

# Grassland Treasures

by Margrit Beemster



Charles Sturt University PhD student Nicky Bruce admits she's always looking down.

"Since I can remember I have been fascinated with the world at my feet, from high country plains to coastal grasslands," says Nicky who commenced her PhD with the School of Environmental and Information Sciences in 2002 under principal supervisor Dr Ian Lunt. "These ecosystems may appear lifeless, not so obvious, but if you take the time to look down, a new world emerges."

This trait stands her in good stead for her research work at Terrick Terrick National Park which contains one of the best remnants of northern plains grasslands in Victoria. Nicky, whose PhD study is titled *Grazing Management for Biodiversity Conservation: A Spatial Study of Terrick Terrick*

*National Park*, has spent many months out in the field, looking down, measuring and recording the grasses and wildflowers that are growing in this semi-arid zone. Sheep are run on the grasslands as a grazing management tool.

## Status Quo

"Parks Victoria have decided to keep the status quo, at least for the time being, until we know more about how to manage grasslands for conservation," says Nicky. "This country has been grazed by Europeans for the last 150 years and many of the native species have survived, though we don't know what has been lost from the grasslands. The view of "status quo" management is if we continue to graze the property as it always has been in the past, we can be fairly confident in maintaining what we've got while we also explore other management options and grazing approaches."

Nicky's research project initially was to investigate on ground grazing management of the native grasslands. However the drought brought a swift and dusty end to that project when the sheep were removed because of the worsening conditions. From this initial project, a new "drought proof" project was started at the beginning of 2003 which looks at the usefulness of satellite imagery in monitoring grassland cover patterns in the park over time. Plant cover is a very important element of grassland ecosystem management. It can determine the level of diversity of plants and animals. Too much may lead to a loss of plant species from increased competition while too little may result in a loss of habitat for ground dwelling animals. "Therefore being able to monitor grassland cover patterns over time will enable more precise grazing strategies to be implemented to ensure the long term conservation of the grasslands," says Nicky whose research is funded by an ARC Linkage Grant in partnership with Parks Victoria.

## Terrick Terrick National Park



What is so precious about Terrick Terrick is that it was a sheep grazing property in the middle of dryland cropping country that through a series of circumstances much of the 1200ha property was never cultivated. That combined with light stocking rates for more than 100 years allowed many of the native plants to survive.

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It was 'discovered' by Paul Foreman, a leading grassland ecologist who was undertaking a

survey of Victoria's remnant grasslands in the early 90s. Originally the northern plains grasslands would have stretched across northern Victoria, covering an area of 22,000km<sup>2</sup>. Now less than 2.5% remains in Victoria, with much of it being highly degraded and fragmented. Parks Victoria has kept on the farm's previous stock manager Russell Shawcross who runs 700 to 800 merinos on the property. Russell and ranger-in-charge Mark Tscharke work together to manage the grazing regime so as to have the least impact on the native species.



*Mark Tscharke and Nicky Bruce*

“At first glance, especially when it's not spring, you could wonder what's so different about Terrick Terrick to other grazing properties,” says Mark. “But when you get down and have a look it's very different especially in spring when the diversity of plants flowering is enormous. It's like a whole forest in miniature however it is much more dynamic. The real challenge is to manage the peaks and troughs that you get with the different seasons throughout the year. In a week even things can change very quickly. Unlike managing say, a forest, here your management has to be right on the ball. Just like in a forest environment, what you do can affect the fauna that live in the area. It's very interesting and challenging to manage the fauna and the vegetation together.”

### **Challenges**

Mark says another challenge of managing Terrick Terrick is that there is only limited knowledge from previous experience. He is hopeful Nicky's research will not only provide an understanding of the dynamics of the grasslands over time but also provide grazing management recommendations, based on applied research, for the existing management plan. Nicky points out that the management approach being implemented at Terrick Terrick may not necessarily be appropriate for other grasslands remnant. “Each grassland remnant is specific to the type of management it will need,” she explains. “The past history of the property has to be considered.”

## **GRASSLANDS NATIONAL PARK**

The 3880ha Terrick Terrick National Park, about 60kms kms from Echuca, is one of Victoria's newest national parks and was the first in the State to be preserved primarily for its grassland values. It comprises of a former grazing property (purchased in 1997 and gazetted in 1998) adjacent to what was Terrick Terrick State Park, a timber reserve since the late 1880s, which has Victoria's most significant stand of White Cypress Pine, and stands of grey and yellow box. It provides habitat for numerous endangered flora and fauna species.

Twenty-six rare or threatened plant species are known to occur within the grasslands, and it is home to over 100 species of birds including the endangered Plains Wanderer. The Grey-crowned Babbler and the Bush stone curlew. Native mammals and reptiles include the Fair tailed Dunnart, Striped Legless Lizard and Hooded Scaly-foot, a large legless lizard that is considered critically endangered in Victoria. Terrick Terrick National Park is the only conservation reserve in which the Hooded Scaly-foot is known to occur.

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