

Gondwana Link groups have developed a plan for the section of Gondwana Link between the Fitzgerald River and Stirling Range National Parks, or what we call the Fitz-Stirling section. This identifies several targets for protection and restoration, each of which is described in a separate leaflet in this series. A short summary of the plan is also available.

These targets are not the only systems or species that are important in this landscape, but by concentrating on the chosen targets we believe we can most effectively improve the ecological health of the Fitz-Stirling area.

Our 6 targets are:

- creeks
- **proteaceous rich communities**
- tammar & black-gloved wallabies
- mallet and moort woodlands
- flat-topped yate woodlands
- freshwater systems



*Chittick is one species that occurs in proteaceous rich communities.  
Photo: Chinch Grynievicz*

### WHAT ARE PROTEACEOUS RICH COMMUNITIES?

As the name suggests these communities are rich in plants from the Proteaceae family, an ancient lineage of spectacular flowering shrubs that grow across southern hemisphere continents. They include plants in the familiar genera of Adenanthos, Banksia (which now includes Dryandras), Conospermum, Grevillea, Hakea, Isopogon, Lambertia, Persoonia, Petrophile, Stirlingia, Synaphea and Xylomelum. Most of the communities included in this target grow on deep sands or gravelly sands and are quite different to the more widespread Myrtaceae family (eg Eucalypts and Melaleucas) common in the Fitz-Stirling area.

A proteaceous rich community can either be a heath, where all the plants occur in quite dense stands of a similar low height and with no overstorey; or a mallee-heath, which has a eucalypt overstorey and a sparse to dense heath understorey. These remarkable plant communities are some of the most diverse in the world and contain many endemic and threatened species. They have evolved over millions of years to cope with the vagaries of an unreliable climate, wildfires and nutrient poor soils.



### WHY ARE PROTEACEOUS RICH COMMUNITIES A CONSERVATION TARGET?



*Honey possums are one of the many animals that depend on the nectar and pollen produced by proteaceous rich plant communities. Photo Natasha Moore, SCNRM.*

Proteaceous rich communities are an important component of the vegetation mosaic that exists across the Fitz-Stirling and contain many of the distinctive species that characterise the flora of the south coast region. As well as their diverse forms, they are rich in wildlife and provide many resources for resident as well as visiting animals and invertebrates. Their prolific flowering provides the nectar and pollen for honeyeaters, silvereyes, wood swallows, honey possums, dibblers, native bees, jewel beetles and a wide variety of other invertebrates and birds throughout the year, and particularly during summer and autumn when other sources are scarce. These animals are in turn vital for pollination which ensures the plants' long term survival and keeps the population genetically healthy. The soft sand makes for easy digging for burrowing wildlife such as skinks, native rodents, turtle frogs, spiders and many other invertebrates.

Proteaceous rich communities were the easiest to clear during agricultural development and consequently only small, often very disturbed, areas remain. They are particularly susceptible to the soil-borne fungus *Phytophthora cinnamomi* but are also vulnerable to a range of other disturbances including fire, weeds and fertiliser drift.

They are amongst the most difficult and costly systems to restore and our preliminary surveys suggests that more than 80% of these communities have been destroyed.

## THREATS



Banksia death through dieback infection.  
Photo P. Deegan.

The main threats are:

- *Phytophthora cinnamomi* (See [www.dieback.net.au](http://www.dieback.net.au) for useful information on dieback in the south coast region)
- Inappropriate fire regimes (Many proteaceous species only reproduce from seed and if fires are too frequent, the plants don't have sufficient time to set seed)
- Fertilizer and chemical drift from farmland (Proteaceous plants are extremely sensitive to fertilizers because they evolved to take advantage of very nutrient –poor soils)
- Sand extraction and road construction (Because they grow on deep sands and gravels, many communities have been quarried. Many of the remaining remnants occur along road-sides and can disappear completely when the road is widened)
- Weed invasion (Once areas are disturbed, weeds quickly colonise these sandy sites)

## WHAT NEEDS TO BE DONE?

The first step is to identify where all the patches of proteaceous rich vegetation occur, and what condition it is in. Where healthy vegetation occurs, it is important to work out whether it can be protected from *Phytophthora cinnamomi* and to take precautions not to introduce infections. Planting resistant species around the more susceptible proteaceous communities can help. Controlling weed invasion is also important.

## WHAT IS HAPPENING THROUGH GONDWANA LINK

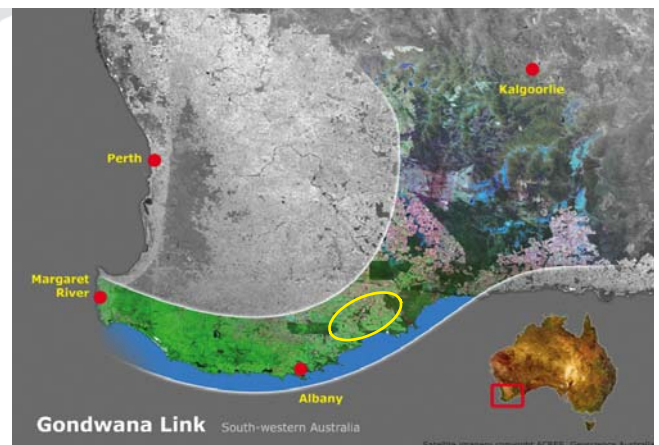


Captive-breed dunnies have been released into proteaceous rich heath in Peniup Nature Reserve. Photo P Deegan.

We are surveying bushland remnants in the Fitz-Stirling to locate and describe the remaining proteaceous rich communities and assess their condition. Bird densities are also being monitored. Proteaceous species are being included wherever possible in our restoration programs. On properties owned by Greening Australia and Bush Heritage Australia, we are mapping and monitoring *Phytophthora* and taking steps to control its further spread. We are also taking steps to control foxes, cats and rabbits to reduce predation on bird pollinators and other small fauna and to reduce the damage to vegetation.

**Gondwana Link** is one of the most ambitious ecological programs in Australia. A wide range of groups are collaborating to protect, manage and restore bushland in a 1000 kilometre-long pathway, from the wet forests of Australia's south west corner to the woodlands and mallee bordering the Nullarbor plain.

**Fitz-Stirling** section of Gondwana Link sits between the Stirling Range and Fitzgerald River National Parks.



For further information please contact the Gondwana Link office.  
Phone: 9842-0000 email: [info@gondwanalink.org](mailto:info@gondwanalink.org)  
[www.gondwanalink.org](http://www.gondwanalink.org)