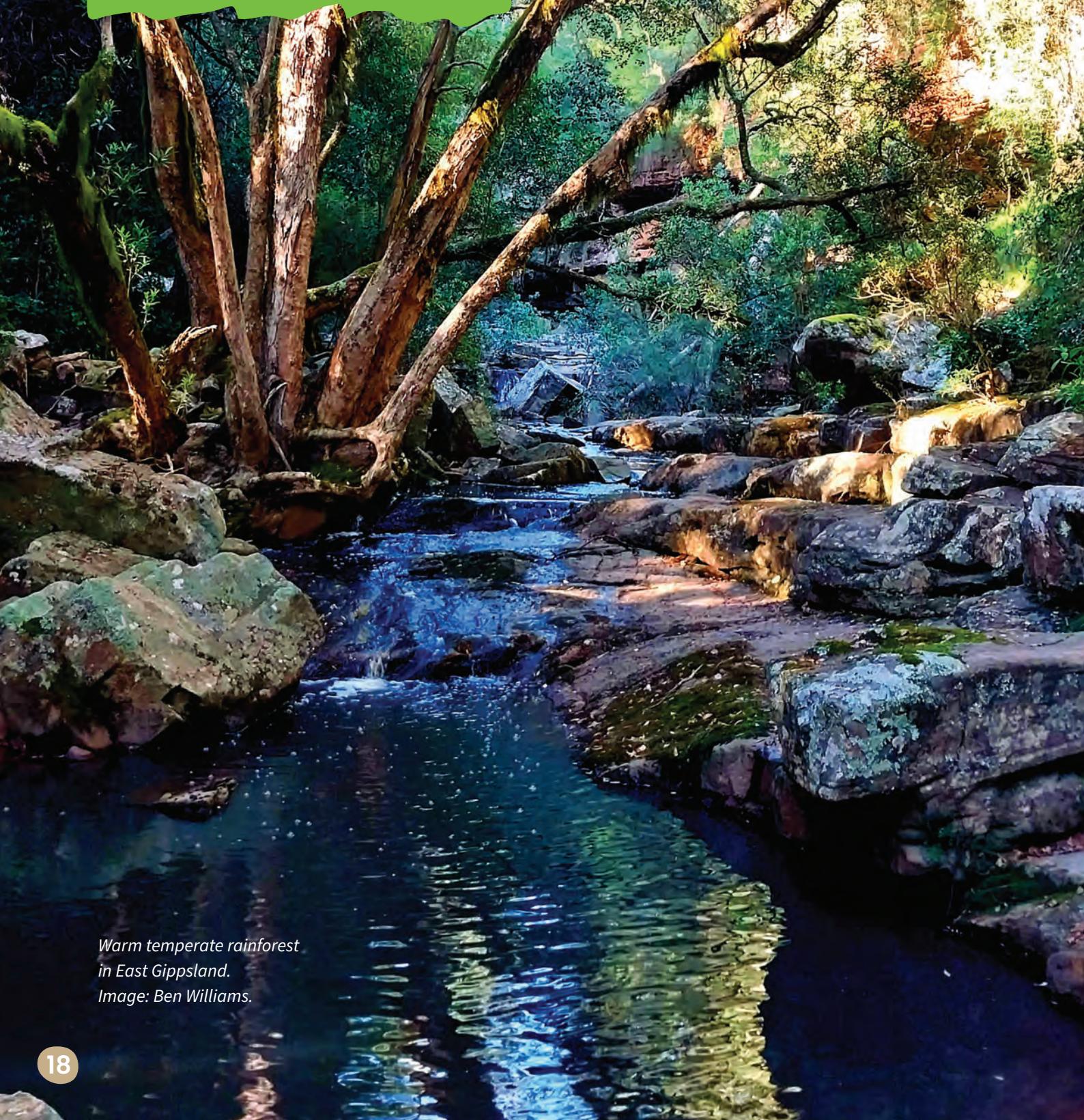
Eucalyptus crenulata
Endangered



Bog Gum

Eucalyptus kitsoniana
Critically endangered

Seeking refuge in rainforest



*Warm temperate rainforest
in East Gippsland.
Image: Ben Williams.*

It was over forty years ago that Darilyn and Les Goldsmith found their refuge at Lakes Entrance, Gunaikurnai Country. But it wasn't until they connected with ecologist Bill Peel that they understood how special their property was.

"He said 'Can we come and have a look at your rainforest?' And we said, 'What rainforest?' When we imagined rainforest we thought of tropical places," Darilyn recalls.

The property is home to rainforest in the gully, and with Bill's guidance Darilyn and Les removed cattle and set about protecting 25 ha through Trust for Nature. After careers as teachers, they moved into tourism and set up a boutique B&B, Goldsmith's Retreat, which caters specifically for nature-minded tourists. Darilyn retrained as a chef and now cooks with edible native plants while Les leads guests on tours through the forest.

"We have a focus on giving people really good experiential tourism with a conservation bent. We realised we could share it with people without destroying it."

Nearly all rainforest in Victoria is like the Goldsmith's property, tiny patches confined to gullies alongside rivers and streams. Found primarily in the Otways, Central Highlands, Strzelecki Ranges and East Gippsland, rainforest covers a minuscule part of the state, less than 40,000 ha or 0.2% of Victoria. Despite its small area, rainforest provides important habitat for threatened wildlife and plants and is providing a refuge for species in a warming world.

The Goldsmith's property is home to threatened Powerful Owls, Sooty Owls and Lace Monitors. Outside of the rainforest, Les has planted 350 she-oak seedlings to attract Glossy Black-cockatoos which visit the state forest next door. But the real stars are the lyrebirds, which lost huge amounts of habitat during the 2019-20 Black Summer Bushfires across eastern Australia. Research has shown that rainforest served as important refuge for lyrebirds after the fires. "The lyrebirds visit us on the deck and jump in and out of the dog's garden," says Darilyn.

"There's just always something different. It's ever-changing – whether it's the birds or a plant that we haven't seen before, it's always interesting."

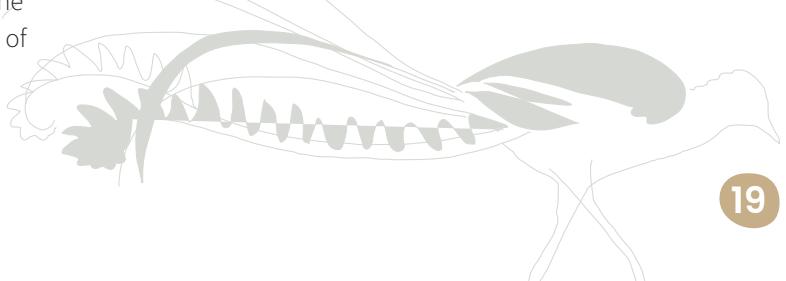
The rainforest here, where the main trees are Lilly Pillies, is known as Warm Temperate Rainforest, one of five types of rainforest recognised in Victoria. All of them are rare or threatened. Around 3,400 ha are found on private land, mostly in the Otways and Strzelecki Ranges.

Rainforests are among the most ancient ecosystems in Australia, with origins in the Cretaceous period 100 million years ago. Once much more widespread, these forests have retreated to refuges as the climate warmed and dried. While rainforests do indeed prefer a wet climate, it's fire that really forges where this habitat grows. Extremely sensitive to burning, rainforests may take 300-400 years to mature.

Dr Suzanne Prober is one of the scientists on the ground measuring how Australia's ecosystems respond to fire and how best to help them, through the pilot Fire and Weeds MER (Monitoring Evaluation and Research) Network. It's a nationwide initiative covering 19 sites across the country, including rainforests in the Kimberley, southeast Queensland and East Gippsland.

"The ultimate goal of the MER network approach is to enable us to detect change in ecosystems and understand the effectiveness of management (or outcomes of natural disturbance). So we can say 'yes, this is going to work here', or 'this doesn't work so we need to find out what does,'" says Suzanne, who is project leader of the MER network.

The network is designed to be simple, so it can be repeated across all sorts of habitat. For each site, scientists selected and permanently marked four plots in burned habitat and four in unburned habitat. Where relevant, they also included four plots in burnt habitat where weeds are being controlled. Trust for Nature's South East Area team has been assisting the MER project by establishing and surveying plots in rainforest on private land. "Just getting the baseline data is really important, as we'll then be able to come back and monitor every few years and detect changes over time," says Suzanne.



Suzanne has seen firsthand the destruction that can come from fire; her family's property in East Gippsland that is home to rainforest has burned twice, in 2014 and 2019. "I'm very concerned about them. I've seen fire go straight through some rainforests and some will turn into wattle forest. If we keep getting fires like the Black Summer then they're at risk, and the more we understand what's going on and can set up priorities for what we protect, the better."

The tiny size of rainforest patches makes them very vulnerable to changes to land use at the edge of the forest, which can increase the risks of the forests drying out and different species moving in. Within the rainforest patches, weeds and deer are major threats. One study found deer had killed a third of nationally endangered Yellow-wood through rubbing their antlers on the trunks. Surrounding forest protects rainforest by serving as a buffer, a safety blanket that disappears if the forest is cleared or degraded. And then there's fire.

In 2019-20 a fifth of Victoria's rainforest was severely burned, mostly in East Gippsland. After the fires, rainforests and other ecosystems, and the wildlife that depend on them, were even more vulnerable to other threats. Surviving stands of rainforest served an immediate and vital refuge in the burned landscape. The South East Area team, funded by the Australian Government, leapt into action to make sure these refuges were safeguarded, by protecting 450 ha of habitat on private land with conservation covenants, and controlling threats such as deer, weeds and introduced cats and foxes on 3,700 ha.

As the world continues to warm, rainforests will also serve as refuges for animals and plants on the move as they attempt to keep pace with their preferred climate. It's a process of adaptation that can only work if we do everything we can to reduce greenhouse gas emissions and slow climate change, but as global action lags, protecting such refuges is vital. Trust for Nature has identified 740,000 ha of climate refuges on private land across the state through its Statewide Conservation Plan, and aims to protect 5,000 ha by 2030. Already, the organisation has protected over 2,100 ha of refuges. It's not just rainforests: other important refuges include habitat alongside rivers and coastal habitat that will give species a chance to move away from rising seas.

"Rainforests are home to a whole suite of different plants that aren't found anywhere in other ecosystems," says Catherine Crowden, Conservation Program Manager in East Gippsland at Trust for Nature. "If we allow them room to move and adapt those plants can migrate outwards as the climate changes. If we lose these niche ecosystems, we lose another opportunity for adaptation in the long run across the state and across Australia."

The Goldsmiths have witnessed many changes on their property over the years, some good, some bad. Where previously they looked out over what Darilyn calls a "sea of rabbits", now thanks to the regrowth of the forest they see only a handful a year.



Left: Rare Butterfly Orchid found in rainforest.

Image: Ben Williams.

"Rainforests are home to a whole suite of different plants that aren't found anywhere in other ecosystems."

Years of drought have impacted the forest, and the property has been threatened by fire several times. Threatened Greater and Yellow-bellied Gliders, once heard on the property, haven't been seen for years. But the recent wet weather has filled dams on the property, and frogs are breeding once more. And recently they received a pleasant surprise on cameras installed around the property.

"When we first moved here we could hear bandicoots sneezing outside our bedroom window. Then they disappeared," Darlyn says. But in late 2023 they spotted a bandicoot on two of their cameras, the first in 35 years. With the sanctuary that comes from decades of care, forests like this can still serve as refuges where wildlife and plants can survive and regenerate.



*Top right: Lyrebirds are the stars of the show at Goldsmith's Retreat. Image: Darlyn Goldsmith.
Above: Darlyn and Les Goldsmith on their property in Lakes Entrance.*



A small but mighty sanctuary in the suburbs

We're standing in the middle of a patch of forest at the foot of the Dandenong Ranges, Wurundjeri Country, interviewing landholder Kim Wormald, when a flash of red appears on a branch. Filming stops as Kim lifts a telephoto lens to capture this special sighting, a male Scarlet Honeyeater, summer migrant to this part of Victoria.

Ironically, the honeyeater is too close to capture, but later in the day Kim sends us a beautiful snap of a female that came to the bird bath in front of the house on her property, Karrawah, an Aboriginal word that means a place where birds gather. Such are the serendipitous encounters that can occur when you've created a wildlife haven.

Karrawah is indeed a sanctuary for birds, with an astonishing 142 species recorded by Kim. While we're visiting fairy-wrens hop across the lawn and thornbills come to bathe. Rufous Fantails, another seasonal visitor, flit among the trees.

"I love the connection to nature and that I've been able to keep it safe for the birds and animals that have lived here for so long. I love all the everyday experiences you get when you're lucky enough to live somewhere with so much wildlife around," Kim says.

Always interested in nature and a keen ethical bird photographer, Kim was looking for her dream property when she found Karrawah. The purchase was fortuitous: the people previously interested had intended to clear it for paddocks. In 2023 she protected the small remnant forest with a conservation covenant through Trust for Nature, ensuring it remains a sanctuary forever.

"I thought there's only two ways that I could keep it safe. One is to live forever and the other is to get a covenant on it. I thought the covenant was probably the safest bet and was thrilled when it was accepted."



Above: Superb Fairy-wren. Image: Kim Wormald, Lirralirra.



Although the covenant is small, it serves as a vitally important piece of the conservation jigsaw. The swampy woodland on the property, thick with ferns and moss, is an endangered type of habitat in the region. Permanent springs are a source of Bungalook Creek, which flows into Port Phillip Bay via Dandenong Creek, and are kept healthy by the intact forest. Mud chimneys of crayfish are a testament to the moist ground. Threatened Powerful Owls have been spotted on the property.

It also connects to the Bungalook Conservation Reserve, a larger patch of habitat including Trust for Nature's 2 ha Bungalook Reserve, one of the last vestiges of the swampy woodlands of the Dandenong Creek floodplains. Purchased and protected by Trust for Nature in 1988 following a community campaign, the reserve is cared for by the Friends of Bungalook Reserves convened by Dr Graeme Lorimer.

"It's such a rich and natural area that I find it fulfilling to be in. It is also a remarkable place to care for nature, because I can think of few other places where you get such a strong positive response. When we remove weeds, we see a really good response from native species, which is inspiring and rewarding," Graeme says.

While there are still large areas of habitat in the Dandenong Ranges, the floodplains were almost completely cleared for farming, industry and more recently housing, a process that is still occurring. Parts

of the Bungalook Conservation Reserve were slated for development when Graeme started a campaign to purchase and protect the land through Trust for Nature, a campaign that was successful with contributions from donors and state and federal governments.

Patches of habitat like Bungalook Reserve and Kim's property help connect waterways and areas of habitat, allowing wildlife and plants to move and spread through the landscape. This reserve is also home to numerous threatened or regionally rare plants, including one of only two known locations of the Porphyry Wallaby-grass, a species restricted to seasonally saturated soils.

Across the area threats include introduced predators like cats and foxes, human disturbance and weeds. Each month Graeme and half a dozen volunteers meet to remove weeds and rubbish and monitor plants. Kim has also planted hundreds of trees on a part of Karrawah that used to be paddock.

Thanks to the dedication of volunteers and landholders, wildlife and plants have a refuge here. At Karrawah, we watch the birds coming and going from Kim's bird baths.

"They're going to have this patch of land that is theirs," Kim says

"It was theirs before we got here and it should be theirs forever."

Above: Kim Wormald on her property.

Leaving a legacy, protecting habitat forever

Habitat protected through Trust for Nature is habitat forever. Conservation covenants are permanent and continue to safeguard nature when properties change hands. We visit three properties that showcase the power of protecting habitat on private land, and the extraordinary dedication of Victorians to conservation.



Lifetime dedication

"We wanted to move to a place where there were trees," says Olwyn Brook. "It reminded me of growing up in the Otways."

Olwyn and husband Ben were living in Stawell when they decided to relocate to Boho South, Taungurung Country, in 1998. There they found Peppermint Ridge, a 105 ha property in the heart of the Strathbogie Ranges. It was indeed a good place for trees, with about half the property still covered in remnant forest: beautiful big Blue Gums, Manna Gums and of course Peppermints.

Having gotten to know Neil Marriott in Stawell, then Regional Coordinator at Trust for Nature, Olwyn and Ben had previously learned of the power of conservation covenants, and soon set about safeguarding Peppermint Ridge through Trust for Nature. As the couple now prepare to sell the property, that protection will ensure that the land continues to be safeguarded. "It gives us a feeling of comfort that the place isn't going to be wrecked. Most of the farms in this area are being subdivided, and a covenant seemed like a good way to slow that process down," Olwyn says.



Above: Ben Brook (right) with Conservation Program Manager for the Goulburn Broken catchment, Shelagh Curmi.



Maintaining a conservation property takes effort. Olwyn and Ben have worked tirelessly to control weeds and introduced species like rabbits, deer and foxes. They've also gotten to know the wildlife and plants on the property. Olwyn has documented 30 species of orchids, while Ben focused on birds and butterflies, including the Imperial Blue, whose caterpillars are tended by ants that depend on wattles. Olwyn and Ben have carefully managed Silver Wattles on the property to ensure that such intimate relationships between species are preserved.

They've also played an integral role in the community and spreading the conservation message, by hosting numerous field days for Trust for Nature and other organisations, creating a legacy that goes beyond the land itself. Children from the local school visited Ben's butterfly house where he raised Imperial Blues, passing on his knowledge to the next generation.

"Most people like the idea of owning and controlling land, whereas we come from the perspective of looking after it. It's a privilege to be involved in the sort of thing that Trust for Nature does and to be involved in making the world healthy."

Above: Hyacinth Orchid spotted on Olwyn and Ben's property.

Community effort

When Laurie Macmillan and David Wakefield found their property at Strath Creek, Taungurung Country, it had been degraded by grazing and had little remnant native habitat. Not to be daunted, they set about restoring the land into a wildlife haven.

"They did a lot," says Susan King, President of the Strath Creek Landcare Group since 2018. "They put into action what they said."

Years of weeding, tree planting and progressively excluding cattle transformed the 41 ha property, more than half of which Laurie and David protected under a conservation covenant in 2015, ensuring their hard work is protected forever.

That would itself be an incredible legacy to leave behind, but Laurie and David also generously decided to bequeath the property to Trust for Nature, and it is now being sold through the Revolving Fund.

The proceeds will be returned to the fund and used to purchase more land suitable for conservation, creating a continuous cycle of investment. Making such a gift is an incredible, life-giving contribution to protecting nature.

David and Laurie were very active members of the community, serving as President and Secretary of the Strath Creek Landcare and as members of other community environmental groups. Their dedication to conservation extended far beyond their property's boundaries, surveying wildlife and plants on neighbouring land, cleaning up the local reserve, and restoring habitat. After the 2009 bushfires, they were involved in the Focus on Fauna project recording how the local environment recovered and putting up nest boxes across the area.

Susan recalls telling David and Laurie that she thought she'd spotted a Sugar Glider in the space above the back door. Laurie checked the scat (aka droppings).

"They said, 'Yes, that's a glider, but they haven't been recorded in the area.' Then after the fires, they put cameras out to monitor wildlife and we discovered they were Sugar Gliders," Susan says.

Since Laurie and David's property was bequeathed to Trust for Nature, the organisation has supported Strath Creek Landcare Group to fence, weed and replant trees on the property to complete Laurie and David's vision before the property is sold.

"I think they intended their property to be a model for other aspiring environmentalists," says Terry Hubbard, former Strath Creek Landcare Group President. "They were the pair with the most significant impact on Strath Creek. They always had a very strong connection to Landcare, and we've achieved great things over the years."

David and Laurie's passion for the environment was widely recognised by the Goulburn Broken CMA, the Upper Goulburn Landcare Network and by the Murrindindi Shire Council, where David was a foundation member of the Shire's Environmental Advisory Committee which developed the Shire's Environment Policy and Strategy.

In acknowledgement of David's and Laurie's contribution to their community, a special garden has been established in the Pioneer Reserve in Strath Creek as a lasting reminder of their passion and commitment to the environment.

Now that legacy will pass on to the next generation of landholders.

*Below left: Susan King, President of the Strath Creek Landcare Group who helped restore the property.
Right: Strath Creek Landcare Group planted hundreds of trees to complete Laurie and David's vision of restoring the property.*





Next generation

Just to the south of the Strathbogie Ranges, at Gobur on Taungurung Country, there's a property that demonstrates the enduring legacy of protecting habitat on private land.

After Trust for Nature acquired the property in 2010, Billygoat Hill was protected with a conservation covenant and sold through the Revolving Fund, with the proceeds returned to the fund to protect more land. Now the property has arrived with its latest custodians, Luke and Emma Spano and their family.

"We'd been looking for a weekender in northeast Victoria, a bit of land with rolling hills," says Luke, who grew up and lives in Melbourne but got to know the region through camping with his father. "The thing that surprised us was the abundance of wildlife. Only a couple of weeks ago I was doing some work up there and an echidna walked past the window."

Billygoat Hill is right next door to the Burge Family Reserve, which was generously donated to Trust for Nature by Mervyn Shaw. The two properties together protect one of the last remaining remnants of threatened Grey Box Grassy woodland, a habitat that once covered 3.5 million hectares of inland eastern Australia. Due to clearing, more than 80% has been lost – and what's left is highly fragmented and degraded.

The loss of these woodlands is the major cause of the decline of threatened wildlife such as Swift Parrots and Regent Honeyeaters which were once found in the district. Despite these declines, the Burge Family Reserve and Billygoat Hill continue to provide critical habitat for other threatened woodland species, including Brown Toadlets and Striped Legless Lizards.

Landholders and dedicated volunteers have done incredible work to restore the properties, replanting trees, controlling weeds and conducting ecological burns alongside Traditional Owners. Protection under a conservation covenant ensures that effort is preserved.

"We hadn't really heard of conservation covenants before we found the property," says Luke. "But once we found out more about it, we realised the benefits, including the exemption from land tax which makes things a bit easier."

Taking ownership of the property in January, Luke and his family are enjoying learning about the abundant wildlife and how to look after it. Recent rains have brought the bush alive and filled seasonal wetlands on the property. Trust for Nature will provide expert guidance on managing the property.

"I hadn't really thought of being a conservationist even three months ago, and now I'm hoping to look after it for many decades and pass it onto our family," says Luke. "I'm someone who needs a project, and now this is my project for life. I feel privileged to take over something that has been so well looked after and hopefully now look after ourselves."

Making a bequest in your will or donating your property to Trust for Nature is an extraordinary gift for nature that makes an enormous contribution to fighting extinction and climate change. If you are considering making such a generous gift, please contact Relationship Manager Neil Venables at neilv@tfn.org.au or 0417 052 861.

Above: Luke and his family are enjoying learning about Billygoat Hill. Image: Luke Spano.

Skills to take care of Country

Yorta Yorta and Dja Dja Wurrung woman Gemma Cadd already had Bachelor and Masters degrees in environmental science under her belt when she started the Warreen Beek Rangers program with Trust for Nature. It was the practical nature of the course that appealed to her after learning the theory at university.

“It was really great to get out into the field each Friday and get that experience. It keeps you engaged and makes it easier to take in information, and a lot of conservation jobs also require field experience these days,” Gemma says.

The Certificate III in Conservation and Ecosystem Management, now in its seventh year, provides conservation training and accreditation for Aboriginal and Torres Strait Islanders. Developed in partnership with Traditional Owners, the course is free for Aboriginal and Torres Strait Islanders and is largely completed on Country with Elders and experts helping to teach the units.

The course is coordinated by Trust for Nature in collaboration with Bunurong Land Council Aboriginal Corporation and Wurundjeri Narrap Rangers, accredited through Holmesglen Institute of TAFE and supported by the Port Phillip Bay Fund. Gemma is one of seven students who graduated in 2023.

Growing up around Melbourne, Gemma’s mum took the family on camping trips around the state every school holiday. Birds are of particular interest to Gemma, and she fondly remembers spotting black-cockatoos in the Grampians/Gariwerd, where the students spent two days learning about important cultural sites and rock art with local Traditional Owners.

“It’s good to learn from other cultures and hear stories from them and all the different experiences. The course was a culturally safe space because all the students were Aboriginal so we could learn and discuss Indigenous topics without fear.”

Other highlights for Gemma included taking part in a cultural burn at Coranderrk on Wurundjeri Country, and surveying penguins at St Kilda pier. “It was really cool seeing all the different environments in Port



Phillip Bay and the Mornington Peninsula. It's so diverse, and great to learn about how the Bunurong manage the land there."

Gemma is hoping to continue using her training to work in the conservation sector and helping protect wildlife. "Being out in nature was what I always wanted to do – working with animals and helping stop extinction," Gemma reflects.

Chelsea Cooke, Conservation Officer and Indigenous Engagement Coordinator at Trust for Nature, mentors students and facilitates the Warreen Beek Rangers program. After completing the course herself in 2021, Chelsea says the course environment and how the students come together is what makes it special.

"Every year I feel like the students start a bit shy and reserved, and a couple of weeks in everyone becomes such a family. All the students have different schooling backgrounds, so it's good to see people supporting each other to do assessments."

Learning from Elders and Traditional Owners is core to the program.

"It's such an honour to be invited out to properties to work with Traditional Owners. It's important to learn from different groups, because they all have different ways of learning and teaching, and different rules and traditions. Whether or not you come from that country, it's part of respecting how each other works."

Below left: Students take part in cultural burning at Coranderrk, Wurundjeri Country, and right: Warreen Beek Rangers graduate Gemma Cadd (left) with Holmesglen Institute of TAFE Teacher Sandra Lutke. Image: Annette Ruzicka.

Bottom: Trust for Nature Conservation Officer and Indigenous Engagement Officer Chelsea Cooke at the smoking ceremony at the graduation. Image: Annette Ruzicka.



New covenants

(Jul – Dec 2023)





Bethanga 43ha

Markwood 15ha

Clifton Creek 30ha

Meerlieu 29ha

Conservation covenant

Private land

Public land



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the Conservation Bulletin? Feedback?
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