

6th Creek Catchment Group Newsletter

Summer 2005

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6th Creek AGM

Come along to our AGM on **Thursday 17th Feb**, 7.30pm at the Adelaide Hills Natural Resource Centre.

Guest speaker:

Dr Mike Bossley (local resident and South Australian of the Year), **"Adelaide's Dolphins"**

NEWS FROM THE PROJECT

Last year was a busy year for the 6th Creek Catchment Group.

Six years of hard work on the ground is finally paying off for properties in the catchment.

Nearly 20 properties no longer require funding assistance from the SCCG to conserve/enhance biodiversity and remove weeds from their land, which means we can take on more properties who may be interested in joining the program. Currently we are working on over 70 properties in the catchment.

In 2004, the group organised several free short courses in partnership with the Torrens Catchment Water Management Board, Trees for Life and the Land Management Program.

We were also fortunate to have access to a Green Corps team during the cold and wet winter. In partnership with Forestry SA, the team of 10 were kept busy with extensive native plantings at Cudlee Creek Forest, hand pulling and cut & swab work, fencing, painting and they also helped us put up our eyecatching signs around the catchment.

A new Youth Conservation Corps team commenced with the group in January and will help with water monitoring, maintaining revegetation sites, weed control and native seed collection over the next 3 months.

If you want to find out more about the project, why not come along to our AGM on 17th February, 7.30pm at AHNRC.

COMING EVENTS

- February** 2-8 World Wetlands Week
17 6th Creek Catchment Group AGM
"Adelaide's Dolphins" with Dr Mike Bossley
7.30pm at the Adelaide Hills Natural Resource Centre
All welcome!
- 19 Uraidla Show – check out the Natural Resource Centre tent!
- March** 4 Schools Clean Up Day
6 Clean Up Australia Day – register your interest with the Project Officer and help clean up you catchment!

For more information, check out our website at

www.sixthcreek.com

Summer jobs to do...

- ✓ Summer is the ideal time for rabbit baiting & woody weed spraying – contact the Mount Lofty Ranges Animal & Plant Control Board (ph: 8389 6166) for advice.
- ✓ Plan your winter revegetation project by collecting seed from your property: *Acacia retinodes*, *Microlaena*, *Themeda* and *Eucalyptus spp.* are all appropriate to collect from.
- ✓ With the unexpected rain in December, make sure you have cleared long grass and rubbish away from your house, sheds and equipment for protection against bushfire.

Bush Regeneration without Herbicides - can it be done?

Andrew Crompton

Many people have a philosophical objection to the use of herbicides. Some objectors believe that nature should be left alone and that weed removal is the plant equivalent of ethnic cleansing. For most objectors, however, there is an understanding of the ecological minefield created by the introduction of thousands of exotic species into this country. But concerns about toxicity and subtle long-term effects have led many to the view that the use of herbicides will do more ecological harm than good.

So, is it essential to use herbicides? Can native vegetation be successfully regenerated without them?

In Good Quality Bushland

Everyone interested in bush regeneration should read Joan Bradley's "Bringing Back the Bush" which was written in the late 1960's. You will see in that book that the originators of the famous "Bradley Method" did not use chemicals and were very sceptical about their use in bushland. They worried about:

- the long-term effects of herbicides
- the potential for harm to the user
- the potential for off-target damage
- the greater need for follow-up treatments after chemical application.

Herbicides in those days included hormone types which contained the highly toxic dioxin as an impurity and arsenical types which were also very toxic to people and wildlife.

They achieved wonderful results in bushland around Sydney applying 3 principles to hand weed removal. These are:

- Work from the best quality areas towards the weed infestations
- Minimise disturbance to native vegetation and soil
- Let native plant regeneration dictate the rate of weed removal.

Joan Bradley recognised that they had real difficulties in dealing with woody weeds more than 2 metres high. Most bush regenerators today view the careful use of herbicides for dealing with large woody weeds to be a natural extension of the Bradley method. The view is that the Bradley sisters would approve of the careful use of glyphosate wiped onto the leaves of weeds or injected into the stems of woody weeds by "drill and fill" or "frill and fill" techniques. But in the 1960's, the Bradleys had no real answer to killing large woody weeds. They tried ringbarking with mixed success. Ringbarking is most useful for killing single-trunked trees like pine and ash but of little value for multi-stemmed trees like olives and shrubs.

So when working in good bushland it is very possible and usually desirable to avoid using herbicides. Large woody weeds can be grubbed with a mattock and an axe but the damage to native flora and to the soil will be much greater and some tree weeds are so big this can't be done. Some workers advocate covering the cut stump area with heavy-duty weed-mat, firmly pegged down. The aim is to starve the stump of light and thereby exhaust the regrowing shoots.

Where the hand-weeded area meets a thick weed infestation, slashing with a brush cutter can help to keep weed infested patches suppressed until you get to them. Some examples of the use of a brushcutter to keep big infestations under control:

- cutting the flower heads off *Watsonia* to prevent the development of stem bulblets,
- slashing a patch of Cocksfoot grass to prevent seed formation
- keeping Blackberry runners under control.

In Degraded Sites

Degraded sites are seriously invaded by many different weed species at least in the ground layer but most likely also in the shrub and tree layers. These sites still have the potential to regenerate to a stable native vegetation system if weeds are carefully removed.

Hand weeding is really only an option for very small areas. If you have a whole hillside of degraded land it is doubtful that you will have enough time to make much of a difference by hand pulling the weeds. All other options, both chemical and non-chemical, can cause a serious loss of native flora on the site. The benefits and costs of the various methods and combinations of methods needs to be thought about after a careful look at the vegetation present on the site and your own resources and capabilities. Possible methods that don't involve herbicides are:

- grazing with sheep and goats – goats can be tethered in severe woody weed infestations, sheep need to be fenced which can be expensive. Unless carefully controlled you will lose native species particularly if stock is left too long on a patch.
- slashing – tractor mounted slashers will cut big areas and they will suppress woody regrowth. They are not very respectful of remnant native flora and they can spread the seeds of herbaceous weeds particularly grass weeds like *Pentstemon* and *Nassella*. Slashing with a brushcutter gives more control over what you cut and has much less risk of spreading weeds but the area covered is much reduced.
- cutting – a chain saw can deal with large woody weeds but most species will regrow and failure to treat the stumps will result in a worse problem.
- grooming (trittering) - chipping the tree weeds with a heavy-duty flail mower mounted on a flexible arm. With a skilled operator, indigenous trees and shrubs can be avoided although damage is inevitable. Grooming machines are expensive to hire and without proper treatment of cut stumps the regrowth will soon undo the work.
- bulldozing (or using a front-end loader or backhoe) - although very damaging to native flora it has the advantage of physically removing big woody weeds so they don't regrow. This method has a place on very degraded sites where the slope is gentle. On steep sites the risk of soil erosion is great and a careful assessment of the flora should be done first to ensure that important flora is not destroyed.
- burning is effective at killing some woody weed species if done twice, a couple of years apart, before the germination following the first fire can set its first crop of seed. This will also severely affect native shrub species but will encourage the herbaceous layer. Burning is not easy for an average property holder to organise but there is a lot of scope for experimentation with fire regimes and effects on vegetation. The common idea that burning is always good for the bush is a myth. It may increase weed levels.
- a blow-torch can be tried to target particular weeds in winter (but not in summer). There are devices made for this purpose. This is the closest non-herbicide equivalent to spot spraying and may have particular benefit in targeting annual weeds.

Stump treatment will be needed after cutting, grooming or slashing. A range of non-chemical methods are possible including:

- stump munching with a grinding machine. When you have more than a few stumps this becomes expensive.
- blasting using explosives has limited applicability in more densely settled areas and will require a licensed contractor.
- covering the stumps with heavy-duty plastic or weed mat will suppress regrowth. This is very labour intensive and will require monitoring over a few years.
- digging out with a backhoe.

Adding to the disadvantages of non-chemical methods in degraded sites is the potential damage to fauna through destruction of nests and shelters by cutting and bulldozing. Generally a bird will prefer that its tree is poisoned and die slowly rather than being cut down.

Whatever methods you use on degraded sites, whether chemical or non-chemical, there is the strong possibility of losing native species as well as the weeds. There are many things you can do and none is a magic bullet. So get as much information as you can and think before you start, and keep records of what you do so we can all learn from your successes and failures.

Revegetation

Site preparation without herbicide can involve:

- ploughing
- scraping
- matting
- mulching
- steam treatment

All can destroy indigenous flora already on the site. Cultivation is particularly damaging to fauna like lizards and soil dwelling frogs.

If there is some native flora present like native grasses or other hardy species, it is probably the best approach to prepare close spots or strips and plant competitive species first, particularly *Acacia* and *Allocasuarina* with some *Eucalyptus*. For a few years weed growth can be managed by slashing. In time (several to 10 years), competition will reduce weed populations to a low enough level that they can be dealt with by hand. Eventually the wattle will die off and other diverse understorey species can be added. If you want to avoid herbicides, then harnessing the processes of natural ecological succession over a number of years is the only practical approach.

Note that in a site where there is a lot of remnant ground flora, competition from a dense planted canopy will reduce it as well as the weeds. Let the amount of remnant ground flora on the site determine the planting density of canopy species. Do the densest planting in the weediest areas. As with all vegetation work, get to know the site first. Don't assume there is nothing there.

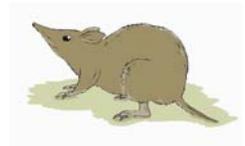
Conclusion

Nobody really loves herbicides. Perhaps they can be thought in same way as we think of medicines – used wisely for a limited period of time they can help us get better but used too much and too often they will do us harm.

Enormous amounts of good work can be done with bush regeneration and revegetation without herbicides, but the one area where it is very hard to do without them is the removal of large woody weeds.

Whatever your attitude towards herbicides, the approach to any vegetation management program is the same –

- thoroughly assess the flora, fauna, soil and topography of your site,
- decide what you want to achieve,
- consider all the available approaches
- determine the resources available
- decide which of the available approaches best suits your site



Reference: Joan Bradley 1988 *Bringing Back the Bush* (available for reference at the AHNRC)

Catchment Clean Up

5th December 2004

Prompted by the regular dumping of rubbish on roadsides and in our watercourses, the Sixth Creek Catchment Group with the support of the Adelaide Hills Natural Resource Centre and Adelaide Hills Council held its first "Clean Up Your Street Day" on the 5th December 2004.

Sixteen volunteers spared a few hours of their time to remove rubbish of all descriptions illegally dumped. The roads targeted included Old and New Norton Summit Roads (Norton Summit), Corkscrew Road (Montacute) and Lobethal Road (Ashton/Basket Range). The creeks targeted included Sixth Creek and Third Creek.

The day was a huge success as we collected over six trailers worth of rubbish including a safe, car parts, fencing, carpet, drink containers (donated to Basket Range Recycling Centre), steel, food wrappings, hydroponic crops and even some old tyres.

All this hard work was then followed by drinks and cakes at the Adelaide Hills Natural Resource Centre for the volunteers involved.

As a result of this success and the magnitude of the problem faced, the Sixth Creek Catchment Group is planning another clean up to coincide with Clean Up Australia Day on **Sunday 6th March 2005** starting at 9am at the Adelaide Hills Natural Resource Centre at I Crescent Drive, Norton Summit. We require as many volunteers as possible for only a few hours on the day to help with this problem that affects us all.

If you are able to assist in any way, please contact the Adelaide Hills Natural Resource Centre on 8390 1891 or Steve King on 8390 0016 to register your interest.



Think globally, act locally.

The 6th Creek Catchment Group is supported by:



Torrens Catchment Water
Management Board



Mount Lofty
Ranges
Catchment
Program



ForestrySA



ADELAIDE HILLS
COUNCIL

Department
for Environment
and Heritage



MT LOFTY RANGES
ANIMAL AND PLANT
CONTROL BOARD

Natural Heritage Trust
Helping Communities Helping Australia

The Sixth Creek Catchment Group is a Landcare organisation with private and public landholder membership.

The Group's objectives are the protection and rehabilitation of the catchment's natural resources.