

PARK WATCH



FORGOTTEN WOODLANDS
COMMUNITY GROUP FUNDING UNDER THREAT
LAMENT OF A BRUSH-TAILED PHASCOGALE
URBAN GROWTH VS CONSERVATION
NATIONAL PARKS BEING SHORT-CHANGED
PLASTICS BUILD UP IN PORT PHILLIP BAY
FERAL DEER ON THE RISE

JUNE 2015 NO 261



VICTORIAN
NATIONAL PARKS
ASSOCIATION
Be part of nature



Be part of nature



Correction: On page 38 in Park Watch March 2015, the Boneseed blitz story incorrectly stated that Stefanie Rennick was a member of Bayside Bushwalkers. Back in the 1980s Stefanie Rennick, a long-time Melbourne Women's Walking Club (MWWC) and VNPA member, together with park managers, allocated blocks on the Cook Street spur of Arthurs Seat State Park to MWWC and the VNPA for boneseed removal. She also approached the Bayside Bushwalking Club and Marg Hattersley to take on a block. After years of weeding, Bayside's block is now almost clear of boneseed.

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We share a vision of Victoria as a place with a diverse, secure and healthy natural environment cared for and appreciated by all.

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You're always welcome to contact the editor to discuss ideas for articles. Phone the VNPA or email michaelh@vnpa.org.au. Articles may be submitted by email, on disk or as hard copy. Include your contact details and brief biographical information. Photos, maps and drawings are needed too. Digital photos should be 300dpi and around 8cm by 12cm.

COPY DEADLINE for September 2015 Park Watch is 1 August 2015.

DESIGN Mary Ferlin PRINTING Adams Print

FRONT COVER

A Striated Pardalote finds shelter in an old tree hollow. Land clearing, firewood collection, burning off, mining and logging are gradually destroying the trees on which many native species depend. Photograph by Chris Tzaros.

BACK COVER

This healthy mossbed and peat bog pool are signs of a long absence of stock grazing in Baw Baw National Park. Expanding deer populations can change that. Photograph by David Tatnall.

Park Watch ISSN 1324-4361

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From the President

A big pat on the back to all of VNPAs campaign supporters and staff, and to the Minister for Environment, Climate Change and Water, the Hon Lisa Neville. The cattle are gone for good!

The Government's legislation to exclude cattle grazing from the Alpine and Red Gum national parks successfully passed through the Upper House of state parliament.

Thanks also to the Victorian Greens, the Australian Sex Party and the Democratic Labour Party for supporting the bill. This puts an end to four years of dodgy 'scientific' grazing trials.

I wrote a personal 'thank you' to those in the Upper House who voted for getting rid of the cows, pointing out that their decision was more than just a sound one for the environment – it was also a sound economic one.

Great achievement that it is, we still face many challenges in the Alps. Feral horse numbers have expanded and deer populations are getting out of control in the forested mountain slopes. Both are causing serious ecological damage, but the impact of the horses is catastrophic in some areas.

Aerial views of the alpine plains, particularly in the more easterly blocks, show hundreds of hectares of pugged and eroding watercourses and bogs. We urgently need a strategic and humane culling program for both horses and deer – and a long-term solution – but there are limited resources to achieve it.

For the first time in four years, we saw an increase in the 2015 budget of \$21 million for park management, although there is a way to go to reverse the damage of the long-term declining trend.

This decline has been so great that park rangers have just about become one of our significant rare and threatened species. Those that remain are often distracted from 'rangering', doing work once done by support staff because of years of staff cuts that we've been told 'don't target ranger numbers'.

What's the point in giving fragile environments legal protection provided by national parks and other reserves, if resources are inadequate to protect them from physical threats.

We will continue to campaign for the Great Forest National Park to protect the Leadbeater's Possum. The status of this species has just been raised to 'critically endangered' under the Commonwealth Environment Protection and Biodiversity Conservation Act, identifying logging and fire as the chief threats to its survival. Minister Neville is putting a task force process in place, which is encouraging.

Ahead of us, we also want to contribute to the reviews of the state's proposed Victorian Biodiversity Strategy, the *Flora and Fauna Guarantee Act*, vegetation clearing controls, the Victorian Environmental Assessment Council's statewide review of public land, and the proposed marine and coastal act. A lot of work!

The review of native vegetation clearing controls is worrying. Rumour has it that the new environment department intends that its application of computer-generated vegetation maps (which I call Enid Blyton maps because they contain so much childish fiction at site scale) will be more dictatorial, with even less scope for real on-ground ecological conditions to influence a clearing decision.

Clearly we will still need your help campaigning for a better deal for the flora and fauna 'protected' in our park system, as well as those areas still totally at risk. Minister Neville has kept several environmental electoral promises. We hope there is more to come. • PW

Russell Costello, VNPA President



From the Editor

The *Park Watch* editor, Michael Howes, has taken a well-deserved break and the enjoyable task of bringing this June issue to you has been mine, with the generous support of VNPA staff and the many contributors.

From feral cats on French Island to feral deer in The Grampians (and plenty of other places in Victoria), the loss of honeysuckles in our woodlands and the pressure on grasslands at the edge of a sprawling Melbourne, the secretive allocation of funds away from national parks, community action on plastics pollution in Port Philip Bay and the pulling of willows and the planting of trees, the values of rivers, small swamps and Baw Baw National Park, and excellent books in review are some of the stories you will encounter in this issue of *Park Watch*. • PW

Chris Smyth

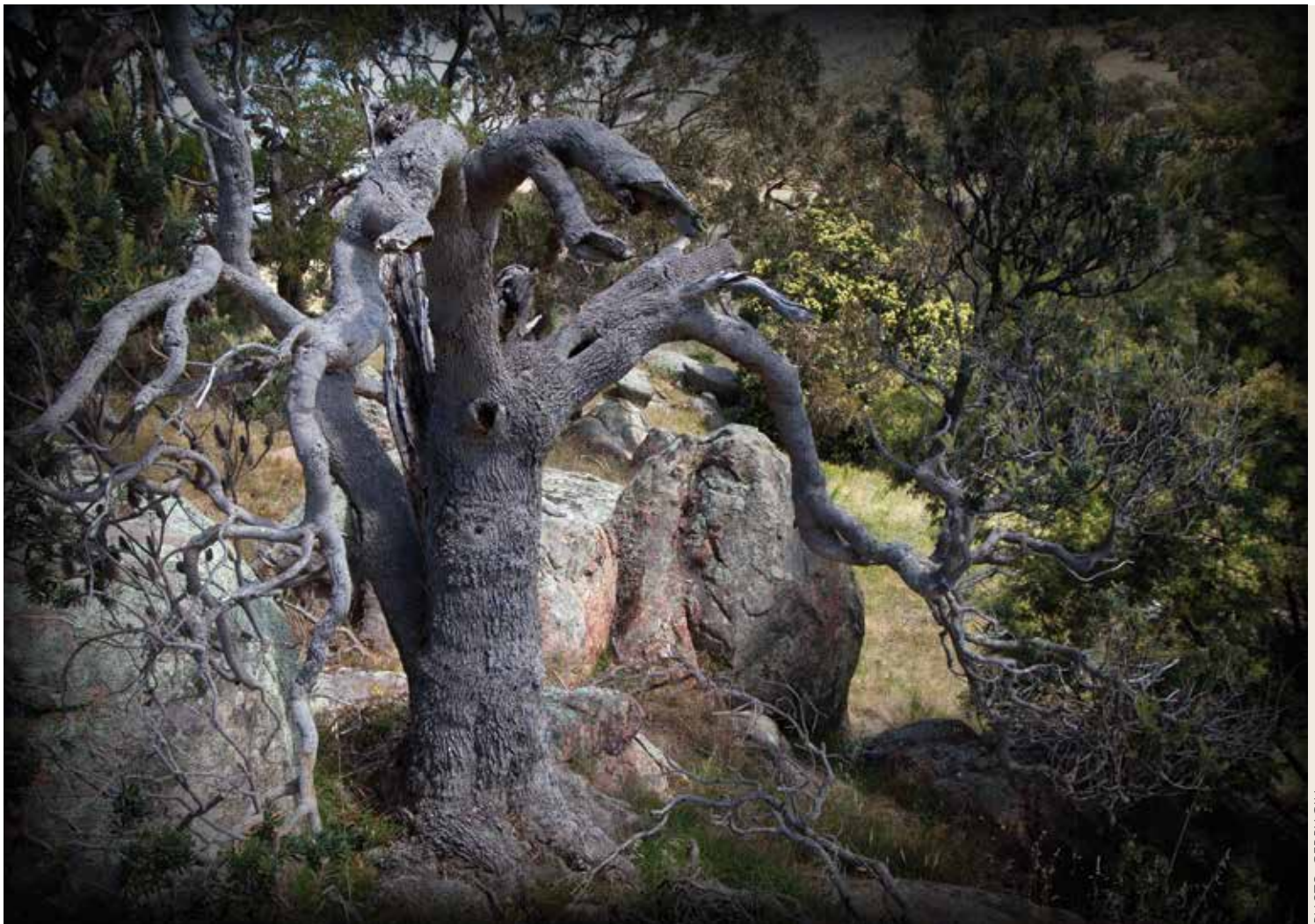


PHOTO: GERRY GILL

A single old honeysuckle survives at Mt Alexander – just.

FORGOTTEN WOODLANDS, *future landscapes*

IAN LUNT REPORTS ON THE DISAPPEARANCE OF SHEOAK,
HONEYSUCKLE, LIGHTWOOD AND CHERRY FROM OUR WOODLANDS.

Picture a gorgeous woodland in the early 1800s. What do you see? Majestic gum trees with bent old boughs, golden grasses, a mob of sheep or kangaroos, and a forested hill in the distance? Was it the luminous landscape of a Hans Heysen painting, perhaps?

It's an iconic Aussie landscape. But something's missing. The trees are wrong. Or at least, they aren't all there.

Two hundred years ago, another group of trees – honeysuckle, oak, lightwood and cherry – formed extensive woodlands across many parts of south-east Australia. Today we call these trees Silver Banksia (*Banksia marginata*), Drooping Sheoak (*Allocasuarina*

verticillata), Wild Cherry (*Exocarpos cupressiformis*), Lightwood (*Acacia implexa*) or Blackwood (*Acacia melanoxylon*).

Did you picture a woodland dominated by any of these species? If not, I wonder why. Do we picture eucalypt woodlands because eucalypts now dominate our local bush? In doing so, did we forget the felled species and only remember the hardy and persistent?

Indigenous Australians, early white explorers and settlers knew these woodlands well. William Howitt extolled the beautiful sheoak and banksia woodlands near Melbourne:

'... nearly all the trees were shiacks [*she oaks*], — not the eternal gum-trees, — and these, interspersed with Banksias, now in fresh foliage, and new pale yellow cones, or rather bottle-brushes, with a sprinkling of gums and golden wattles, gave what you rarely see in that country, a variety of foliage and hue' (Howitt p. 206).

Early surveyors inscribed combinations of 'oak, honeysuckle and gum' across many survey plans, as on the early map of Mt Alexander in central Victoria shown opposite. Mt Alexander is still covered by bush, but it's now dominated by eucalypts, not Silver Banksia. I wonder how many honeysuckles survive on the range, and how far away the nearest large population might be.

The woodlands of honeysuckle and oak disappeared as the trees fed the stoves and the seedlings fed the sheep of the new colonists. Property-conscious landholders avidly removed the untidy banksias:

'Clearing the timber has done much, both towards improving the pasture and adding to the beauty of the estate. The country is gently undulating, and in its natural state lightly timbered with gum, honeysuckle and lightwood trees. As the honeysuckles fall and cover the ground with dead wood, a system is being carried out all over the estate of cutting down and burning of all these trees, leaving only the lightwoods and gums.' (The Burrowa News, 13 August 1880, p. 3).

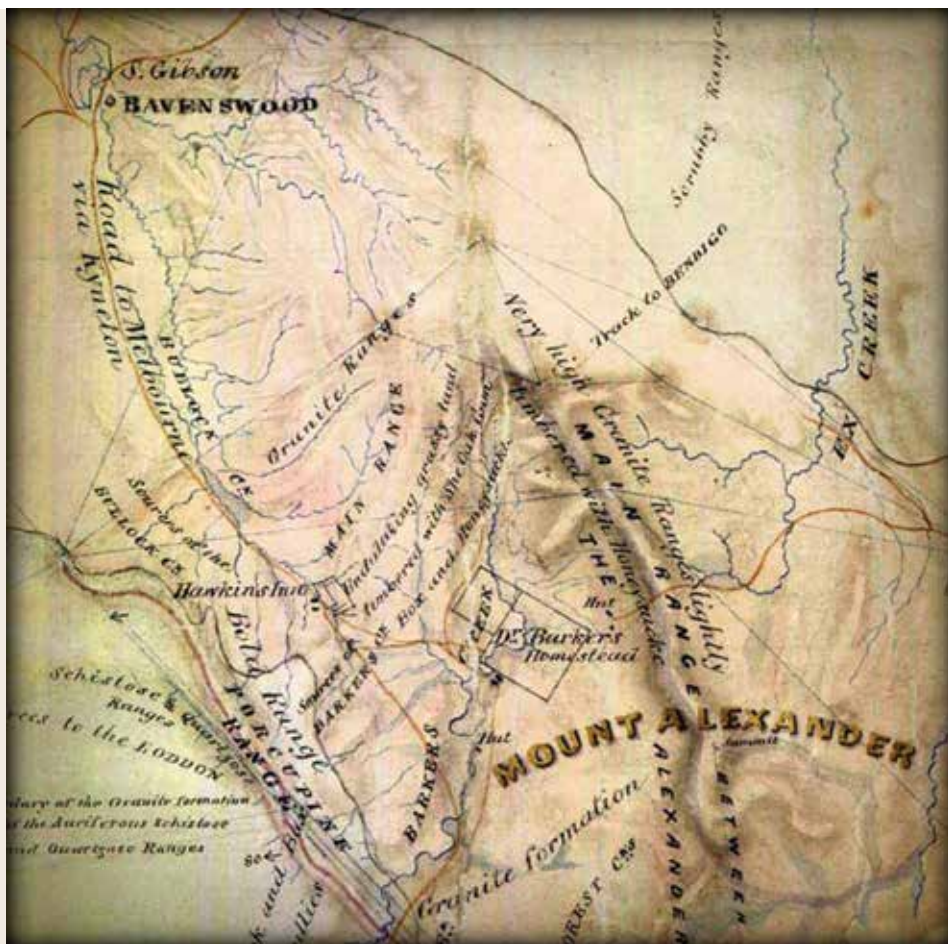
Widespread clearing guaranteed that future generations will never have the opportunity to complain about too much woody debris from old banksia trees.

From the hills to the plains...

The woodlands of sheoak and honeysuckle, lightwood and cherry clothed the flat plains and the rolling hills. They were particularly common on basalt soils, as William Howitt noted: 'So off I went... through a wood of Banksia trees, which, as well as shiack [sheoak], particularly affect volcanic soil...' (Howitt p. 215). And also abundant – according to the first edition of the Geology of Victoria (Ulrich 1875) – on granite hills:

'Granite – This rock occupies a considerable portion of the area of the colony, forming larger and smaller isolated tracts and massives... The higher points and spurs are in most cases quite bare, or support but a poor forest-growth of gum-tree (Eucalyptus), and, as specially characteristic, of she-oak (Casuarina) and honeysuckle (Banksia).'

This statement – that honeysuckles were common enough to be seen as 'specially characteristic' of granite outcrops – staggers me. Nowadays most granite hills have few if any banksias. Instead, the ghostly woodlands persist in place names and road signs – at 'Sheoaks' and 'Oaklands' and along many a 'Honeysuckle Creek'.



Detail from an 1854 map of central Victoria showing the northern end of Mt Alexander. Mt Alexander is still covered by bush, but it's now dominated by eucalypts, not Silver Banksia.

With the trees, went the birds...

This isn't a botanical requiem. The demise of the oak and honeysuckle woodlands affected an entire ecosystem, not just a few trees. Eucalypt, honeysuckle, cherry and oak each provided specific foods and resources for insects, birds and mammals. In full bloom, the

honeysuckle woodlands hosted a cacophony of birds, interrupting William Howitt's peaceful sojourn:

'...the dogs in continual excitement with the noises of vast numbers of parrots, paroquets, and wattle-birds, which were feasting on the honey of the Banksia flowers' (Howitt 1858, p. 215).

Continued overleaf

Bringing back banksias and sheoaks

The Glenelg Hopkins and Corangamite catchment management authorities are working with their communities to return banksias and sheoaks to the landscape of the Victorian Volcanic Plain.

The project is focussing on three rapidly disappearing key species: Silver Banksia (*Banksia marginata*), Drooping Sheoak (*Allocasuarina verticillata*) and Sweet Bursaria (*Bursaria spinosa*).

The general aims of the project are to:

- map past and current distributions of the three species
- conduct genetic studies on individual populations to determine genetic health and viability
- establish seed orchards for the species for future seed collection.

For more information, contact Aggie Stevenson, Biodiversity Projects Coordinator, Glenelg Hopkins Catchment Management Authority. Phone: **(03) 5571 2526**.

In flowering Silver Banksias near Sunbury, naturalist Isaac Batey watched the birds we now call New Holland Honeyeaters and Rainbow Lorikeets (Batey 1907). The she-oak woodlands supported different birds again. Over a century ago, Mr G.F. Gill recorded Yellow-tailed Black Cockatoos and Spiny-cheeked Honey-eaters in the oaks near Ararat, while Isaac Batey saw his first flocks of Cockatiels in the Sunbury sheoaks.

Not surprisingly, the birds disappeared as the honeysuckles and oaks were felled and cleared. Isaac Batey lamented the loss of:

GREY-CROWNED BABBLERS:

‘Since the almost total destruction of sheoaks this bird has taken to the eucalyptian tracts’

HOODED ROBINS:

‘the wholesale destruction of casuarinas apparently affected a change in former habits’

VARIED SITTELLAS:

‘A good 50 years have gone since this bird was seen, the trees having been removed’.

All three species are now listed as Declining Woodland Birds across Australia.

Shifting baselines, future landscapes

The decline of the oak and honeysuckle woodlands, and our failure to recognise its scale, is a textbook example of the shifting baselines syndrome.

Each generation views the condition of an ecosystem when they first saw it as the new normal.

We see many small losses, and know of other changes before we arrived. But we remain oblivious to how big these changes become as they accumulate over many generations.

We forget the expansive, noisy woodlands of honeysuckle and oak, and remember only the locations of a few old banksias, and a few more dead plants.

We picture a past landscape dominated by eucalypts, because we forget the felled species and remember the hardy and the persistent.

Why does it matter what a landscape looked like over a century ago?

From one perspective, it doesn't matter at all. We can design landscapes to conserve birds and other organisms without knowing about, or attempting to re-create, past patterns. As climate change intensifies, our children will have to do this more and more. From another perspective, a primary goal of history is to create morality plays for the future.

Picture two regions. In one, eucalypts were always dominant and honeysuckles rare. In the other, honeysuckles were once dominant and abundant. In both, a handful of dying honeysuckles remain.

What would you do for the honeysuckles in each landscape? Would you have a bigger vision for banksia conservation in the second region? If you would, it's because our knowledge of past landscapes informs not just the content, but also the scale, of our visions for future landscapes. We think bigger when it was bigger.

In many regions Silver Banksias can no longer be planted across large areas. There just aren't enough seeds. More abundant sheoaks, wattles and other species are planted in their place. In these areas the best prospect for the banksias is to collect cuttings and seeds from every surviving plant, create seed orchards that contain all the inter-mixed plants and overcome the grinding poverty trap of genetic isolation. These orchards will inspire further action, as they host the first bustling woodlands full of squawking 'parrots, paroquets, and wattle-birds' for over 100 years.

Across broader landscapes, we can re-create some of the functional diversity that once existed by planting nectar-rich trees of other species as surrogates for the vanquished honeysuckles.

Whatever we choose, the landscape of the future is a world that we'll create. We can use the past as a signpost to embolden our visions, or we can embroider the past like a fading signpost. Either way, no action = no future. So think big. • PW

Ian Lunt is Associate Professor in Vegetation Ecology at Charles Sturt University and for 30 years has worked as an ecologist, researcher and lecturer. You can find more of his fascinating stories at www.ianluntecology.com.

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On its last legs; a veteran Silver Banksia in western Victoria.



Coalition seeks to undermine community fundraising

DR JOAN STAPLES REPORTS ON EFFORTS BY THE FEDERAL COALITION TO REMOVE THE CHARITABLE STATUS OF SOME ENVIRONMENTAL ORGANISATIONS.

The community expresses its opposition to the leasing of a large part of Point Nepean National Park to a property developer at a rally organised by VNPA which, along with other environment groups, could have its funding targeted by federal Coalition politicians.

Is Australia in a parallel political dimension? Our elected leaders deny the existence of climate change, and they criticise environmental organisations, such as VNPA, for speaking up to defend the beauty and significance of our natural environment.

Our Prime Minister says 'We don't support, as a Government and as a Coalition, further lock-ups of our forests. We just don't support it. We have quite enough national parks.'

A House of Representatives Inquiry is looking at the ability of environmental environmental nongovernment organisations (NGOs) to offer tax deductibility for donations. Even before the Inquiry has received evidence, Government members of the committee are saying they have identified 100-150 environmental NGOs they want to remove from the current list of those eligible. The VNPA could be included in that list.

What is going on?

The right to speak up and defend the environment has been under attack since the Howard government. There were attempts to silence NGO voices, with policies like 'confidentiality clauses' that prevented NGOs speaking to the media if they received federal money.

These attacks were ideologically based, saying that everything should be

interpreted by 'market' values. NGOs were not seen as legitimate players and their lobbying was seen as interfering with this 'market', not as part of the democratic process. They were praised if they planted trees and fed the homeless, but were attacked if they lobbied on the environment or poverty.

Under the Abbott government the same ideology is being turned on NGOs again, but with a new twist – a focus squarely on the environment movement.

In June, the Federal Council of the Liberal Party unanimously recommended stripping environmental NGOs of their ability to receive tax-deductible donations. Tasmanian MP Andrew Nikolic named the ACF, the Bob Brown Foundation and the Environmental Defenders Offices and accused them of 'untruthful, destructive attacks on legitimate business' and of 'political activism'. Now this Federal Liberal Party resolution has been turned into a House of Representatives Inquiry.

What about other NGOs?

This Inquiry does not include other NGOs receiving tax-deductible donations. It does not include ACOSS and its social welfare organisations, or the international development associations, the consumer movement or churches. It certainly does not

include the Institute of Public Affairs, the conservative think-tank that has led campaigns trying to silence NGOs. Nor does it include political parties who can receive tax-deductible donations. There is also no mention of the fact that business can lobby and influence government policy as much as they like, then claim this as an expense reducing their income and their tax.

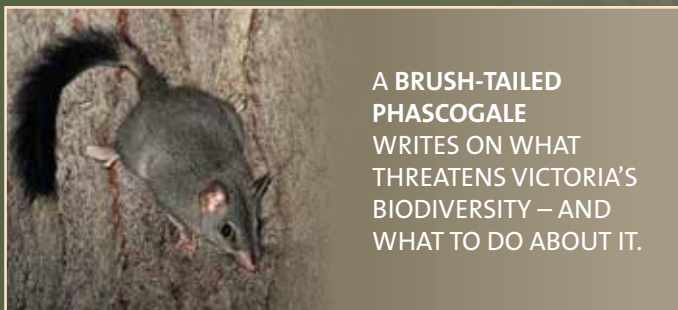
NGOs like the VNPA are an essential part of our democratic fabric. They help make better policy by allowing citizens to come together to express their points of view. They can consider a longer vision than the next election, they are a balance to the views of powerful economic interests, they hold governments to account and they express regional and local variations needed in policy.

The richness of our social fabric depends on organisations like the VNPA to throw up a variety of views and possibilities that dream of the society and the environment we might enjoy. Penalising the environment movement will not work for this Government.

The love of natural places runs deep and cannot be suppressed by bureaucratic overkill. However, it is a sad day to find ourselves living in a parallel universe, where our leaders no longer value our environment and seek to suppress voices that speak for it. • PW

Dr Joan Staples is a public commentator and academic based in Melbourne.

We need a plan to protect biodiversity



A BRUSH-TAILED
PHASCOGALE
WRITES ON WHAT
THREATENS VICTORIA'S
BIODIVERSITY – AND
WHAT TO DO ABOUT IT.

Brush-tailed Phascogales are threatened with extinction if their habitat continues to be cleared.

G'day. I bet you've never read a story in *Park Watch* written by a Brush-tailed Phascogale before but I guess there's a first time for everything.

I'm writing from my nice warm hollow in an old forest tree. That's where the females bear our young – usually in litters of 5 to 8 – that stay in the nest until they are 5 months old.

From my photo you can see my tail is long, black and bushy at the end. When I get excited, the black silky strands on the end of my tail stand up making it look like a bottlebrush (hence my name).

One of the problems with being a male Brush-tailed Phascogale is that I am unlikely to live beyond a year. Mind you, that year is pretty wild. I devote my whole life to getting as much sex as possible, after which time I am so exhausted, stressed and weak I die.

But the other killer problem is a lot bigger than just me. You see there are

not many of us left. I'm afraid we're heading for extinction. In fact, there have been no sightings of any of us in Gippsland for more than 25 years. We may only have a few hundred breeding pairs left in the whole of Victoria.

Land-clearing, firewood collection, burning off, mining and logging are gradually destroying the trees in which we live. I'm talking serious trees; big old trees, with large open hollows. That means trees about 100 and up to 300 years old.

And it's not just the trees we need to live in – it's the ones on the ground too, where you find the insects, spiders and centipedes that we like to eat.

And it's not just us phascogales that depend on having the right environment to survive. The Powerful Owl is in the same boat and needs hollows in really old trees too. There are now fewer than 500 breeding pairs left.

Victoria has, I'm sad to say, a pretty poor record when it comes to species like us.

More than half of Victoria's native vegetation has been cleared. Of what's left, more than half has been fragmented, so it doesn't really work as an ecosystem.

More than 80 species have become extinct since Europeans arrived and a 1,000 species or more are rare, near threatened or with their status unknown.

But we have some pretty special things going on. For example, did you know that right here in Victoria we have 40 species of freshwater crayfish and 54 freshwater fish species.

We also have one of the world's richest collections of ground-dwelling orchids with about 420 species.

And what about all of the small species that are often overlooked – the likes of insects, worms and mosses – but their ecological importance is immense. (Heck, I like to eat them. My kids need this food.)

We need a plan to protect Victoria's rich range of plants, animals and other



PHOTOS: CHRIS TZAROS



PHOTO: LYN AND GEOFF EASTO

There are only 500 Powerful Owl breeding pairs left in the wild.

creatures and the places they live. It's called protecting biodiversity – that's a big word for a phascogale.

It should be the state government's job to create the plan, but frankly, we haven't seen much action there so far.

It's been more than 13 years since the last statewide strategy for protecting native plants and animals was released. While the new Andrews Government has committed to doing a biodiversity strategy, we need to make sure it happens and provides a real vision for the future.

So VNPA will do it themselves – if you help. After all, someone's got to get the ball rolling. But it will cost more than \$80,000 to consult with the people of Victoria, take on board comments, hire experts, put it all together and then promote it in the community.

Then perhaps there will be some Brush-tailed Phascogales like me – and the other native species I've mentioned – still around in 20-30 years. • PW

Time for a new Victorian biodiversity strategy

It's almost 20 years since the last formal Victorian biodiversity strategy, which was prepared under the Kennett Government in 1997.

The Brumby Government did produce the *Land and biodiversity White Paper: Securing our natural future* and a draft strategy before it lost office in 2010, but very little has been done since.

What we now need is a new and reinigorated vision to protect our natural areas – our biodiversity.

In its environment policy before the 2014 state election, the Andrews Government made the following commitments: 'Labor will review the *Flora and Fauna Guarantee Act* and institute a statewide biodiversity strategy to protect our habitats for future generations'...and...'Labor will also review the new native vegetation regulations so they can sensibly protect sensitive vegetation'.

Last year VNPA released a comprehensive assessment, *Natural Victoria: Conservation priorities for Victoria's natural heritage*, which outlined what was required to protect the state's biodiversity. We did it ourselves because successive governments had failed to come up with one.

When preparing *Natural Victoria* we reviewed nine Auditor General Reports and two state of the environment reports produced over the past decade. The consistent message from them was a pattern of failures and deficiencies in managing our natural areas, including:

- lack of integration of laws, administration, programs and plans
- poor leadership and coordination
- weak laws and inadequate enforcement
- low political commitment to the environment
- extremely inadequate funding
- environmental progress made under earlier reforms slowly slipping back.

Victoria urgently needs a new strategy for biodiversity protection from the state government. This should include:

- a clear vision and targets for what we want to achieve
- a new state-wide strategy to protect nature within 18 months
- new and stronger laws
- greater funding
- programs to help the community engage with nature, not just plant trees.

Waterways and wetlands

EVELYN FELLER SUMMARISES THE FOURTH CHAPTER OF THE VNPA'S NATURE CONSERVATION REVIEW, COVERING VICTORIA'S FRESHWATER ECOSYSTEMS.

Freshwater values

Much of Victoria's landscape is densely woven with rivers and streams – the greatest concentration of waterways on Australia's mainland. These freshwater ecosystems are extraordinarily complex and diverse, and include cold rushing mountain streams, warm slow-moving pools in dry land and subterranean seepages.

Freshwater ecosystems and their interfaces with the land in flood plains and riparian zones are extremely important in maintaining water quality, reducing flood impacts and acting as carbon sinks.

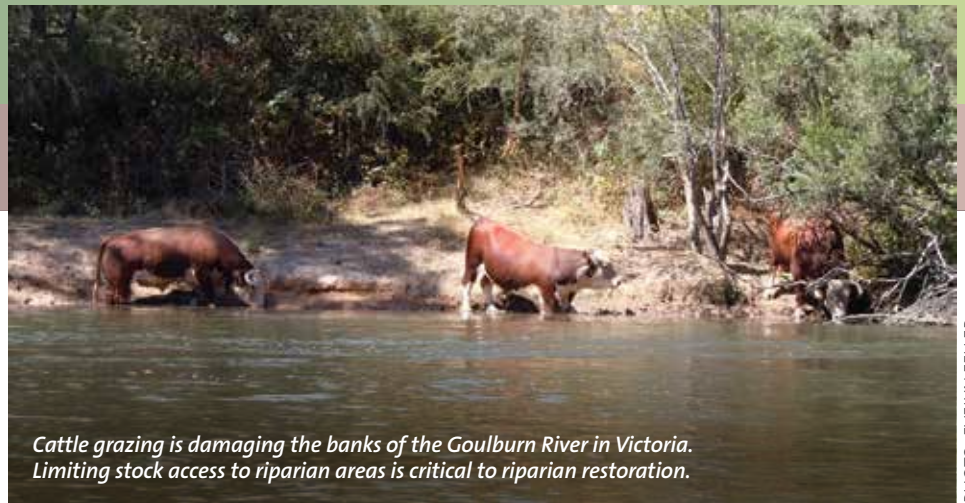
Victoria's freshwater habitats are known to support high species diversity: more than 100 waterbirds, 54 freshwater fish, 38 frogs, 40 crayfish, an undetermined number of other invertebrate species, and more than 800 vascular plants. Nine freshwater complexes have been recognised as internationally significant Ramsar sites, more than 1,300 freshwater wetlands are listed as nationally significant and 18 rivers are designated as heritage river areas with significant recreation, conservation and heritage values.

Threats

Worldwide, freshwater habitats have the highest proportion of threatened plants and animals. In Victoria, more than half of the freshwater fish, two-thirds of crayfish and turtles and a third of frogs are threatened but few are formally listed. Victoria's rivers are chronically overworked and flow regulation has severe impacts on river health, ecological functions and resilience against future stresses caused by climate change. Many rivers now have dying trees and drying wetlands, and are full of exotic fish.

Existing protection

Because the past protection system has focused on terrestrial values, freshwater ecosystems have only been protected incidentally – even Ramsar wetlands are not



Cattle grazing is damaging the banks of the Goulburn River in Victoria. Limiting stock access to riparian areas is critical to riparian restoration.

PHOTO: EVELYN FELLER

fully protected. Heritage rivers are only given protection from the construction of major dams and not from other alterations to their flow regimes.

Gaps, priorities and recommendations

Environmental flows

Seasonal natural variability causes essential disturbances in many river ecosystems, for example food distribution, opportunities for migration and conditions for reproduction and recruitment. Natural variability has been compromised by flow regulation and heavy over-allocation. Restoration of flooding regimes is essential to the health of floodplain biodiversity, including to the 110 flood-dependent ecological classes and almost 200 rare and threatened species on the Murray River in northern Victoria.

Riparian protection and restoration

Riparian areas in Victoria have been extensively degraded with only one-fifth of streamside vegetation considered in excellent condition. Reforming management of the 30,000 kilometres of crown water frontages, and limiting stock access to riparian areas, will be critical in restoring riparian health.

Freshwater protected areas

In the past the conservation reserve system has been focused primarily on terrestrial values; freshwater features have not been adequately considered. The Victorian Government should create 'representative rivers' to protect the best examples of the state's many river types. The protection of highly valued, largely intact freshwater ecosystems should be optimised by having freshwater ecosystems proclaimed under the *Reference Areas Act 1978*.

Wetlands

In 1994 it was estimated that about one quarter of Victoria's wetlands had been destroyed, mainly through their

drainage. Many more have been modified but there is no recent information about the extent of the loss. Because wetland protection in Victoria is fragmented and often ineffective, there is a great need for a comprehensive strategy to set out goals, targets and measures for wetland protection.

Groundwater

Better management of groundwater is needed, starting with the systematic assessment of the condition of aquifers, the nature of links to surface water, and comprehensive monitoring. Currently there is insufficient data and monitoring to determine whether extraction rates are sustainable. Research is needed to address these knowledge gaps.

Catchment management

All land use can potentially affect freshwater ecosystems and so effective management has to be at a catchment scale. Catchment management strategies should guide all activities in Victoria, whether by private or public land managers, and be based on ecosystem-based models with clear targets, indicators and long-term monitoring.

The Andrews Government committed to '... develop a strategy to improve our riparian land and river ways...' at the November 2014 election. A Regional Riparian Action Plan Advisory Committee has been established with representatives from VNPA, Environment Victoria and the Victorian Farmers Federation. An additional \$10 million was committed in the recent state budget, which brings funding to about \$20 million for the first year. While significantly more funding will likely be needed, we hope this action plan will put in place a long-term management solution for the 22,000 kilometres of high conservation significance crown land water frontages across the state. • PW

For more details, see www.vnpa.org.au/page/publications/nature-conservation-review/nature-conservation-review-2014



PHOTO: PHIL INGAMELLS

Alpine grazing ban sealed!

THE FRAUGHT ISSUE OF CATTLE GRAZING IN THE ALPINE NATIONAL PARK HAS TAKEN FAR TOO LONG TO RESOLVE, WRITES VNPA CAMPAIGNER PHIL INGAMELLS.

There is probably no other issue in the history of Victoria that could, for so many years, defy the overwhelming evidence of hundreds of published scientific studies and multiple investigations. It seems that unlimited chutzpah, cloaked in a Driza-bone and an Akubra hat, can routinely override truth.

But on 5 May 2015, definitive legislation was finally passed in the Upper House of Victoria's parliament. Now, no future government can introduce cattle into the Alpine National Park under the guise of a purported 'scientific study', 'management practice' or whatever.

Bizarrely, given the cattlemen's long history of disregarding scientific research, they have been saying that the legislation is 'anti-science', and no more research can ever be done on cattle grazing's impact on bushfires. But research can still be conducted (and always could have been conducted) outside the Alpine National Park. And as for the previous government's Wonnangatta Valley grazing research program, its design and implementation were canned by both the Royal Society of Victoria and the Australian Academy of Science. Spending taxpayer's money on a trial with no capacity for valid results would have been a great waste of resources.

Before Alpine National Park grazing licences ended in 2005, managing the licences cost Victorians around \$500,000 annually. And since then the Australian and Victorian governments, in attempts to re-introduce cattle to the park, allocated at least \$4.5 million

SYMPOSIUM: managing climate impacts

The VNPA, in association with Melbourne University, the Royal Society of Victoria and the Department of Environment, Land, Water and Planning, will hold a symposium later this year on Managing Victoria's Biodiversity under Climate Change.

The aim of the symposium is to establish likely climate change impacts on Victoria's terrestrial ecosystems, including coastal areas, and to identify practical management actions and adaptation

pathways supported by science that can minimise those impacts.

We expect the symposium will be of considerable interest to Victoria's land managers and policy developers, as well as the scientific community and environmental NGOs.

The symposium is planned for 8–9 October 2015. Further information, including booking procedures, will be available in due course.

on failed grazing and fire research. If that money was spent on identified park management priorities, such as deer, feral horse or weed invasions, we could have been making some real progress by now.

When the legislation went to the Victorian Parliament's Upper House, the Legislative Council, it was passed by just one vote! The Liberal Party, the Nationals, the Shooters and Fishers Party and Vote 1 Local Jobs all voted against the bill.

We thank Environment Minister Lisa Neville and her government for their work in introducing the legislation, and the Victorian Greens, the Democratic Labour Party and the Australian Sex Party for their crucial votes in support.

We also thank all of our supporters and encouragers, without whom there would be cattle in the park today. And we thank Victoria's scientific community, especially those alpine ecologists who have acted with great integrity despite repeated attempts to discredit them and their work.

It's time to move on. • PW



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Property developers undermining conservation

INTERFERENCE BY PROPERTY DEVELOPERS IN MELBOURNE'S GROWTH PLANNING PROCESS IS WHITE-ANTING CONSERVATION OUTCOMES.

Melbourne's population in 2051 is projected to be 7.7 million, a 75% increase on existing numbers. That means many more homes (up to 700,000 by 2031), roads and urban infrastructure and, if not planned right, far fewer wildlife habitats.

To plan for this growth, four new Urban Growth Areas were established and Melbourne's Urban Growth Boundary expanded by 30,000 hectares in 2009. Four years later the Victorian government transformed the Growth Areas Authority into the Metropolitan Planning Authority, which now focusses on growth in seven municipalities within the expanded Urban Growth Boundary: Wyndham, Melton, Hume, Mitchell, Whittlesea, Cardinia and Casey (see map).

Melbourne's Urban Growth Zones cover some of Victoria's most endangered habitats, including the 'critically endangered' grasslands and grassy woodlands, and the living spaces for a raft of threatened species such as the Growling Grass Frog, Southern Brown Bandicoot and Golden Sun Moth.

The Melbourne Strategic Assessment, a joint Commonwealth-State approval process, was begun in 2009 and aimed to assess the potential impact of the new Urban Growth Zones on key conservation areas and species, produce better outcomes for biodiversity protection and streamline approvals for development. The last part of this assessment was signed off by the Australian Government in August 2014.

This complicated and sometimes frustrating process appears to have been a bonanza for property developers but not so for wildlife. It will see almost 4,000 hectares of critically endangered grasslands cleared and offset into yet-to-be established grassland reserves

outside the growth areas. There were also significant reductions in protection for high conservation areas between the draft and final approved plans. For example, in the South East a total of 388 hectares or 54 per cent of the original conservation areas for Growling Grass Frogs were deleted, along with significant areas of Southern Brown Bandicoot corridors.

The property industry appears still dissatisfied and is continuing to undermine conservation outcomes. For example, a submission from the Urban Development Institute of Australia and Property Council of Victoria to the Department of Environment, Land, Water and Planning (DELWP) requested a copy of departmental guidelines for changing conservation area boundaries '...ASAP for consultation before they are confirmed by DELWP'. Environment groups have not yet been given the same opportunity.

The process rolls on with reduced conservation outcomes at every stage. VNPA's focus now, along with local conservation groups, is on the next stage. Precinct Structure Planning: the preparation of master plans for communities of 10,000 to 30,000 people and the last step before new planning zones and development permits are issued for the new suburbs.

Rushed precinct planning

In a mad rush, 80 Precinct Structure Plans have either been completed, commenced or are at the pre-planning stage. Emerging issues are being inadequately addressed and exacerbated by this fast-tracking and pressure from the property development industry, which appears intent on undermining the modest conservation outcomes enshrined in the Melbourne Strategic Assessment.

The rush to lock down so many of the precinct plans is of concern, especially without a pressing need for most of them: sales within the existing subdivisions on Melbourne's fringes have slowed right down. Many of the emerging problems will need revisiting, or at the very least review, prior to implementation of the precinct plans.

Back-to-front planning

Various government agencies have confirmed that the precinct plans are running ahead of other government processes, leading to inconsistencies and the dilution of conservation outcomes. Some precincts, for example, are yet to have their Melbourne Water drainage schemes finalised prior to the plan's release for public comment e.g. English Street Precinct, Donnybrook, in the North Growth Corridor. In another case, part of an expanded sewage treatment complex is planned inside a conservation area in the Northern Quarries Precinct Structure Plan, north of Epping.

DELWP is developing a master plan for the Growling Grass Frog that will identify hundreds of new artificial wetlands to compensate for the large areas of the frog's habitat to be cleared. The master plan is not due for at least 6 months but urban wetlands and water infrastructure are already being built within the frog's conservation corridors.

Protections for conservation areas eroded

The protections for 36 conservation areas defined by the Federal-Government-endorsed Biodiversity Conservation Strategy for the Urban Growth Zones are under threat.

The Guidance note: Implementing the Biodiversity Conservation Strategy for Melbourne's growth corridors (DELWP February 2015) aims to guide future conservation area management but is

skewed towards allowing a variety of uses within conservation areas under an unclear decision making process.

Approvals under national environmental laws should lead to better conservation outcomes, but these outcomes appear to be continuously undermined.

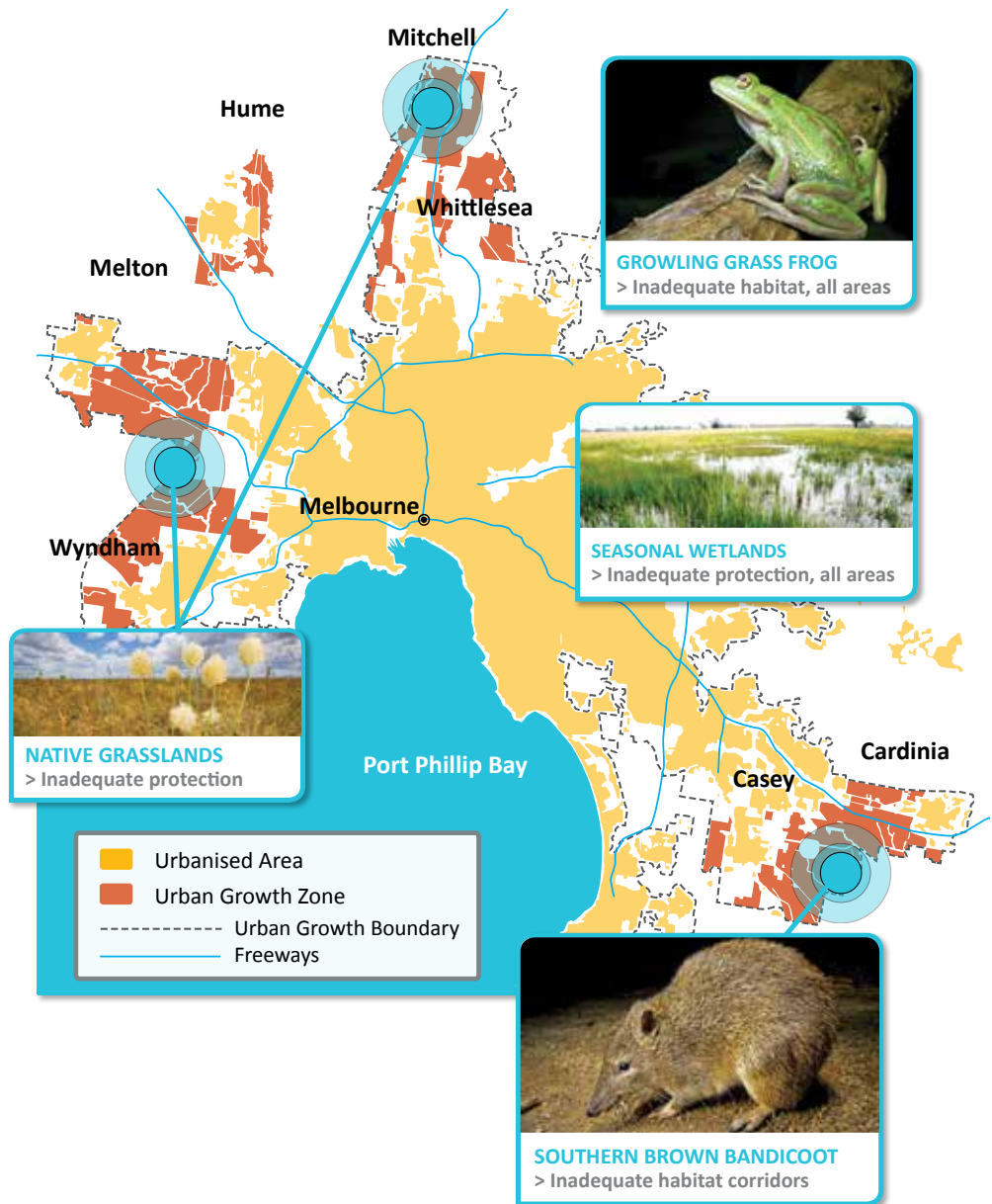
For example, DELWP developed proposed Special Use Zones to apply to the different types of conservation areas. These zones were to replace other protections, such as Environmental Significance Overlays, that cover a much wider set of important issues. After environment group objections to the use of these zones, a Rural Conservation Zone has been proposed and an Integrated Plan Overlay applied, but the Environmental Significance Overlays will still be removed. It is unclear how this will protect the conservation areas.

Many of the provisions about the final tenure and management arrangements for proposed conservation areas are also unclear. Agencies such as Parks Victoria and local municipalities seem unwilling or unable to manage them and there is a lack of opportunity to add to or expand them.

The precinct planning process views the Biodiversity Conservation Strategy's conservation areas as the only ones required, focussing on nationally listed species and ignoring consideration of state, regional or local conservation assets. Finer-scale planning should be used to add to the conservation areas by creating habitat links and other natural spaces.

Failure to appoint an Independent Monitor

More than five years after the commencement of the growth area assessment process, a monitoring and reporting framework is yet to be approved. Nor has there been the appointment of the independent monitor required to ensure integrity in the assessment and implementation of the growth planning process. VNPA has outlined the independent monitor's key roles and responsibilities and is urging both levels of government to immediately act on the appointment before we slide, inch by inch, into a concrete jungle. • PW



The southern brown bandicoot could have its day in court

As urbanisation has proceeded through the south-eastern suburbs of Melbourne, the Southern Brown Bandicoot species has progressively declined towards extinction.

The last large population, living in Cranbourne Royal Botanic Gardens, is now threatened by development that will destroy the habitat corridors linking them with other populations. The Commonwealth Government approved the development, so the Green Wedges Coalition lodged an appeal with the Federal Court for review of this decision, represented by Environment Justice Australia and supported by VNPA.

The main concern is that the approval did not provide for the functional habitat connectivity corridors required to avoid species extinction. Corridors 200m wide that had been provided in the first draft of the Sub Regional Species Strategy had been removed, and the \$30 million initially provided for the corridors had been reallocated.

Protecting the southern brown bandicoot from extinction in the South East has been complicated by the federal proposal to de-list the species from the *EPBC Act*. Fortunately, independent scientists and the Victorian State Government oppose the delisting. If the bandicoot was de-listed, whether or not legal action is successful, the State Government could attempt to get out of its obligations to provide the \$30 million or the less-than-adequate wildlife corridors that were included in the final approved drafts last year. The final decision will be made by the Federal Minister, Greg Hunt, based on recommendations of the Threatened Species Committee.

If the case succeeds, it could make the difference between the extinction and survival of this endangered species in south-east Melbourne.

Melbourne's 'other river', the Maribyrnong, is fed by a number of creeks.

Of these, the main tributary, Jacksons Creek, rises in the Macedon Ranges and then slices through the Western Volcanic Plains where it has created spectacular escarpments and revealed remarkable rock formations in the Organ Pipes National Park.

A little upstream, as though practicing for the sculpting of these landforms, the creek has carved out smaller rocky escarpments in what is known as Holden Flora Reserve, between the townships of Sunbury and Diggers Rest.

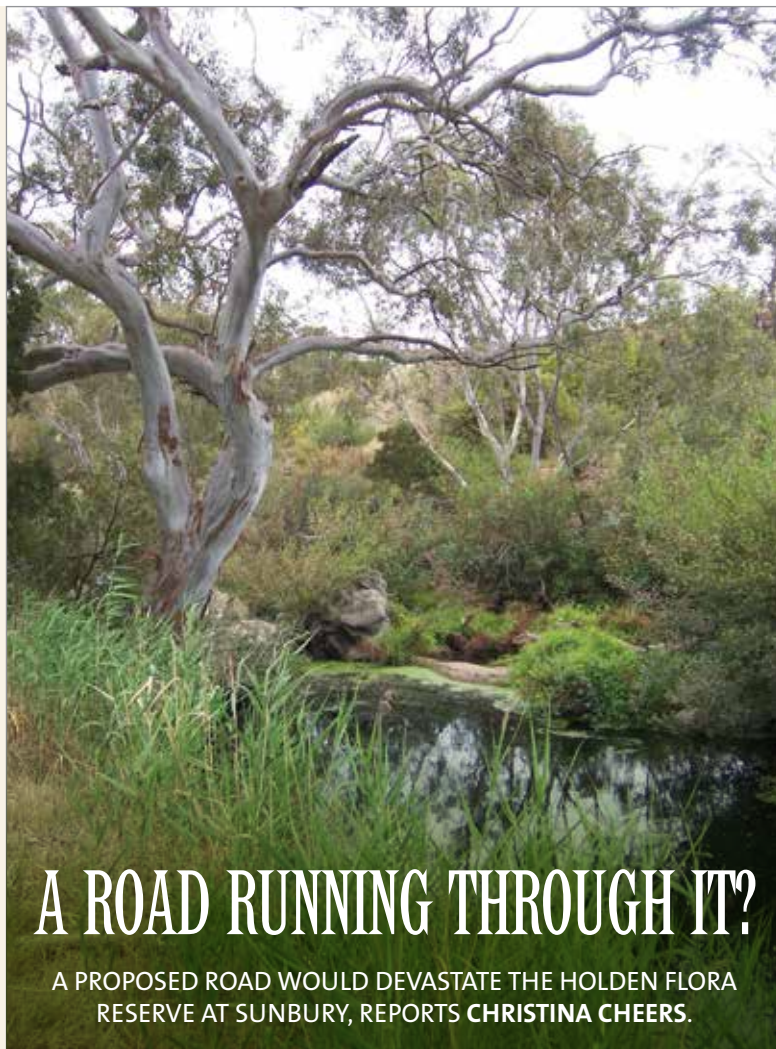
Holden Flora Reserve was declared in 1987 with the aim of protecting remnant native flora and fauna. It is cared for by Parks Victoria and has been assigned IUCN Category 1a, which means its 96 hectares are to be managed primarily to protect and preserve natural features including the escarpments and beautiful deep gorges.

The escarpments have sheltered the last-known Victorian breeding colonies of Grassland Earless Dragons, although proof that these quaint little lizards are present awaits further research. What we do know to be there though, is well worth preserving.

Stretching along a thin line to the west of the Jacksons Creek, the reserve represents the only area in the lower Maribyrnong-Jacksons catchment that retains a sizable remnant of the original vegetation, and has been the main plant source used to revegetate the Organ Pipes National Park over the past 40 years.

The reserve's vegetation contains three communities (Grassy Woodland, Temperate Grassland and Rocky Chenopod Open-scrub) that are listed as critically endangered; there are also flora species classified as rare, threatened or significant in the Melbourne area.

Many species of national significance are also present, and possibly the Grassland Earless Dragon, along with 25 species of reptiles including regionally threatened



A ROAD RUNNING THROUGH IT?

A PROPOSED ROAD WOULD DEVASTATE THE HOLDEN FLORA RESERVE AT SUNBURY, REPORTS CHRISTINA CHEERS.

PHOTO: CHRISTINA CHEERS

Holden Flora Reserve runs along the Jacksons Creek and is a refuge for wildlife in the developing Melbourne suburbs of Sunbury and Diggers Rest.

or restricted ones such as the Red-bellied Black Snake, Lowland Copperhead, Marbled Gecko and Tree Dragon.

Rare or restricted birds include Southern Whiteface, Spiny-cheeked Honeyeater, Singing Honeyeater, Diamond Firetail, Peregrine Falcon, Calamanthus, and Pied Currawong. Wedge-tailed Eagles breed there, and Barn Owls are known from the reserve.

Jacksons Creek is also important

habitat for Platypus (five were found in a recent survey), Growling Grass Frog and Lesueur's Frog, all of them regionally rare and threatened.

The Holden Flora Reserve has a strong Aboriginal history, being on the border of two clans. It also shows signs of early European use, with the bluestone ruins of an old inn and the remains of a water pump and boiler house associated with the Sunbury Asylum. Add to all of this the wonderfully isolated and almost mystical atmosphere of the place, and it becomes very precious.

Friends of Holden Reserve was formed in 2009 and, since then, has helped Parks Victoria's management by planting more than 6,000 indigenous plants to replace woody weeds removed by Melbourne Water. The plantings have attracted enthusiastic community support, but sadly the area is now threatened by development.

Holden Flora Reserve is particularly vulnerable to edge effects because of its long and narrow shape within a developing urban area. There is now a proposal to build a road through its very centre, which will threaten still further the reserve's remnant species of flora and fauna.

Proper environmental surveys are needed, lest we lose it before we even know what we have. Better still, we should protect it altogether. • PW

Christina Cheers is President of the Jacksons Creek Eco Network.

The economy of waste

Burning native forests is NOT renewable energy

The logging industry, supported by the Federal Government, wants the burning of 'wood waste' from logged native forests to be included as a renewable energy source in the Renewable Energy Target (RET). There are five major reasons why this should be opposed.

1. The biomass used will not really be 'wood waste' as maintained by the logging industry

The industry will use whole trees as its primary fuel for biomass power, rather than offcuts and residues from the forest floor. Gathering and transporting residues from a logged forest is not practical or economically viable.

The logging industry claimed 50 years ago when woodchipping was introduced that it would only take waste branches and other logging residues. In fact, whole trees up to 600 years old (radio-carbon dated in East Gippsland) have been felled and sent to the chipper. They do not use wood waste (branches and residues) as it is not economic, and always clear-fell entire forest coupes and take whole trees. This would continue if native hardwood became part of the RET.

Current management practices have had devastating environmental impacts. Native forests have been converted into monocultures of even-aged eucalypt species. Intensive logging has meant that millions of birds and animals are killed every year as a result of habitat loss. Leadbeater's Possum is now critically endangered as a consequence of industrial logging and fire. Clearfelling also causes a reduction in water yields and leads to soil erosion.

2. Burning wood produces at least 1.5 times, and up to 6 times, as much CO2 as burning coal

The aim of the RET is to reduce the total output of CO2 pollution. Burning the planet's most effective carbon capture and storage mechanisms i.e. native forests is completely at odds with reducing greenhouse gases.

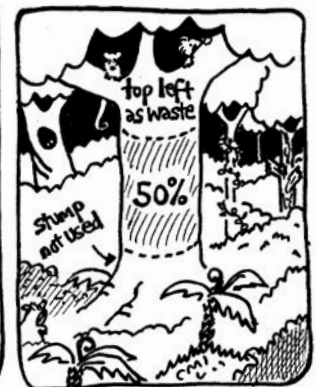
Moreover, the logging industry has never been required to account for its total carbon footprint. This would require an accurate carbon accounting for all stages involved with felling and transporting logs, processing, the intensely hot regeneration burn, and the loss of soil carbon. The industry has failed to do this.



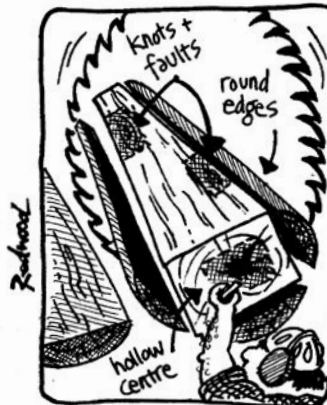
Half of a forest is classed as "waste" even before logging starts



That means only 10% of a forest's total parts are chosen for sawlogs



only half of a tree's bulk is taken, which bumps the "waste" up to 95%



on average, about 1/3 of a log is useable



final sum - 98% of a forest is "waste" - and is burnt or woodchipped

(all percentages are arrived at using government documents + figures)

3. Forest destruction will inevitably increase if native forest wood is included in the RET as an accredited fuel

Using native forest wood as a fuel for biomass power is extremely inefficient; a lot of wood is needed to make a small amount of electricity. It is clear there will be increased pressure on native forests to provide this fuel.

4. There will be increased subsidies for an industry already heavily subsidised by taxpayers

State and federal governments have spent hundreds of millions of dollars propping up the logging and woodchipping industry. It seems to be a protected species to which traditional economics does not apply. We have in effect been subsidising the destruction of our native forests for more than 50 years. There is no indication that a native forest biomass industry would be viable without government support.

5. Allowing credit for burning forests reduces and displaces investment in genuine renewable energy

Real renewable energy comes from hydro, wind and solar power. Our future depends upon transitioning to genuine renewable energy sources if we are to survive as a society into the future.

What you can do

Please contact your local MPs, the Federal Opposition and the cross-bench senators and inform them you are totally opposed to the burning of native forest hardwood to be included as a renewable energy source in the RET. Allowing burning of native hardwood 'biomass' to be included will displace genuine renewable energy sources such as wind and solar, will actually increase CO2 production and also allow the overcutting of native forests to continue. You might also state that you no longer want your taxes used to subsidise the ongoing destruction of native forests, and that you want any future funding to the industry to enable a switch to 100% plantation use for our future timber needs. • PW

John Renowden is a long-running forest activist.

A small swamp full of life

GEOFF LACEY REPORTS ON HIS VISITS TO LINLEY'S SWAMP ON FRENCH ISLAND.

French Island is home to many wetlands.

Some of the larger wetlands are surrounded by a thicket of Swamp Paperbark and hold water for a long time.

Linley's Swamp is different. It is only 2.5 hectares in area, has an open aspect, is shallow and dries out frequently. While most of the island's wetlands are inside French Island National Park, this one is on private land along the west coast.

Although small and relatively unprotected, Linley's Swamp is of unusual importance for birdlife on the island.

Water cycles, surrounding habitat and birds

The cycles of wetting and drying are an important factor in wetland productivity. When a swamp dries out the water plants die off, decompose in the presence of oxygen and release nutrients into the soil.

When it floods again the nutrients stimulate a rapid growth of large water plants, like sedges and rushes. These plants provide excellent habitat and some food for birds. There is also an abundance of invertebrates (like midges, worms and crustaceans) that feed on the decayed organic matter. Large numbers of waterbirds come to feast on them.

The habitat surrounding a wetland is also important in determining when birds will be attracted to it. Linley's Swamp does not have the dense cover that ducks and other waterbirds need for sustained breeding. However, many birds come there for feeding, roosting



PHOTO: GEOFF LACEY

White Ibis, Royal Spoonbills and Black Swans gather to feed in Linley's Swamp.

and shelter, attracted to large sheets of water with a clear view of distant approaching raptors and other potential threats. Waders (or shorebirds) prefer shallow water with an open aspect and exposed mud.

Linley's Swamp under high water

Linley's Swamp is an excellent example of a shallow, saline wetland that frequently dries out and refills. It is surrounded mainly by grassy paddocks but with two patches of Swamp Paperbark along parts of its eastern margin, heathland on the southern margin and Messmate Woodland flanking the northwest corner.

When the swamp is full, lush water plants, in particular Water Ribbons and Pale Rush, give the swamp a beautiful appearance. In August 2004, Black-winged Stilts, uncommon on French Island, were breeding there: 80 birds, including young. Ducks swimming around included seven Shovelers. In April 2012, the count included 105 White Ibis and 34 Royal Spoonbills, with four Whistling Kites circling nearby.

When the swamp was half full, in March 2014, groups of ducks arrived at intervals throughout our visit – about 60 Chestnut Teal and 170 Grey Teal by the time we left. They were apparently moving in from the bay as high tide made feeding opportunities more favourable in the swamp. We also observed a Black-tailed Native-hen, a rare visitor.

A surprise awaited us in September 2014, a pair of Freckled Ducks – a rare and endangered species – sheltering among the flooded paperbarks.

...and under low water

In April 2013 the swamp was drying out, creating good foraging habitat for small waders. Seven Red-kneed Dotterels, a species rare on the island, were observed and had been breeding there. Five Black-fronted Dotterels were also running around and feeding on the muddy edges, and eight Greenshanks (a migratory wader species) flew in from the bay and landed. The nearby intertidal mudflats are where they feed at low tide but when the swamp is shallow and its mud exposed, the birds come in for shelter and extra feeding as high tide approaches. The bird count on that day included 42 Masked Lapwings, 20 White-faced Herons, 18 White Ibises, 34 Royal Spoonbills, 16 Swamphens and a Whistling Kite.

An uncertain future

The French Island wetlands complement each other. Birds move between them and the bay to best meet their feeding, shelter and safety requirements.

Linley's Swamp is a vital link in this chain, a shallow and seasonal wetland that is highly productive and supports a rich birdlife. But its future is uncertain.

A few years ago, Parks Victoria was hoping to buy the wetland but funds for such purchases were suspended. It came under new ownership in 2014. If it could be added to the French Island National Park, the swamp's future would be secure. • PW

Geoff Lacey is an environmental engineer, naturalist and long-standing member of the VNPA and the Friends of French Island.

Catching cats on French Island

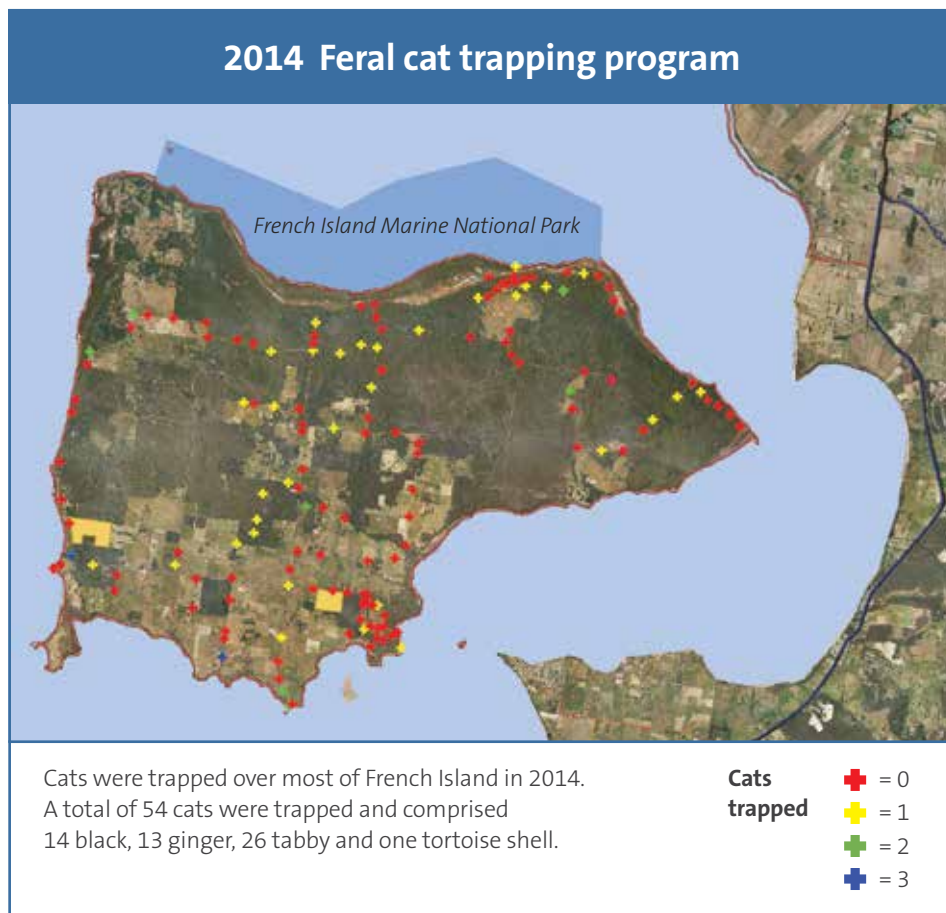
JENNY NORVICK EXPLAINS WHY A FERAL CAT TRAPPING PROGRAM HAS BEEN SO SUCCESSFUL ON FRENCH ISLAND IN WESTERN PORT.

Two-thirds of French Island is national park, the other third mainly farmland. With its extensive shoreline, its swamps and lagoons, and a marine national park along its northern coast, it is a critical part of the Western Port Ramsar wetlands. More than 230 species of birds have been recorded at the island, including rare species and 33 species of waders.

The island is fortunately fox-free but its shorebird populations, migratory ground birds and other native wildlife, such as the Long-nosed Potoroo, are at constant risk of predation by a large population of feral cats. Over the years Parks Victoria has run feral cat control programs but none with the success achieved over the past five years.

With an injection of money that started in 2010, Parks Victoria has been able to conduct a comprehensive trapping program each winter in the national park and surrounds, and from 2010 to 2014 it trapped and removed 624 cats.

The program was part of a larger one covering the Western Port Ramsar sites and the western shoreline of Port Phillip. Funded for three years under the Australian Government's Caring for our Country Program, and administered by the local catchment management authority, its aim was to reduce the threats to the sites posed by feral animals and weeds, and to provide community education. The National Landcare Program has continued the funding until 2018.



MAP: PARKS VICTORIA

Parks Victoria was funded to control goats and weeds in the national park and surrounds, and to intensify its feral cat trapping activity. The long-term goal is to eradicate feral cats from French Island.

Trapping takes place seven days a week for ten weeks, from June to August each year. The winter months are chosen because the small mammals, birds, reptiles and invertebrates on which the cats usually prey are scarce. The cats become cold and hungry and therefore more likely to take risks, resulting in greater trapping success.

About 100 custom-built galvanised steel treadle cage traps baited with fresh Kentucky Fried Chicken are used to catch the cats. The traps are set where cats have been seen recently – areas containing fresh scats, roadsides, tracks, fence lines, creek lines, shorelines, high-tide roosts in saltmarsh, unoccupied dwellings and the interface between cleared land and the bush. The cages are placed approximately 500-1,000 metres apart, and multiple traps are used where, for example, kittens have been seen. Every trap is checked daily and the baits are kept fresh.

All the cats that are trapped are taken to the parks depot to be euthanised by a trained, qualified and experienced

parks ranger. Animal ethics requirements are adhered to and great care is taken not to distress the trapped animals.

In 2012 the French Island Landcare Group joined the program and extended cat control onto private land, with the result that an extra 207 feral cats have been dispatched over the last two and a half years. The Landcare Group also offers free cat desexing as part of its public education program.

One of the main ongoing issues in managing feral cat populations on French Island is landowners who support domestic feral populations on their farms. The descendants of these animals eventually end up inhabiting the national park.

Over the last five years 831 feral cats have been removed from French Island under the two programs. This, in conjunction with the community awareness program and free cat desexing, has seen a huge reduction in the overall feral cat population.

There are already promising signs that the population densities of local wildlife are increasing. • PW

Jenny Norvick is a VNPA member.

Canal estate threat to coastal wetlands

There were once mudflats and saltmarsh along the southern shoreline of Corio Bay at Moolap between Point Henry and Limeburners Point.

But in the mid-1800s the area was transformed into an extensive system of shallow lagoons to produce salt, first by the Cheetham Saltworks and more recently by the Ridley Corporation, although salt production became non-viable and has ceased.

The site is now set for another transformation if the Ridley Corporation's plans for the 209 hectares of coastal crown land, which it currently leases, are given the go-ahead. This time the salt fields would be replaced by a \$4 billion marina and housing development, with 1,200 berths, up to 5,000 homes, a golf course and a canal estate.

Under the proposal, the corporation would get possession of the crown land and another coastal strip, for which it had been negotiating with the previous Coalition Government under a process titled an 'Unsolicited Proposal, whereby the crown land would be swapped for some much less environmentally valuable Ridley land at Avalon.

This process had proceeded to the third stage of five, in which the corporation was in exclusive negotiation with the government to develop the proposal; an agreement on the land swap was signed just prior to the caretaker period for the November 2014 state election.

The Moolap salt fields and Ramsar sites on Corio Bay and associated wetlands are home to 20,000 birds each summer, and provide a vital habitat for species that have migrated here from as far as Siberia and the Arctic. Although not listed under the Ramsar treaty, the salt



The Moolap salt pans near Geelong are threatened by a proposed canal estate and marina development.

fields are recognised in the region's Ramsar management plan as having Ramsar values.

For more than 30 years the Geelong Field Naturalists have conducted annual surveys of the birdlife and ecology of the area. On average, more than 68 bird species use it each year, including three threatened species and 22 shorebird species protected by international treaties.

Environmental concerns with the project include:

- the loss of significant coastal habitats and its impact on wildlife
- the massive dredging program that would be required to produce the fill needed for the new development. Limeburners Bay, from where the dredge spoil would come, has very significant lead levels on its seabed (from ammunition fired into the bay from a shooting range at Limeburners Point), together with many other heavy metals from earlier industrial development. Dredging would activate these and also disturb acid sulphate soils, which the Victorian Coastal Strategy recommends being left alone
- the Victorian Coastal Strategy also recommends avoiding coastal development in areas that will be inundated by a 0.8m sea level rise by 2100; most of this land will be so affected.

The draft Victorian Coastal Strategy also contained a recommendation against any new canal estates because of their impacts on estuaries, habitat loss, water pollution from urban runoff and boating, and the disturbance of coastal acid sulphate soils. However, apparently, the direct intervention of Premier Napthine just prior to the release of the final strategy in late 2014 led to the recommendation's removal from the final strategy.

Geelong Environment Council and the Queenscliffe Environment Forum have proposed to environment minister Lisa Neville that a VEAC investigation be conducted into the 19 wetlands on the Bellarine Peninsula, including the Moolap salt fields, with a view to creating a Victorian nature conservation reserve containing all the wetlands. Before the investigation begins, any negotiations between the Victorian Government and the Ridley Corporation on the Moolap saltfields should cease, and the government commit to retaining the land in public ownership for conservation.

The nature conservation reserve would ensure that the Bellarine wetlands are protected and conserved at this time of high population growth and climate uncertainty. Consistent management, taking into account the many environmental values in each water body, would ensure that the area continues to supply habitat to the thousands of migratory waders that make their remarkable journey here each summer. • PW

Joan Lindros is president of the Geelong Environment Council and a member of the VNPA Conservation Committee.

In some ecosystems, like this box woodland, long-unburnt areas can have less fuel than recently burnt areas.

Burn target gets the thumbs down

AN INVESTIGATION RECOMMENDS VICTORIA'S FUEL REDUCTION BURN PROGRAM SHOULD MOVE AWAY FROM A 5% STATEWIDE HECTARE TARGET TOWARDS A RISK-BASED APPROACH. IT'S A VERY WELCOME STEP, SAYS PHIL INGAMELLS.

The Victorian Bushfires Royal Commission's most controversial recommendation, to burn 5% of public land each year for fuel reduction, may no longer be a frontline policy of bushfire management.

Earlier this year the Victorian Government asked the Inspector General for Emergency Management to conduct an inquiry into the target. He has clearly recommended a move to a 'risk-based' management of fire.

If the Government accepts the recommendation, it could mean a radical change in bushfire management.

While debates on where, when and how to burn the bush will be had for many years to come, Victoria's land managers could now be free to make decisions strategically, without having to achieve at least 390,000 hectares of burns every year regardless of their effect.

There have been many problems with the 5% target. For a start, and perhaps most importantly, the controversy it generated encouraged some of its supporters to make extravagant claims about the capacity of the fuel reduction program to save lives. Fuel reduction burning can certainly be a useful tool, but it is least effective in severe fire weather conditions, when lives are most at risk.

The public perception, however, was that the fuel reduction program would somehow save them from the next megafire, leaving them less likely to invest in seriously effective options, such as a good bushfire shelter at home.



PHOTO: PHIL INGAMELLS

Another problem with the annual target was that it encouraged prescribed burns in larger remote areas, where they were relatively easy to perform and chalked up lots of hectares. A former director of the US forest fire service called this the 'low-hanging fruit'. Many smaller but far more effective burns around townships just weren't being done. They are expensive, and involve lots of staff but contribute little to the target.

The Mallee was the greatest victim here, suffering many damaging burns with little or no advantage to public safety. Species dependent on long-unburnt bush, such as the Mallee Emu Wren, are being pushed to the brink.

The unprecedented increase in prescribed fire right across Victoria, on top of a number of recent large bushfires attributed to climate change, mean Victoria's remaining natural areas have few long-unburnt bits left. The impacts of this are still being debated and studied, but there is general agreement that many of Victoria's native plants and animals are in trouble if we mainly have young 'age classes' of vegetation. And once we lose an old patch of an ecosystem, it can take decades, or even hundreds of years, to recover it.

In last year's report on the impacts of the burn program on Victoria's biodiversity, the environment department (then called DEPI) confessed that protection of biodiversity '...has not been achieved but is a manageable risk', however DEPI



PHOTO: CHRIS TZAROS

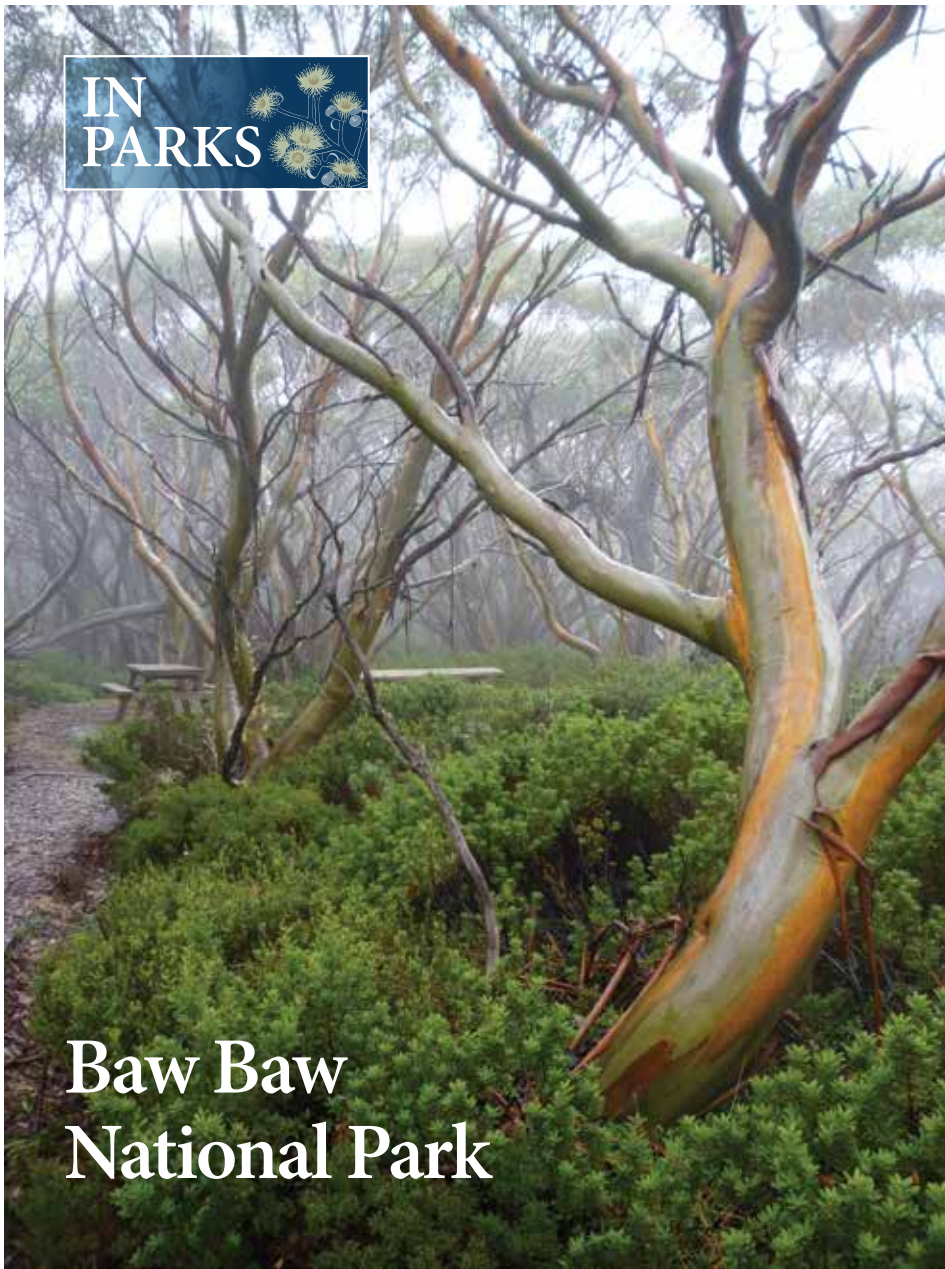
Recent research shows that the Mallee Emu Wren depends primarily on long-unburnt vegetation.

gave no indication of how that risk would be managed!

Our top ecologists, as well as many well-informed amateur naturalists across the state, are convinced that burning at current rates is no way to manage natural areas. It's been an unprecedented ecological experiment conducted at a landscape scale – something that would not remotely pass ethical standards for scientific studies, anywhere.

Protecting human life is a critical job for our fire managers. But protection of Victoria's remarkable natural heritage is also something that should be achieved.

A new risk-based approach will be able to look at all available fire mitigation and public safety tools and allow managers to work out how they should be applied in different places. It will allow for far more effective use of fire budgets and resources. It should, and can, aim to protect human life as well as allow the long-term survival of the bush and its many remarkable inhabitants. • PW



Baw Baw National Park

Picnic area in snow gum at the Baw Baw Alpine Resort.



Walking through wildflowers near the summit of Mt Erica.

sedimentary rocks of the heritage-listed Thomson and Aberfeldy rivers to the east, adjacent to which is the 2,660 hectare Walhalla Historic Area Park. The parks are surrounded by State Forest, which extends in a wedge from the north between the two sections. Clear felling of Mountain and Alpine Ash is continuing in the forest with post-logging hot regeneration slash burns.

The plateau is an area of national botanical, zoological, geological and geomorphological significance. It is within the Thomson, Tanjil and Tyers water supply catchments. The highest peak is Mt St Phillack at 1,567 metres (Mt Buffalo National Park's highest peak, The Horn, is 1,723 metres).

There are more than 400 native vascular flora species in the park, including 46 that are rare or threatened and one endemic, the Baw Baw Snowgiant. The non-vascular flora was surveyed by the late Arthur Thies, well known to VNPA members, who listed more than 70 mosses and 41 liverworts. The park is also of global zoological significance, with 16 threatened species including the critically endangered Baw Baw Frog and Leadbeater's Possum. Most of the plateau is a 6,500-hectare Remote and Natural Area (including a 135-hectare Reference Area), with Snow Gum woodlands, grassy herblands, heathlands and Sphagnum Moss bogs.

In 1970 a proposal for a road across the Baw Baw Plateau was abandoned after much protest. Forestry ceased in the 1950s and grazing ended in 1975, but some feral cattle remained on the

GEOFF DURHAM VISITS ONE OF THE NATIONAL PARKS THAT WOULD BE PART OF THE PROPOSED GREAT FOREST NATIONAL PARK.

VNPA and other conservation groups are advocating the creation of the Great Forest National Park, which would protect 355,000 hectares of land across the Central Highlands, stretching from Kinglake to the Thomson Reservoir and north-east to Eildon, incorporating some State Forests and existing parks, including Baw Baw National Park.

This is Gunaikurnai country and the name, Baw Baw, possibly means 'echo'. In 1860 the intrepid Ferdinand van Mueller was the first European to reach the Mt Baw Baw summit.

The Baw Baw Plateau was managed for the Forests Commission by a

Committee of Management from 1964 until 1979, when 13,300 hectares became the initial Baw Baw National Park. Land Conservation Council 1994 Recommendations resulted in the park's area being increased by a further 230 hectares. The 2005 Management Plan, with a life-span of 10 years, is to be replaced by a Greater Alpine National Park Management Plan for all alpine parks. The planning process is now being reviewed after the election of the Andrews Government.

The park is in two distinct sections – the granitic sub-alpine Baw Baw Plateau to the west and the much older dissected Silurian-Devonian

PHOTO: ROBYN DURHAM



PHOTO: EIJAN MOORE



PHOTO: GEOFF DURHAM



PHOTO: GEOFF DURHAM

Aberfeldy River camping area.

The aftermath of a hot, regeneration slash and burn post logging.

plateau and it was years before the last animal was dispatched. Much effort went into their eradication, but no attempt has been made to remove Sambar Deer from the plateau. There are also rabbits, foxes, wild dogs and cats; Blackberry is a widespread weed.

On the western edge of the plateau the 365-hectare Baw Baw Alpine Resort is not part of the national park. Its limited snow is enhanced by artificial snow making. Stuart Ord, a former Chief Executive Officer of the resort, says that, being at a lower elevation than the larger Victorian resorts, it is more susceptible to climate change through shorter snow seasons. This makes the development of 'green-season', nature-based activities in and around the resort highly important. One of these is downhill mountain biking.

The eastern section on sedimentary rocks, in a rain shadow area and zoned Conservation and Recreation, lacks the towering Mountain Ash and Alpine Ash forests of the western section.

Natural attractions

'Spectacular wildflower displays' is the phrase commonly used when referring to the park, as these are a feature in summer on the plateau, but Snow Gums and Mountain Ash in mist or snow have a special charm any time of the year. Lyrebirds are common in the tree-fern gullies. From the Mount Erica car park, there is a 30-minute return Beech Gully walk.

An adventurer's national park

In 1980 Dr Sandra Bardwell wrote: 'Baw Baw is undoubtedly an adventurer's national park.'

The 650-kilometre Australian Alps Walking Track between Canberra and Walhalla passes from Stronachs, a small walkers-only camp site on the northern tip of the park, south-east down the centre of the park over Mt Whitelaw, Mt St Phillack and Mt Erica (with camping, rock climbing and abseiling at the nearby Mushroom Rocks) to the walkers-only Eastern Tyers camping area off the South Face Road, and then onto Walhalla, crossing over the heritage-listed, old-iron Tramway Bridge across the Thomson River. There are off-shoot tracks to Mt Baw Baw and on to the Alpine Resort, and to Mt St Gwinear and on to the Mt St Gwinear car park and visitor centre – a base for walking, cross-country skiing and tobogganing. The volunteer St Gwinear Ski Patrol operates on weekends in the snow season. From here a short track leads to a viewing platform.

There are also cross-country ski trails at the Alpine Resort where there are downhill ski runs with lifts.

In the park's eastern section, the hunting of Sambar Deer by stalking is permitted, while canoeing and white-water rafting are possible on the Thomson River from Beardmores below the Thomson Reservoir. There are tracks for four-wheel driving, and cycling and trail-bike riding are permitted on all public vehicle tracks.

Friends of Baw Baw

The Friends of Baw Baw National Park formed in 1980, was revived in 1994 and has been active ever since with nature walks and many projects including removal of Grey-sallow

Willows and Blackberry, and track maintenance. The contact is Eileen Laidlaw Phone: 5160 1312.

Access

The Alpine Resort is accessed via Noojee and Tanjil Bren. The bitumen Alpine Resort Road from Tanjil Bren is steep, narrow and winding with hairpin bends.

The South Face Road through State Forest between the Baw Baw Alpine Resort Road and the Thomson Valley Road has a wide gravel surface.

The Thomson Valley Road from Erica passes approximately north between the park's two sections and then north-west through State Forest to the northern end of the park. Turn-off roads lead to Rawson, Walhalla, the Mt Erica car park and picnic area, the Thomson Reservoir, and to the Mt St Gwinear car park and visitor centre.

The very narrow and rocky Walhalla 'Road' in the east is the access route to the beautifully sited Aberfeldy River Camping Area.

Before visiting Baw Baw National Park, check the Parks Victoria website regarding track conditions. Chains are required in the snow season.

Camping and accommodation

The only vehicle-based camping in the park is at the Aberfeldy River Camping Area. Disbursed bush and snow camping by walkers is permitted. Accommodation outside the park is available at the Baw Baw Alpine Resort, Tanjil Bren, Noojee, Rawson, Walhalla and Erica. • PW

Zoo working to save local wildlife

BROOKE SQUIRES REPORTS
ON THREATENED SPECIES
CONSERVATION PROGRAMS
AT ZOOS VICTORIA.

Securing futures for threatened species

Bandicoots and guardian dogs, frogs and bunkers; these are unusual combinations.

But they're all about how Zoos Victoria, a zoo-based conservation organisation, is delivering conservation outcomes for 20 threatened native species.

This commitment was sparked by the extinction of the Christmas Island Pipistrelle, a micro bat.

In 2009, Zoos Victoria staff were given a simple brief: collect the last remaining pipistrelles to establish a captive insurance population. But it was too late, none could be found, and the microbat joined 26 other Australian mammal species that have become extinct since colonisation.

Zoos Victoria decided then that it would work to stop this happening again.

It began by assessing the vertebrate species listed as at risk in Victoria against four criteria: small population size; declining populations; restricted distribution; key threatening processes.

Sixteen species were identified and added to four threatened ones occurring outside Victoria but which the zoo was already actively supporting, such as the Lord Howe Island Stick Insect.

These 20 'Fighting Extinction' species are all at risk of extinction in the wild over the next 10 years without urgent conservation interventions.

To secure the future of these threatened species, Zoos Victoria is working with



Eastern barred bandicoots like these will be guarded by maremma dogs without the use of fox-proof fencing.

remarkable partners in the field, using its extensive skills in the areas of captive management, breeding and release, and supporting innovative conservation solutions.

Bandicoot bodyguards

As with many of our native species, the greatest threat to Eastern Barred Bandicoots is feral animals such as foxes. Since 1989, Zoos Victoria has worked to secure the bandicoots through captive breeding programs, and their numbers have increased from 50 to more than 400.

At this stage the bandicoots can only be released into fully fenced fox-proof areas. But building and maintaining fox-proof enclosures is a costly exercise, and it only takes one fox invasion to wipe out an entire population.

To overcome this problem, Zoos Victoria has established the Guardian Dog Project, inspired by the successful use of maremma dogs to help the recovery and protection of Little Penguins from fox predation in Warrnambool. The dogs instinctively protect the birds that they have been socialised with or conditioned to, and they can go on to help monitor and protect them after release.

Maremma dogs will be used to secure a population of Eastern Barred Bandicoots in suitable habitat without feral-proof fencing.

Maremmas also naturally protect livestock, and could allow bandicoots to be released on multi-purpose farmland. Over the next five years Zoos Victoria will trial this on private land at Tiverton Station, a grazing property near Mortlake in western Victoria that

has low sheep stocking rates and habitat suitable for bandicoots.

Baw Baw Bunker

Zoos Victoria is using a very different approach to conserve the critically endangered Baw Baw Frog. The threat to these tiny amphibians is not from feral species, but matters more difficult to control, the spread of the Amphibian Chytrid Fungus and climate change.

Baw Baw Frogs are found only on the Baw Baw Plateau (see Geoff Durham's In Parks feature on Baw Baw National Park on p.20) where they live and feed underground. Their population has declined by 30 per cent over the past two years; data from the last survey (2011) showed a total population of about 2,600.

A major challenge is the lack of knowledge around the frog's captive management and breeding, should its wild population continue to decline.

But the collection of wild egg masses and the establishment of a specialised facility at Melbourne Zoo – the 'Baw Baw Bunker' – are already bearing fruit.

The Baw Baw Bunker is a refrigerated shipping container modified to enable rigorous control of temperature, humidity, lighting and moisture, which is crucial to all life stages from eggs to frogs.

Two egg masses were collected in November 2013, and another four in December 2014 along with four frogs. Overcoming successive husbandry challenges, our skilled amphibian keepers are now rearing 140 Baw Baw froglets.

This work is being complemented by the reinstatement of surveys to track wild population trends, which are essential to understand how this little frog is faring on Mt Baw Baw.

Zoos Victoria is using sound ecological research and community engagement to help overcome the conservation challenges facing our native wildlife and secure the future for species such as the Eastern Barred Bandicoot and Baw Baw Frog. • PW

Brooke Squires is a conservation officer in Zoos Victoria's Wildlife Conservation Department. Email: bsquires@zoo.org.au



PHOTO: PHIL INGAMMELLS

Central Victoria's Kooyoora State Park. State Parks actually have the same level of protection as National Parks, but are often confused with State Forests.

Victoria's public land gets the once-over ... again

A NEW VEAC INVESTIGATION COULD FRAME CONSERVATION AGENDAS FOR THE YEARS AHEAD.

The Victorian Environment Assessment Council (VEAC) has been asked to hold a thorough *Statewide Assessment of Public Land*. The inquiry, essentially a 'stocktake' of all parks and conservation reserves and other areas of public land, will take place in several stages. Importantly, VEAC has been told by the government that it is 'not intended that the investigation will change the current levels of protection underpinning Victoria's public land system'.

First, VEAC will make an assessment of the current system of public land categories, including options for changing or consolidating the existing categories.

Potentially, this could lead to a simplification of the huge number of categories of protected areas we have inherited over the years, possibly matching international guidelines. The final report for this is due by September 2015.

Then VEAC will:

- assess the current reservation status of public land, including areas where land use has changed since earlier investigations.
- make an inventory of the types of values on public land.

These last two investigations will involve release of a discussion paper (due early 2016), then a draft proposals paper, with the final reports completed by February 2017.

Initial public submissions are due by Monday 22 June 2015. This will be the only opportunity to comment on the first investigation, or to provide information for the discussion paper for the other two investigations.

There will be two more opportunities for public comment: after the discussion paper is released, and after the draft proposals paper.

More information can be found on VEAC's website at www.veac.vic.gov.au and suggestions for submissions can be found on the VNPA's website www.vnpa.org.au

Initial submissions should be sent to veac@delwp.vic.gov.au by Monday, 22 June. • PW

Secretive, unfair fund cheats our parks

RAY RADFORD REPORTS THAT VICTORIA'S NATIONAL PARKS ARE BEING DEPRIVED OF THEIR RIGHTFUL SHARE OF PUBLIC MONEY FROM THE PARKS AND RESERVES TRUST FUND.

Since 1958 the Parks and Reserves Trust Fund has received its income from the 'parks charge' on residential and commercial water, sewerage and drainage bills (farms are exempt). Some of this contributes to the management of our national parks by providing 38% of the Parks Victoria budget.

The parks charge is calculated using the property's net annual value. For residential properties, the net annual value is multiplied by five per cent and then 0.424 per cent is applied to the resulting figure. For a property valued at \$2.5million, the park charge would be \$530; there is also a minimum charge of \$70.62.

Although the fund raised \$153 million in 2013-14, it does not publicly account for its income or expenditure. To gain access to this information, the Victorian Environmental Friends Network had to file a Freedom of Information request.

Not only is the fund secretive, the expenditure figures reveal that, while the total amount of money collected by the parks charge has grown by around 45 per cent in real terms since 1999, revenue to Parks Victoria has only grown by 12.7 per cent.

The result is that the proportion of funding to Parks Victoria has dropped from 74 per cent of revenue in 1999 to 57 per cent in 2014. This has occurred at a time when Parks Victoria funding has been so badly cut that it has less staff than when it was established in 1996, even though the park estate has expanded dramatically.

The share of funding to other organisations, such as Zoos Victoria (\$17.6m in 2013-14), Royal Botanic Gardens (\$13.9m) and the Shrine of Remembrance (\$0.96m), has substantially increased. While these are worthy organisations, national parks are heavily dependent on the trust for

funding, often lacking broader government support.

Yet there is even a further problem with this secretive fund: it is inequitable.

The parks charge is only paid by people living in areas serviced by the old Melbourne and Metropolitan Board of Works in 1996, while money from the fund has to be spent on parks enjoyed by many more people in the now larger metropolitan area (see map). This is unfair and also 20 years out of date because the metropolitan area has expanded considerably as huge new suburbs have been established. National parks in the rest of the state are funded by Victorian Government consolidated revenue, grants and some self-generated income from fees and charges.

The growing population and expanding metropolitan area mean that our parks and reserves are under increasing pressure for funding. However, the total cost of our park estate, covering around 17 per cent of the state, is less than 0.6 per cent of total state government expenditure. Any increase would either have to come from consolidated revenue or by the state government increasing the amount of money generated from the existing parks charge.

It is time the Parks and Reserves Trust Fund published annual reports that include maps of the parks charge collection and expenditure areas. This is an easy thing to do and it should start from July this year.

There should also be an independent review of the trust fund's funding arrangements. Such a review should consider the amount and the scope of the parks charge. It should also determine why only some properties in the Melbourne metropolitan area pay the charge and others do not e.g. one side of the Dandenong-Hastings Road is in the collection area while the other side is not. The review should also take account of the significant expansion of the metropolitan area over the past 20 years and consider the broadening of the parks charge to cover all of Victoria. • PW

Ray Radford is Convenor of the Victorian Environmental Friends Network. Robert Bender, editor of the network's newsletter, *FriendsNet*, and Matt Ruchel, VNPA's Director, gathered the data used in this analysis.

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We can't even begin to describe everything you will do and see in a short ad like this, suffice to say that the clients on our first Madagascar trip in 2014 all loved it. The things we learned on that trip should make this one even better.

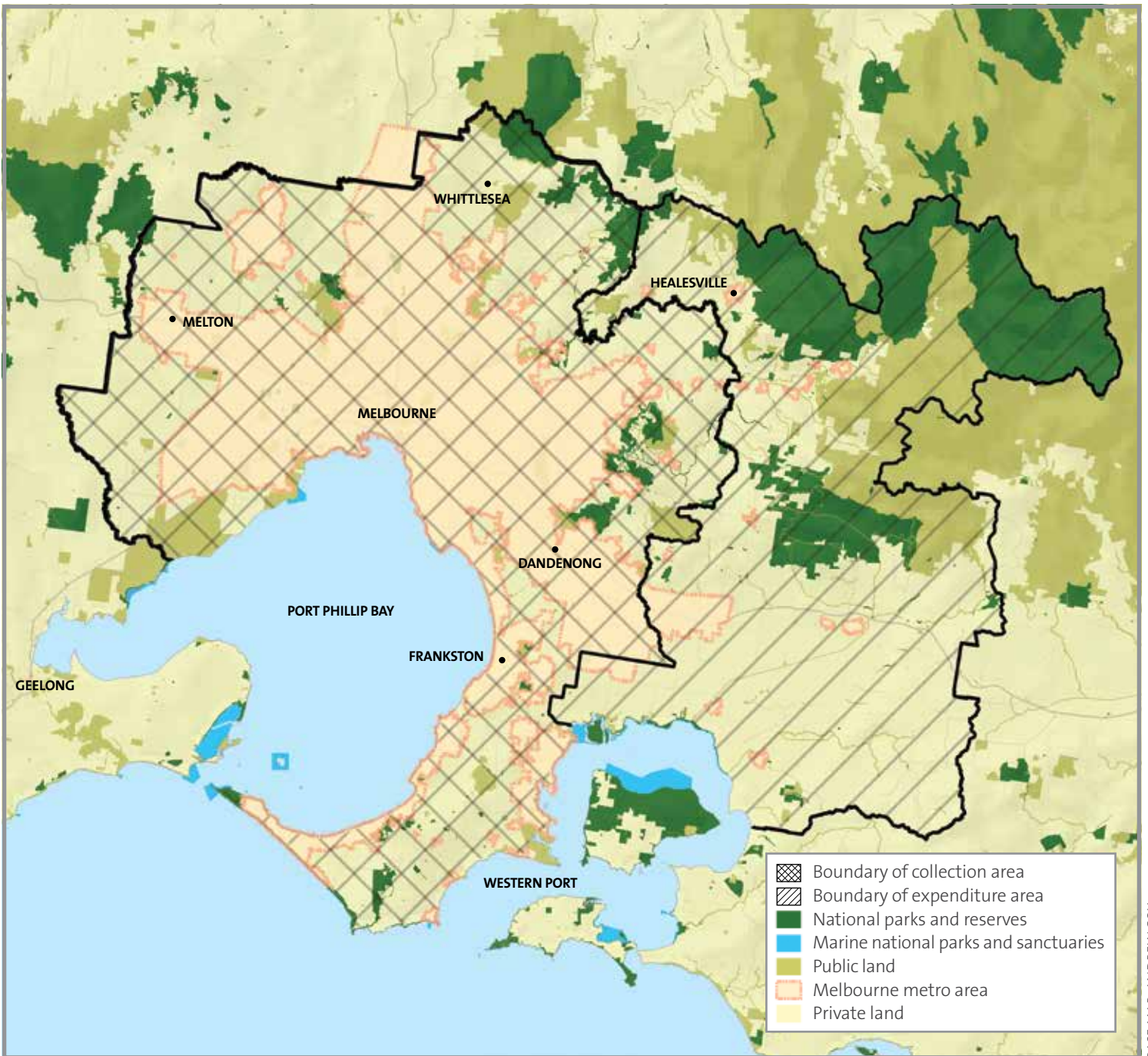
The best way to get an idea of what it is like is to read the trip notes.

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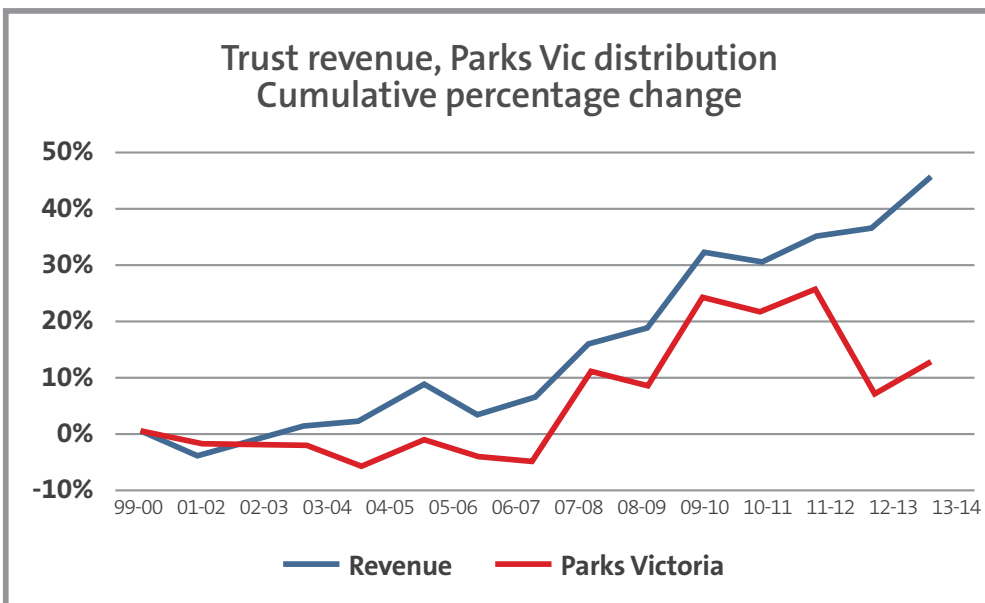
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BASE MAP: ANDREW COX



GRAPH: ROBERT BENDER

The size of the collection area for the revenue of the Parks and Reserves Trust Fund is far smaller than the area where the funds are spent, which is inequitable for those paying the parks charge on their water, sewerage and drainage bills. The expenditure area includes the collection area (cross-hatched on the map) and the area to its east shaded with diagonal lines.

There is a widening gap between the revenue of the Parks and Reserves Trust Fund and its allocation to Parks Victoria.

Community acts on litter in the plastic age

THE INVENTION OF PLASTIC STARTED A REVOLUTION THAT CHANGED THE WORLD BUT 100 YEARS LATER WE'RE DROWNING IN IT, SAYS FAM CHARKO.

Plastic is the largest type of litter in the world's oceans, and they receive 21 million tonnes of it every year. As a result there are currently an estimated 5.26 trillion plastic particles floating around the oceans.

Due to recent research on the impacts of plastics on wildlife, plastic pollution is no longer just an amenity issue; it is now seen as a very real threat to wildlife and the marine food chain.

Plastic does not fully break down into organic molecules and so it never really goes away; it merely degrades into smaller and smaller pieces. Apart from the obvious entanglement issues, animals at each trophic level are also at risk of mistaking plastic for food and ingesting it. From corals to sea cucumbers, from crustaceans to seabirds, sea turtles and fish; plastic particles have been found in the digestive systems of marine species around the world.

In addition to the more obvious physical problems of gut punctures and digestive tract blockages, ingested particles inhibit the animal's urge to forage for more food by making it feel satiated without providing any nourishment.



PHOTO: PORT PHILLIP ECOCENTRE

In a study of a Short-tailed Shearwater colony on Phillip Island, all fledglings sampled were found to have plastic in their stomachs. This may lead to the chicks leaving the nest underwater, jeopardising their survival success and leading to a population decline.

Plastics also tend to absorb already dissolved chemicals like DDTs, PCBs and heavy metals from the water. When ingested, these chemicals transfer into the tissues of the animal, posing health risks to them and their predators higher up the food chain through bioaccumulation. As humans are top predators of the marine environment, this includes us.

A common item on the beaches is the nurdle or plastic resin pellet. Nurdles are melted down in factories to produce

plastic products of all kinds. Their small size (3-5 mm) makes them extremely hard to clean up once they have entered the environment, which frequently occurs after spills on factory floors or during transport. They are lightweight and float, easily entering the waterways via drains after periods of rain. Nurdles come in every colour, but most are transparent or black, causing wildlife to mistake them for food.

In 2013, the Port Phillip EcoCentre discovered a very large amount of nurdles in a major drain in the western suburbs of Melbourne. This led to an investigation by EPA Victoria, resulting in an upstream business being ordered to clean up the drain and spilled nurdles around their factory.



PHOTO: BEACH PATROL



PHOTO: PORT PHILLIP ECOCENTRE



PHOTO: PORT PHILLIP ECOCENTRE



PHOTO: PORT PHILLIP ECOCENTRE

Clockwise from top left: Beach Patrol members from postcode 3182 ready to clear litter from their local beach; litter piles up at the Stony Creek backwash under the Westgate Bridge; children play in The Butt Castle, an art installation made from cigarette butts picked up by volunteers in St Kilda; nurdles are small plastic pellets that are becoming a huge plastic pollution problem on beaches and pose a risk to marine animals that ingest them.

Further research and monitoring of waterways in Melbourne's catchment area has since revealed that nurdles are found in many inland creeks and drains, as well as on most beaches from Sorrento to Altona. Outside the bay they have been found on Sorrento back beach and at Wilsons Promontory.

The Melbourne metropolitan area has many factories that use nurdles, making it very hard to prove which ones are the specific sources of pollution. Port Phillip EcoCentre has initiated targeted monitoring of waterways in proximity to factories as a means of identifying the source. Having no specific legislation or enforcement measures in place to prevent this type of industrial pollution is a major issue that needs to be urgently addressed.

Of the litter in Port Phillip Bay, approximately 95 per cent comes from the stormwater system in the greater Melbourne metropolitan area. Often the last barrier standing between this litter and the marine environment is a community group. As litter has become an increasing problem in Melbourne waterways, community environment groups and active individuals are responding by taking personal action.

This growing community engagement with litter issues is demonstrated by Beach Patrol, a group of people who take one hour per month to clean up the beach in their own postcode locality, followed by social coffee at a nearby cafe.

Beach Patrol started out in Albert Park in 2009 with only a few people but has now grown to fifteen groups around Port Phillip Bay. The latest group officially launched in Rye in February and three more will have started by June this year in Frankston, Seaford and Werribee.

More than 1,300 volunteers are now engaged in beach cleaning every month by Beach Patrol alone. In addition, many other local groups, like Friends of Williamstown Wetlands, Friends of Westgate Park and Scab Duty, to name but a few, are taking care of their local patch, which often is a marine sanctuary or sensitive wetland ecosystem.

These community efforts have not gone unnoticed by the Victorian Government, which recently awarded a Litter Hotspots Program grant to the Port Phillip EcoCentre for

running a multi-year, community-based litter monitoring and prevention project named 'Turn Off The Tap'. The project supports several environment groups in gathering a large amount of litter data and provides litter prevention education in schools in the wider Yarra catchment.

By undertaking nurdle surveys in local waterways, the EcoCentre is supporting not-for-profit Tangaroa Blue's Australian Marine Debris Initiative, which is working to create a national program that assists in reducing the loss of nurdles during manufacturing and transport.

The EcoCentre seeks community support by asking people to keep an eye out for nurdles near their local waterways. If you see nurdles, please take a photo and send it, with the exact location, to Fam Charko at the Port Phillip EcoCentre. • PW

Fam Charko is the Community Engagement Manager at the Port Phillip EcoCentre. You can contact her on fam@ecocentre.com or phone: (03) 9534 0670.

Looking west along the port Campbell coastline. The rifle range is hidden from view on the vegetated escarpment.

Community shooting down spa resort proposal

MARION MANIFOLD WRITES OF CONCERNS ABOUT A PROPOSED SPA RESORT ON THE SPECTACULAR PORT CAMPBELL COAST.

The Port Campbell coast is threatened yet again. Corangamite Shire Council is conducting a feasibility study, funded by ratepayers and the former Victorian Government, for a spa resort on a large wedge of Commonwealth land situated on the cliffs near Port Campbell. No other sites are being considered in the study.

The land is bordered on each side by the Port Campbell National Park and has sweeping views along the coast. It has high ecological significance, containing EPBC Act-listed species that include the Metallic Sun Orchid and Southern Brown Bandicoot and is an extremely important wildlife corridor linking the national park.

The land is leased to the Port Campbell Rifle Club, which has been an important part of the area's history since July 1900; the current site was opened on 10 April 1954. The club's members compete in national and international championships and contribute to the identity of the community. The wider community supports this historic use and its management appears to assist the surrounding habitats and wildlife.

Any tourism development would have an adverse aesthetic impact on a nationally listed coastline, a beautiful

wild bluff, and would be visible all the way down the coast to the 12 Apostles.

This land is not necessary for a resort as 10 large private land sites (in total more than 1,000 hectares) were rezoned for large tourism developments along this coast in 2012 and could be used for a spa, including one site just over the road. There are also other sites better suited to a spa resort, such as a large piece of land opposite the Port Campbell police station or on the Blair Estate that sits high above the town; both could support this venture and both have excellent views.

The proposed site contains a land-to-sea gas pipeline. Buildings are not permitted within a 20-metre easement and the safe setback of buildings for this class of pipeline (as specified by Energy Safe Victoria) is 700 metres, otherwise a detailed risk assessment would be required.

The local community believes there should be no development of this site, but if the feasibility study deems it proceed, then a full and open Environmental Impact Assessment (EIS) should be conducted, with any costs associated with the EIS, risk assessment and additional actions and controls borne by the developer.



PHOTO: MARION MANIFOLD

PHOTO: MARION MANIFOLD

The metallic Sun Orchid, an endangered species, is found at the Port Campbell Rifle Range.

The Corangamite Shire Council should have first discussed the proposal with the local community, which has a long-term interest in the area, rather than facilitate the interests of a private developer.

The current Victorian Government has a policy of no large developments in national parks and the community is amazed that it has not stopped the feasibility study and advised the developer to look at other sites already zoned for such a purpose.

There is very strong community opposition and the State Government should step in before ratepayer and taxpayer money, and much community time and energy, is spent. • PW

Marion Manifold is Secretary of the Port Campbell Community Group.

“Stirling? Now don’t you worry about that.”

In 2008, the Mount Buller and Mount Stirling Alpine Resort Management Board (ARMB) applied for a permit to build a new road between Mount Buller and Mount Stirling via the north face of Corn Hill.

The 2.4-kilometre, two-way sealed road would be cut through intact sub-alpine forests, mostly with high to very high conservation significance, including threatened species. The road would connect Mount Buller with Howqua Gap.

VNPA has opposed this Link Road since it first learned of the planning application in 2010. It made no sense. There is already the ‘Corn Hill Road’ connecting the same two points via the south side of Corn Hill. An upgrade would seem more logical.

However, the ARMB has pressed ahead, the planning application and our objections being heard at a three-day hearing at Planning Panels Victoria in mid-April. We await a decision from the Planning Minister.

While the road may end up ticking the bureaucratic planning boxes, it does raise a strategic issue for the Andrews Government – both Planning Minister Wynne and Environment Minister Lisa Neville, who is in charge of Victoria’s alpine resorts, should consider the broader issues of public policy and planning objectives, before making a decision.

The Victorian Government should ensure there is a completed strategic plan for Mt Stirling based on comprehensive public consultation, clearly outlining the strategic significance of the road (if there is any), and whether or not spending



PHOTO: RUSSELL COSTELLO

Site inspection of the proposed road’s route by the Mt Buller-Mt Stirling Link Road Advisory Committee with VNPA councillors in attendance.

\$6-17 million on a second Mt Buller tourist road fits in with its priorities and budgets.

Over the past five years VNPA has searched for a rationale for the road and background information. After much effort, we still cannot find any of the following:

- a completed strategic plan for the destination of the Link Road, Mount Stirling.
- a business case
- records of public consultation or public support
- a request from any emergency service, including the Country Fire Authority, for a new road across the north face of Corn Hill
- a mountains or regional fire management plan which includes, or demands this Link Road
- any request, public support or skiability study relating to a new ‘nordic ski trail’, which the road is supposed to become in winter
- a visual impacts study
- any detailed geotechnical studies that clarify the risks of landslide, associated risks of loss of life, and the costs of construction.

The claim that the Link Road could be used for ‘fire access’ is absurd. It would take people from Mount Buller into the forests of Corn Hill and Mount Stirling, with no fire fighting or fire protection facilities. This is contrary to the ARMB’s own published bushfire procedure that says: ‘Avoid forested areas, thick bush or long dry grass’. In a

bushfire, the Link Road would be a potential death trap.

As a ‘nordic ski trail’ the Link Road is doomed because the entire road is on the sun-exposed northern slopes, and below the snowline, for most of the winter.

We believe that this proposal is a symptom of dysfunctional economic, planning and consultation issues. From 1998 to 2003, Mount Stirling lost about \$200,000 per year, and nowadays it is a drain on Buller finances. Stirling has the economic model of a national park, not an alpine resort.

The proposed Link Road is a ‘road to nowhere’, unless the ARMB intends to convert Mount Stirling into ‘somewhere’, perhaps a dormitory suburb of Mount Buller, thus creating a bonanza for property developers.

We should have had a completed Mount Stirling Strategic Plan and a business case years ago. ‘Let’s not get hung up about it’ is not an acceptable answer. • PW

Charles Street has been a keen cross country skier, bushwalker and a campaigner for the conservation of Mount Stirling for over 20 years. He was also a member of the Mount Buller and Mount Stirling Alpine Resort Management Board from 2004 to 2006. The VNPA’s Save Mount Stirling campaign has been supported by the talents and hard work of Environmental Justice Australia, The Mount Stirling Development Taskforce, Practical Ecology Pty. Ltd. and a small army of VNPA personnel and volunteers.

Grow West celebrates 10 years of community action



PHOTO: BOB REID

The 10th Annual Planting Day Committee – Alan Marks, Terese Dalman, David McKinnon, Emma Muir and Helena Lindorff – inspect the planting site on the Lakey's farm at Rowsley.

Grow West is in celebration mode.

In 2012 we planted our one-millionth tree, 2013 was the time to celebrate our tenth anniversary and 2014 was when we planted the one-millionth tree at the Yaloak Estate, a large farming property near Ballan.

This year Grow West is proud to celebrate 10 years of community action at the Annual Community Planting Day on Sunday 19 July. During those 10 years we have welcomed 1,800 volunteers who have planted an amazing 60,000 trees on 70 hectares of land.

'The Grow West team would like to thank all the volunteers who have helped us over the years,' said Grow West Project Coordinator, Helena Lindorff.

'It takes a big team of people to coordinate the event behind the scenes, as well as all those that ring up on a Sunday morning and come out to plant. Some years we have had lovely weather and others it's been a challenge to stay upright on the hill.'

Grow West is this year heading to John and Tristia Lakey's 105-hectare property in Rowsley, which they purchased in 2012. It is only 66 kilometres west of Melbourne and a stone's throw from Werribee Gorge State Park.

'We were in search of a property that needed some TLC and was also an ideal location to develop our farm business,' said John.

'With the support of Grow West and Melbourne Water in 2013-14, we planted more than 25,000 trees along the waterways, developed a series of strategic wind breaks and direct-seeded 22 hectares of hill country with endemic native species.'

John and Tristia's whole-farm approach to restore the non-arable areas of the property, fence out waterways and plant wind breaks will provide enormous benefits to the environment and the farm's productivity.

'Rabbits and weeds are our biggest battle. We began tackling them at a whole-farm scale and soon realised that a neighbourhood approach was required. With our neighbours on board, we are seeing a reduction in rabbit numbers and an increase in grass coverage, which in turn increases farm productivity,' said John.

'Our niece and her family have bought the farm next door and together we are running Saler cattle, Ryeland sheep and Boer goats that are being sold directly to Melbourne restaurants as sustainable meat.'

'Over time we plan to build on the block and develop a bed and breakfast so that people can appreciate the revegetation works and natural beauty of the valley,' said John.

Helena Lindorff is excited to organise the 10th Annual Community Planting Day on John and Tristia's property.

'It's been wonderful working with John, Tristia and their niece on environmental restoration works through the Grow West Biodiversity Incentives Program. Their enthusiasm and sheer determination to make a change has been an inspiration to all.'

'John and Tristia are extremely grateful to the volunteers who will set aside their Sunday to come and plant 5,000 native seedlings on their property,' said Helena.

Grow West are proud partners of VNPA and welcome members and their families to the 10th Annual Community Planting Day on Sunday 19 July from 9.30am–4.30pm. Lunch and refreshments will be provided. Registrations close 13th July. • PVV

For more information visit www.growwest.com.au.

Another big planting for Project Hindmarsh

Now in its 18th year, planning for Project Hindmarsh, the Hindmarsh Landcare Network's iconic planting event, is well under way.

The Project Hindmarsh planting weekend will be held on 14-16 August 2015, hosted out of Dimboola with the main planting site at Ben and Tim Inkster's property in Antwerp, on the banks of the Wimmera River.

This historic site was once occupied by the Mallee Eucalyptus Company and produced Emu brand oil from 1882 to 1905. The company was Australia's leading eucalyptus oil producer, using mallee plantations at Antwerp Station. In 1885 it merged with Bosisto's to form J. Bosisto and Co.



PHOTO: STEVE HEMPHILL

Landcare Facilitator Phil Falcke gives a hand to some young Project Hindmarsh planters.

Dimboola and surrounding district. It is planned that all planting will be completed on the Saturday with optional activities available on the Sunday.

A limited number of accommodation options are available and include camping on the Recreation Reserve – it will resemble a tent city when the planters converge on it – and a caravan park and the local motel.

This event is supported through generous donations from the ACE Radio Network, Handbury Family Trust, Luv A Duck, Lowan Foods, Victorian Landcare and Wimmera Catchment Management Authority. • PW

Registrations for Project Hindmarsh are to be made through the Hindmarsh Landcare Network website, www.hindmarshlandcare.org.au. Any enquiries can be made to hln@hindmarshlandcare.org.au or to Steve Hemphill, Local Landcare Facilitator on mobile: **0429 006 936**.

Weekend willow pull

'Rising levels of background noise threaten to make people oblivious to the uplifting sounds of birdsong, trickling water and trees rustling in the wind.'

These words from a recent edition of *The Guardian Weekly* remind me of an extended weekend of willow pulling on the Bogong High Plains in February. But instead of birdsong, we ignored the uplift from myriad sounds of insects.

It was on a Friday evening when, in dribs and drabs, 18 volunteers arrived at the YMCA in Howman's Gap.

The next morning we were introduced to our three VNPA 'rangers', Elaine, Wendy and Antony, who led our three groups during the 'working' day. We were taken in 4WD vehicles to three different locations, boggy areas of the high plains favoured by the willows.

Although easier to spot, the larger willows (up to a metre high) were definitely not easier to dislodge. After a small frisson of excitement, elicited by detection of one's prey, the hard work began.



PHOTO: CLODAGH NORWOOD

Willow weed-pullers at Howman's Gap on the Bogong High Plains.

The aim was to get as close to the main stem as possible, and whether from big or small willows, these stems can spread extensively underground. The technique used was to cut the main stem with secateurs and then quickly dab both cut ends with the Round-up we carried in small, sponge-topped bottles, a little like modern shoe-shine bottles. The most difficult specimens were dealt with by people working in pairs, prompting many a tête-à-tête.

The generally benign weather allowed stunning views from those beautiful alpine meadows across to Mt Bogong and further afield. There were still a good number of wildflowers, which

only the botanists among us could properly name, and included many yellow daisies and White Gentian.

The snow gums, which are regenerating after the large fires that ravaged the area in 2003, have kept their snow white trunks and branches. The mystical effect of these sublime natural sculptures was enhanced by the occasional descent of mist into Howmans Gap.

Rarely, I later reflected, does hard work and a sense of delight combine so well. • PW

Clodagh Norwood joined 17 other volunteers to pull willows at Howman's Gap under the watchful eye of John Stirling.

FERAL DEER ON THE RISE

ANDREW COX REPORTS
ON THE ENVIRONMENTAL
DAMAGE CAUSED BY
VICTORIA'S RAPIDLY
EXPANDING FERAL DEER
POPULATION.



PHOTO: STEVE MORVELL

A large male red deer in the Grampians.

Victorian farmers and wildlife are in for tough times – feral deer populations are flourishing and spreading.

It is the legacy of acclimatisation, which was enthusiastically supported in the 1800s by the likes of Victoria's governor and the editor of the state's major newspaper, and saw attempts to introduce exotic monkeys, birds, giraffes, other creatures – and deer – to Victoria. Thankfully, this fad has largely faded away but not the deer.

The political power of the hunting lobby has ensured that the rising population of deer is unmonitored, unchecked and officially unimportant. In the absence of monitoring, there are two trends that justify alarm.

There are more and more reports of deer affecting farmers (deer graze and browse crops, fruit trees and grassy paddocks meant for livestock, and destroy fences), causing car accidents, and impacting on important patches of bushland such as in the Dandenong Ranges.

Secondly, regular reports of the number of deer killed by hunters show that it has become much easier to kill them. For the most common deer in Victoria, Sambar, their numbers killed by hunters have gone from 8,500 in 2004 to 47,000 in 2014. In a decade, the number of Sambar killed annually has increased almost five-fold, while the number of hunters has increased only four-fold. These numbers suggest a population of at least several hundred thousand, perhaps more.

The Victorian Government admits that hunting is failing to control deer, saying it 'appears to have little noticeable effect on the success of the species', that Sambar have steadily extended their range into NSW and the ACT, and that their density is increasing. The numbers of fallow and red deer shot have also risen and exceed the rise in hunter numbers.

Sambar deer are already officially recognised as impacting on threatened plants with a listing as

a 'potentially threatening process' under Victoria's threatened species legislation. All deer are heavy grazers or browsers, reducing plant diversity and competing with other native animals. They cause physical damage through trampling, erosion and wallowing and spread weeds and diseases. Deer create extensive tracks through moist gullies, removing ground cover and assisting the movement of other feral animals.

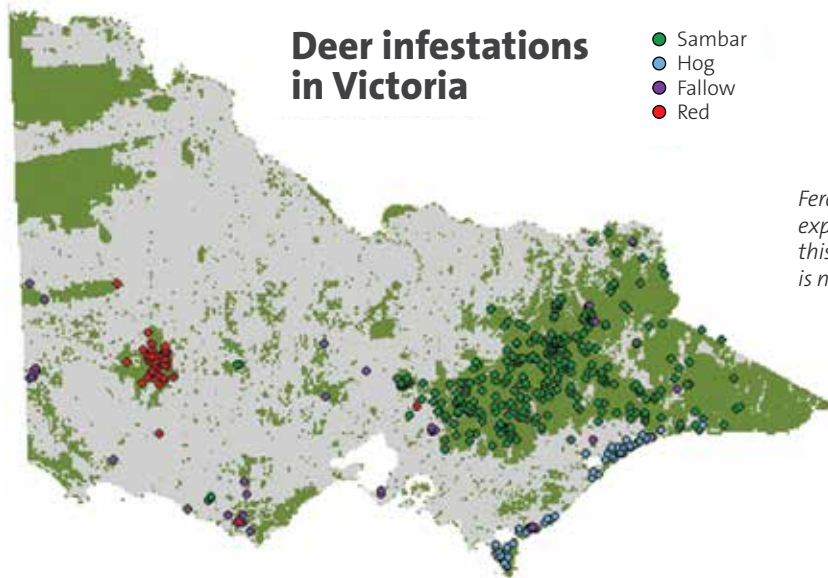
The Victorian Government has felt unable to act for fear of a hunting community backlash. But feral deer are not an either/or problem. Unfortunately, it is impossible to eradicate them so recreational hunters will always have deer to kill. By pandering mainly to hunters with a narrow policy agenda, the government is neglecting the environmental, economic and social costs of the growing feral deer population.

Treating deer as the problem pest they really are requires better laws and policies. The key role lies with the Victorian Government, for dealing



PHOTOS: STEVE MORVELL

The number of feral deer is increasing in The Grampians and many other parts of Victoria.



Deer infestations in Victoria

- Sambar
- Hog
- Fallow
- Red

Feral deer are widespread in Victoria and expanding their range, which means that this map, produced only a few years ago, is now in need of updating.

with an emerging pest requires a coordinated response.

There first needs to be public acceptance of the problem, facilitated by declaring feral deer as a pest species and removing their out-of-date protected game species status under the *Wildlife Act 1975*. Understanding of the problem would be assisted by a systematic assessment of deer populations across Victoria.

A feral deer management strategy is also needed and it should include a funded and systematic approach to preventing the spread of feral deer and reducing their impacts. Priority would be given to eradicating small isolated populations and lowering impacts on high conservation areas, minimising traffic accidents and limiting other damage. Greater controls are needed to prevent deer farm escapes and deliberate movement of deer by hunters, and there needs to be research on new control measures, including humane baits.

Recreational hunting will continue to be supported by government but it must not be mistaken for feral animal control. It is ad-hoc, dispersed and opportunistic, conducted by hunters with variable skill levels and often targeting trophy males. Restrictions such as bans on night hunting and the use of spotlights also limit its effectiveness.

Skilled volunteer shooters can still be helpful if engaged under supervision to assist with coordinated, strategic and supervised control efforts, as has recently begun in the Dandenong Ranges and Yellingbo areas, and used successfully for feral goats in the Little Desert National Park for some years.

Allowing widespread unsupervised hunting in national parks is not the answer, although it appears to be the real agenda of the hunting lobby – acclimatisation in another guise. • PW

Andrew Cox is CEO of the Invasive Species Council.

Ridding The Grampians of deer

Steve Morvell, wildlife artist, former park ranger and long-term Halls Gap resident, recently wrote to environment minister, Lisa Neville, about the deer problem facing the Grampians National Park:

'I am deeply concerned about ... the proliferation of feral deer in our beautiful park. ... Where 20-years back seeing one or two was unusual, herds of 25 are now not uncommon here in the Halls Gap valley. I myself have counted 56 individuals browsing peacefully within 600 metres of the Parks Vic offices and have on many occasions observed them grazing right outside the office windows there. Hardly a good advertisement for park management.'

VNPA says the Grampians is a perfect place to run a deer eradication program. While millions will be spent on a new tourist-friendly walking track through the Grampians National Park, the areas the visitors walk through are increasingly being damaged by red deer.

Rewriting Victoria's invasive species laws



PHOTO: WWW.FREEIMAGES.COM/MARCAERT

ANDREW COX ADVOCATES NEW LAWS TO COMBAT INVASIVE PESTS, WEEDS AND DISEASES IN VICTORIA.

Victoria's invasive species laws are set for a rewrite during 2015. This represents an important chance to stem the growing numbers of new pests, weeds and diseases entering and establishing in the State.

Of about 1,000 exotic plants established in native vegetation in Victoria, about 580 are known to threaten biodiversity, landscape or social values; on average seven new plants (mostly garden escapees) are established in the wild in Victoria each year.

At least a dozen invasive animals rate among Victoria's most serious threats such as foxes, cats, rabbits, deer, horses, ants and wasps.

The Invasive Species Control Bill, presented by the Coalition Government in its final legislative flurry at the end of 2014, was seriously lacking and thankfully failed to pass.

But while the bill would have provided broader powers, they were highly discretionary and would have allowed biosecurity protection to dwindle with the government's shrinking resources.

What is needed instead is legislative clout to implement the sensible goals and actions in Victoria's biosecurity strategy and invasive species policy framework.

There must be a commitment to prevention as the most cost-effective approach. One of the most widely regarded preventive measures for lowering the risk from new invasive species, a 'permitted list' approach, was also missing from the bill. Without this, nurseries and other plant sellers will be able to continue selling weedy plants that will eventually escape to become problems for land managers and costly for taxpayers. Western Australia has successfully used this system for many

years, leading to a low rate of new weeds.

Inexplicably, a late addition to the bill, absent in an earlier discussion paper, was a restriction that prevented game animals, such as deer and exotic game birds like Californian quail, from ever being declared a pest species. Native plants unnaturally spreading beyond their usual range, such as Sweet Pittosporum, were also excluded from the bill.

An important biosecurity reform missing from the draft legislation was a 'duty of care' obligation that requires everybody to avoid creating a biosecurity risk. This idea was recently implemented in Queensland and is now proposed for NSW. It aims to ensure that everybody behaves responsibly to minimise the establishment and spread of invasive species.

The environment must be at the centre of tackling the threat from invasive species. Traditionally, attention has focused predominantly on threats to agricultural production and economic interests. Victoria was one of the few state governments to allocate invasive species management to the Minister for the Environment and the environment department. In recent years, responsibility has reverted to the agriculture department. Labor has left these arrangements unchanged, but has given the reformed environment department responsibility for marine invasive pests.

Embedding biosecurity within agriculture can bring conflicts of interest and neglect of environmental priorities. The Victorian Government introduced and continues to actively promote tall wheat grass as a pastoral grass for saline areas. This is a highly invasive weed with the potential to

spread over more than half the state of Victoria, putting numerous threatened species at risk (being a listed threat under the *Fauna and Flora Guarantee Act*). Invasive species legislation needs a process to resolve such conflicts of interest between primary industries and environmental protection.

Currently the process for listing species for eradication, control or management is opaque and combines scientific risk assessment with political considerations. A superior model is to use an independent expert-based committee to make decisions on the risk or threat posed by different invasive species. The second-stage decision on the resulting actions needed to respond to the risk, and the public resources to be committed, would be made by government or the Minister.

If such a system were adopted, already introduced species would undergo a systematic risk assessment and categorisation to optimise management.

Best-practice measures also include the addition of ecologically sustainable development as a guiding principle, which includes the precautionary principle, conservation of biodiversity, intergenerational equity, valuation and pricing, and public participation.

The Invasive Species Control Bill is not all problematic. We praise its adoption of a tenure-blind approach, where responsibilities are the same regardless of tenure, public or private, and the extension of the legislation to cover invertebrates and aquatic invasives.

In a change to the way declarations will operate in Victoria, instead of listing a species at a catchment management authority area or statewide level, any useful boundary can be used. This is a good change.

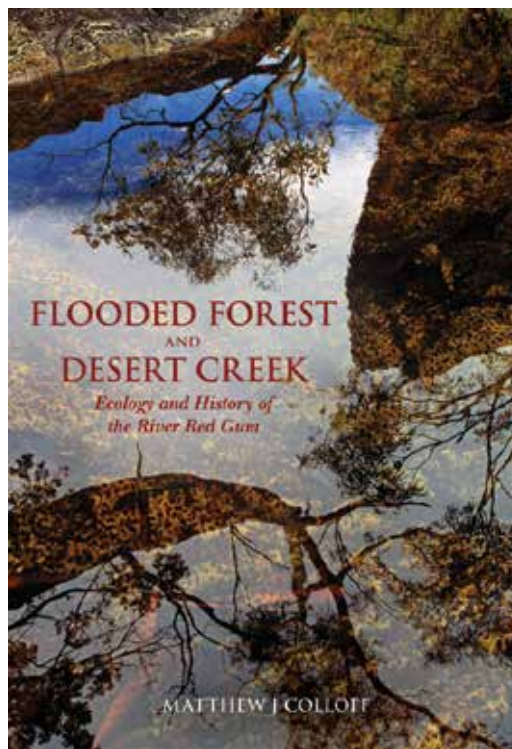
A biosecurity law can seem rather dry and abstract, and it won't incite street marches or protests, but this law could make a huge difference to the future of Victoria's wildlife and environmental health. The effects of past legal laxness are all too evident in this state, and we cannot afford for invasive species problems to keep growing at the current rate. • PW

Andrew Cox is CEO of the Invasive Species Council.

Flooded forest and desert creek:

Ecology and history of the River Red Gum

By Matthew Colloff,
CSIRO Publishing, 2014
Hardback, RRP \$69.95



The River Red Gum (*Eucalyptus camaldulensis*) is a remarkable tree. It is Australia's most widely distributed eucalypt and, where we humans have not caused its destruction, thrives along ephemeral and more permanent rivers and creeks and their flood plains.

Matthew Colloff, of CSIRO Ecosystem Sciences, is currently researching floodplain ecosystem function and biodiversity. He is interested in how ecosystems work, how they are changing, and how they can be managed.

In *Flooded forest and desert creek* he applies his research expertise to River Red Gum in floodplain and wetland ecosystems. He examines past impacts of climate, geography and people on the ecology of River Red Gum forests and woodlands, and ventures beyond science into history, economics, politics and the arts to create a fascinating multidimensional study of the River Red Gum.

The book is divided into three parts.

Part 1, 'The unfolding forest', covers the tree's evolution, distribution and taxonomy, its life history, growth and water use, and its ecosystem functions. Read how its scientific name comes from the Count of Camaldoli's European garden, and how the south-eastern Australian subspecies acts as an 'ecosystem engineer' in floodplain forests and woodlands.

Part 2, 'Forces of change', is about human exploitation of Murray-Darling

River Red Gum forests and woodlands – via fire, grazing, timber harvesting and river regulation (damming).

Part 3, 'From exploitation to conservation and multiple values', presents Indigenous and non-Indigenous ideas. Colloff traces the gradual shift from exploitation to conservation, including the concept of 'wise use' articulated in the Ramsar Convention on Wetlands. And he wonders whether climate change will convert floodplain wetlands into terrestrial communities.

Colloff sensibly focusses on two River Red Gum regions rich in records and stories – central and south-eastern Australia. The latter includes Victoria's Barmah Forest, about which Colloff writes quite a bit. He documents the unlikely Aboriginal burning of River Red Gum and their much more common burning of associated reed beds.

In pre-European times Moira-grass (sometimes called Spiny Mudgrass) was also commonly associated with River Red Gum. But grazing stock and rabbits have since wreaked havoc on this nutritious grass. Years after Barmah Forest was listed under the Ramsar Convention, a field experiment showed that Moira-grass, regenerating after a flood, survived only as long as it was protected from grazing and drought.

River Red Gum timber's durability attracted widespread forest destruction. The dense hardwood was sought to

construct wharfs, paddle steamers, mine shaft props, bridges, pavements, roads and railway sleepers. Periodic flooding is essential for healthy River Red Gum forests. River regulation can be damaging. In the Barmah Forest, flood frequency and intensity affect River Red Gum, Moira-grass and their interactions.

Colloff's involvement with River Red Gum began at Barmah Forest – when the Victorian Government was considering designating it and other River Red Gum areas national parks. As you may remember, the Brumby Labor Government established the Barmah and Gunbower national parks in 2010. However, before establishing the long linear Murray River Park from a string of reserves between and beyond Barmah and Gunbower, they lost the state election, and the incoming Coalition Government reversed the process of phasing out grazing licences and re-issued over 200.

Colloff enriches the narrative of *Flooded forest and desert creek* with maps, graphs, diagrams and recent and historical photographs.

I recommend this book to anyone interested in indigenous plants, national parks and landscape history, and I hope that you enjoy reading it as much as I have. • PW

Review by Linden Gillbank, School of Historical and Philosophical Studies, The University of Melbourne.

Land of sweeping plains:

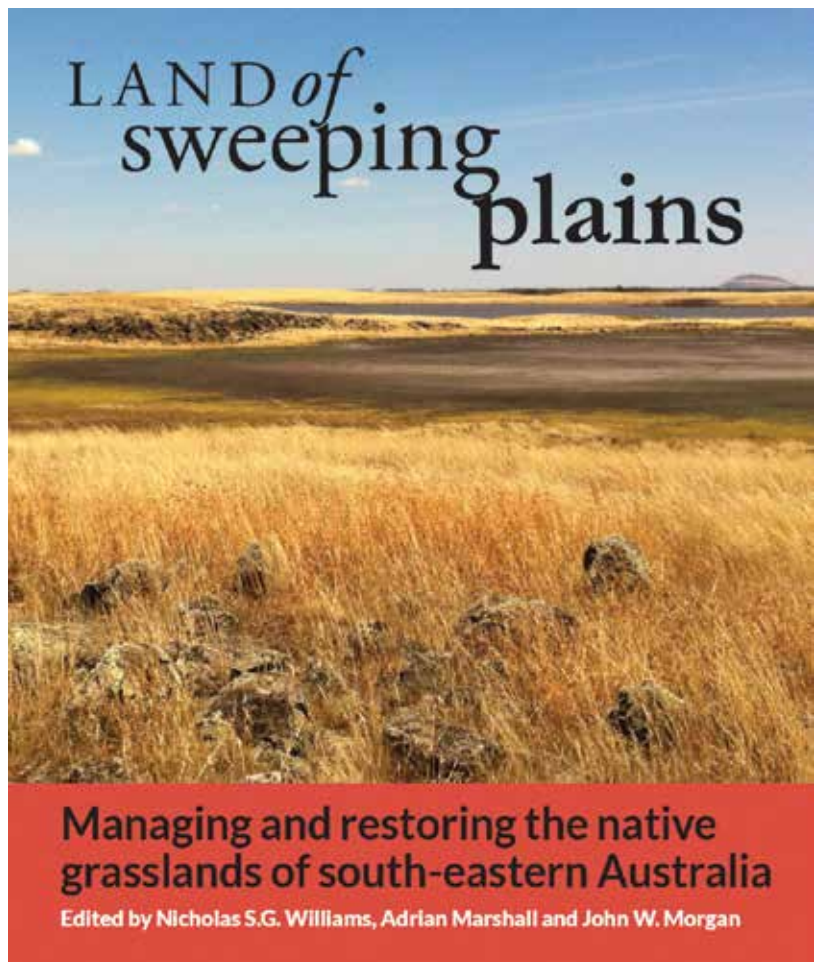
Managing and restoring the native grasslands of south-eastern Australia

Williams, N., Marshall, A.
and Morgan, J. (eds)
CSIRO Publishing, Paperback,
RRP \$59.95, 472 pages.

Lowland Grasslands are one of the most vulnerable ecosystems in Australia. They are also one of the most-studied and best understood. Because Europeans chose to settle and exploit the grassy plains, many grasslands are close to where our major urban centres developed. Many people interact with grasslands every day, and in many different ways.

This new book explores those interactions, and what they mean for the grasslands and for us. It is aimed at anyone who is passionate about grasslands, and would be valuable for managers, farmers, academics and enthusiasts in equal measure. The book includes chapters on basic grassland ecology, wildlife, management, restoration, monitoring techniques and their application, and a set of chapters that explore the many ways people interact with grasslands. The chapters with a social focus are particularly diverse, focussing on the roles of traditional Indigenous managers, farmers, urban residents, agency and contract managers, scientists, volunteers and 'friends', and the application of current environmental laws.

The book is bold in its embrace of both the ecological and social sciences, and its insistence that these two stories must be told together. Everyone has a place, and the picture painted of the grassland conservation movement is mostly positive, vibrant and inclusive. Every chapter is richly illustrated with photographs and charts, some from the



published literature, others showing new data brought together for this book. The authors of each chapter are experts in their fields, and their depth of knowledge and passion is always evident.

The text is interspersed with many double-page 'boxes' that look at particular places, people or species. These provide enjoyable detail and anecdote, and must have taken a great deal of research to compile. I enjoyed these immensely, my personal favourite being the reproduction of Jim Willis' hand-written letter pleading the case for the reservation of the Evans Street Grassland in Sunbury in 1984.

Another highlight is the series of boxes that describe the management of the Oddie's family farm at Chepstowe (south-west of Ballarat), with contributions from the landowner and several experts describing in detail the intricacies of grassland management in this single case. These boxes cover management philosophies, objectives-setting, management techniques, monitoring, collaboration with scientists, and interactions with the broader community.

The book contains very few errors, and none are serious. My main quibbles are that the order of the chapters seems slightly out-of-sequence to my mind, and I would have preferred an introduction that placed the grasslands to be dealt with in a clearer ecological and geographic context, before diving into the social aspects.

When I first picked up this book, I was concerned that the obvious focus on individual people and their opinions might make it parochial and cliquish, and perhaps render it more quickly out of date. On reflection, I think this is the major strength of the book. It screams out: 'This is what we all have, this is what we are doing right now, and we challenge you to do it better!'

The social and personal focus gives the book a sense of life and momentum.

I suspect the authors would love to confront a second edition in a few years time and find that a major overhaul is needed because the field has progressed so far. Here's hoping this book spurs some of that positive change. • PW

Review by Steve Sinclair, Plant Ecologist at the Arthur Rylah Institute for Environmental Research.

Origins of the grasslands book

Lowland temperate grasslands are among Australia's most poorly conserved ecosystems. Less than one per cent of their extent at the time of European settlement remains.

The continuing urban development in the western and northern suburbs of Melbourne has led to the recent creation of numerous grassland reserves managed by agencies and organisations with variable skills and experience. There the grasslands provide opportunities for the many people now living nearby to access high quality open space and to connect with their local landscape.

Greater community appreciation and understanding of our critically endangered native grasslands and their ecology, and an upgrading of management expertise, is key to their persistence.

To achieve this, the community and grassland managers need to be able to access authoritative information in an attractive format so they can identify and understand grasslands. To address this need, the Myer Foundation has funded three University of Melbourne grassland projects.

The first to be completed is *Land of sweeping plains*, the grasslands guide that Steve Sinclair has reviewed on the opposite page. The guide is intended to synthesise and present in an accessible and attractive format, vital information and latest technical research for use by all those involved in grassland restoration and management. Based on Steve's review, it looks like the editors and chapter authors have succeeded.

The other two projects are a new edition of the book, *Plains wandering*, which is a field guide to the flora of south-eastern Australia's grasslands, and a smartphone app with 'live' grasslands information.

Let the land speak:

A history of Australia – how the land created our nation

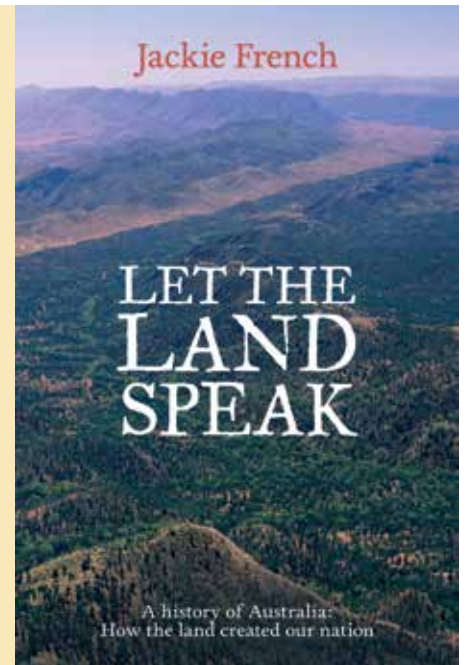
By Jackie French
Harper Collins, 2013, RRP \$45.00

From an evocative story about the first woman coming to our coast 60,000 years ago, to goat droppings that saved Captain Cook when the Endeavour was holed on the Barrier Reef, to predictions for the next 100 years, Jackie French has written a mighty tome in *Let the land speak*.

French is reinterpreting our history much as historian, Henry Reynolds, has helped us see a post-contact history that includes the Indigenous nations we invaded. This time it is a focus on the land itself and how it has shaped who we are today.

French has a very strong sense of place both at a local level and with our continent. For more than 40 years she has lived and worked in the Araluen Valley and the Deua River Wilderness Area southeast of Canberra. She's seen it change and evolve through droughts and floods, mines and settlements. It is a place she loves dearly, delights in its beauty and is keenly observant of its changes; it has provided the basis for many of her more than 100 books.

She also has a feminist perspective (though she may not call it that). It was refreshing and inclusive for me, as a woman, when she writes of the first families to come here – the first boat people – from the woman's point of view. It is a woman who describes the journey for her family, the children's needs in the boat when they are three days from land they left, seeing the first land-based birds and wondering what food will be available. While this is a fictional approach it makes this epic journey that we can never know, feel real.



She also argues that the role Indigenous women had in shaping the landscape, which included the digging of yams and the use of plantings as signposts for certain foods, is at least as important as fire-stick farming.

On a totally different tack (or is it?), who would think that pumpkin scones were worthy of any reflection. But French argues that you can tell a lot about our connection to the land from what we eat, what we cook and don't cook, and our 'iconic' food of damper, pumpkin scones, Anzac biscuits and lamingtons. History in an afternoon tea, says French.

Understand the history of pumpkins and you go some way towards understanding the history of land settlement in Australia, writes French. Pumpkins: would grow where no other familiar vegetables survived, from arid lands to tropics to Tasmania; could be cooked without ovens just in their own skin; would last; and took very little work.

'Plant a seed in the silt after a flood, go droving for six months and you'd find a crop when you came back.'

French is one of those people who can tell the big picture and illustrate it with a story, surely the art of the best historians. She is a modern polymath and renaissance person.

As for Cook's goat, why our first colony didn't starve, the bronzed Anzacs and how we almost won Eureka, you'll just have to read the book. • PW

Review by Karen Alexander, one of Australia's leading environmentalists.

Pipi harvesters dig a long trench to gather pipis at Venus Bay in December 2013.

Marine and coastal updates

When it announced new management arrangements for commercial pipi harvesting in Cape Liptrap and Discovery Bay coastal parks just days before the caretaker period last year, the then Napthine Government intensified community concerns about the future for pipis on Victoria's beaches.

Already under enormous pressure from recreational harvesting – from 1,000 to 2,000 harvesters can converge on the Venus Bay beaches during Christmas weekends – and amid signs that pipi numbers are in dramatic decline, the decision on commercial harvesting in the coastal parks was irresponsible.

Along with declining pipi stocks, the collateral impacts of pipi harvesting are damage to coastal dune habitats from recreational harvesters accessing the beach, the loss of food for shorebirds such as the pied oystercatcher, and the disturbance of beach-nesting birds like the endangered hooded plover.

Fisheries Victoria has poorly managed recreational pipi harvesting and has now increased the pressure on pipis by promoting commercial harvesting. The agency's claims that pipi harvesting is sustainable cannot be supported by the very limited science available.

VNPA believes that urgent action is required to resolve the environmental issues being caused by pipi harvesting and is urging the Victorian Government to:

- introduce a 12-month moratorium on commercial pipi harvesting in coastal parks
- close parts of the coastal parks to recreational harvesting to allow pipi recovery and assist scientific studies
- establish an ongoing science-based pipi monitoring program
- conduct a comprehensive assessment of the ecological sustainability of pipi harvesting
- review the appropriateness of pipi harvesting in coastal parks.

Super trawler killing seals and dolphins

After successfully seeing off the super trawler *FV Margiris*, marine campaigners are now faced with a new one, the Geelong-based *FV Geelong Star*.



PHOTO: FRIENDS OF VENUS BAY PENINSULA



This now represents a remarkable opportunity to include the Anglesea heathlands

Super trawlers have devastated fish stocks in other parts of the world, putting European commercial fishers out of business and sending artisanal fishers in Africa to the wall.

At 95 metres long, the *FV Geelong Star* is the largest trawler fishing in Australian waters and is targeting the Small Pelagics Fishery, which extends from southern Queensland to Western Australia.

Super trawlers are very efficient at catching and processing fish, but they also catch other species such as albatrosses, seals and dolphins. In fact, in its first two fishing trips in late April and early May, the *FV Geelong Star* killed eight dolphins and four fur seals. Federal Minister for the Environment, Greg Hunt, labelled the deaths as 'unacceptable and outrageous'.

VNPA joined with many other groups on a National Day of Action in April protesting the entry of the *FV Geelong Star* and any other super trawlers into Australia's fisheries and spoke at the Melbourne rally. To keep up to date on the issue you should go to www.stophetrawler.net

Protection of Anglesea heathlands a step closer

Campaigners advocating the closure of the Anglesea coalmine and power station were delighted with the announcement by Alcoa in May that both would be shut down.

in the Greater Otway National Park, rehabilitate the coal mine by potentially employing the 80 workers from the mine and power station, and reduce air pollution in Anglesea.

The existing open-cut mine was created by clearing 300 hectares of the Anglesea heathlands to fuel the power station which supplied energy to Alcoa's aluminium smelter at Pt Henry (it has already closed). The Alcoa lease of the area includes more than 7,000 hectares of the heathlands.

The Anglesea heathlands are listed on the Register of the National Estate for their biodiversity value, both in terms of the highly diverse flora and abundance of native wildlife. They contain more than 700 species of plants, including over 100 different orchid species, and are an ecological asset of international significance.

At the 2014 election, the Andrews Government committed to adding the heathlands to the national park. The Alcoa announcement clears the way for the government to deliver on that commitment.

Send an email to Premier Daniel Andrews and Minister for the Environment, Lisa Neville, urging them to follow through on their commitment. You can do this at <http://vnpa.org.au/eletter/please-protect-victoria%27s-precious-anglesea-heathlands> • PW

DOUG RALPH

A Tribute

10 JULY 1948 –
24 FEBRUARY 2015

**BERNARD SLATTERY, FROM CASTLEMAINE'S
FRIENDS OF THE BOX IRONBARK FORESTS,
REMEMBERS A MODEL CAMPAIGNER
FOR THE ENVIRONMENT.**



PHOTO: JOHN ELLIS

Central Victorians are mourning the death of one of the state's most respected environmental leaders, Doug Ralph, who died of a heart attack at his home in Castlemaine in March.

Doug was founding president of the Friends of the Box Ironbark Forests, and of the Connecting Country land restoration program, and was a founding member of the Bendigo branch of the Greens. He was celebrated for the influence he built through quiet, friendly conversation in street corner encounters rather than through speeches in public confrontations. A fifth-generation local, he seemed to know everyone around Castlemaine, but his easy manner also enabled him to establish connections with newcomers.

Doug's knowledge of the country from Mount Alexander to the Fryers Ranges and from Taradale to Mount Tarrengower was unequalled, and he was generous in sharing it. Hundreds of people learned of its secrets through his

monthly guided walks. He played a key role in the design and implementation of the first stage of the Great Dividing Trail, a walking track linking Bendigo and Ballarat. He was an unpaid consultant on ecology and cultural history to park rangers, university teachers and shire councillors. His was the number to ring about a snake caught in garden netting, the stability of a mine shaft, or the wisdom of a development proposal.

Although one-to-one conversation was his style, Doug was active in public forums, stood for Parliament four times, and participated in innumerable consultations on fire, planning and land management. He co-authored a local history, *Vagabond, the story of Charles Sanger*, created an environmental blog, *Central Victorian Ecology*, and ran a history program on local radio.

Doug was born in Castlemaine in 1948 and grew up in a miner's cottage near Chewton. He was a voracious researcher of local history, and dreamed of writing an environmental history

of the region. He was impatient with the glamorisation of gold, and appalled at the damage mining had done to the Victorian woodlands, which he observed slowly repairing themselves through natural regeneration, but was insatiably curious about the mining life. His father had been a miner, quarryman and forest worker, and he had enormous empathy for the lives people carved out on the goldfields. He had a unique ability to feel both sides of environmental debates, which made him in many ways a model campaigner for the environment.

A large crowd gathered at the Castlemaine Botanical Gardens on 7 March to honour this 'elder of the environment movement'. Three years ago Doug had been hit by a falling branch at these gardens. He'd been amused at the irony of a 'tree hugger' like himself being injured in this way, but did point out that it was an exotic tree. This time, at the height of the memorial proceedings, a large flock of Corellas wheeled twice about the gathering before flying into the distance. Doug would have liked that flock of birds. • PW

