

Submission into the effectiveness of threatened species and ecological communities protection in Australia

In responding to this senate inquiry I will draw upon my knowledge of a Victorian animal - Leadbeater's possum and its habitat. A well studied animal in a well studied habitat. My submission will delve into bigger picture threats to the habitat - namely the recent Black Saturday fires and continued extensive clearfell logging.

Firstly the listing of an endangered species is problematic - as the listing process can be very slow. However seemingly most problematic for this possum has been the inability of the recovery team (Note. this team being a legislative requirement - which should be an effective management tool) to make decisions to help the possum. In September of this year Professor David Lindenmayer out of frustration resigned from the recovery team - citing the current state government as 'environmentally bankrupt'.

Bridie Smith

[The Age](#), September 12, 2012

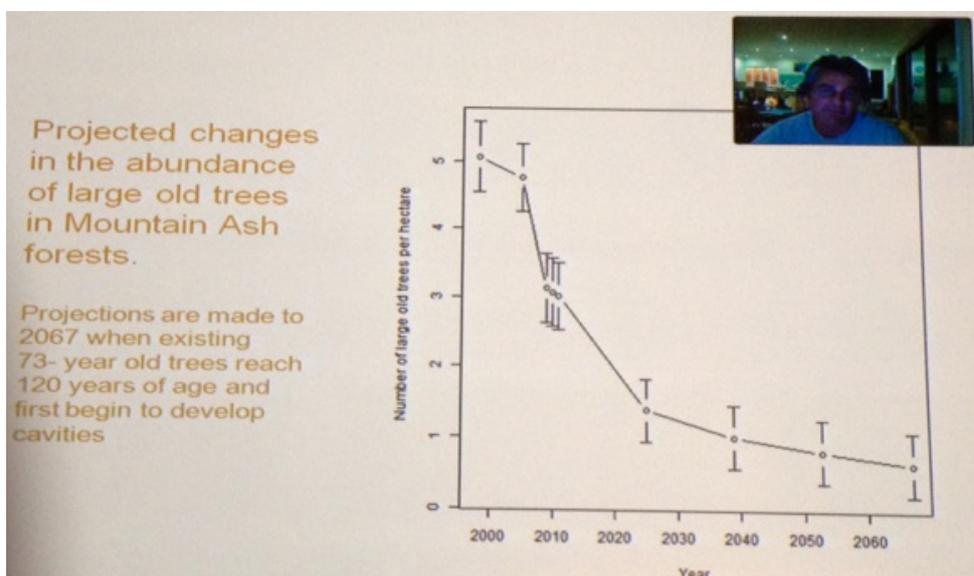
"David Lindenmayer, who has studied the possum for 30 years, said he could no longer work with "the most environmentally bankrupt administration" and would resign from the recovery team after more than a decade."

This animal therefore provides an excellent case study in the implementation of solutions for threatened species and an ecological community's protection.

Extinction likely in 30 years

For Leadbeater's Possum the threats posed to its small population warrant the status being ramped up to critically endangered, the last point before extinction. World renowned forest scientist Lindenmayer predicts the animal extinct in 30 years if we continue business as usual. Through his extensive peer reviewed research he has established there is 'a big tree crisis' across the Central highlands north east of Melbourne (recently published research paper). The numbers of large old trees available for forest animals needing hollow trees is plummeting.

Figure 1. The big tree crisis - a key threat to animal and its habitat



The area of 'old growth' forest across the Central Highlands is only 1.15% spread across 147 individual patches its very small (Lindenmayer's data), but it is the extensive clearfell logging across the forest landscape outside the old growth patches that is a direct threat to the recruitment of old trees.

Figure 2. Old growth versus regrowth forest

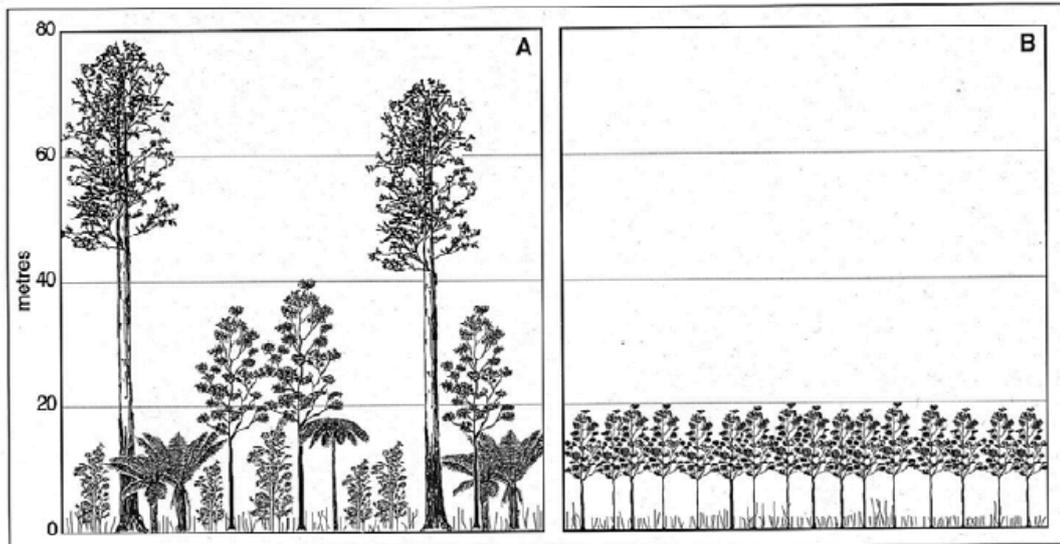


Figure 25: Comparison of forest structure (A) old growth and (B) regrowth mountain ash stands

The above image compares a complex biodiverse forest with that of a regrowth coupe. It is very important to note the understory in old growth forest contains plants that are often older than the canopy trees, plants like the critically important tree-ferns (two species), Musk daisy bush, and Tree Geebung. Research from Steve Mueck has established understory species can average 370 +/-70 years of age (Mueck, et.al., 1996) (vastly older than the pulp logs and sawlogs the pro logging argument is based upon), and notably treeferns are critically important in suppression of wildfire as they hold moisture in the understory.

Forest disturbance, a comparison between wildfire and clearfelling - treeferns

Clearfelling is not the same disturbance factor as a wildfire. Research from Mueck and Keely, (2004) established vastly different survival statistics for tree-ferns, they found **84% of treeferns are killed 1 year after clearfelling**, this number increases further following the regeneration burn and subsequent years. In comparison treeferns are visually the first plant to resprout following wildfire, capable of surviving quite severe fires.

Tree-ferns are significantly important to the resilience of the forest – they survive fire, and their quick resprouting protects vulnerable soil after the fire from heavy rainfall. The older growth biodiverse forest is less flammable.

Clearfell logging – leading to the homogenisation of the forest landscape

The following 3 photographs demonstrate the tragic careless management for old trees by VicForests, trees such as these are perhaps 300 plus years of age, tragically spared by the machinery in the clearfelling operation then killed by the regeneration burns, as demonstrated in the photos of fine twigs that held leaves

prior to the burns – biological legacies killed! No stewardship of the landscape here!

No longer protected by a community of trees (the former forest) from high wind these giant stags in effect are accelerated to the ground by wind and lightning strikes and no longer of use to arboreal animals for tree hollows. Unlike the numerous stags that have stood for 73 years since the 1939 fire – ‘Black Friday’, in the open these biological legacies are unlikely to last long at all.

Photos 1,2,3 Large old trees killed by regeneration burns following clearfelling – the homogenisation of a forested landscape





Extensive clearfelling of Central Highlands forest is essentially the homogenisation of a vast landscape from a mixed age biodiverse forest into one with a quick rotation for one tree species Mountain ash - largely for the production of paper pulp. Leadbeater's possum needs hollows that typically take 120 years to develop in mountain ash. However they need to compete with other forest animals for these hollows, as a result Leadbeater's often live in dead trees (known as stags) which would typically take 300 to 500 years to develop.

VicForests it would seem cannot be trusted... given the impending 'big tree crisis' stated by Professor Lindenmayer - it disgusts me to recall hearing a VicForests contractor's lack of care taken for stags while undertake clearfelling. He considered them a safety hazard, as they are likely to fall on a machine while working in the coupe and would therefore push them over.

[Leadbeater's & Regional Forest Agreement - Central Highlands 1998 27th March](#)

Following the Regional Forests Agreement of 1998 VicForests tell us that there is enough land set aside for Leadbeater's possum in the reserve system - the 'Special Protection Zones'. Lindenmayer's research finds there is a big tree crisis regardless of special protection zones. Besides around half of the special protection zones set aside for Leadbeater's possum were burnt by the 2009 fires. The reserve system set up following the Regional Forest Agreement is an outdated management system. Let us move with the latest science - the extinction clock is running for this species.

Black Saturday fires

The following map **Figure 3** to me very strongly communicates the story of Toolangi forest – it is a survivor! A small patch of forest survived the fire unburnt between the two Black Saturday fires (the Kilmore fire to the west, and the Murrindindi fire to the east of Toolangi forest – locals refer to this unburnt forest refuge as ‘The hole in the donut’.

Figure 3. Black Saturday - Kilmore and Murrindindi fires



Critical for a refuge, to my amazement and disgust VicForest have actually stepped up the clearfelling of the unburnt survivor, all three log coupes subject to *MyEnvironment's* Appeal are within this unburnt patch.

These three coupes and many others on the current TRP (Timber Release Plan) for Central Highland forest are high conservation forest. These clearfell coupes are approved under the Australian Forestry Standard (AFS) – totally unacceptable! Around 85% of the timber sourced from our public forests goes into producing paper, a Japanese owned timber mill profiting from our public forests. Total madness that large bluegum plantations in Victoria's west are not being used to supply paper mills.

Leadbeater's possum in 2009 lost 45% of its habitat in the Black Saturday fires, and since the fires has not been recorded in any burnt habitat. **Land managers need to show adaptive management if managing for an endangered species following such a large wildfire.**

My involvement in the forest's future

It has become obvious to me forest being clearfelled in the Central Highlands is not simply 'regrowth forest', '1939 regrowth' or plantation forest. I have personally walked through the forest in all three coupes subject to the Victorian Supreme court appeal process the *MyEnvironment vs. VicForests* case.

I have measured trees in each of these three coupes. All three log coupes contain large parts of high conservation value forest, the following photo is an example of a large living hollow tree from the Gunbarrel coupe: -

Photo 4. Old yet living tree in the Gunbarrel coupe, Toolangi forest



Leadbeater's possum is recorded on the DSE's own record system in the same forest very close by (within 200m of coupes) and considering this unique animal was thought to be extinct for 50 years the precautionary principle would have VicForests slow the 'harvest' of the forest largely for paper pulp.

I have come relatively new to the forest dispute, and the people I have met involved in the campaign to stop logging of Toolangi forest's high conservation forest are not radical extremists. They are a mix of local business folk and entirely reasonable concerned locals.

During fieldwork for my Honours year in Geography (Melbourne University) this year and during the last three years as a keen observer of the natural world living a short drive from Toolangi forest. Hence I have left the dirt roads and walked the forest extensively.

Leadbeater's Possum – the canary in a coal mine

This forest is our future! The critically endangered Leadbeater's possum is the canary in the coalmine!

This forest is watershed for Victoria's Goulburn and Yarra Rivers. Growing trees in a clearfelled coupe take more than 100 years before this land returns water to the rivers.

The forest is a biodiverse wonderland and more threatened than Tasmanian forests. Only Victoria has the Leadbeater's possum. And Cool Temperate Rainforest is highly restricted in its distribution in contrast to Tasmania.

The forest is one very powerful carbon sequestration asset! The wet forests of the Central Highlands are the most carbon dense forest in the world. This public

asset could earn Billions of dollars in carbon offsets if we let the forest grow. Heather Keith from the Australian National University's Fenner school has established this with a paper published in 2009.

Pro logging folk say 'the forest grows back following clearfell logging', the problem here lies with their definition of 'forest'.

If the forest is summed up by the regrowth of just two species of trees? Wattles and Eucalypts? Then this can hardly be called 'forest'. A forest is a rich biodiverse vegetation community resiliently able to cope with disease and climate change far better than simpler regrowth forest.

VicForests has shown no flexibility / adaptive management following 2009 Black Saturday fires toward the management of Leadbeater's possum.

Victoria's mighty forest – a future?

The Western Australian town of Denmark is home to the tall tree walk and is 440km or a five-hour drive from Perth. Our giant trees are within two hours of Melbourne.

Why is Victoria not proud of the world's tallest flowering plant? If Western Australia can champion their tall trees why can't we? Our grandchildren could witness Leadbeater's possum and 100m plus trees if we could only let them grow.

Responsibility – who is accountable?

If the animal becomes extinct it will not be a surprise. Who is responsible for pulling together protection measures for this iconic animal? A unique animal – a small possum that calls the world's tallest hardwood forest home. We need action on this – Leadbeater's possum is the perfect test case. Let's get Professor David Lindenmayer back on board the recovery team and implement significant management decisions through the recovery plan.

References

Mueck and Ough, (2004) Decline in tree-fern abundance after clearfell harvesting. *Forest Ecology and Management*.

Mueck, Ough, and Banks (1996) How old are wet forest understories? *Australian Journal of Ecology* 21, 345-348