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The next extinction won't be an accident. It will be a political choice

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The collapse of Victoria's lowland Leadbeater's Possum population is a warning. Chronic underfunding and forest policies that disregard scientific evidence put more native species at risk.

The past few weeks have seen the extinction in the wild of the lowland population of the critically endangered Leadbeater's Possum – one of Victoria's faunal emblems. The population had unique genes not found in other populations of the species. We can add this latest environmental catastrophe to the long list of extinctions in Australia. Indeed, since British colonisation, Australia has lost so many native mammals that it leads the world in mammal extinctions. More than 30 species of native mammals that used to occur nowhere else on the planet are now gone. To give some perspective, mainland USA (which is roughly the same size as Australia) has experienced just one mammal extinction.

The extinction in the wild of the lowland population of Leadbeater's Possum is a reflection of many failures at many levels. And it comes at a time when governments have promised there would be no more extinctions on their watch. Several factors have contributed to this broken promise to safeguard Australia's unique natural heritage – under-resourcing and evidence-free environmental policies are two of the key ones.

The conservation of biodiversity and management of the nation's environment is chronically under-resourced. Just 0.3 per cent of Australian government expenditure is directed towards conservation and management of resources. Current expenditure is less than 10 per cent of what is actually needed to prevent yet more extinctions in this country. Similarly, there has been a dramatic decline in environmental spending in Victoria over the past few years, despite it being Australia's most cleared state and in urgent need of conservation actions.

The extinction of the lowland population of Leadbeater's Possum in the wild is emblematic of what happens when insufficient resources are dedicated to effective conservation. But it also magnifies concerns about the potential loss of the primary remaining (highland) population of the Leadbeater's Possum that occur in Victoria's tall, wet forests.

Our long-term studies have indicated that levels of site occupancy by Leadbeater's Possum in tall, wet forests have declined by more than 50 per cent in the past 25 years. This decline is due to the effects of wildfires, which burn significantly more severely in forests with a history of past logging. In addition, there is a direct effect of past logging operations on Leadbeater's Possum. Logging makes large areas of forest unsuitable as habitat for decades and potentially centuries. This is due, in part, to its effects on the greatly accelerated loss of large old trees on which the species depends for nesting and denning. We have documented key links between declines of animals and declines in large old trees. Yet the Victorian government has recently deliberately cut down more than 880 large old trees as part of constructing so-called firebreaks – a management action for which there is only very limited evidence (at best) of its effectiveness.

A series of robust empirical scientific studies have demonstrated unequivocally that forest protection is critical for the conservation of not only Leadbeater's Possum but a whole suite of other forest-dependent species (such as the Southern Greater Glider). Data from around the world clearly show that large amounts of biodiversity persists today because of national parks and other protected areas; for example, reserves are credited with preventing the extinction of approximately 25 per cent of the world's birds. The key role of protected areas in biodiversity conservation, including the conservation of Leadbeater's Possum, is one of the reasons why I (and many other conservation scientists) have repeatedly made the case for the establishment of a Great Forest National Park.

Yet, conservation and environmental policies in Victoria have been blind to scientific and economic evidence. Indeed, all sides of politics in Victoria are on notice for their poor policies on the environment and conservation. The current state Labor government promised to deliver a Great Forest National Park, and in their 12 years in office to date, not only broke that promise but also dismantled the independent body that operated for 45 years and which explicitly recommended the creation of a Great Forest National Park.

The Coalition and One Nation plan to reinstate native forest logging, a form of forest disturbance with well-documented long-term negative effects on Leadbeater's Possum (and many other species). Their plans for widespread thinning across 5,000 ha of forest every year will badly damage the integrity of understorey vegetation which is a critical component of the habitat for Leadbeater's Possum. Such 'ecological thinning' will not only result in habitat removal, it will also add to fire risks, which are in turn bad for biodiversity. In fact, thinning has nothing to do with conservation or fire mitigation – it's a form of logging and all about the production of timber.

In this context of current evidence-free policies in Victoria, more extinctions of species will be inevitable. That should be a legacy that no political party, irrespective of colour or persuasion, should aspire to. Conversely, there is ample scientific evidence on what needs to be done to protect forests and conserve threatened forest-dependent biodiversity.

Ignore the evidence and the next extinction will not be an accident. It will be a political choice.

The views expressed in this article may or may not reflect those of Pearls and Irritations.

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Professor David Lindenmayer is a distinguished Australian scientist and academic, specialising in landscape ecology, conservation, and biodiversity. His research focuses on integrating nature conservation with agricultural production, improving biodiversity conservation in forestry and plantations, and enhancing fire management practices. With over 1000 peer-reviewed papers and 50 books, David is one of the most published ecologists globally. He leads large-scale, long-term research programs in south-eastern Australia. A Fellow of the Australian Academy of Science, he has received numerous prestigious awards, including the ESA Whittaker Award, multiple Eureka Prizes, and the Australian Natural History Medal.

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