

WINTER 2020

NL 62

kunanyi/Mt Wellington from Lutregala Marsh. Photo: Andy Townsend

The last few months have been challenging for many. With restrictions now easing across the country, we can reflect not just on how difficult it is to not physically be in nature, but also on the opportunity isolation has provided to experience nature in different ways. By slowing down we notice our shared humanity and the importance of being connected to our community. For some people, the stillness and time has heightened our observations – the radiant colours of the Autumn leaves, the sound of birdsong. It's provided an opportunity to reflect on what nature means to us and the importance of ensuring it lasts.

Despite the limitations of travel and social gatherings, the Tasmanian Land Conservancy (TLC) team has adapted well and continued to deliver across our conservation programs. Before the COVID-19 restrictions took hold, I spent

time exploring Tinderbox Hills with some TLC supporters, including long-term supporter and eucalypt expert, Emeritus Professor Brad Potts. I am continually inspired by the connection the TLC community has to the places we work to protect. In this newsletter, Brad shares his connection to Tinderbox Hills and the importance of the area for conservation. Thank you to everyone who has contributed so far to the protection of this special patch of Tasmania.

Our Science and Reserves Management teams have been out across our estate, ensuring essential activities continue. The teams have been monitoring fire recovery across our Five Rivers Reserve to better understand impacts from the 2019 fires and inform ongoing management. While some programs have been rescheduled or adapted, much of our management is carried out in isolation, which means we can still

perform critical invasive species and access management across key areas, keeping on top of ongoing threats. We couldn't do it without the inventiveness, flexibility and dedication of the TLC staff, and in this newsletter we are thrilled to introduce you to some new team members. Among them is our volunteer caretaker at Rubicon Sanctuary, Alison Roach. We are so pleased to have Alison involved in the day-to-day management of this significant property.

From all of us at the TLC we send our well wishes to you during these difficult times and thank you for your loyal support of our conservation efforts. We look forward to coming together again to enjoy Tasmania's wild places while working to protect nature for the long-term.

James Hattam
Chief Executive Officer

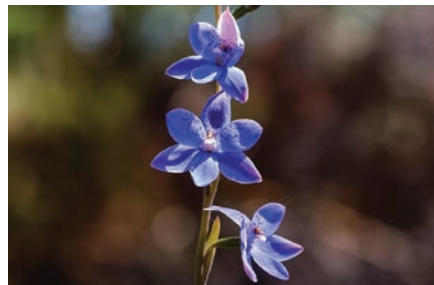
HIGHLIGHTS



Tasmanian devil (*Sarcophilus harrisi*). Photo: Matthew Newton

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Tinderbox is home to endemic animals and an inspiration to scientists.



Sun orchid (*Thelymitra ixioides*). Photo: Phill Laroche

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Read about Rubicon Sanctuary's first volunteer caretaker.



Cedar gum seedlings. Photo: Rowena Hamer

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Find out how Five Rivers Reserve's cedar gums are returning after fire.



TINDERBOX: INSPIRING SCIENCE

Blue gum (*Eucalyptus globulus*) blossoms. Photo: Andy Townsend

Tinderbox Hills, right on Hobart's doorstep, is a truly special place. The TLC has looked longingly at this property for many years now, and we are delighted that we finally have the chance to protect it as a reserve.

Tinderbox Hills has an incredibly rich mix of habitats brimming with wildlife, from the canopy tops to the deep gullies. The towering blue gums (*Eucalyptus globulus*) on the property had a superb flowering season over the summer, the branches heavy with blossoms and with swift parrots (*Lathamus discolor*) feeding. Now that the cold weather has arrived, the swifties and their young have headed north for winter on the mainland.

Of course, Tinderbox Hills isn't just special to us at the TLC. It's also special to local residents. Last newsletter we included some reminiscences from Diana Hale, who grew up on the property that encompassed Tinderbox Hills. This time we've been talking with UTAS Emeritus Professor, Brad Potts, who also spent his early years among the peninsula's woodlands.

Professor Potts is a world expert on eucalypt genetics and a long-time TLC supporter. He works on the evolutionary processes that have shaped eucalypts' natural diversity, as well as providing research to support the planting of eucalypts for fibre, wood production and environmental benefits. His decades of research have increased our understanding of these building blocks of the Australian landscape.

Growing up on the Tinderbox Peninsula, with forests and woodlands in his backyard, fuelled Brad's love for the

natural world and set him on the path to scientific discovery and his life's work. He told us:

'In Tasmania, we have a magnificent natural laboratory on our doorstep. There is so much we still don't know about nature – even the species we live among. We are sitting right in the middle of the natural range of one of the world's globally significant eucalypts – the Tasmanian blue gum – which has been my science passion.

'This magnificent tree is important swift parrot habitat and abounds in the Tinderbox Hills, where several of our studies have been undertaken. These hills form the backdrop to the Tinderbox Marine Reserve – overlooking Bruny Island, the mouth of the River Derwent and the northern entrance to the renowned D'Entrecasteaux Channel.

'With increasing pressure from development, the TLC property represents a significant southern extension of the conservation areas in these hills, protecting the old-growth eucalypt forests and their dependent species. However, places like Tinderbox Hills aren't just important for the species that live there – they connect people to nature, they inspire people of all generations. Protecting such places is of the utmost importance for so many reasons.'

Our fundraising target for this magnificent property currently stands at just over \$1,000,000. This includes the purchase price and acquisition costs, and a contribution to the TLC Foundation endowment to fund ongoing reserve management and ecological

monitoring. Our thanks to everyone who has contributed so far. It might take a while, but we are looking forward to hitting our total and declaring Tinderbox Hills a reserve. It will be a place where Tasmanians will have the chance to be inspired, enlightened and, perhaps, set on their life's journey.

WHO LIVES ON TINDERBOX HILLS?

In April, TLC's Senior Conservation Ecologist Matt Taylor installed some wildlife monitoring cameras at Tinderbox Hills to give us a night-time view of the property. While we know the woodland is home to swift parrots (*Lathamus discolor*) and forty-spotted pardalotes (*Pardalotus quadragintus*), we were keen to get a look at the resident nocturnal marsupials.

The results were very pleasing. There were, of course, pademelons (*Thylogale billardierii*) and Bennetts wallabies (*Notamacropus rufogriseus*). But we also saw both southern brown (*Isoodon obesulus*) and eastern barred (*Perameles gunnii*) bandicoots, potoroos (*Potorous tridactylus*) and bettongs (*Bettongia gaimadi*). And we now know two or three Tasmanian devils (*Sarcophilus harrisi*) live on the property too.

GIVE

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Donate now to make Tinderbox Hills a safe home for Tasmania's endemic wildlife. Visit tasland.org.au donate-now, or call the office on 03 6225 1399.
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RUBICON CARETAKER

At home at Rubicon Sanctuary. Photo: Heath Holden

Rubicon Sanctuary is a rare gem on the central north coast of Tasmania. With the support of various orchid experts, the TLC was able to secure this 20-hectare remnant of natural coastal vegetation in 2004 and it became the TLC's first Revolving Fund property. Phil Collier and Robin Garnett purchased the covenanted land from us in 2008 and named it Rubicon Sanctuary. Their careful management practices conserved one of Tasmania's biodiversity hotspots, with 60 different orchid species, including the critically endangered marsh leek orchid (*Prasophyllum limnetes*), which is found nowhere else on earth.

Phil and Robin have returned to the UK and very generously decided to donate the property back to the TLC. In November, we engaged Rubicon's first volunteer caretaker, a rolling position for six months (with the possibility of an additional six months).

Alison Roach, the current caretaker, tells the TLC:

'From receiving the TLC email highlighting a need for a caretaker for Rubicon Sanctuary, to now having been here for six months, has been a wonderful privilege for which I have been grateful. I continue to be awed, inspired and humbled by the commitment of Robin and Phil to this land, and their generosity in passing its ongoing care to TLC. I grew up locally and I have observed the rate at which the subdivisions are encroaching on the surrounding landscape. To be able to play my part in caring for what is such a precious remnant of coastal vegetation is the realisation of a long-held dream.'

'Each day caretaking at Rubicon reveals something new that I find "fills my cup". Today it was sighting the first scarlet robin here for the cooler months. Another day it was the flock of yellow-tailed black cockatoos snacking on the banksias. It is the sound of frogs increasing as the lovely rain we have had replenishes the soil and the bush, marvelling at the force with which the large fungi push up through the soil, and being on my knees searching for orchid leaves and flowers.'

Having a caretaker on site has been hugely beneficial for the TLC, particularly one as committed, enthusiastic and effective as Alison. She has been taking care of the day-to-day activities, including mowing, fence maintenance and track clearing. Alison is also helping with orchid monitoring, continuing the good work of Robin and Phil.

In 2021, we are looking forward to conducting mosaic burning on the property to support orchid growth, another practice instituted by Robin and Phil. As well as involving Alison, this burn will be a chance for trained TLC staff to put their fire management skills into practice.

ACT

If you would like to hear when we're recruiting Rubicon's next caretaker, please register your interest by contacting Phill Laroche, plaroche@tasland.org.au



Superb fairy wren (*Malurus cyaneus*). Photo: Peter Vaughan

LAND FOR WILDLIFE UPDATE

The TLC is excited to now be delivering the Land for Wildlife program. Across the state, Land for Wildlife property owners make an enormous contribution to private land conservation, managing significant areas that include critical habitat for threatened species. Since early 2019, Land for Wildlife has been in transition to the TLC. We are grateful to DPIPWE for the opportunity to run the program and we thank the existing members who have opted to continue their involvement.

Unfortunately, like most organisations, our activities have been affected by the COVID-19 restrictions and we have been unable to visit landholders or assess new properties for Land for Wildlife membership. We are taking enquiries; however, there is a waitlist.

When restrictions ease we look forward to holding regional Land for Wildlife field days and meeting members in person. These events will be an opportunity to hear from conservation experts and other local landholders and to share stories, knowledge and experiences.

In the meantime, we are developing a survey with the University of Tasmania so we can better understand the interests of Land for Wildlife members and the support they'd like through the program. If you're a Land for Wildlife member and you opted in during the transition from DPIPWE, look out for the survey in the next few weeks.

If you are a Land for Wildlife member and you didn't confirm to continue in the program, but would like to maintain your membership, please contact Emma McPhee, Land for Wildlife and Engagement Systems Coordinator on emcphee@tasland.org.au



AFTER THE FIRE: FIVE RIVERS

Cider gums being caged, shortly after the January 2019 bushfires. Photo: Heath Holden

It's been almost 18 months since the Great Pine Tier fire ripped through the TLC's Five Rivers Reserve in the Central Highlands, and we've just completed our second round of post-fire monitoring surveys. TLC staff and volunteers are currently wading through great piles of fauna images and data and we don't expect them to surface for some time.

In the meantime, though, we can give you an update on the fate of the reserve's cider gums (*Eucalyptus gunnii*). Some of you may remember that last winter saw a group of hardy volunteers out at the reserve installing cages to protect the young regrowth, which was being eaten faster than it could grow.

It's now six months later, and 32 of the 34 cages installed contain at least one cider gum seedling or regrowth sapling. One cage which was placed under the canopy of a fallen tree contains 30 seedlings within only 2.25m²! Even better (possibly not from the point of view of the volunteers) is that with the warmer weather, new seedlings and regrowth are emerging outside the cages as well.

Data collected from the cages and nearby regrowth shows that caging did give the trees inside a head-start on the growing season. We compared similar sized trees inside and out of the cages, as larger trees have more energy reserves so can grow faster and put out more shoots. Comparisons showed that those inside the cages had larger

regrowth volume on average, though the difference was only statistically significant for larger stems.

Our data also showed that browsing pressure was greater outside than inside the cages – which is what we were aiming for, so our volunteers can take a bough (sorry, couldn't resist). Trees inside the cages still showed signs of being eaten by insects, but no mammal browsing, and the overall amount of biomass lost was less. What is interesting, though, is that herbivory was extremely low overall: 90% of caged stems and 52% of uncaged stems had less than 5% biomass removed, which is in huge contrast to what we saw over winter.

There are a couple of possible explanations for the low browsing pressure: firstly, populations of herbivores may have declined due to the fire and subsequent lack of food. We didn't see any sign of this from our fauna monitoring immediately after the fire last year, but this year's camera data is still being processed. Secondly, there are currently huge areas of post-fire regeneration: more than 5,000 ha on Five Rivers alone, meaning that herbivores are spoilt for choice when it comes to tasty young green things. This means herbivory on cider gums may increase in future years.

Because of this, we'll continue to check in with the cider gums as they grow, removing the cage tops as the

trees get bigger and converting them to floppy tops where possible to keep herbivores out. We will also repeat our measurements to determine whether caging has any long-term benefits for the survival, growth and reproduction of the trees, to help guide future management of the species throughout its range.

Rowena Hamer
Conservation Ecologist

CIDER GUM FAST FACTS

- Cider gums are endemic to Tasmania.
- Cider gums' sugary sap acts as antifreeze through long, cold winters.
- Tasmanian Aboriginal people traditionally tap cider gum sap to make a fermented drink.
- Being adapted to cold and wet conditions makes cider gums very vulnerable to a hotter, drier climate.

EXPLORE

We'll be publishing a longer version of this article on our blog, In Our Nature, in coming weeks, complete with graphs and discussion of sub-species. Keep an eye out if you enjoy data!

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SPOT THE STRIPES

Eastern barred bandicoot (*Perameles gunnii*). Photo: Henry Cook

Cath Dickson. Photo: Eddie Safarik

Small and scampering, and reliant on good vegetation cover for their survival, eastern barred bandicoots (*Perameles gunnii*) are finding fewer and fewer places in Tasmania where they can safely live.

To help conserve these small, thylacine-striped marsupials, the TLC is partnering with NRM North in an exciting project funded through the Federal Government's National Landcare Program, to record and map their distribution and improve habitat across the West Tamar and Northern Midlands regions. Landowners are key to this project – we've been getting them involved in the WildTracker monitoring program, training them to operate remote sensor cameras and gather data on their land. Through the project, we provide management advice and financial support for revegetation and fencing so landowners can protect and rehabilitate bandicoot habitat. This also benefits the long nosed potoroo, southern brown bandicoot, spotted-tail quoll, eastern quoll and Tasmanian devil as well as birds, reptiles and invertebrates. The project will connect existing vegetation remnants and reserves across the landscape.

Eastern barred bandicoots were once widespread across the Tasmanian Midlands in their preferred habitat of grasslands and grassy woodlands. The loss of these places to agriculture, the introduction of predators – humans, cats and dogs – and habitat loss through the drying and heating effects of climate change have seriously diminished

bandicoot numbers. They are now a nationally threatened species, with no naturally occurring populations on mainland Australia and significantly reduced distribution in Tasmania. Observational records and anecdotal evidence however, suggest they may occur in the central north of Tasmania on the East and West Tamar and in the Northern Midlands.

The cameras are finding eastern barred bandicoots in a variety of sites – from remnant bush near Carrick and formal gardens in Westbury to the open plains of Evandale, in woodland and edges of forest on the West Tamar and gardens of Legana. Confirmed locations are usually close to dense, low vegetation cover which may be native tussocks and sedges, garden grevilleas, bracken fern and blackberries or gorse clumps, all of which offer protection from predators and weather. Their diggings are found in soft, moist soils in mown lawns, roadsides and paddocks. Diggings do not last long – you might see a small scratching with tiny piles of soil for a few days then they are blown over or filled in by rain. Bandicoots are recognised 'ecosystem engineers', contributing to nutrient cycling, soil health and seed germination, among many other processes of ecosystem function. Improving their habitat is not only helping this species to survive but many others too.

If you'd like to get involved, contact Helen Morgan at hmorgan@tasland.org.au

Helen Morgan
Conservation Programs Ecologist

TLC PEOPLE

In the past few months, we have welcomed two new staff members to the TLC.

Cath Dickson is now our Conservation Management & Planning Coordinator, a new position that builds a link between the Science and Reserves teams. Cath comes to us from the Nature Glenelg Trust in South Australia, where she was the Senior Threatened Species Ecologist. She has 15 years' experience working in natural resource and threatened species management in regional South Australia and Victoria, for government and NGOs. She recently completed her PhD at Monash University on the response of a dominant threatened plant to climate change on Macquarie Island. Cath absolutely loves native orchids.

Jarrah Vercoe is the TLC's new Revolving Fund Coordinator. Jarrah has a great deal of experience across a range of projects in the areas of natural resource management, stakeholder engagement and project management, most recently as the Senior Environmental Assessment Officer at EPA Tasmania. He loves Tasmania's natural places and wants to do work that results in long term environmental, social and economic benefits.

Both Cath and Jarrah have started at a tricky time, with our offices closed and many staff working from home. They've done an admirable job of learning the ropes despite being distanced from the rest of the team and we're very pleased they have joined us.



WHAT'S ON

TLC's Gordonvale Reserve. Photo: Grant Dixon

NATURAL GUARDIANS INFO

Leaving a gift to the TLC in your will is one of the most powerful and lasting ways you can help protect nature in Tasmania, forever. This year we're presenting a series of online clips and resources for people who are thinking about creating a legacy that reflects their values. Look out for the email bulletin coming soon or contact Planned Giving Coordinator, Sophie Marshall on smarshall@tasland.org.au for more information.

FOLLOW OUR SOCIAL MEDIA

While current restrictions have affected reserve visitation, volunteering and TLC events, we've been using our social media accounts to fill some of the gaps. For reserve videos and photos, online events and stories from the field, follow us on Facebook ([@taslandconservancy](https://www.facebook.com/taslandconservancy)), Instagram ([@tasland](https://www.instagram.com/tasland)) and Twitter ([@Tas_Land](https://twitter.com/Tas_Land)).

OTHER NEWS

How stimulating! A plan for the environment and jobs

Coming together is more important now than ever. Over the last few months, the wider land sector and our colleagues at the Australian Land Conservation Alliance have been working together. With over 80 state and national conservation, environmental and agricultural groups, the TLC has contributed to a COVID-19 combined federal and state economic stimulus proposal. The \$4 billion plan, led by the Pew Charitable Trusts, would provide much needed investment in conservation and land management across the country, and provide jobs for 24,000 people. Conservation activities would include weed and pest control, coastal and river restoration, revegetation, habitat recovery, ecological monitoring, funding for Indigenous rangers and more.

Recent submissions

While the TLC remains apolitical, we do advocate for strong protections of our natural values through legislative and planning mechanisms. To read our recent submission on the 10-year review of the Environment Protection and Biodiversity Conservation Act, and our position on the state-wide planning scheme and local council zoning reviews, see tasland.org.au/about-the-tlc/tlc-submissions/



Native indigo (*Indigofera australis*). Photo: Andy Townsend

Tasmanian Land Conservancy

PO Box 2112 Lower Sandy Bay
Tasmania 7005
Ph +61 3 6225 1399
www.tasland.org.au
ABN 88 743 606 934

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