



THE NEW CONSERVATION STEWARDS

As Australia's biodiversity faces the double pressures of a changing climate and higher levels of human encroachment, disjoint national parks and reserves simply won't provide enough refuge. **James Woodford** reports on the vital role that private landholders are playing in national conservation plans, and how their efforts might be rewarded.



Biodiversity 'corridors': Gondwana Link, WA, and 'Alps to Atherton' on the east coast.

One of the more common but remarkable Australian animals is the greater glider – a spectacular marsupial with a body the size of a cat, weighing as much as 1.7 kilograms and able to glide up to 100 metres. It is regarded as locally common in a vast band of the east coast of Australia from Mossman, in Queensland, to Daylesford, in Victoria. To watch one of these creatures sailing between tall eucalypts, silhouetted against the night sky, is one of the most glorious nocturnal sights of the Australian bush.

But recently the New South Wales State Government-appointed Scientific Committee made an extraordinary decision: it has listed one group of this presently, relatively common species as an endangered population. It is a decision that highlights how conservation outside national parks is to be a new front in the challenge to secure the nation's biodiversity.

It is also one of the best recent examples of how important conservation on private land is going to be for even those animals we take for granted, let alone endangered species.

Above: Reserve managers Owen Whitaker and Lauren Van Dyke standing on the grassy plateau at Bush Heritage Australia's Scottsdale Reserve, indicating the path for a habitat corridor. Paul Evans

Only 10 per cent of the continent is in conservation reserves. This means that in the face of growing evidence of climate change, ongoing broad-scale land degradation and population growth it is no longer possible to rely on conservation reserves alone.

In his new book *On Borrowed Time* (CSIRO Publishing and Penguin), Australian National University's David Lindenmayer says parks do not protect all of our nation's biodiversity.

'One reason for the failure of our reserves to be comprehensive, adequate and representative is that the area of private land ... is nearly three times larger than that of public land,' Lindenmayer says.

Also, Ian Pulsford, the senior NSW government official in charge of establishing a 2800 kilometre wildlife corridor from Victoria to Queensland, says: 'Park boundaries are pretty meaningless in climate change and evolutionary terms.'

But up against a thousand years of English property law, strong rural and development lobbies, where do wildlife managers start to protect habitat on private land?

All three of the existing major mechanisms – volunteer protection by environmentally minded landowners, regulation and incentives – have their limits. And across Australia these mechanisms are currently undergoing a major overhaul. Giant, continental-scale wildlife corridors are being planned and created, and land stewardship programs are being introduced.

Supporting environmental stewards

In May the federal government announced the \$50 million Environmental Stewardship Programme for landholders to be paid to protect environmentally valuable areas, initially targeting some of the continent's most endangered ecosystems. These are known officially as areas of 'National Environmental Significance.' The initial funding covers the first four years of a potential 15-year program.

'Land managers will compete on the environmental importance of their proposal, the services to protect the asset, duration of expected benefits and cost,' says a federal government briefing paper. 'They will therefore determine their own costs as part of their competitive bid.'

The program won't pay land managers to meet their standard regulatory responsibilities but rather encourages proactive preservation of nationally endangered or vulnerable species and ecological communities, migratory species and wetlands for which Australia has international obligations and natural values associated with world and national heritage.

The first area of significance under the program is the Box-Gum Grassy Woodland – a critically endangered ecological community.

The Box-Gum Grassy Woodland covers about 405 000 ha through the wheat and sheep belt of Queensland, New South Wales and Victoria and may have about 16 000 land managers within its distribution. It occurs as remnants of varying quality on productive agricultural land and has been reduced to less than 5 per cent of its original extent – much of it needs urgent work. These areas are important habitats for a wide range of plants and animals, including at least 19 rare and threatened species such as superb



The greater glider is common in Australia but faces habitat threats.

Esther Beaton Wild Pictures

Noongar representatives plant seeds at the Gondwana Link celebration of the purchase of Peniup, Monjebup and Yarabee reserves in April 2007. Deborah Badger



parrots, regent honeyeaters and squirrel gliders.'

The real difficulty with this program will be enforcement and monitoring. Implementation arrangements are still being worked out and, based on other stewardship programs run by state governments, are still considered the weakness of land stewardship programs.

In a statement released after the government announced the program, the Australian Conservation Foundation, WWF-Australia and The Wilderness Society said taxpayers need to know that they're getting value for money, 'That they're not paying anyone to do what should be done anyway and that the best available science is being used to target environmental action. Incentives must result in proactive biodiversity conservation on private land, not end up as another production subsidy.' That is the aim.

Manning new relief corridors

Meanwhile the newly listed population of greater gliders is in an area of rapid development within the Eurobodalla Shire, near Moruya on the NSW South Coast, ringed by an impassable moat. The ocean is to their east, the Princes Highway and large tracts of farmland to their west, and estuaries block migration to their north and south.

Almost every week another huge hole is punched into the forest, by the clearing of 'unproductive' rural land for subdivisions. The land may never have been any good for agriculture but it supports a suite of magnificent creatures, including greater gliders.

The listing will force Eurobodalla Shire Council and the state's Department of Environment and Climate Change to draw up plans to try to recover the species. Development applications will likely have to take into account the retention by private landholders of the large gum trees the species depends upon.

Like the greater gliders, more and more native creatures are going to find themselves stranded on islands of habitat – an archipelago of biodiversity, where species are extremely vulnerable to local ecological events and inbreeding. The job of wildlife managers will increasingly revolve around keeping these populations alive until their isolation on private land can be broken.

The difference between the nation having an archipelago of separated conservation reserves and a connected system of land, where biological systems can have a chance of surviving in the long term, depends on getting landholders more involved in better managing their properties for environmental outcomes.

The good news for the Eurobodalla gliders is that the NSW Government, in partnership with groups such as Bush Heritage Australia and Greening Australia, has recently announced it is embarking on the creation of a 2800-kilometre-long biodiversity corridor stretching from the Alps in Victoria to Atherton in Queensland. One of the main 'tributaries' that will flow into this vast corridor is called Kosciusko to the Coast – when complete it will be a highway for wildlife stretching from the ocean, near Moruya, to the top of Australia. Private land will be critical if the corridor is to secure the long-term future of the greater gliders and other species.

Ian Pulsford, Connectivity Manager with the NSW Department of Conservation and Climate Change, is possibly the first government official charged with the responsibility for connectivity conservation across an entire state. He is heading up the team behind the 'Alps



to Atherton' corridor and says every type of conservation mechanism on private land will be used to try to get the project running and to help handle the conservation determination now needed on a national scale.

Voluntary Conservation Agreements, whereby landholders protect special parts of their property in perpetuity, are the highest and most guaranteed form of protection, but there is also biobanking – under which developers pay landholders with high conservation value land to protect areas as compensation for biodiversity loss arising from development – and regulatory frameworks, such as new native vegetation protection laws.

Pulsford says connectivity gives conservation on private land a greater purpose.

'We don't just want postage stamps,' he says. 'One of the problems we have had is that in the past we have collected hundreds of thousands of little specks on the landscape.'

'Often it's going to be about knocking on doors and contacting the people who love their properties, love their wildlife and the bush but haven't even thought about something like this.'

A similar but more community driven example of a large-scale corridor is Western Australia's Gondwana Link,¹ which joins the Stirling Range and the Fitzgerald River national parks, in the south-west of that state, again, joining isolated tracts of remnant habitat across both private and crown holdings.

Professor of Environmental Science at the Australian National University, Brendan Mackey, says the nation is experiencing an 'extinction crisis'.

'We can't turn the continent into a national park,' Mackey says. But, he emphasises that, where it is possible, joining up patches of bush on private land makes a big difference and programs like Alps to Atherton and Gondwana Link are crucial.

In a recent paper he wrote: 'Landscape-wide planning and management is needed to better

A view over the cleared expanse of Scottsdale Reserve, a former private property recently purchased by Bush Heritage Australia, and one of a number of properties involved in a biodiversity corridor project.

John Reid



View of the Proteaceous Heath Candle Banksia on Yarrabee Reserve with a view of the Stirling Range.

Jiri Lochman/Lochman Transparencies

buffer and link existing protected areas through mechanisms such as creation of protected areas over important intact linkages, whether as national parks or conservation covenants on private land, changes to land management such as through leasehold conditions, or allowing regrowth of native vegetation. In this way, biological permeability can be enhanced at scales commensurate with the likely impacts of global warming.'

Successful trials

CSIRO Sustainable Ecosystems' Dr Stefan Hajkowicz points to a program that he and his colleagues have run in conjunction with Queensland Environment Protection Authority as one extremely effective way of protecting conservation values on private land. In March this year, the project asked landowners to tender for payments to protect natural and indigenous cultural values. Twenty-five indicators were used to assess 95 proposed sites. Some of the tenders were for as low as 36 cents a hectare and others as high as \$6300 per hectare.

Altogether 70 of the proposed areas were funded. For \$2.3 million, 138 000 hectares of privately owned land is now being managed for conservation.

'In terms of bang for buck, this is excellent,' Hajkowicz says. In fact, if the \$2 billion available to the Commonwealth's Natural Heritage Trust had been employed in such a scheme, Hajkowicz says, theoretically 78 per cent of Queensland could have been purchased outright.

'If Australia wants to achieve these landscape services we are going to have to pay for them. Then farmers will have an income stream alongside commodities.'

Hajkowicz acknowledges that one weak point in the scheme as it currently stands is monitoring and evaluation. But, he says, by borrowing from the lessons learned overseas it will be increasingly difficult for landholders to avoid their obligations. The other advantage of such a system is that once a breach is detected payments can simply be withheld.

A similar scheme has been developed for Tasmania, called the Tamar Sustainability Index. Once again, farmers and landholders will be asked to tender for funds in return for environmental services that benefit the whole community.

It will be different to the Queensland case, though, as it looks at issues broader than biodiversity and cultural heritage.

Environmental stewardship services can include activities such as improved water quality, removal of weeds and pest animals, enhancing biodiversity, land rehabilitation and maintaining long-term soil productivity for future generations.

Hajkowicz sums up his goal simply: 'As a taxpayer I want to see species like the cassowary not go extinct, and the Great Barrier Reef not go under a pall of sediments. I want to see results.'

More information:

National Environmental Stewardship Programme, www.nrm.gov.au/funding/esp.html

Alps to Atherton Conservation Corridor program, www.murrumbidgeelandcare.asn.au/node/184

Gondwana Link, <http://www.gondwanalink.org/>

¹ de Blas A (2007). Reconnecting country at a landscape scale. *Ecos* 136, 4. <http://www.publish.csiro.au/paper/EC136p4.htm>