



friends of the pinnacle newsletter

Issue No.2 SEPTEMBER 2010

FRIENDS OF GRASSLANDS KAMA WOODLANDS TOUR

by *Don Driscoll*

Three members of FOTPIN (Rosemary Blemings, John Fitzgerald and I) attended the Kama woodlands tour on election day, 21 August. The trip was led by ACT grasslands expert Sarah Sharp, and was laced with enormous botanical expertise with the many enthusiastic Friends of Grasslands members who attended.

Our first stop was in a Themeda grassland at the southern end of the reserve. Dr Sue McIntyre from CSIRO was present, and pointed out that the extensive weed infestations, including exotic brome grasses and flat weeds, were a sure indicator that superphosphate had been applied at some time in the past. Sarah told us that the grassland was probably natural, based on the way that the trees seem to peter out at the same elevation all along the valley, and the consistent absence of trees from historic photographs.

Everyone was a little disappointed in the condition of the southern grassland area. In the past few years, substantial work has been undertaken to control the exotic Saint John's Wort, probably with extensive application of herbicide. We wondered if these attempts to control the invasive weed may have inadvertently eliminated most of the herb species. Long term monitoring would have helped to solve this mystery.



Drosera pelata (Sundew) is found in the Kama Nature Reserve

Next we walked over to the Molonglo valley where we discovered the weeds thinning out on a westerly facing slope (the same phenomenon that occurs in The Pinnacle's nice grassy woodland near the dam and in the bottom Pinnacle). Suddenly the botanists were in action, swooping down on unsuspecting skerricks of green that had barely emerged from the soil in anticipation of spring. Names that I've never heard but believe I should learn flew around as the crowd surged from leaf to blade and the identifications were made. Dorcus, Galium, Asperula; all new names to me.

Our third stop was back in the Kama woodlands, where Sarah led us to a small but incredible patch of grassy woodland. Incredible because the flat weeds and exotic grasses that filled the

gaps between native grass tufts elsewhere were not present. In their place was an amazing variety of native forbs, including orchids, sun dews, blue devil and Ophioglossum, a plant that is more primitive than a fern. There were also some small shrubs, including the heaths *Cryptandra* and *Melichrus*. It was inspiring to see such woodland biodiversity on our doorstep; Kama was certainly an excellent save from the Molonglo developers.

Post-script: The following weekend I re-visited Kama and saw a Brown Treecreeper, a threatened species in the ACT. This gives hope that we could one day see this species return to The Pinnacle as our restoration efforts take effect. However, it also raises concerns as the Molonglo Development proceeds, with the risk of pushing this sensitive species out of the valley and reducing opportunities for FOTPIN to recover our lost avifauna.



Hardenbergia is flowering at The Pinnacle

PREPARING FOR SPRING....

By Rosemary Blemings

There's no shortage of purple-flowering *Hardenbergia* in the sunniest positions along the track up & away from Dungowan Street. Soon the weedy *Capeweed* will be in full bloom along the edge of tracks and paths where the seeds were easily moved in on autumn breezes. *Hovea* has blue flowers and its stems grow over other plants to bring them towards the sun. Both the *Hardenbergia* & the *Hovea* have "pea" flowers and the plants' roots will enrich the soil. Deeper into the forest areas there are low shrubs with white heath-like flowers. They are species of *Cryptandra* and their bell-shaped flowers look delicate under a hand lens. Pale yellow flowers from *Melichrus* or *Urn heath* are also bell-shaped and have been on show all through winter in an unobtrusive way.

The rainy winter has prompted a spurt of foliage growth for many species and the promise of a good season for paper daisies. Shrubs have clusters of tight flower-buds waiting for increased warmth.

I searched in vain for ground orchids, having found many on the CIT edge of Bruce Ridge. Perhaps the Pinnacle's soil is colder as well as well watered.

On the ground there are numerous lichens, mosses and young annual plants. Previously there were many toadstools and other fungi showing a variety of shapes, colours and sizes. The activities of animals and plants in these miniature habitats are essential for the health of the soil and the forest system.

Where water flows down past boulders in the south-draining gullies, the mosses and liverworts are joined by Sundews - classic insectivorous plants in miniature. Since my walk, Early Nancy flowers have sprung up in the forest. This shows how rapid plants' response to rainfall can be. It's a surprise if we think of plants as being slow!

Our next monthly Guided Walk is on Saturday 17th October. By then, there should be many more colourful "native gardens" in the forest and in the grassy woodland. See you then!

SPRING BIRD REPORT

by *John Brannan*

Every season brings an influx of new bird species to the Pinnacle, and spring is particularly exciting when so many of the birds are busy building nests and raising their young.

This year spring has come early to the Pinnacle, with most of the early nesting species already feeding their first batch of youngsters. (If the rain continues, many birds will raise two or even three broods this year.) The thornbills, some of Australia's smallest bird species, are all busy feeding chicks already, and the ravens and magpies are sitting on eggs, as are our nocturnal residents, the Tawny Frogmouths. One family of White-winged Choughs is currently feeding a nest full of hungry chicks and a Spotted Pardalote pair have dug themselves a nest burrow beside one of the busiest paths on the reserve.

One particularly significant breeding event this year is the early arrival of a Scarlet Robin chick. This is the second year running that Scarlet Robins have bred successfully at the Pinnacle, an excellent outcome for a species that is recognised as in decline in NSW and the ACT. With luck, they will get to work on raising a second brood before too long.

In another encouraging sign, a pair of Varied Sittellas (another locally threatened species) have already built a nest, though they've shown no particular interest in using it just yet. (Last year they built three nests and only used one!)

Some of the new arrivals are still settling in, including Dusky Woodswallows, Rufous Whistlers, Black-faced Cuckoo-shrikes and Diamond Firetails, and the treetops are laced with the migrating honeyeaters passing through on their way to the mountains to breed.

Every spring, tens of thousands of honeyeaters, mostly Yellow-faced and White-naped, wend their way through and around Canberra, and small flocks will stop over in our gardens and reserves. This year's migration is just getting into full swing at the moment.

There are a number of species that have yet to arrive and many that are only just starting to settle into nesting, but this year, spring is already off to an excellent start!



Rufous Whistler
(photo by Geoffrey Dabb)



Scarlet Robin
(photo by David Cook)



Spotted Pardalote
(photo by Stuart Harris)

SAVING OUR SOILS

By Pax

A team of FOTPINs is surveying and assessing soil condition and erosion across the nature reserve, the “Bottom Pinnacle” and the Kama property, a total area of approximately 275 ha.

We are using the CSIRO’s Landscape Function Analysis (LFA) methodology, developed by FOTPIN David Tongway, to assess track, ephemeral drainage line (waterway) and soil surface condition. We will also record and assess erosion problems caused by unauthorised BMX tracks constructed in the reserve.

The surveys will provide a baseline condition for FOTPIN’s long-term land and water monitoring program, as well as identify tracks, drainage lines and grassy areas at risk of erosion or needing early intervention. The survey outcomes, proposed interventions and future monitoring activities will be set out in a proposed Land and Water Conservation Strategy for The Pinnacle area, due in 2011.

The LFA methodology is a repeatable monitoring procedure that assesses how well a landscape is working as a biophysical unit. LFA uses rapidly assessed indicators of the status of processes occurring close to the soil surface. The indicators may be biological, such as perennial vegetation or cryptogams, or abiotic, such as engineering structures.

Track assessments classify track segments according to the nature of any erosion (e.g. rilling), the accumulation of alluvium or the presence of a stony surface. The ephemeral drainage line assessment considers a range of factors including slope, slope surface, drainage line wall and floor vegetation, profile, and wall and floor erodibility, and generates a risk score.

Soil surface assessments consider rainsplash protection, perennial vegetation cover, litter, cryptogams (soil surface plant communities), crust brokenness, soil erosion severity, deposition of materials, surface nature and roughness, and soil solubility and texture. For example, “Criterion 7: Deposited Materials” has four classes to assess the nature and amount of alluvium transported to and deposited on the “query zone”.

SSA scores are fed into an Excel spreadsheet and relative values for soil stability, infiltration and nutrient cycling are produced.

We plan to set up 50 soil surface transects, approximately 1 for every 5 hectares, as well as assess some 15kms of tracks and 4.8kms of drainage lines. We hope to complete all assessments by January. If you would like to help and learn more please contact me.



Warren Bond and Geoff McAlpine conducting track erosion assessments

MONITORING RABBIT ACTIVITY

By Pax

In our last newsletter, Gilbert outlined our rabbit warren mapping in April this year, conducted to help the ACT's Parks, Conservation and Lands (PC&L) agency design its rabbit control program. Along with GPS coordinates, we recorded warren details such as rockiness, accessibility, slope and the number of burrows (warren entrances) to help PC&L locate baiting stations and prioritise warrens for treatment.

Land managers are concerned about the grazing pressure from elevated rabbit populations. Estimates of "sustainable" rabbit densities vary from less than one per hectare in the arid rangelands to three per hectare in higher rainfall areas. And so we needed to better understand our rabbit population, its density across the reserve, and consider whether grazing was likely to be a problem and where. We'll come to kangaroo grazing later!

In April, FOTPINs mapped rabbit warrens across a total area of 275 hectares, comprising The Pinnacle Nature Reserve, the land below it known as the "Bottom Pinnacle", and the Kama property (west to William Hovell Drive). We located 273 active warrens.

By way of background, Queensland and NSW agriculture departments and the Commonwealth's Bureau of Resource Sciences have correlated rabbit numbers with active burrows. In the non-breeding season – which would include mid/late autumn - they estimate that there is 1 adult or sub-adult rabbit for every 1.6 active burrows. To get a better handle on rabbit numbers, FOTPIN needed to locate all active burrows. We realise there will also be a proportion of rabbits living above the surface, as well as a small hare population.

After warren mapping was completed, Bob, Warren and I revisited all 85 warrens with six or more burrows and 40 of the 188 warrens with less than six to count the number of active entrances (see Figure 1). We also affixed flagging tape near the large warrens to guide PC&L contractors.

From this follow-up survey, I estimated there were 1,066 active burrows across the study area, equating to about 670 rabbits (using the above conversion factor) and therefore a little more than 2.4 rabbits/ha. In some areas, such as "Rabbit Central" the density is as high as 40 rabbits/ha. This mapping highlights the need to effectively treat warrens such as Central that act as "source" warrens for the recolonisation of treated areas within 200-300 metres.



Active rabbit burrows at The Pinnacle

The active rabbit burrow survey was repeated in late August, visiting the same warrens and following the May route. I estimated 190 active burrow entrances, a very significant drop on May's figures. The survey will be repeated at the end of the breeding season (December 2010) to track changes in the rabbit

population over the season. PCL have furnished FOTPIN with their spotlight transect information and counts, and we are presently looking to correlate those disparate datasets to see if one can be used to predict the other. More info, including December's figures, in a future newsletter.



Route followed to sample rabbit warrens for active burrow count (blue 1-5 burrows, red 6+)

friends of the pinnacle notices

Our Draft Community Weed Management Plan is still available for comment, and will be finalised in early 2011. Please send your comments to Pax at fotpin@optusnet.com.au by November. The Plan is available for download at our page on the website: www.ginninderralandcare.org.au

At the Special General Meeting on 25 July our constitution - "management rules" - were approved by FOTPINs. A Coordinating Committee was formed, comprised of Rosemary Blemings, Warren Bond (Treasurer), Heather Burness (Secretary), Don Driscoll, Mark Hallam, and Pax (Convener).