



## DEFEATING THE WEED MENACE



*Don Driscoll explains plot layout*

**Restoring native grasses to the understorey of The Pinnacle. New knowledge that will aid recovery of degraded box-gum grassy woodlands.**

Exotic grasses and other weeds have wrought the most profound environmental change throughout The Pinnacle Nature Reserve and similar degraded grassy box-gum woodlands in SE Australia. Such weeds cover the majority of the reserve, exclude most native plants and are a threat to woodland fauna. Traditional weeding methods cannot defeat this weed menace and new techniques are needed.

Recent research suggests that removing nutrients from the soil may tip the balance back in favour of native species. We must therefore first discover whether nutrient management does favour native species in our area, and then look at ways to reduce nutrients over large areas in a cost-effective manner.

- Project funded by:
- ACT Government Environment Grant
  - Community Action Grant, Australian Government
  - Canberra Labour Club

## DEFEATING THE WEED MENACE ...

Our project will examine methods for reducing nutrients, and the effects on weed control and native plant recovery. Our approach is to carefully monitor nutrient levels in trials that compare slash removal, applying carbon (sugar), burning and crop harvest as means to reduce nutrient levels.

Our approach also considers the impacts of herbivores. Grazing by rabbits and kangaroos is substantial at The Pinnacle Nature Reserve, evidenced both by the obvious prevalence of these animals, and by our observations that grasses have been grazed to an extent that has limited flowering. If grazers remove plant material and replace the nutrients through urine and dung, then it may limit our capacity to remove nutrients. Furthermore, grazing by herbivores may also limit the capacity of native plants to re-establish in our experimental plots. Before we can implement widespread restoration activities, it is critical to understand how important herbivore management might be.

A third variable that we regard as potentially important is variation in the level of exotic plant cover. At Goorooyaroo Nature Reserve, Dr Sue McIntyre found that plant communities dominated by exotic grasses had elevated soil nutrients, whereas soil nutrients were lower in communities dominated by native grasses. Conceivably, areas of The Pinnacle that have retained some cover of native grasses will have different nutrient loads and so may respond to our treatments in a different way.

**The questions we are setting out to answer using our weed-menace experiment are:**

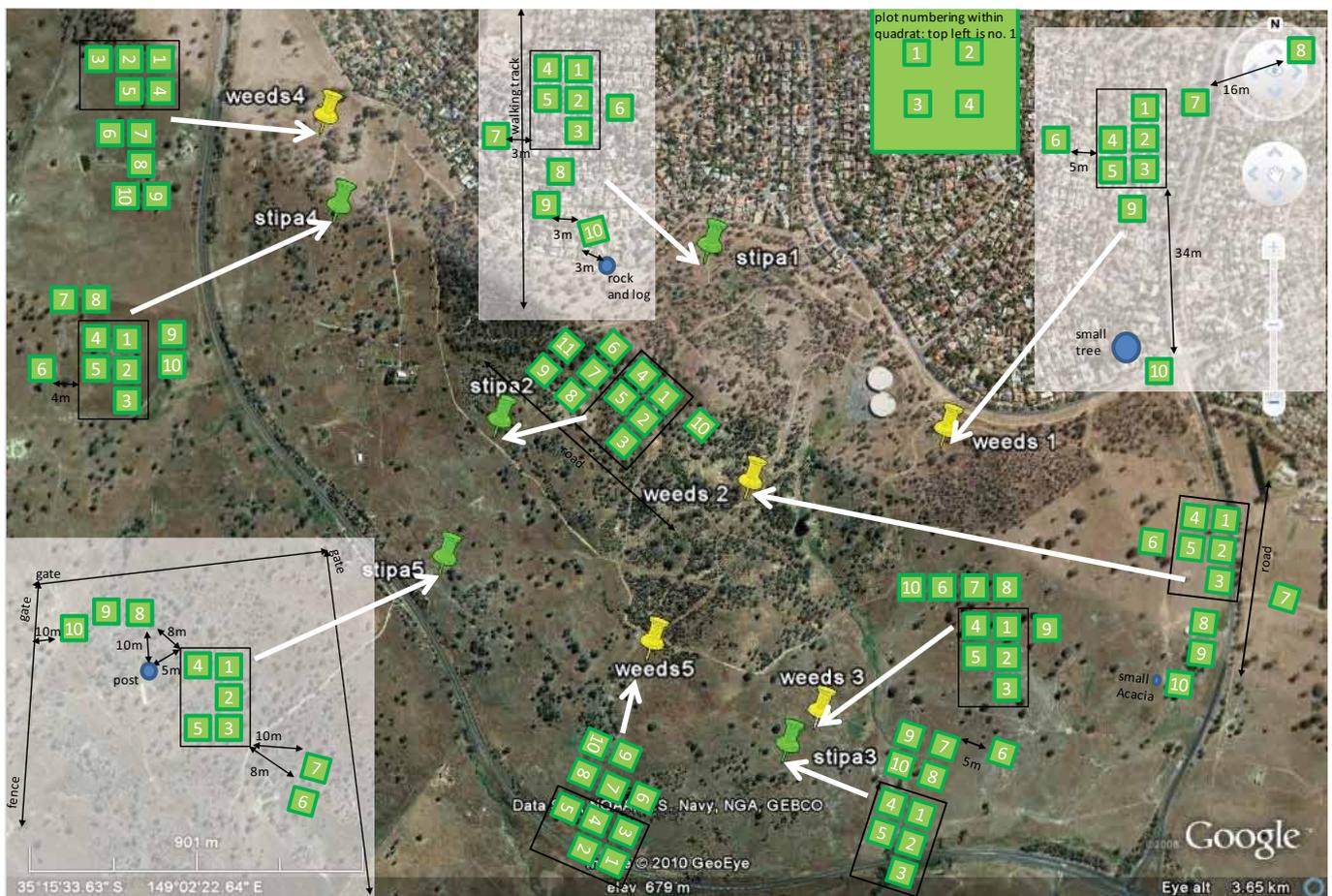
- Does burning, slashing or harvesting a crop plant reduce nutrient levels and the cover of exotic species as effectively as applying sugar?
- Does burning, slashing, harvesting a crop plant or applying sugar enhance native species or reduce exotic species?
- Do high rates of herbivory by kangaroos and rabbits limit our capacity to remove the nutrients contained in vegetation?
- Do sites that retain a substantial proportion of native grass species have increased soil nutrients and can such sites be restored using nutrient manipulation?



*Exotic grasses dominate large areas of The Pinnacle Nature Reserve*

## DEFEATING THE WEED MENACE ...

The project will run for three years as we assess changes in soil nutrients and in native and exotic plant cover. We will have ten replicate experimental blocks, with five in areas with high weed cover (weed sites) and five in areas with moderate to high weed cover in addition to some cover of native grasses. The latter are most commonly found in areas with thinner soils. One of five treatments will be applied to each quadrat within the plots (see figure below).



Our project will identify methods that are critical for fotpin (and similar groups managing degraded box-gum grassy woodlands) to restore our woodlands. We will know how nutrient management influences the cover of exotic and native species, how to reduce nutrient levels at a large scale, and how our restoration activities may be influenced by herbivores. The project will therefore provide insights that could enable us to really transform the reserve from the largely exotic-dominated landscape that it currently is into a diverse native ecosystem as it once was.

**\*\*OPPORTUNITIES FOR FOTPINS\*\*** This large project needs helpers to make it happen. Jobs include slashing and managing the crop, native plant surveys and soil collection. It is a wonderful chance to learn about the flora, and the science of restoration.

## WEBSITE

*By Warren Bond*

October saw the launch of our new website:

**www.fotpin.org.au**

It aims to provide the general public with information about the Friends of The Pinnacle (and The Pinnacle Nature Reserve), as well as providing an efficient additional means for communicating with members. It will also be used to provide tools for entering and displaying data (such as weeding effort).

There are a couple of web pages that we hope you'll find particularly useful. One is the calendar: **This week on The Pinnacle**, which provides details of events and activities, not only for the coming week but for the next month or so. The other is the **News** and **latest headlines**, where we post other current information of interest. These are both accessible from the right-hand side of the home page, and also from the bottom left-hand side of all other pages.

On the left-hand side of all our web pages is the expanding menu, which will direct you to all the other website content. If you haven't

tried it already, I'd encourage you to hover your mouse over the menu and see what pops up. I'll mention just two menu items here: *Issues* leads to the themes where fotpin effort is planned or happening, such as weed management, the native grass regeneration project, erosion management, etc. Information about the running of the Group, such as the minutes of coordinating committee meetings, coordinating committee members' roles, etc., can be found under **governance**.

And there's more to come. Plans are afoot for a **fotpin Kids' Club**, with a series of web pages containing content targeted at arousing kids' interest in The Pinnacle Nature Reserve and local conservation issues, as well as perhaps being a resource for our local schools. A series of pages containing more information about The Pinnacle Nature Reserve, such as walking tracks, plant animal and bird species, history, geology, etc. will also be added, and the existing pages, such as the photo galleries, will be expanded as images become available.

If you have any ideas about what you would like to see on the website, or contributions that you would like to add, please contact me:

**fotpin.web@internode.on.net.**

## FOTPIN KIDS CLUB

The Friends of the Pinnacle had a display at the Weetangera Primary School fete on November 7. The display featured the **fotpin kids club quiz** - which received 71 entries. The prize, a backpack full of goodies, was won by Zac Trafford. Congratulations Zac! Fotpin plans to have displays at future local school fetes to promote and educate our children and community about The Pinnacle Nature Reserve and the great things we are doing.



*Fotpin Convenor Pax presenting Zac with the fotpin prize*

## RECORDING WHAT'S HAPPENED BEFORE . . .

**Hi Folks,**

**My name is Mark Hallam.**

I am a fotpin Committee member, and was the Treasurer of the former “Pinnacle Environment Group” – fotpin’s predecessor...

As such (and as an avid collector), I have a number of records (photos and printed material) of our earlier work in The Pinnacle Nature Reserve which I am compiling as part of fotpin’s history and archive. I am hoping to digitize all of my data over the next few months and make it available to anyone interested in what was done before.

I have the capability to digitize any documents up to A3 size, as well as flatbed and photographic slide scanners to digitize photos and slides of the Pinnacle Reserve and surrounds.

**What do we want?**

ANY photos, documents, articles and reports with any reference to The Pinnacle Nature Reserve, and its surrounds.

**When do we want it?**

As soon as possible, please.

**How do we want it?**

Ideally, it would be great to get your data in digital format – i.e. already scanned in. We are after high resolution scans, preferably in TIFF format (these are easier to re-format, if required), or as a pdf document. If this is not possible, I can assist with this process by scanning your data for you.

Alternately, if you have any documents/photos of the Pinnacle Reserve that you no longer want to keep, then I am happy to come and collect them from you, to add to our “hardcopy” store of such items.

**Where will it be stored?**

We are looking to store the data on the fotpin website.

**Who will have access?**

Ideally, anyone with internet access, unless you would like to restrict access to certain people/groups. We are designing a “Permission to Use” form for you to complete before your data is released onto the website.

For any further questions, I can be contacted at **[mhallam@ozemail.com.au](mailto:mhallam@ozemail.com.au)** or by phone on 0427 635517.



## THE PINNACLE: NATURE PARK OR THEME PARK?

### *By Pax*

BMX riders and equestrians using the Reserve sometimes confuse nature park with theme park!

That's not all, youths has been mistreating local fauna, there is evidence of firewood collection and open fires, and the ACT Government's Parks and Conservation Service (PCS) has received reports of youths removing lizards from the reserve. Unfortunately accurate details of a vehicle used could not be provided to Rangers.

Removing native animals or firewood from the Reserve is an offence under the *Nature Conservation Act 1980*. However, awareness raising may be the only response to some of the above – unless rangers catch people red handed or other users of the reserve identify the offender.

If anyone sees such illegal activity, they should report it to the PCS on 6207 2113. You should not approach the individuals, but any information you collect (e.g. vehicle registrations) may be useful to the Rangers.



*BMX track constructed across Deep Creek.*

### **BMX riders**

BMX tracks have been constructed along a drainage line to the west of the dam, below the dam across Deep Creek, and to the east and north east of the dam.

The western track has been used and maintained by youths for years. Following more works in 2010 fotpin raised concerns with PCS, which responded with stakes and exclosure tape to discourage use. We believe the track remains in regular use.

In August fotpins discovered a newly constructed bike track and jump along a north-south axis on the rise to the east of the dam. The track was some 130 m long, cutting through native grass communities. The scale of the destruction was very upsetting, and so a team of fotpins immediately set about repairing the site. PCS followed up with further works.

Fotpins also discovered a new BMX track dug across Deep Creek between the dam and the pumphouse. Fotpins have seen adults and children with their BMX bikes at this site, so this vandalism may not just be the whim of energetic youths. The track has seen little use during our wet spring, and we believe the careful placement of dead timber will deter further use.

The PCS has advised they will undertake works to remove illegal bike jumps, however the wet spring and summer has prevented machinery accessing the site.

## THE PINNACLE: NATURE PARK OR THEME PARK?

### Equestrians



Equestrians may only ride within the Reserve on the Bicentennial National Trail, located between the cavalettis on Coulter and Springvale Drives. They are not permitted in the Forest Block or in the Dam, Hawker, Kama or Southern Paddocks.

Some equestrians - seeking the pleasure of a loop trail through the Reserve - have not remained on the approved track, contravening the formal Canberra Nature Park Plan of Management.

Since August, fotpin has worked with PCS to identify a suitable loop trail for equestrians, especially conditions for its use. The proposed loop trail allows equestrians to use the boundary track west of the ACTEW pump track, with additional fencing to prevent riders heading west from the Springvale Drive cavaletti.

Fotpin understands that signage has been agreed to by all parties and will be installed shortly.

### Track damage

BMX tracks and horse-riding are not the only activities causing erosion problems at the Reserve.

Driving vehicles through the reserve is also an erosion risk, even on management tracks. For example driving on saturated tracks has caused damage along the steep track leading up to the Pinnacle itself. Fotpin understands PCS have taken measures to repair this damage (see below) – full repair is likely dependent on a few dry weeks.

Development of our Land and Water Conservation Plan has been delayed by peak weeding season and setting up the NGRP. When we return to this activity, a key outcome might be proposing whether to close some tracks and works to stabilise eroding tracks.

Not all users give conserving and protecting the The Pinnacle Nature Reserve the highest priority. Nevertheless, fotpin and PCS are collaborating to change people's attitudes and behaviour, and secure a better outcome for our local nature reserve.

