



JUNE 2018 NO 273



WHALE HELLO THERE! FUNDING FOR OUR PARKS DEALING WITH DEER WHERE IS YOUR FIREWOOD FROM? REGIONAL FARCE AGREEMENTS THE GREAT TREE PROJECT LILLYDALE LAKE PARK





PRESIDENT Euan Moore DIRECTOR Matt Ruchel	
Level 3, 60 Leicester St, Carlton, VIC 3053 ABN 34 217 717 593	3
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From the President

There seems to be one environment issue that is never resolved – the logging of native forests. Particularly our least-disturbed, high conservationvalue forests; old-growth that has never been intensively logged in the past. There are forest issues across the state.

The Regional Forest Agreements (RFAs) for eastern Victoria have recently been rolled over for two years (see page 14), ostensibly to bring them in line with the RFAs for the rest of the state. But maybe this is an issue the government just doesn't want to deal with in an election year. RFAs perpetuate the myth of compliance with threatened species and environmental protection legislation, while allowing native forest logging to continue without effective oversight from national environmental controls (see March 2018 Park Watch pages 14-15).

Meanwhile, logging of native forests is continuing in East Gippsland, the Central Highlands, the Strathbogies, Rubicon Valley, central and southwest Victoria. In all cases the native forests being logged have high environmental values. All are home to listed threatened species, whether it be greater gliders, Leadbeater's possum and large forest owls in the mountain forests, or red-tailed black cockatoos, swift parrots or endangered small mammals and plants in the forests further west.

Over Easter I again took part in the Forests Forever Easter Ecology Camp based at Goongerah, jointly organised by VNPA and Environment East Gippsland. There were walking tours of cool temperate and highland rainforest, as well as a drive which took us through logging areas around Bendoc and comparable forests in Errinundra National Park. At roadside stops I was able to point out original forest adjacent to clear-felled areas with seed trees (often dead) and the highly modified regeneration areas where silver wattle often dominated. Nearby unlogged forest showed what these forests had been. Even thirty or more years after logging, regeneration areas were not a patch on the original forest.

High on the range a pocket of montane rainforest is home to giant Errinundra shining gum and mountain plum pine. The latter is normally a low growing shrub of alpine areas, but here grows to around 10 metres tall. Although relatively small, these trees are probably in the order of 800 years old, as are the giant gums that overshadow them. As plum pines are very sensitive to fire, this is also an indication of the time without significant fire in this area.

As a trained forester, I believe that production forestry is a cropping industry, and as such timber should be grown as a crop on land that has already been cleared of its native vegetation (see pages 11-13 for more on this). I do not support the clearing of native vegetation to establish plantations, and neither does long-standing state government policy. The reason we are seeing so much pressure on our native forests today is that there has been a failure to plan for the transition to plantation forestry. It has been easier for a lazy timber industry to operate as a mining industry, where their cheap but irreplaceable resource is now all but mined out.

The state government's Protecting Victoria's Environment – Biodiversity 2037 strategy values the services provided by our parks at more than \$2 billion per annum. This is without taking into account carbon storage and amelioration of climate impacts (e.g. coastal erosion). The value of services provided by our native forests outside the parks system will be of similar magnitude. We can't afford to continue trashing them in the way that we do.

While we battle to protect threatened species and fill the gaps in our national parks estate, we also need to ensure that our prime protected areas are properly managed – that was the intent of establishing them in the first place; for protection in perpetuity.

VNPA continues to push for increased funding for core management of national parks. In the most recent state budget, while the environment was a clear low priority for the Andrews Government in an election year, parks received a funding boost of \$70.6 million over four years (between \$14 and \$20 million per year increase), including 130 extra regional ranger positions. This is welcome, but not nearly enough (read more in-depth coverage on pages 5–6).

VNPA estimate that core funding for national parks needs to increase by at least \$50-\$65 million per year to ensure that management of our national parks and conservation estate approaches world's best practice, and deals effectively with many threats such as pest plants and animals, population growth and climate change. With your support, we will continue to advocate for the funding that our great national parks estate needs and deserves.

Please turn to the back page to support this work by making a tax-deductible donation. Together, we can stand up for national parks. • PW

Euan Moore, VNPA President

UPDATES

Annual General Meeting – Advanced Notice

VNPA's 66th Annual General Meeting will be held on **Tuesday 9 October 2018** at **6.30pm** in the Ground Floor Meeting Room, 60 Leicester Street, Carlton.

New staff member

The VNPA welcomes **Shannon Hurley**, our new Nature Conservation Campaigner. Shannon brings her fantastic skills, knowledge and experience from role as campaigner at the Australian Marine Conservation Society and various roles at Parks Victoria. We look forward to working with Shannon.

Nominations for VNPA Council are now open

Nominations for the VNPA Council are now open to members who would like to participate in the governance of the organisation.

The Council play an important role in the life of VNPA – establishing policy guidelines, approving annual budgets and undertaking strategic planning for the association.

Elected councillors are unpaid volunteers and are asked to participate in six Council meetings and relevant committees (usually around two hours each) over the course of the calendar year.

The Annual General Meeting (see above) elects the volunteer Council and includes a president, vice-president, honorary secretary, honorary treasurer and up to nine councillors.

To nominate for Council, you must be a current financial member and indicate your intentions by writing to the executive director, Matt Ruchel via **mattruchel@vnpa.org.au** by **5pm on Tuesday 11 September 2018**. More information on our Council, please visit **www.vnpa.org.au/about**

A true nature lover

VNPA SAY FAREWELL, THANK YOU AND CONGRATULATIONS TO OUR NATUREWATCH COORDINATOR **CHRISTINE CONNELLY**.

Christine has moved on to a new role as a lecturer in Environmental Science at Victoria University.

Christine wanted to say a huge "thank you!" to all the wonderful folk that have been part of NatureWatch since she started at the beginning of 2014.

Prior to starting her role as coordinator, Christine was a volunteer team leader on the program from 2007 to 2013. She is keen to return to the role of volunteer team leader, and hopes to see you at a NatureWatch activity soon! While working at VNPA, Christine was also completing her PhD at Deakin University on urbanisation and eastern yellow robins (see page 32-33 in March 2018 *Park Watch*).

Christine has brought a passion for working with community and a high level of scientific expertise to the NatureWatch program. Over the past four years, she has worked hard to ensure the program meets the needs of local community groups, collects meaningful, valuable scientific data, and contributes to land management.

We thank her and wish her all the best in her ongoing journey. \bullet $\ensuremath{\mathsf{PW}}$





We love parks, but do our politicians?

We love parks, and so does the vast majority of the community. But seemingly not the politicians who we elect to manage our state on our behalf. The best indication of this is the pitiful levels of funding provided to management of our prime protected natural areas.

Every year, 42 million people from near and far enjoy Victoria's national and state parks. This number increases by a further 24 million if you include metropolitan parks, and roughly the same number again visit piers and jetties managed by Parks Victoria.

These priceless assets include over 100 national, state, regional and metropolitan parks and reserves and wilderness areas; thousands of Aboriginal and post-European settlement cultural and heritage sites; several local ports and major rivers; around 80 per cent of Victoria's coastline and 24 marine national parks and sanctuaries.

Our terrestrial and marine parks estate covers about 18 per cent of the state – over four million hectares – and about five per cent of our state waters.

While home to 888 threatened plant and animal species, the great value of protection under the *National Parks* Act (1975) is that parks protect whole ecosystems and habitats, so many species benefit.

Protecting our natural areas provides a whole raft of benefits to individual and community health and wellbeing.

And then there are also contributions to the economy. A few that can be quantified in dollar terms include:

- Tourists spend \$1.4 billion per year associated with their visits to parks, which generate \$1 billion gross value added and 14,000 jobs in the state economy.
- The market value of water runoff supplied in nine of the highest yielding Victorian national parks is estimated at \$244 million per year.
- The value of water filtration from metropolitan parks is estimated at \$33 million per year.
- The value of protecting mangrove, saltmarsh and dunes in parks along Victoria's coast is conservatively estimated to avoid costs of \$24–56 million per year.
- Avoided healthcare costs and productivity impacts associated with undertaking physical activity regularly in Victorian parks could be up to \$200 million per annum.

But our conservation estate requires appropriate levels of management to ensure ecosystems remain healthy and visitor impacts are managed effectively to continue to have these natural and societal benefits.

Pest plants and animals are a significant cost pressure for parks. Deer numbers have exploded across Victoria, with some estimates above one million (see pages 7–9). Feral pigs, goats and horses are also impacting on key habitats, the weed menace is a constant challenge, and resources are inadequate.

Parks are also at substantial risk from climate change; an increased incidence of extreme bushfire weather, storms and periods of drought are already upon us.

Management of national parks receives less than 0.5 per cent of \$68 billion of annual state expenditure. It is hardly comparable with the funding for health (about 27 per cent of state expenditure), education (about 24 per cent) and infrastructure (13–15 per cent). Even if you doubled existing government funding of parks and reserves across Victoria, it would still equate to only one per cent of state government expenditure, and have no impact on these other critical services. In fact,

Taci,

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increasing parks funding would likely provide dividends for health.

Parks Victoria has a complex funding mix, with its two main sources of funding coming from the state government and the Parks and Reserves Trust (from the Parks charge levied on properties in parts of Melbourne). While Parks Victoria does raise some of its own funds from fees and charges, these funds represent a small proportion of its overall budget.

State government funding comes initially in the form of an annual budget allocation. Then there is a range of grants from other government departments for specific projects, such as weed control, fire management and infrastructure.

As the graph shows, Parks Victoria had a steady annual increase in funding of about \$13 million from 2005 until 2013. After this there was a significant funding cut. There has been a rebuilding since 2015, but total government funding is still approximately \$17 million less than at its highest point in 2013.

Additional funds have been allocated over the last three Andrews Government budgets, both for infrastructure and core funding. Other than major projects, such as the Grampians Peak Trail, in the 2015-2016 budget the Andrews Government committed \$20 million over four years for parks infrastructure and a one-off increased allocation of \$15 million (\$10 million operations and \$5 million in infrastructure) from the Parks and Reserves Trust. In its 2016-2017 budget, the Andrews Government allocated \$31.8 million increase in Parks Victoria funding, mostly over two years, with the bulk to be spent on much-needed core operations, such as rangers, and \$22.8 million for additions to Victoria's national parks estate (mostly new regional urban parks).

The most recent 2018–2019 state budget allocated \$70.6 million over four years to "manage and improve our parks". \$14.4 million in year one, \$16.9 million in year two, \$19.4 million in year three, and \$20 million in year four.



*Includes core funding + PV base review funding + government grants for special projects + program initiatives + project fire fighting + major works funding from DELWP.

At best, these budget allocations over the past three years will merely restore funding to 2013 levels by 2019. While this boost is a good start, it is not nearly enough. Long-term funding would ensure certainty of operations and effort, especially for programs such as weed and pest animal control, which often require long-term efforts. Parks Victoria is still in many ways rebuilding after the period of severe cuts.

Between 2005 and 2012, the Parks Victoria budget grew about \$13 million per year (not CPI adjusted). This trend must be re-established, and expanded to deal with increased costs as well as increased pressure from population and tourism, climate change and pest plants and animals.

To bring the budget up to scratch, there needs to be an allocation of further funds to fill an estimated shortfall of about \$50 million from previous years, in addition to an immediate ongoing long-term \$50 million increase, with subsequent annual increases of at least \$15 million in core government funding (non-tied). For example: year one, \$50 million; year two, \$65 million plus CPI; year three, \$80 million plus CPI etc. In addition, appropriate funds should be allocated when there are significant additions to the reserve system.

This is not huge in the scheme of the billions of dollars allocated to health, transport or education, and would have tangible benefits to nature and the community. Improved funding would allow a significant investment in rangers, enhance planning, support Indigenous co-management arrangements, prepare our parks for climate change, and stop the spread of invasive species.

There are still significant gaps in Victoria's protected areas estate. By our estimations there is still a gap of around 3.1 million hectares (1.5 million on public land and 1.7 million on private land). Even the state government's own *Biodiversity* 2037 strategy estimates that to meet Australia's criteria for a comprehensive, adequate and representative reserve system, an extra 2.1 million hectares of protected areas are required in Victoria.

While we need to fill these gaps, we also need to manage what we have to a high standard.

National parks are legally protected, but run the real risk of being neglected. Every Member of Parliament needs to take responsibility for parks funding. In the lead up to the next state election, please write to your local member of state parliament, and ask them to support an increase in core funding for management of national parks. (To find you MP contact details visit www.vnpa.org.au/stand-up-for-parks).

With your support, we'll campaign for increased funding for our parks in the lead up to November's election and continue to highlight the problems caused by insufficient funding.

Please turn to the back page to support this work by making a tax-deductible donation. Together, we can stand up for national parks. • PW



A sambar stag enjoying a bath in one of the Alpine National Parks national and state listed protected peatbeds.

Dealing with deer

VICTORIA'S DEER MANAGEMENT STRATEGY CAN AND SHOULD INCLUDE REAL ANSWERS TO THE DEER PROBLEM, SAYS **PHIL INGAMELLS**.

Deer are creating havoc in our natural areas. The problem will have to be faced on a series of fronts, but strategies can be developed for all of them if the will is there. And despite some bizarre legal confusion, the law is largely on our side.

Let's start with the problem

In the 19th century a few deer were introduced to south-eastern Australia for sport. But the descendants of that original population have multiplied spectacularly in the last decade or so. Something like one million deer are currently chewing their way through Victoria.

They eat and trample a wide range of vegetation; snap off shrubs and young saplings; ring-bark trees by 'antler rubbing'; and make large wallows in wet areas. In many places where volunteers have worked for decades revegetating stream-sides and linking landscape corridors, that work is now trashed.

Our main invaders are sambar deer, which dominate in the east of the state but also now turn up along the Murray, the Otways and in the Prom. Largely a tropical animal in their native habitat in India and parts of Asia, sambar will inevitably spread throughout northern Australia if they are not controlled here. Easily increasing their population by around 40 per cent a year, sambar are as damaging as cane toads or red fire ants, and warrant at least the same level of attention.

Other deer in Victoria include red (mainly in the Grampians), hog (the Prom and east coast), fallow (farm escapes in many places), chital and rusa. Around 60 native plants are now significantly threatened by deer, and more than a dozen state or federally listed vegetation communities are being brought close to the brink.

Growing deer populations are also causing havoc on our roads.

What solutions are currently on offer?

The deer hunters' solution is to increase the area hunters can operate in. It's an apparently compelling argument, given that the latest estimate from the Game Management Authority has 35,000 hunters taking about 100,000 deer a year from the 8.5 million hectares of public land they currently have at their disposal.

Continued overleaf

Sambar deer, caught here browsing and trampling areas where late-lying snow favours some very rare plants. Snowpatch communities are listed as threatened under Victoria's *Flora and Fauna Guarantee Act.* VNPA has assisted La Trobe University in this research.

Continued from previous page

But the deer population keeps growing, partly because we've reached a point where population increases far exceed any huntable amount, and partly because amateur hunting is unstrategic, randomly reducing deer numbers in easily accessible areas, and pushing them into new areas.

Parks Victoria currently runs a number of trials with 'accredited amateurs', who volunteer to work strategically under the guidance of park managers. These programs are good, but limited in extent. They result in very small deer reduction numbers.

One research program they are running in the Alpine National Park compares the effectiveness of an accredited amateur operation with another run by professionals. The results of that are trial are a little way off, but there are many things we know already.

Professional pest controllers are highly skilled and experienced, and can work in relatively inaccessible areas. They also have access to a range of specialist weapons and have permits (such as night shooting and use of silencers) that aren't available to amateurs, enabling more strategic, effective and humane control.

Parks Victoria is about to trial aerial shooting of deer around the Alpine National Park's Mt Howitt area, using experienced New South Wales operators. And there are plans to erect expensive deer-proof fences around a few highly vulnerable research plots on the Bogong High Plains.

But what we really need is a solidly funded commitment to remove of all deer from the alpine region.

Canada is currently spending \$5.7 million bringing highly skilled aerial sharp-shooters all the way from New Zealand to eradicate introduced deer on their west coast Haida Gwaii islands.

It will take serious investment to deal with Victoria's problem, but given the potential for all of our deer



species to invade most of the nation, a significant contribution from the federal government would seem an obvious option.

Research is a must

While industry leaders talk about the 'innovation nation', current pest animal controls to protect our conservation estate are largely small advances on 19th century techniques. Investment in a range of research options is essential, and should include:

- Development of a humane and effective deer-specific bait, preferably one that first puts deer to sleep. This should include development of a delivery system targeted to deer, perhaps also using species recognition software.
- Research into biological controls.
- Options for genetic controls.
- Development of pheromones, or scents, to keep deer away from small and hard to protect, highly sensitive, areas.

Developing Management Zones

As with most land management strategies, there will be different priorities in different places. The easy option, discussed in some circles, would be to leave deer where they are and just try to stop them gaining new ground, but that would be an unconscionable surrender.

We need to prioritise serious management in:

- National and state parks and other areas clearly designated for nature conservation.
- High priority ecosystems (Flora and Fauna Guarantee Act and Environment Protection and Biodiversity Conservation Act listed Ecological Vegetation Classes at a minimum).
- Peri-urban areas, where public safety and biodiversity are both big issues.
- Many roadsides, where safety is an increasing problem.



Sambar are turning up everywhere these days, including this Eltham front garden.

Importantly, we must allow deer populations to be managed by professionals, including within the 8.5 million hectares now allocated to amateur hunters.

What about protecting the hunting experience?

So far, most deer strategies and investigations in Victoria have talked about maintaining 'sustainable hunting', as if deer hunting is the thing facing extinction. It's not, of course.

And while those on the nature conservation side of the issue are asked for evidence-based assessments of plants, animals and vegetation communities at risk, there is little such obligation on the recreation side. There is no definition, for example, of exactly what the hunting experience is that we are being asked to protect, and how many deer are actually necessary to maintain the experience.

Many older hunters miss the time when they would have to track a deer through the bush for days, matching their skills against the tricks of a wary stag. Opportunities for that experience would presumably increase with a reduction in deer population densities.

There are also significant public amenity and safety issues with any expansion of deer hunting, and the apparently growing number of rogue shooters acting illegally.

Aren't deer protected by law?

Not really. They are given protection as a game species in Victoria's *Wildlife Act* (i.e. protected for amateur hunters to shoot them), but that's not all the Act says. Farmers can now shoot deer invading their property, and deer damaging public land can be destroyed under an 'Authority to Control Wildlife Permit'. Parks Victoria can, and does, shoot deer under such permits.

There is ample legal incentive to put deer control permits into action across the state. In 2007, sambar deer were listed as a 'potentially threatening process' under the *Flora and Fauna Guarantee Act*. That listing cites 12 state or federally listed ecological communities being damaged by sambar, from lowland rainforest communities to alpine peatbeds and fens, as well as 13 rare or threatened native plants.

Since that 2007 listing our knowledge of plants threatened by sambar has grown considerably: around 65 at last count.

Then there is the *National Parks Act*, which unambiguously requires the government to "exterminate or control exotic fauna", and to "have regard to all classes of management actions that may be implemented for the purposes of maintaining and improving the ecological function" of national and state parks. Last but not least, the International Convention on Biological Diversity, signed in 1992 and ratified in 1993, obliges the federal government to "prevent the introduction of, control or eradicate those alien species which threaten ecosystems, habitats or species".

That should be a compelling trigger for federal funding for immediate action on deer, and urgent research into future management options.

It's high time the *Wildlife Act* was changed to remove any semblance of protection for deer in Victoria (such as bag limits), to end confusion over their status and reduce red tape.

But we don't need to wait for any change in the law to act decisively on the deer problem. • PW

A draft Deer Management Strategy for Victoria is due to be released for public comment in June or July this year.

Fieldia is a rainforest epiphyte, growing on the trunks of trees and treeferns. Deer eat a wide range of plants, and can greatly damage Victoria's Gondwanan rainforest heritage.



Mount Feathertop is Victoria's only freestanding mountain of any magnitude, and so far it has remainned largely untouched. Tourism plans for a series of luxury cabins and a group lodge on the peak's Diamantina Spur, serviced daily by helicopters, have little public support.

Where's the line?

PLANNING RULES FOR TOURISM AND OTHER VISITOR INFRASTRUCTURE IN PUBLIC LAND ARE LARGELY ABSENT, AND GUIDELINES ARE INCREASINGLY IGNORED WHERE THEY DO EXIST, REPORTS **PHIL INGAMELLS**.

Why is this happening?

As far as we can see, the only people employed to actually implement nature-based infrastructure are employed by Parks Victoria, and they can only develop infrastructure on land Parks Victoria manages. That leaves our vast public land estate beyond the park system without a recreation planning process.

And it means the current plan to introduce 'eco sleeper pods' for 'comfort in nature' seekers can only place them inside national parks, even though there are many good options for them on other public land adjacent to parks.

We need a really solid planning process, well advised by ecologists, land managers, recreation planners, social scientists and tourism operators; a process that can produce strong and lasting guidelines and regulations across public land.

Without such a planning process, there is no certainty for developers, and no certainty for nature.

A wise society would fix that situation. $\bullet \ \mathbf{P} \mathbb{W}$

The pressure for increased visitor access to public land is growing at a great rate, but uncertainty seems to be the only 'rule'.

A whole range of proposals, from mountain bike trails to spa hotels, are being pushed into our national parks. And because there are no clear regulations, each proposal faces its own battleground.

What's not working?

1. Mountain bike riding is a fast-growing activity. It's a great for the health of young people, and can be a boon to some struggling rural towns. But there are no clear rules on where they should go. It would seem to be an ideal activity for lower conservation-value public land (including pine forests), because tracks erode and weed invasion grows, and conflicts with walkers make dual purpose tracks unworkable.

Some very odd processes have emerged in the planning vacuum, such as Yarra Ranges Shire Council's plans for mountain bike trails in Yarra Ranges National Park. The Shire mapped out a trail, and now Parks Victoria is left struggling to reduce its potential impact while the park's management plan is left on the shelf. More worrying is the increased proliferation of illegal mountain bike, trail bike and even 4WD tracks in parks, many of which become 'formalised' because that's easier than fighting their creation.

- Parks Victoria has produced the 2. 'final' plan for the Falls to Hotham Track, the third of four proposed 'icon walks' Tourism Victoria proposed some time ago. When Victoria's original 'Nature Based Tourism' strategy first mooted the walks, it was intended to consult widely with conservation groups and walking organisations before any final plan for new tracks emerged. That process never happened, leaving the poorly conceived (and very expensive) Falls to Hotham track struggling to get community approval.
- Most outrageous is the scheme by a group of 'locals', some of whom are private developers, to excise land from Mount Buffalo National Park and build spa hotels, pubs, shops and other highly intrusive infrastructure in one of Victoria's oldest and most loved national parks. It's now being 'assessed' by a consultant appointed by the Alpine Shire Council.

AS WINTER DESCENDS, ARE YOU ONE OF MANY CONFLICTED ABOUT SOURCING FIREWOOD TO HEAT YOUR HOME? **BEN BOXSHALL**, LAND MANAGER, FORESTRY PRACTITIONER AND A MEMBER OF THE VICTORIA-BASED AUSTRALIAN AGROFORESTRY FOUNDATION, EXPLAINS THE OPTIONS.

The nature

Right: Ben Boxshall with a spotted gum he planted 16 years ago.

As I place a billet of wood on the fire, watch it ignite and burn hot and clean, and feel the resultant pulse of radiation and warmth, I can't help but contemplate the wonder of it. I feel a real sense of reward that I am benefiting so directly from a tree I planted as a younger man.

Wood is not only a versatile, renewable and biodegradable material of immense strength, diversity and durability; a billet like this is technically a battery! This tree harnessed energy from the sun to take carbon from the atmosphere to create sugars, carbohydrates and starches to build its tissues and trunk. Photosynthesis is how energy is harnessed by nature, and it is a process that hasn't been superseded in over 3 billion years of evolution. No mining, fracking or smelting involed. The light and heat the dog and I am enjoying is in fact solar energy that was stored in chemical form and embodied in the wood.

It is this interception and absorption of light by trees that provides a desirable, cooling effect on our suburbs and cities. Trees have a powerful moderating effect on the environment, providing shade and shelter for animals, and protecting us from extreme weather. They can help keep us cool, and they can sure help to keep us warm. This same tree has produced pollen and nectar and fruits and seed from its annual production of flowers and foliage, providing food and shelter for creatures big and small.

And now, less than two years since it was harvested for its wood, the same tree has regrown from the stump. It is already over three cubic metres tall and is again growing wood and storing carbon to complete the cycle.

Almost all of our native trees are able to coppice – to regrow again from the stump following harvest. Historical evidence suggests people have been using this ability to regrow trees from the stump for fuel wood for over 5,000 years. This ability to coppice means that a tree plantation can be a permanent system, providing a perpetual source of wood, timber and habitat.

Of course this moment of self-satisfaction came only after wielding a chainsaw, working the splitter and leaving it to dry for a year or two. But this is home grown biotechnology. Elon Musk didn't even have a hand in it. It feels good to take direct responsibility for a significant chunk of our household's energy consumption.

Should I feel conflicted? If tree planting is a central tenet of the environmental movement, cutting them down must be counterproductive?

The wood and timber that we use can only come from trees that have been cut. But most Victorians don't know where their firewood comes from.

Few landowners grow trees for the purpose. Many rely on 'tidying up' wood that should be left for habitat around remnant paddock trees and bush blocks, or they purchase wood from merchants that haul it in from forests interstate. In fact, most of the forest products Victorians consume are extracted from forests in faraway places.

Victoria has cleared a higher proportion of its native vegetation than any other state. Whether you care about soil health, water quality, tree cover or biodiversity, 'decline' is the key word used to describe the current state of our environment. Despite three decades of Landcare, we haven't planted enough trees to adequately protect our soils, waterways and farms, let alone the native plants and animals that rely on them. We're certainly not planting enough trees in Victoria to create the 'climate ready economy' our government says it wants.

Farm forestry landscape.

Trees help to stabilise and protect the land they're planted on, and improve animal welfare and productivity. Broadening the suite of services we expect from the trees we plant to include the production of forest products like wood and timber could help motivate landowners to invest in trees to diversify their land use, and reverse the pervasive degradation and decline in Victoria's agricultural landscapes. If more Victorians planted trees on their land, and managed them for wood and timber, everyone would benefit. Planting a tree for wood production is planting a tree for the environment.

The demand for sustainable sources of wood and timber will surely grow, not diminish, as we strive to formulate

An example of multi-species, multi-purpose planting.

economic systems that meet our personal and material expectations while also stabilising our planet's biosphere.

Accelerated action on climate change, along with new manufacturing technologies, could drive a forestry renaissance here, just as it has started to do in parts of Europe, and New Zealand.

Multi-purpose tree plantations on farms can be managed to be many times more productive than native forests and woodlands. It takes foresight, and investment, but we could choose to take responsibility for not only our firewood consumption, but create alternative sources of all forest products. • PW

Where is your firewood coming from?

Conservative estimates put the amount of firewood consumed by Victorians at more than half a million tonnes a year.

The removal of a permit system for domestic firewood collection in Victoria's state forests in 2015 – previously in place since 1958 – has also increased pressure on traditional firewood sources.

There is no genuine environmental accreditation for firewood sourced from these forests, so the wood you burn may be contributing to the loss of habitat for our threatened wildlife.

If left on the ground in a forest, fallen branches form valuable shelter for native species. Taking firewood from native forests particularly threatens reptiles, birds and mammals. It can impact upon threatened species such as the squirrel glider, carpet python and brush-tailed phascogale (also known as tuan). Across Australia 21 species of native birds are considered threatened by firewood collection – 19 of them are found in Victoria.

Permits are no longer required (though you are supposed submit a form online) to collect firewood for domestic use from state forests and those parks where collection is allowed (mostly some parts of red gum parks).

The current system allows domestic firewood collection in designated firewood collection areas during a firewood collection season: autumn (1 March to 30 June) or spring (1 September to 30 November).

Two cubic metres is the maximum volume of firewood (about a ute or small trailed load) which may be collected per person per day in a designated domestic firewood collection area. See: www.ffm.vic.gov.au/firewood/firewood-collection-in-your-region

For non-compliance there is capacity for on-the-spot fines of around \$600 and offences that go to court may be liable for fines of up to \$7,926, one year imprisonment, or both. But it is unclear if there is much enforcement.

It would be much better to be able to source firewood from small scale wood lots on private land, grown and managed specifically for that purpose. This has many benefits, which can be part of a broader landscape restoration strategy (used in conjunction with permanent revegetation), or part of an diversified income stream for farmers.

The key problem is that there is a not a level playing field. The state government essentially gives firewood away for free for domestic users, and for very low fees for commercial native forest harvesting. A private provider will find it hard to compete on price, and there are few incentives for rural landholders to invest in woodlots. Our state government needs to step in with sensible policy settings, which reduce reliance on native forest extraction and incentivise woodlots for firewood and other uses.

PHOTOS: BEN BOXSHAL



IN LATE MARCH OUR STATE AND FEDERAL GOVERNMENTS ANNOUNCED A TWO-YEAR EXTENSION OF REGIONAL FOREST AGREEMENTS (RFAS) IN VICTORIA, REPORTS **MATT RUCHEL**.

The short extension of the East Gippsland, Central Highlands and North East RFAs essentially aligns all five Victorian RFAs, including the West and Gippsland RFAs, for a 2020 renewal.

This is much better than rolling over the previous failed and out of date RFAs for 20 years, as has happened in Tasmania. But it will still leave large areas of high-conservation forest open to continued logging, and many of our most threatened wildlife, such as Leadbeater's possum and greater glider, at further risk as their habitat continues to be destroyed.

The RFAs provide special treatment to the logging industry, allowing for logging of our public native forests that does not require approval under national environmental protection laws. They will now remain exempt from this protection for at least a further two years.

None of the Victorian RFAs have met their objectives. Numbers of forestdependent species listed as threatened continue to rise, and forest health is declining and will only get worse under climate change and the cumulative impacts of successive bushfires. Even the native forest industry is stagnating and in decline as their main resource runs out.

The announcement also included a commitment to protect (likely in a Special Protection Zone) small parts (2,500 hectares) of the Kuark Forest in East Gippsland. It's a welcome move, but they urgently need to be formally added to Erinunderra National Park in this term of government.

The Andrews Government also announced that it will protect all large, old trees greater than two-and-a-half metres in diameter across Victoria.

A program of landscape and pre-harvest surveys will also be introduced, to provide greater operational certainty to VicForests and improve the management and protection of threatened species in timber harvesting coupes. Just over \$35 million over four years was included in the state budget in the 'delivering greater community value from our forest' initiative. The detailed budget papers describe this funding purpose as to "... deliver modernised Regional Forest Agreements...". The detail also notes that "this initiative will be underpinned by community engagement to determine the highest and best value use of our forests..." We will wait and see if this community engagement eventuates, and any new agreement will be judged on its outcomes.

VNPA and other conservation groups have argued that any review of the RFAs needs to be rigorous, independent and open. It must also consider all aspects, including forests in the west of our state and other non-wood forest values such as water, ecosystem services, recreation and tourism that are contributing significant sums to the state's economy, and could contribute further. • PW

Thank you to everyone who took part in this year's Forests Forever Easter Ecology Camp!

About 80 folks enjoyed being amongst East Gippsland's magnificent forests and spending time with fellow forest lovers over the weekend 30 March to 2 April. All of us at Victorian National Parks Association and Environment East Gippsland were greatly encouraged to know that others share our passion for forests. Together we're a much stronger voice for their protection!

Logging in our national parks?!

Just when you think you've heard it all ...

According to a report in the *Guardian Australia*, a group of six sawmilling companies calling themselves the G6 have called for national parks and closed water catchments to be opened up for logging, or the industry offed exit packages.

VNPA immediately called for the Andrews Government to rule out logging in national parks.

Thanks to emails from our supporters, the Victorian Environment Minister Lily D'Ambrosio made a public commitment on Twitter on the 28 March that: "The Andrews Labor Government has no intention to log in National Parks". We have now made a similar call to the Coalition, and have written to Matthew Guy and Shadow Environment Minister Nick Wakeling to clarify their policy and to publicly reject these calls to log Victoria's national parks. At time of publishing, we not received any clarification. You can add your voice here www.vnpa.org.au/no-logging-in-our-national-parks

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The Great Tree Project

KARENA GOLDFINCH IS ONE OF THE KNITTING NANNAS OF TOOLANGI, A GROUP OF WOMEN PEACEFULLY AND CREATIVELY PROTESTING AGAINST THE DESTRUCTION OF OUR BEAUTIFUL NATIVE FORESTS.



Woolly women: The Knitting Nannas of Toolangi

Standing at the base of this magnificent mountain ash tree in Toolangi, that had somehow been spared from the chainsaws, we wondered what it would take to create a full-sized tree knitting project. A colourful installation to honour these beautiful, large old trees, both those still standing and those felled?

At the heart of The Great Tree Project is the need to highlight the importance of these trees that are in decline due to logging and fire.

Left alone these trees can stand for more than 250 years and provide habitat for our iconic wildlife, if let to grow for long enough.

But the scale and frequency of logging in the Central Highlands of Victoria has seen these areas of large old trees being converted to stands of young regrowth. These 'high rise homes for wildlife' are presently being targeted by the logging industry for paper, pallets and a smaller amount of timber. Trees are being logged before they are old enough to form hollows.

This particular tree is close to the entrance of a logged coupe called 'Rusty' in Sylvia Creek Road, Toolangi. The Rusty coupe was logged in 2013 after a long campaign to try and save it from being logged. This was a huge loss as 'Rusty' contained 101 hollow bearing trees, is at the base of Mt St Leonard and is situated on the main tourism access road. Along with

other groups and individuals we fought hard to stop this logging. Eventually, in a minor and mostly pointless concession to conservationists, most of the hollow bearing trees were saved from the chainsaws and the coupe was not subjected to a post logging burn. Retaining only these old large trees while subsequently logging the surrounding area usually means that wildlife eventually perish due to loss of habitat.

A recent survey has shown no sightings of the wildlife that once called these trees home.

Now, five years later, we gather underneath this towering mountain ash to talk about a new project.

Our vision is to knit a life-size tree, to show our love for these gentle giants. It will not be yarn-bombing as such (the practice of covering objects in public places with decorative knitted material), but just as striking. The Great Tree Project will, when completed. be an 80-metre long tree silhouette placed along the ground in a prominent public position to be seen by as many people as possible. We are calling on knitters to stitch hundreds of pieces that will be sewn together to create an impressive piece.

The Knitting Nannas of Toolangi formed in early 2013, to bear witness to the industrial clearfell logging that was taking place on our doorstep, a practice that has seen the destruction of the

Using creativity as a form of peaceful protest.

mountain ash forests of the Central Highlands of Victoria. Communities in the Rubicon, Strathbogies, Noojee and Mirboo North have been speaking out against the logging of places they hold dear. One way we choose to do so is to express our care and concern through creativity - and knitting needles!

The Great Tree Project has been enthusiastically received at festivals and events, and we aim to take it 'on the road' to many of the regional communities that are appalled to see the forests they love devastated by logging.

Get knitting with us and join our efforts to protect our beautiful forests. PW

Instructions for knitting the tree \sim

Using size 4 needles, and 8 ply wool cast on 40 stitches and knit in garter stitch, stocking stitch, or whatever combination of stitches you prefer.

Experiment with combinations of colour, or just knit one solid colour. (We delved into our stash of wool and have been using up wool from unfinished projects.)

Continue knitting until your piece measures 100 centimetres and cast off. We will then sew them together to form the tree.

Post to:

The Great Tree Project PO Box 115 St Andrews 3761

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Being frank about fire

THE DEPARTMENT OF ENVIRONMENT'S REPORTING ON ITS FUEL MANAGEMENT PROGRAM IS FAR FROM ADEQUATE, SAYS PHIL INGAMELLS.



There are few things more important for a government department to report on than public safety. And you might expect a department charged with protecting Victoria's natural heritage to be frank about that too.

However, in each of the Department of Environment, Land, Water and Planning's (DELWP) annual Fuel Management Reports since 2013, it has fallen short on both counts. The reports are required by a Victorian Bushfires Royal Commission recommendation, and by the department's own Code of Fire Practice.

Protecting human life

The Code and the Royal Commission are clear that protecting human life is the prime objective of fire management, but the department's reporting on this subject is surprisingly brief – just one diagram (reproduced here) and less than a page of text.

The diagram shows total area burnt (planned and unplanned) each year since 1980, and gives an estimate of something called 'residual risk' since that time. But does it really show that?

- The diagram is based on modelling using Phoenix RapidFire, the department's bushfire simulation program. But we don't know if the estimated risk reduction applies in the most severe fire weather, when risk is greatest.
- The apparent accuracy of the line in the graph suggests the risk measure is precise, but assessing risk is a rough process at best, and the method has never been peer reviewed.
- No comparison is made to other risk mitigation measures, such as control of ignition points or private fire shelters, so we don't know if the public's money is well invested. (Should some of the the \$108 million spent annually on fuel reduction be allocated to private shelter subsidies, for example?)

Protecting the environment

While saving lives is the highest priority, looking after our great natural heritage is by no means a low one. State and federal laws, and an international treaty, make the department's environmental obligations clear. But DELWP is less than clear when reporting on the impacts of fuel management. Two reporting measures are used:

- How much of the state's vegetation is burnt below the 'minimum tolerable fire interval' (the point at which repeated fire is harmful).
- How much of the state has a suitable 'growth stage structure'. A broad range of ages since fire can provide the largest range of habitat structures.

However, there is no reporting on how these age class assessments apply to listed threatened vegetation communities. There is no assessment of the decline in tree hollows, despite a vast and unprecedented program of tree clearing.

And there is no assessment of the decline in hollow logs on the ground, despite their critical importance for small mammals. Hollow logs, once gone, can take a hundred years or more to be replaced.

Fire has long been part of the Australian bush, both naturally and through Indigenous burning. It's a complex story.

But given unprecedented levels of fire across the state in recent decades, the community deserves a far more revealing annual report. • PW MATT RUCHEL EXAMINES THE STRENGTHS AND WEAKNESSES OF A NEW ASSESSMENT OF VICTORIA'S UNDERWATER VALUES.

New investigation into marine areas

The Victorian Environment Minister has issued new terms of reference for the Victorian Environmental Assessment Council (VEAC) to do a desktop assessment of the values of the Victorian marine environment. The assessment aims to inform the development of a statewide marine and coastal strategy and the development of the proposed Marine Spatial Planning framework.

The purpose of the assessment is to:

- Identify current environmental, economic, social and cultural values of Victoria's marine environment, including their spatial distribution where relevant.
- Identify current and likely future threats to these values.
- Provide independent advice on future patterns, trends and direction related to existing and emerging uses.

- Determine a process to systematically classify data and an approach to describe social and economic values and uses of Victoria's marine waters.
- Provide an inventory of available knowledge and data on existing values, uses and threats and advise on any significant gaps.

See: www.veac.vic.gov.au/ investigation/assessment-of-thevalues-of-victorias-marine-environment

The assessment is welcome and likely useful, but it falls well short of what was recommended by the recent VEAC State-wide Assessment of Public Land, which was to "Victoria's marine environment be reviewed for the comprehensiveness, adequacy and representativeness of its marine protected areas when current work on marine habitat mapping and classification is completed and available."

The state government's response acknowledged that information from this review will support better policy and planning, but it disappointingly explicitly ruled out consideration of new marine national parks or protected areas as: "it is current government policy that no new marine national parks will be created".

See: www.veac.vic.gov.au/ investigation/statewideassessment-of-public-land

The anti-marine protected area stance by the so-called progressive Andrews Government is essentially the same as the Victorian Coalition – poorly informed and poor policy. • PW

WHALE HELLO THERE!

DAVID DONNELLY, MARINE RESEARCHER AND MANAGER OF KILLER WHALES AUSTRALIA TELLS US HOW TO HAVE A WHALE OF A TIME THIS WINTER.

Victoria's coastline is no stranger to the presence of large whales. Since the early 1980s, southern right whales have been monitored from vantage points in western Victoria near Warrnambool. As a result of these efforts, the state now has excellent records of this species from this region and across the coast – but what of other large whales?

Since its inception in 2015, the Two Bays Whale Project (TBWP) has been using sighting data to track the likes of southern right, humpback, blue, killer and minke whales within the Barwon Heads to Inverloch (including Port Phillip and Western Port) region. In addition to these data, a small but useful collection of historical data has also been added, creating a very substantial dataset. These data are only now beginning to provide researchers at the Dolphin Research Institute with an understanding of these large mammals in the region.

The TBWP is a citizen science initiative, led by the Dolphin Research Institute in collaboration with Wildlife Coast Cruises. The project was born out of an increased sighting rate of humpback whales, and the introduction of dedicated whale watch tours leaving from Phillip Island.

To date, the project has validated 562 separate sighting events (excluding repeats) of 2001 animals, involving six



Left: A southern right whale enjoying Victoria's waters

Right: The unmistakable appearance of the ocean's apex predator, the killer whale.

Below (top and middle): Humpback whales having themselves a time in Bass Strait.

Below (bottom): Killer whales spotted in The Rip, a stretch of water connecting Port Phillip and Bass Strait.



species of medium to large cetacean. The vast majority of these events have been recorded between 2014 and the present, however supplementary data dating back to 1984 has also proved very valuable. Recent sighting data has been collected locally from whale watch tours leaving from Phillip Island as well as from land-based sightings from areas such as Point Nepean National Park. Cape Schanck and the Bunurong area of the Bass Coast.

The majority of sightings are made up by humpback whales during the northward migration season (June to late August). The return of this species to Victorian coastal waters became apparent in 1984 when three humpbacks entered Corio Bay, Geelong. This was the first published record of the species in our waters since commercial whaling ceased on the east coast in 1962. Prior to 2006 very few humpback whales were seen on the Victorian coast, and a sighting was a major news story. Today, seeing humpback whales in winter has become more of an expectation rather than a surprise. This is largely due to the excellent recovery of the species on the east coast, from an estimated 200-400 individuals post-whaling to around 30,000 this year. This population increase is estimated to be at a rate of approximately ten per cent per annum, which is quite remarkable.

Unfortunately, the same cannot be said for the southern right whale, which has shown a much slower recovery from the effects of commercial whaling in Australia. The current population estimate for southern right whales in southeastern Australia is approximately 250-300 individuals, with no significant population increase observed for this region in the last 30 years. The reasons for this poor recovery are still yet to be properly understood.

Aside from the frequent sightings of humpback and southern right whales, there are also regular sightings of killer whales in the Two Bays region. The killer whale, or orca, is the largest member of the dolphin family (Delphinidae) and is known to be present in all of the world's oceans, ranging from sub-polar regions to the equator. This apex predator of the ocean is generally sighted in June and July and December to February in the Two Bays region. On the east coast of Australia, this species is highly mobile, rarely staying in the same location for more than a few hours. Sightings are scattered along

the entire Victorian coast, with regular reports from Cape Bridgewater, Phillip Island and Port Phillip Heads. Most individuals in our waters are well known to the east Australian catalogue which is managed by Killer Whales Australia. A copy of the catalogue can be downloaded at www.wildiaries. com/articles/214-killer-whales-of-eastern-australia

Victorians are becoming more aware of whales in our local waters, and some people are now dedicating days to sitting at vantage points along our coast in the hope of catching a glimpse of these ocean giants as they pass by. Many keen folk also join whale watch tours from Cowes on Phillip Island and Port Welshpool, with the latter exploring the eastern side of Wilsons Promontory National Park. The unique and beautiful landscapes of the national park making for incredible backdrops to whale photos!

The Two Bays Whale Project would greatly appreciate hearing about sightings of whales within the region. Citizen scientists are encouraged to contribute sightings either by completing an online sighting form at www.dolphinresearch. org.au/research/dolphin-two-bays-sighting or by Facebook Messenger at www.facebook.com/twobayswhales • PW



Auditor-General shines light on coastal management



VNPA has for some time been concerned about the focus and level of management of our coasts and marine environments. We have been critical of the new *Marine and Coastal Act*, currently working it way through parliament (see *Park Watch* March 2018, page 18).

A report by the Victorian Auditor-Generals Office (VAGO), Protecting Victoria's Coastal Assets, tabled in the Victorian parliament in late March, reaffirms many of the issues. See: www.audit.vic.gov.au/report/ protecting-victorias-coastal-assets

The report strongly concludes that "... overall natural and built assets on Victoria's coastline are not being adequately protected". It highlights various problems: that existing oversight is poor; there is lack of resources; and a lack of skills and capacity in government agencies, especially in the state Environment Department (DELWP).

Key findings include:

- Coastal assets are not a focus for larger agencies, because they make up only a small subset of agencies' overall asset portfolios.
- Poor oversight by DELWP across all public coastal areas contributing to overly complex planning and management arrangements.
- The skills and capacities of coastal managers not aligning with what is needed to manage and protect assets.

- Constraints on funding, how revenue is generated, and where and when it can be spent.
- The lack of a statewide perspective on what areas are at greatest risk from coastal hazards, as well as on what assets are currently being protected or need to be protected.
- The lack of effective guidance and support provided by DELWP to its coastal managers to be effective risk-based asset managers.

The Auditor-General notes in particular: "The limited knowledge about existing coastal processes, such as wave behaviour and sand movement and uncertainty about the likely impact of future climate change reduce agencies' ability and confidence to act."



The total economic value of Victoria's coastal assets, including both natural and built assets, is \$18.3 billion annually. In 2013 the Victorian Coastal Council (VCC) estimated that it would cost \$24 to \$56 million annually to replace the protection offered by natural coastal assets.

The report stresses the potential scale and impact of climate change. Based on research showing the implications of 0.8 metre sea level rise by 2100, billions of dollars of built assets, and huge areas of our natural environment, including national parks, are at risk.

VAGO also looked at the new *Marine* and *Coastal Act*, finding that actions in the proposed reform package will only go part of the way to addressing the long-standing issues.

The report emphasises the need for adequate funding and further 'timely action' to really focus on our coast, stating: "Victoria's valuable coastal assets will continue to be at significant risk without adequate and more effectively targeted funding." VAGO add: "The timely implementation of reforms is needed, particularly as risks to our coastal assets grow due to climate change and population growth."

It seems strange that after such a scathing report, particularly over the role of DELWP in coastal management, the new legislative reforms essentially give the department greater control over producing coastal strategies, while reducing community input and oversight. Further, there was no additional funding for coastal or marine work, other than beach renourishment for Port Phillip Bay, in the most recent state budget.

While current systems have failed, it is clear that the current reforms are a missed opportunity, to put Victoria ahead of the game.

VNPA will continue to push for improvements and strong marine and coastal policy from all parties at the next state election. • PW

Assets at risk of inundation based on a 0.8-metre sea level rise by 2100

Asset	Quantity	Value			
Built assets					
Residential buildings	31,000-48,000	\$6.5 to \$10.3 billion			
Commercial buildings	Up to 2,000	\$12 million			
Roads	527 km	\$9.8 million			
Railways	125 km	\$500 million			
Government-owned public facilities	87	Not known			
Maritime assets	Not known	\$220 million			
Coastal protection structures	Over 1,000	\$700 million			
Natural assets					
Public land	586 km	Not known			
National and state coastal parks 15		Not known			
Vegetation 48,720 h	Not known				
95 ecological vegetation classes					
Mangroves	6,300 hectares				
Wildlife reserves	14	Not known			
Nature conservation reserves	ure conservation reserves 9				
Flora and fauna reserves 4		Not known			
Rare or threatened species880		Not known			

Note: This table does not include costs associated with impacts on maritime assets and loss of revenue for other activities that rely on coastal assets.

Source: Victorian Auditor-General's Report Protecting Victoria's Coastal Assets March 2018, page 23.

The cost of inaction

Nineteen percent of Victoria's population live along the coast, and it is a huge recreation and tourism drawcard. As well a built infrastructure (roads, drainage and housing), there are also important protective assets: some built, such as sea walls, but many natural, such as beaches, dunes and mangroves, which act as an effective barrier against coastal inundation and erosion.

According to VAGO: "These protective assets, while vitally important now, will be even more so in the future when the predicted effects of climate change exacerbate coastal hazards."



Horses for courses, not beaches

SHANE HOWARD IS A SONGWRITER AND MUSICIAN. **KELVIN THOMSON** IS A FORMER FEDERAL LABOR MP AND CURRENTLY PATRON OF THE GROUP PROTECTORS OF PUBLIC LANDS. THEY WERE BOTH GUEST PRESENTERS AT THE RECENT SAVE OUR BEACHES COMMUNITY SYMPOSIUM.

Victoria is one of the lucky states where 96 per cent of its coastline is held in public hands, a remarkable legacy of political foresight in the 1870s.

But in many places that communityowned strip above high tide is narrow, fragile and under immense pressure within and along its boundaries. Habitats have been lost, fragmented and disconnected due to agricultural, urban and industrial development and foreshore mismanagement.

Pressure can also come from private, commercial and special interests seeking to get cheap access to coastal public land. That is now occurring along the stretch of beaches, windswept sand dunes, wetlands and rocky reefs known as the Belfast Coastal Reserve between Warrnambool and Port Fairy.

We both have a strong connection with the reserve. The musician among us was born and raised nearby and still lives there, the former politician has holidayed there since childhood.

Long before we ever saw the reserve, it was for thousands of years home to clans of the greater Peek Whurrong coastal tribe. Burial sites and middens are scattered throughout the culturally rich sand dunes. Their descendants retain that spiritual link.

Whenever visiting the reserve, we are on the lookout for the tiny hooded plovers that scamper across its beaches. Each year between August and March they scrape out a nest in sand to lay their eggs. It is their second-most important breeding area, even though there are barely 50 living there and, as a species, their future is threatened.

They are not the only birds that rely on the reserve. Migratory shorebirds, in decline due to habitat loss along their flyway through Korea and China, regularly stop over.

In the 1980s this wild and somewhat remote area became a coastal reserve to protect its wildlife, cultural heritage and landforms, and support passive recreation, including surfing, swimming, walking, angling, picnicking and birdwatching. And ever since it has done just that.



But in 2015, commercial trainers and their racehorses invaded the beaches and dunes uninvited, with up to 250 horses worked there every day. Car parks and roads bulged with trainers, horses, floats, trailers and trucks, pushing the regular beachgoers aside.

Coastal management agencies sat on their hands as racehorses churned up the sand, eroded the dunes, disturbed hooded plovers and their chicks, crushed eggs and destroyed protective fences.

Community outrage finally forced the government to act but not in the way expected. In what was a questionable interpretation of public land laws, it decided to 'legitimise' the racehorse invasion by issuing a licence to Collage created by Teresa O'Brien and Shane Howard, including bird paintings by Jeff N Davies 1993, supplied by the State Library of Victoria from their BirdLife Australia collection.

the Warrnambool Racing Club to coordinate training in the reserve, effectively privatising public coastal land management.

The government boasted that under the licensing arrangements signed in June 2017, daily racehorse numbers in the reserve would drop from 250 to 65, and only one per cent of the reserve would be affected. What it failed to mention was that the licence allowed training on ten per cent of beaches.

Prior to and since the issuing of the licence, racehorse training has been mismanaged, with numerous breaches of licensing conditions, public safety put at risk and taxpayers footing the bill for costly Parks Victoria surveillance and infrastructure upgrades.

Despite these intractable problems, the reserve's draft coastal management plan released in January proposes increasing daily racehorse numbers by 400 per cent to 256. The draft plan would also give over 25 per cent of the reserve's beaches to the racing industry, and return racehorses to 750 metres of sand dunes at Levy's Beach near Warrnambool, where in the past they have caused severe erosion. These numbers would be far worse than when the horses first invaded.

Rather than resolving management problems, the plan admits the risk to sand dune habitats and resident and migratory bird species from racehorse training will remain extreme even after its implementation. Far from being a coastal management plan, it is a relic of past coastal mismanagement, an industrial racehorse training plan that turns our beaches into racetracks.

As a community, we should not be told to sacrifice these beautiful beaches – our last wild places where we spend our childhoods and lives – at the altar of a destructive commercial operation that benefits so few. Common sense and good science should prevail.

The government, to its credit, has put considerable time and money into protecting hooded plovers from extinction in Victoria. But what it is doing in the Belfast Coastal Reserve makes a nonsense of all that. It is driving with one foot on the accelerator, the other on the brake.

Sadly, this will not be the last time that private and commercial interests try to invade public land. The government has a duty to safeguard our community-owned assets from such assaults but it is manifestly failing to do so in the Belfast Coastal Reserve.

If it believes the racehorse industry worthy of public support, the government should tell the racing industry to use the off-reserve, sand-training facilities taxpayers have already funded and stop our public open spaces from being damaged and degraded for private, commercial gain • PW

Common sense and good science should prevail.



THE DESPERATE PLIGHT OF THE ORANGE-BELLIED PARROT

KAREN ALEXANDER AND HER PARTNER **DAVID NEILSON** TRAVELLED TO THE WILDS OF TASMANIA FOR THE ORANGE-BELLIED PARROT, FILMING AT CLOSE QUARTERS THESE CRITICALLY ENDANGERED BIRDS AND THE PEOPLE TRYING TO SAVE THEM.

"There's a vacancy in OBP watching at Melaleuca," I said. "Two weeks in late October; two hours observing morning and afternoon. Let's go."

"Maybe," he said.

Neophema chrysogaster, the orange-bellied parrot (or OBP to its friends) weighs less than a tennis ball. This fluff of blue, green, yellow and orange feathers heads to the wildest part of Tasmania to have its chicks, raise them, abandon them and head north again to the rich saltmarshes of the Victorian and South Australian coasts. OBPs as young as four months fly, without a guide, across Bass Strait to find their favourite foods.

Prior to the 2017–18 breeding season there were less than 30 of these beautiful small parrots living in the wild.

Enough adults and juveniles have to arrive on the south coast of the mainland between the Coorong and East Gippsland to feed over the winter, and then make it back to Melaleuca in the far south-west of Tasmania in summer to breed if the species is to survive.

But something is getting in the way. Fewer and fewer are returning to their birthplace.

We land with a bump on the short white quartzite strip at Melaleuca. In the single engine Cessna it's an hour's flight from Hobart along the wild and spectacular south coast of Tasmania. We are met by Deb and Kevin, the current volunteers, who show us the ropes: how to record the birds and their leg bands, the feeding regime, and the high priority on cleaning to keep beak and feather disease at bay. This disease, a common affliction for parrots, hit the wild flock and the captive bred birds in 2014. With so few wild birds, any loss has an impact, so rigorous cleaning of the feed tables is important.

For me, returning to Melaleuca was like coming home. I'd spent five months here in the late seventies with tinminer and brilliant naturalist Deny King helping extend the airstrip. Deny's death in 1991 meant I had little reason to return and I was fearful of how it would have changed. One thing I did know was that there were far fewer OBPs.

In the late 1970s Deny, a keen birdwatcher since childhood, noticed that there were dwindling numbers of OBPs arriving at Melaleuca. He alerted Parks and Wildlife, and they, with WWF, wrote a report on the situation and recommended captive breeding, supplementary feeding and placement of nest boxes at Melaleuca. Use of nest boxes meant banding of nestlings and monitoring of the population. The birds adapted to greater attention; but numbers continued to decline.

By the end of our first volunteer stint in mid-November 2015 only 14 wild OBPs had returned, and only three of them female. Without the release of captive bred birds, the OBPs would have had, at most, three pairs that season – extinction in the wild is the next stop.

The release of captive bred birds is keeping the species alive in the wild. With the captive flock now close to 300, and its genetic diversity enhanced by nestlings from the wild flock in 2011, the numbers of birds able to be released into the wild are increasing. This season 27 birds were released at Melaleuca. Pairing up with wild birds they produced 33 juveniles. At the end of the breeding season 48 birds flew north.

We can never be sure just what is causing the decline in numbers. While habitat loss would be an obvious factor, there is, given the relatively low numbers of OBPs, plenty of food. As well, the OBPs are adapting and eating seeds of various weeds.

Cats, dogs and foxes will be playing a part. Unfortunately, the windfarm at Cape Grim in north-west Tasmania may also be part of the problem.







Top: OBP nestling at three weeks. Centre: A feed table at Melaleuca. Bottom: David filming the OBP.

A dedicated team are working hard, and good science is being applied. \$140,000 was donated in a week to a crowd-funder for the ANU Difficult Bird Research Group for OBP research.

But it would appear the national government does not care about our natural environment, including threatened species, with funding decreased by 25 per cent in this most recent federal budget. Since July 2017 there has been no dedicated funding for the OBPs from the federal government.

For three years in a row we've bumped along the runway at Melaleuca. Deny King's absence is strong, but a very beautifully curated museum celebrates his life. The Needwonnee people who were here for more than 30,000 years are acknowledged in a sculpture trail that encourages reflection on the tragedy around indigenous Tasmanians. Instead of a plane a week, there are now often five a day as people spill into the wilderness to see OBPs, go bushwalking, head off with a tour company or join the Friends of Melaleuca's working bee.

The film that emerged from my initially reluctant partner David, *The Desperate Plight of the Orange-bellied Parrot*, has now had six sell-out screenings and five more are in the wings. People really care about this little bird. As Bob Brown says in the film, we are hurting ourselves if we let OBPs go extinct in the wild. • PW

The OBP is just one of 1,700 officially threatened species in Australia. Environmental funding is less than one per cent of the national budget. We can afford to save all these species, including the beautiful OBP; so we must.

Please contact your federal MPs and Senators and ask them to dedicate funding to the OBP.

Check www.snowgumpress.com.au for future screenings of The Desperate Plight of the Orange-bellied Parrot.

To keep up to date go to the www.facebook.com/orangebelliedparrot

Karen Alexander has worked for VNPA, ACF, Landcare and was president of Bush Heritage. Her partner, David Neilson is a landscape photographer, book publisher and now film-maker.



Lillydale Lake Park

GEOFF DURHAM MAKES THE CASE FOR MORE PUBLIC OPEN SPACE LIKE LILLYDALE LAKE PARK.

Lillydale Lake Park is a prime example of the provision of public open space by a local council.

The Victorian Environment Assessment Council's Metropolitan Melbourne Investigation Final Report in 2011 defined public open space as "those areas of public land and local council land that have an accepted and ongoing community use for outdoor recreation and informal activities, and that are freely accessible to the public," and said that local council land is an integral part of metropolitan Melbourne's public open space network. Lillydale Lake (two 'l's) is at Lilydale (one 'l'). When first established the township spelling was Lillydale. Later, the township name was changed to Lilydale, but the lake kept its two 'l's.

Lilydale township was originally 'Running Creek' after what is now Olinda Creek. There are various explanations of the name Lillydale – after a song *Lilly Dale*, after Elizabeth ('Lilly') Castella (wife of Paul de Castella, vigneron), or after Lily Heales, daughter of Richard Heales, Victorian Premier 1860-61.

Olinda Creek, with a catchment 43 square kilometres, rises in the Dandenong Ranges National Park and flows through Kalorama, Mt Evelyn, Lilydale and the Coldstream district, eventually entering the Yarra at Spadonis Nature Reserve, Yering. A substantial flooding of Lilydale township in 1984 led to the construction of the lake by Melbourne Water for flood control. The Council took the opportunity to create a park.

The area of park is about 80 hectares. The lake surface is 28 hectares with two fox-free islands and an average depth of three metres. The earth dam wall is 440 metres long. Construction began in 1988 and was completed in June 1990. Melbourne Water manages the water and a Yarra Ranges Council permanent management group based at the lake provides onsite management of the park.

The area is Wurundjeri territory and was important for hunting and fishing. It became part of David Mitchell's 'Cave Hill Estate' and later had Chinese market gardens and casual grazing.

The Olinda Creek Trail leads from below Mt Evelyn to the Hull Road Wetlands. A series of ponds catch sediment and purify the water before it enters the lake.

The lake has three sandy beaches, but E. coli levels can be high after heavy rain and swimming is not recommended. The lake is stocked with Rainbow Trout for anglers.

Non-powered boats with a maximum length of 4.5 metres and a maximum keel depth of one metre are permitted and no fee or booking is required. The Lilydale Lake Community Sailing Club, the Lilydale Radio Yacht Club and the Yarra Valley Flyfishers are based at the lake, and CanoeVic conducts training sessions.

The park is green passive-recreation open space without formal sporting fields. It is open at all times with free admission and parking. The 2.5 kilometre circuit walk around the lake has 'line-of-site' overhead pathway lighting. (The Albert Park lake circuit is 4.7 kilometres). There are over 10 kilometres of shared wide Lilydale topping-surfaced paths which attract joggers and walkers – many with prams or strollers, and dogs, which should be on-lead except in two designated off-lead areas. Some cyclists also use the paths and there is a basic Mountain Bike Trail through weedy native buffer planting. Near the picnic area there is a boardwalk through wetlands.

The park is a mecca for family picnics and group parties, providing expansive grassed open areas with some shade and a few picnic shelters, free electric BBQs and a recently upgraded playground with water features. Ibis, known locally as 'tip turkeys', patrol the area. The park has disabled-friendly tracks and facilities, and a 'Liberty Swing' for wheelchairs. A community room is available for hire. The park has approximately one million visitations each year.

Historical features

Two stone walls at the edge of the lake are all that remain of a two-storey bluestone mill with shingle roof operated by the Cashin family between about 1854 and 1880 as a flour mill, and which in later years also milled timber. It was powered by a water wheel fed by a race from Olinda Creek, parts of which with a few old swamp gum remain on the north side of the lake.

To the west of the park is the Cave Hill limestone quarry established by David Mitchell in 1878. On south side of the lake are signs of the standard-gauge railway line that brought firewood for drying operations at the quarry, and of its aquaduct from Olinda Creek.

In 1914, just before the start of the First World War, 3,000 militia camped here under the command of John Monash. The story is told in an interpretation shelter at the lookout above the lake.

Conservation values

This is not pristine bush, but it does have native habitat values. Olinda Creek, Hull Road wetlands, and the heavily planted, fenced boundary and buffer zones are wildlife corridors. There is the occasional copperhead and tiger snake. The lake has water birds and a variety of aquatic creatures, including eels and carp. Reed warblers are in the reed beds on the edge of the lake.

The Melways reference for the park is map 38 ref. G7. It is a 15 minute walk to the park from Lilydale railway station. On weekdays a bus runs between the station and the park about hourly between 10am and 3pm.

Liveable cities must have adequate public open space – the VEAC report mentioned in the introduction list many benefits. The loss of open space, where it exists, must be resisted. In new suburbs, particularly those with high-density housing lacking back yards, the provision of sporting fields is not enough. There must also be green passive recreation space like Lillydale Lake. • PW





Eileen McKee

8 January 1923 - 7 March 2018

Many VNPA members have fond memories of Eileen McKee, who was the Victorian National Parks Association's office manager from 1975 to 1987.

A number of past and present VNPA staff, councillors and members joined family members and friends on 13 March at a service of thanksgiving for her life.

Eileen Margery Smith grew up on the family farm at Cabbage Tree Creek near Orbost, spending holidays at nearby Cape Conran and developing a love of the bush, its wildflowers and native animals.

Eileen had three brothers and three sisters, and later in her life published a family history – her family was always very important to her. She travelled to England in 1952 and met her future husband Hugh there. They had three children – Jim, Peter and Kathy.

Over the years the family went on camping trips to remote areas both within and beyond Victoria – Eileen had a particular love of such places. She and Hugh also enjoyed overseas travel and visited Britain, Russia, the USA and New Zealand among others.

Eileen had been a trainee teacher, but the Second World War broke out and she joined the Australian Women's Army Service on her 19th birthday. After the war Eileen worked in finance and later as a manager for a small clothing company. Then in 1975 she started work with VNPA.

Until then the Association, formed in 1952, had been run by volunteers, but in the 1970s the Council recognised that membership, workloads and responsibilities were increasing and that professional staff were needed. Dr John Jenkin became Executive Secretary in September 1974 and Eileen was appointed Office Manager in November 1975. John resigned in August 1976 – it seems he felt that the VNPA could not afford both staff members and that Eileen filled a greater need.

In this position Eileen was responsible for membership, finance, volunteers, correspondence and administration. She also acted as *Park Watch* editor and for many years supplied relevant news items for the magazine's 'Here and There' column. In addition she ran VNPA's Publications Committee and was largely responsible for the distribution of several of its books, including the influential *The Alps at the Crossroads* (by Dick Johnson, published in 1974) – a "mammoth effort", according to Geoff Durham.

Malcolm Calder adds that Eileen "certainly was an influential force in the office and kept us strongly on message", a comment echoed by Phil Ingamells, who says that she understood the role and aims of VNPA and ensured they were adhered to.

A strong-minded person, Eileen came into conflict with one of her brothers, an East Gippsland local councillor, when a new coastal road between Marlo and Mallacoota was proposed. This road, which would have cut through today's Croajingolong National Park, was eventually ruled out by the state government.

After retirement, Eileen compiled a valuable memoir, *My Years in the VNPA Office*, still available as a printed document. As well as details of conservation campaigns, it includes tributes to six prominent former VNPA Councillors.

In the late 1990s Hugh developed Parkinson's disease, passing away in 2004. Eileen kept in touch with his UK relatives and also travelled within Australia to places like Queensland and Kangaroo Island. She took a great interest in her grandchildren and continued to live in the family home until 2016, when she moved into Livingstone Gardens hostel.

Son Peter said that Eileen always had a sense of perspective and would fight for the 'big things'. But she also had a dry wit and a sense of humour, and a mind that was active until her last days. He had a great respect for his mother, who maintained a life of her own in addition to her role as mother and grandmother.

Jim stressed her love of history and poetry, especially Burns and Henry Lawson, and her positive and optimistic outlook. She was at peace at her life's end at 95, he said.

Vale Eileen. • PW

Compiled by **Michael Howes** from notes by Eileen's sons Jim and Peter and daughter Kathy Alexander, with additional comments from long-standing VNPA members.

OUR TWO FAVOURITE COMMUNITY TREE PLANTING EVENTS, **PROJECT HINDMARSH** AND **GROW WEST** ARE BACK THIS YEAR, SO ROLL UP YOUR SLEEVE THIS JULY!



One of three sites in this year's Project Hindmarsh.

Project Hindmarsh heads west

Now in its 21st year, Project Hindmarsh is heading to Dinyarrak, a stone's throw from the South Australian border.

As part of our long-term biolink project connecting the Little Desert and Big Desert regions of western Victoria, we aim to restore around 13 hectares planting 12,000 trees, shrubs, herbs and grasses across two sites.

This fascinating and little-known corner of the state contains remnants of some amazing shallow wetlands, creeklines, waterholes and woodlands, including *Victorian Flora and Fauna Act* listed grey box – buloke grassy woodlands. The area also has a very interesting colonial past and is situated around the junction of three aboriginal language groups.

Our first site is a remnant grey box – buloke woodland, recently fenced off from grazing, with little of the original understorey remaining. We will be planting some overstorey trees, but mostly replanting the missing shrub and herb layers.

Our second site comprises two adjacent areas, a remnant black box swamp grading up to a yellow gum woodland, plus a section of Tatiara Creek and adjoining swamp, now mostly drained and devoid of vegetation after a long history of grazing.

We welcome all volunteers to help us restore this beautiful part of the world. The planting weekend will be held from Friday 6 July to Sunday 8 July, with the main planting day on the Saturday. Breakfasts, lunch and a sumptuous Saturday dinner will be provided.

Register at: www.hindmarshlandcare.org.au

For more information, please contact Jonathan Starks on 0429 006 936 or jstarks@hindmarshlandcare.org.au • PW

Sheoak Hill

Grow West for a greener, brighter future

Can you help plant 5,000 new trees in Melbourne's west at the 13th annual Grow West Community Planting Day?

One of the Grow West's biggest events, this is an important opportunity for volunteers and landholders to help to rejuvenate and restore local landscapes in the Upper Werribee Catchment.

This year, the planting day will be held at Sheoak Hill, a 552 hectare former cropping and grazing property nestled between Brisbane Ranges National Park and Werribee Gorge State Park, in the Rowsley Valley.

The goal of the Sheoak Hill project is to reestablish a link between the two parks by managing existing vegetation, controlling weeds and rabbits and revegetating both the flats as wells as the shallow and highly erodible hillsides.

It will also be helping to reform this important corridor for threatened wildlife such as swift parrots and brush-tailed phascogales.

The Grow West Community Planting Day is on **Sunday 15 July**, 9.30am–4pm, Telford Park, at Sheoak Hill, 1216 Glenmore Road, Glenmore. Lunch and refreshments will be provided (BYO cup and plate to help reduce waste).

For more information and to register visit www.growwest.com.au

You can also contact Grow West Coordinator Emma Muir on 0437 195 511 or emma.muir@ppwcma.vic.gov.au

VNPA is proud to support both these projects, and grateful to all of our Members who have been involved in both since their beginning. • PW







An underwater view from above



GO DIVING FROM YOUR DESK INTO THE UNDERWATER WONDERS OF ONE OF OUR FAVOURITE MARINE NATIONAL PARKS.

Reef Cam is Australia's first ever rocky-reef, live-feed, combined under and above water webcams, installed by The Nature Conservancy at Popes Eye - Australia's oldest marine sanctuary - in Port Phillip Heads Marine National Park.

Popes Eye is an uncompleted foundation for a fort that was intended to defend the entrance to Port Phillip Bay in the 1880s. A marine sanctuary for last 38 years, it is home to a variety of species

including colourful reef fish, octopus, featherstars, cuttlefish, seals, dolphins, rays and gorgonian corals. It is also an important nesting ground for Australasian gannets. In fact, it is one of the few manmade structures in the world where this species will breed. And Reef Cam provides everyone with the opportunity to get an insight into their secret world!

Reef Cam is an important engagement tool in The Nature

Conservancy's Great Southern Seascapes Program which aims to raise the profile and help conserve and restore Australia's southern marine waters.

VNPA partnered with The Nature Conservancy, with our ReefWatch volunteers taking control of the cameras of to create highlight reels showcasing some of the diversity of Port Phillip Bay. You can view the outcomes of their diligent work here: www.vnpa.org.au/ programs/reefcam • PW

An amazing shot of a nudibranch taken for the Sea Slug Census by participant Nick Shaw.

THE BOLD and Beautiful

AN ENORMOUS THANK YOU TO ALL THOSE WHO JOINED IN THE FIRST EVER MELBOURNE SEA SLUG CENSUS!

On the weekend 21 to 22 April over 150 Victorians and a few interstate visitors jumped in the water at Port Phillip Bay and Western Port Bay to capture images of some of the most vibrant species that call our coastline home – the nudibranch!

REEF WATCH

There are over 400 species of nudibranchs, or sea slugs, that can be found in Victoria. More than just popular photographic subjects, they are excellent indicators of environmental change because they have rapid life-cycles (less than 12 months), very specific food requirements, and respond to changing oceanographic conditions. With water temperatures increasing it is believed some nudibranch species may be extending their range into the cooler southern waters of Victoria. However little is actually known about their diversity, distribution and ecology.

That's why the team at Southern Cross University are currently monitoring changes in nudibranch distribution under the influence of human impact, including climate change. The Melbourne Sea Slug Census gave citizen scientists the opportunity to contribute to this important research whilst learning more about their local environment.

Through VNPA's ReefWatch program the Melbourne Sea Slug Census contributed over 200 images of 53 species of sea slugs and nudibranchs to the Southern Cross University's Marine Biodiversity Research Program.

Images will be used to produce a booklet showcasing some of the magnificent species of nudibranchs participants photographed during the census. \bullet PW

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I try to go out snorkeling and diving whenever I can, but it's difficult for me to do with a young family. The census was a great excuse for me to get out into the water. I enjoy the challenge of finding nudibranchs, not knowing what I will see; and it's a great way to experience nature. It was also great to help build on the knowledge of Victorian marine life, something which I am very passionate about.

PARTICIPANT NICK SHAW

PARK WATCH · JUNE 2018 NO 273 35

SPECIAL SPECIES: SUPERB FAIRY-WRENS

Though small, the superb fairywren, *Malurus cyaneus*, has a large habitat range stretching from southern Queensland to Adelaide. Superb fairy-wren males are usually easily distinguishable by their bright blue colouring that turns iridescent when in pursuit of a mate. Females take on a simpler appearance of brown colouring. They usually hop around in the undergrowth feeding on small insects, seeds, flowers, and fruits.

Males take risks to increase their chances of attracting a mate. Their annual colour change makes them an easier target for predators. They have also been observed flirting with danger through 'vocal hitchhiking', where they sing their sexual display songs on the end of a predator's song, as females are more alert after hearing a predators call. They work together in small groups to raise chicks. This is usually a son as well as a father helping the mother raise her young. Sometimes unrelated males help raise young with the hope of being accepted by the group and increasing their own breeding success.

Superb fairy-wrens have complex family structures. They are usually monogamous until death. However a third of pairings end in separation initiated by the female. If there is not much help around to raise her young, they leave their partners to a territory with more helpers. The females are also highly promiscuous, and will often travel outside of their natal territory to mate then return to raise her young with her partner.

The females also have a strong voice in the community. Their song

is complex and heard as much as males, though not only for mating purposes, but also to other females to communicate about their breeding territory. It has been discovered that chicks start their singing lessons whilst still an embryo. They listen to both of their parents singing, and the song that they learn and use when they are older is a combination of their mothers and fathers.

You can listen to the superb fairywren song by visiting collections. museumvictoria.com.au/ species/8161

Superb fairy-wren and other bird song have been recorded across Victoria in the Communities Listening for Nature project of our NatureWatch program. More information: www.vnpa.org.au/ programs/communities-listeningfor-nature • PW

Right: A male shows off its supurb blue iredescence. Inset: A female pays curious attention.



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It has been discovered that chicks start their singing lessons whilst still an embryo.



Call of the Reed Warbler

BOOK

A New Agriculture -A New Earth

BY CHARLES MASSY, UNIVERSITY OF QUEENSLAND PRESS, PAPERBACK, 570 PAGES, RRP \$39.95

Charles Massy has written an inspiring and vitally important book that calls for fundamental changes in Australian farming. He describes his own journey from traditional farming (he has a merino stud in the Monaro district of NSW) to regenerative farming – in which farmers collaborate with nature and 'listen to' the land, rather than trying to control it with chemicals and ploughs.

One of the book's best features is the stories the author tells about farmers he has interviewed around Australia and overseas who have turned to regenerative farming (often as a result of a disaster like drought or flood), and their associated challenges and triumphs.

For instance, there's David and Jane Vincent of Sutton near Canberra, whose creek reclamation work protects pasture plants and checks salinity – and has brought back wildlife, including reed warblers, that hadn't been seen there for 100 years (Massy is a lifelong birdwatcher).

Tim Wright subdivided his New England (NSW) cattle farm paddocks into a number of smaller areas, grazing them for short periods and then allowing the grasses and other plant species to recover and spread. A third of his property is now timber belts and forested hills, greatly increasing biodiversity.

And there are many more examples.



Massy sets the scene by discussing the present Anthropocene era, in which "one species – humanity – may well determine the future health and survival of life systems on this planet". We have changed from the traditional 'Organic' mindset, where people saw themselves as part of nature, to the 'Mechanical', in which we are separate from nature and try to dominate it. So, for example, soil is seen as a 'box of chemicals' to which you add more chemicals and seeds, rather than as a living, water-holding entity with vital microbes, bacteria, fungi, nutrients and insects.

He then looks in detail at regenerating the five 'landscape functions': solar energy, the water cycle, the soil-mineral cycle, dynamic ecosystems, and the human-social element.

At this point, you might ask, "Why are you reviewing a book about agriculture when VNPA is all about national parks?" Fair question – but VNPA has long recognised that having a number of isolated 'islands' of nature in a sea of cleared farmland is not a sustainable way to support and protect our biodiversity.

We need to connect national parks and other nature reserves with 'corridors' of local native vegetation in farmland, on roadsides and elsewhere so that plants and wildlife can flourish and move between them. HenceVNPA's involvement in Project Hindmarsh, Grow West and other revegetation programs that build biolinks to support and join parks and reserves. Massy's own property is "tucked into the lee of a high, timbered hill...which forms the shoulders of a National Park...a wonderful remnant vegetation reserve [of] more than 600 hectares".

The final section of the book is titled 'Transforming Ourselves – Transforming Earth'. Here Massy describes the rise of 'emergence thinking' and the selforganisation of nature. We learn about the 'vegie-garden paradox', epigenetics and paradigm entrenchment, where farmers and others find it very difficult to break from established ideas. But there are many examples of new practices and the groups that promote them – the Otway Agroforestry Network, Landcare, the Potter Farmland Plan, Permaculture and more.

He then moves to human health, physical and mental, and the effects of 'Mechanical' farming practices. A chilling case study from Keith in SA shows the terrible harm caused by excessive chemical use – the very situation that might have been repeated in the Little Desert if the 1960s clearing plans had gone ahead.

But Massy is optimistic about the 'emergent future'. It is already present, and current environmental and health crises will stimulate further change and opportunity.

Charles Massy is a modern-day prophet. For our sake, for our children and for the natural environment, his message must be heard. I urge you to read this well-written and deeply engaging book. • PW

Review by Michael Howes

WILD FAMILIES

Wild Waterway Discovery

Rivers, creeks and wetlands are an important part of our landscape. They:

- carry water from land to the sea;
- are a part of our water cycle;
- are very important habitat and water for birds, fish, frogs, bugs and mammals; and
- are special places for relaxation and recreation.

Waterway spotto

On your next adventure by a waterway, try this 'spotto' activity (see inset drawing).

When you see or hear the animals, plants or micro-habitats (such as fallen logs) at your chosen location by a river, creek or wetland, you can colour it in or tick it off. You may see all or just some of these things along your waterway. What might it mean if all of these things are present or some of them are missing?

Some more questions to explore

- Is the water clear or murky?
- How fast is the water flowing?
 Where has the water come from and where is the water going? (Look at some maps to find out.)
- What sounds can you hear?
- Thinking about recent and forecast weather, do you think the water level will be the same, higher or lower when you come back?

Always consider safety on outdoor adventures and remember to supervise children safely around water.

Download and print your own copy of this activity at www.vnpa.org.au/wild-families • PW

This Wild Waterway Discovery activity was put together by VNPA with support from Melbourne Water and Living Links.





Every year, 42 million people from near and far enjoy Victoria's National Parks.

Our parks service looks after more than four million hectares – that's 18 per cent of Victoria and 4 per cent of coastal waters. All on less than 0.5 per cent of the State Budget!

With your support, we'll campaign for increased funding for National Parks in the lead up to November's election and continue to highlight the problems caused by insufficient funding.

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Level 3, 60 Leicester St, Carlton VIC 3053 | PH: 03 9341 6500 | EMAIL: vnpa@vnpa.org.au | WEB: vnpa.org.au