REVEGETATION

GONDWANA LINK – ECOLOGICAL RESTORATION AT THE SCALE THIS COUNTRY NEEDS

Keith Bradby

I reckon it's been a great couple of decades. In the late 1970s, when I started getting involved in 'matters bush', the WA State Government still actively encouraged widespread clearing. Hundreds of thousands of hectares were being pushed over every year.

Now, not only do thousands of landholders actively protect and manage their bushland, but we have also seen the emergence of significant government based support programs, such as *Land for Wildlife.*

The Australian Bush Heritage Fund's Cherininup Creek reserve, with revegetation area in foreground. Photo: Amanda Keesing.

While it's been a long journey, it's not over yet. I am proud of the contribution I have been able to make to this era of great change, but hanging over this pride are a few 'curly questions', which I first bumped into in the very early 1980s.

Reservation is not preservation

In 1979 Steve Hopper published a wonderful journal article on the evolution of the south-west flora - the first of a number of papers Steve has written on that intriguing question 'why is the biota of the flat and dry south-west so rich?' The answer, it seems, lies in a complex interplay between the stresses of fluctuating climates across the 'transition zone' (between the wet forests and the arid interior) and the complex mosaic of soil 'islands' we have in the south west.

The work of Steve and others is opening a wonderful window on the rampant evolutionary forces we have swirling around us in south-western Australia. When I first read Steve's paper I was living at Ravensthorpe and my evolutionary knowledge was not much more than a basic understanding, thanks to Charles Darwin, of how the different finch species of the different islands of Galapagos had evolved. I suddenly realised I was living in some form of 'inland Galapagos' with islands of soils surrounded by a 'sea' made up of other soil islands, all supporting different plant species and providing different wildlife habitats. The ongoing patterns of evolution around me became very visible, such as the way *Grevillea macrostylis* becomes *Grevillea tripartita* in a 50 kilometre range across the middle of Fitzgerald River National Park. Or the way a sequence of seemingly similar, 'yet different', eucalypts I was unable to find scientific names for, were just part of the same ongoing evolutionary processes that Darwin's finches represented.

Steve's work also left me with a much bigger question: in an area where we were unable to even properly conserve distinct species and communities, what hope did we have of conserving the evolutionary processes clearly vital to continued ecological health?

In 1980 the WA Museum published results from its biological survey of the WA wheatbelt. This was a time when ecologists were coming to terms with "island biogeography" theories, which suggested limits to the number of species that would survive in any isolated piece of bush. For mammals the Museum scientists came to the grim conclusion that '40,000ha approximates the area of nature reserve likely to conserve that part of the regional assemblage of mammals in southern Western Australia liable to persist in the face of moderate disturbance by man and his agencies'. For birds the conclusion was even grimmer: 'Reserves of the order of 30-94,000 ha are required to conserve most of the avifauna of the wheatbelt'. While I am sure there has been lots of scientific quibbling about these numbers, I remain deeply disturbed by even the vague possibility that, across the entire wheatbelt, only the Lake Magenta Nature Reserve seems large enough to be in the long term race.

My concerns deepened in 1982 when I attended an Arid Lands Conservation conference in Broken Hill, and met a scientist called Earl Saxon. Earl presented a paper which compared the system of social apartheid, then in place in South Africa, with what he called the 'environmental apartheid' represented by the Australian nature reserve system. In his view this system had predictable consequences: 'the few biological communities which have designated reserves have no rights outside those reserves. Those reserves are physically inadequate for the officially designated purpose. Environmental apartheid gives the illusion of moral rectitude, but literally sows the seeds of ecological revolution'.

Think about this next time you fly over the wheatbelt, and look down on the boundaries of the reserve system and, despite all our efforts, the still largely ecologically inhospitable farming landscape that surrounds them.

REVEGETATION

Then ponder the level of protection and management those reserves need, as opposed to what they receive. As Earl foresaw in 1982: 'If the network of reserves is to be our life support system, it would be fatal to design reserves which are dependant on our economy for survival. Management inputs must serve the goal of making the system less dependent on further investment'.

We are now starting to see the place for whole landscape conservation, adding to the public reserve system with private reserves, such as those managed by *Land for Wildlife* members, and recognizing the threat that forces such as salinity pose to the 'protected areas'. But these 'curly questions' still hang over all our work and all our hopes.

In addition, we now know that our biota is even richer than we thought at the time, with the wonderful work of Steve Hopper, Greg Keighery, Mark Harvey and others continually underlining that. And we get constant confirmation that, even without further clearing, biodiversity richness is continuing to decline. Scientists like Harry Recher and Denis Saunders have become chillingly prophetic in their statements that we are in the process of losing 50 per cent of bird species from most agricultural areas, with the losses peaking within the next 30-40 years.

I do not want to live in such an impoverished place.

Confronting the 'curly questions'

It's always good to confront the issues that concern you most. So, in August 2002, I was delighted to be appointed as Coordinator of the Gondwana Link project, a partnership focused on restoring fundamental ecological processes across a broad swathe of south-western Australia. We are moving beyond a single-minded focus on saving a small selection of rare species or specific areas. Our vision is: *reconnected country in south-western Australia, from Kalgoorlie to the karri, in which ecosystem function and biodiversity are restored and maintained.*

Five groups currently make up the Gondwana Link partnership: the Wilderness Society, Friends of Fitzgerald River National Park, Fitzgerald Biosphere Group, Greening Australia and the Australian Bush Heritage Fund. It's an interesting collection of groups, drawing together the wide spectrum of environmentalism in Australia, from on-ground landcare work to national advocacy for fundamental policy change. We also work closely with some international groups, particularly The Nature Conservancy from the USA, and with the south coast's regional natural resources group, SCRIPT.

While our vision is a large one, our initial focus seems readily achievable. It's only 76 kilometers between the Fitzgerald River and Stirling Range National Parks, and significant parts of this gap are still under bush, either in nature reserves or in large remnants on private property. Since 1998 there has been a large corridor project operating through the Pallinup-North Stirlings landcare group, to protect waterway vegetation and replant strategic small

Eddy (left) and Donna Wajon (second from right) with friends on the massive task of revegetating parts of Gondwana Link. Photo: Craig Keesing.

links between bushland areas. With support from the Jerramungup-based Fitzgerald Biosphere Group, a number of farmers have undertaken significant change in their farming practices, with a view to becoming much more sustainable and reducing the ecological damage that flows from their property. Many of the smaller areas of private bushland are already fenced and under some form of protection and management.

These are the essential arteries of a good conservation network. Our task now is to keep the heart pumping by focusing on the restoration of fundamental ecological processes and building strong links between the remaining bushland.

The first steps on the ground were taken in 2002, when one of our partners, the Australian Bush Heritage Fund, purchased 800 hectares of bushland and some 70 hectares of cleared land on Cherininup Creek. This is an important piece of bushland that sits between Corackerup and Peniup Nature Reserves. With support from the Commonwealth's EnviroFund, Bush Heritage and Greening Australia have worked together to re-vegetate the 70 hectares of cleared land and strengthen the link into Peniup Nature Reserve. Also that year, private conservation buyers Eddy and Donna Wajon purchased nearly 500 hectares of bushland further downstream on Corackerup Creek. This purchase consolidates an important north-south link with the Pallinup River and the coastal vegetation.

While further bushland purchases are being negotiated, the project is now turning its attention to the main game, which is building strong links across cleared land. Gondwana Link is not about building a single, narrow 'wildlife corridor' across the cleared areas. Rather, we want to achieve a much broader change of land use that not only provides greater ecological connectivity, but also enriches social and economic life in the area. This vision for rural Australia argues that such a matrix has to be achieved, particularly in an area where agriculture is not as profitable as elsewhere and, as a consequence,

REVEGETATION

population levels and associated services are already in decline.

This year Eddy and Donna have started re-vegetating the 100 hectares of cleared land that came with their property. Greening Australia, working through the National Trust's Bush Bank revolving fund, is purchasing an 800 hectare farming property adjoining the Corackerup Nature Reserve, and over 100 hectares has already been direct seeded with local species so far. Funds are being sought to enable other strategically placed properties to be secured and restored.

While many of the plantings to date are purely ecological, we see scope to keep expanding and diversifying the Link by also developing ecologically and socially supportive commercial industries, based on the botanical bonanza the region is blessed with.

An obvious example of this is Sandalwood. Elsewhere in Western Australia we have seen the development of commercial sandalwood plantations, based on one or two acacia host species to feed the parasitic sandalwood plants. Work by Albany based researchers Geoff Woodall and Chris Robinson has identified over 700 local host species that sandalwood parasitises. The first of these biodiverse plantations has been established and we expect more to follow. On its own property, Greening Australia has already established some of this biodiverse sandalwood, as well as broom-bush plantations, for use in garden fences, and a stand of Moort poles that have a market as both fine wood and structural timbers.

Work has commenced on other sections of our ecological pathway. In the wet forests of the south-west The Wilderness Society, along with other groups, has achieved significant ecological gains through the end of old-growth logging and the establishment of the Walpole Wilderness Area. With support from donors secured through its Gondwana Link involvement, The Wilderness Society has employed Charles Roche to work towards securing the ecological values of the vast tract of mallee, woodland and heath stretching east of the wheatbelt to the Nullarbor.

This area, as large as Tasmania but with a much greater level of biological richness, survived a number of attempts last century to have much of it opened up for wheat farming. Only a few small areas have ever been cleared or put under pastoral lease. While there is an increasing level of mining activity, this area is the largest reasonably intact part of south-western Australia, and the largest intact temperate woodland system in the world. It also provides a vital ecological connection into the more arid interior.

The red-flowered Corackerup Moort, Eucalyptus vesiculosa, *is one of the local endemic species being restored to their former distribution as part of the Gondwana Link revegetation effort. Photo: Nathan McQuoid.*

Funding at the scale our environment needs

Underlying Gondwana Link's program is a strong commitment to developing a larger and more diverse funding base for ecologically critical work. Much of the good work of the past few decades has either been done on the smell of an oily rag or been almost totally dependant on government funding programs, which are often short-term in nature. Western Australia, and its immensely valuable biodiversity, takes up an area about one-third the size of the United States of America. Our population is only 1.8 million, of which around 1.4 million live in Perth. Our economy, while strong, doesn't retain the surpluses of many western economies and we do not, yet, have a culture of private generosity to conservation causes, particularly for the dry country. Many of us are, understandably, being overwhelmed by the immensity of the urgent needs we tackle.

Gondwana Link partners have already developed good links into the philanthropic sector, and have been fortunate in gaining significant early donations. There have been fellowship exchanges with senior fundraisers, who work in the USA for The Nature Conservancy, which has helped partner groups gain essential skills.

In March this year we hosted an inspirational visit by Trustees from The Nature Conservancy's Maine Chapter. This group of committed citizens raise around $35 million of private donor funds a year for conservation work, in a state with a population of only 1.2 million.

South-western Australia still contains many awesome landscapes, is now recognized as one of the worlds 25 biodiversity hotspots, and has a level of ecological weirdness that fascinates and astounds visitors and residents alike. We are learning to turn these features into the dollars needed to restore the most damaged areas. If we do this, and can use our work to restore and underpin the most critical ecological processes, maybe our future can be one of ecological richness and personal joy, not the ecologically bleak and socially impoverished landscape that looms so dangerously close.

Keith Bradby is Coordinator of the Gondwana Link Project and can be contacted by email on: kbradby@westnet.com.au

A list of references is available from the Editor.