



# GECKO AUTUMN 2011

The Newsletter of the Blue Mountains City Council Bushcare Program



**You are invited to attend your**

**17th Annual Bushcare/  
Landcare BBQ**

**at Megalong Reserve  
on Saturday 30 April 2011  
at 12:00 noon**

Entertainment will include:  
Music from the Gang-Gang Bush Band  
Children's activities, Awards and prizes  
**Site treasures competition**

Delicious Vegetarian and Carnivorous BBQ  
Bring along friends, family, a plate, cup and cutlery

The Community Bus is available, please book with the  
Bushcare office on 4780 5623 or [bushcare@bmcc.nsw.gov.au](mailto:bushcare@bmcc.nsw.gov.au)

Please RSVP by Wednesday 20th April to the Bushcare office  
4780 5623 or [bushcare@bmcc.nsw.gov.au](mailto:bushcare@bmcc.nsw.gov.au)



**Deadline for contributions for next Gecko Thursday 30th June**

## DATES TO NOTE

for bookings and details, unless otherwise stated, contact Lyndal Sullivan 4780 5528 [lsullivan@bmcc.nsw.gov.au](mailto:lsullivan@bmcc.nsw.gov.au)

- Sunday 17th April 9 am—12 pm Marmion Swamp Planting event** to assist Bushcare Group consolidate previous plantings and provide a swamp buffer. Morning Tea provided contact Karen Hising on 4780 5623 or [khising@bmcc.nsw.gov.au](mailto:khising@bmcc.nsw.gov.au)
- Friday 29<sup>th</sup> April Connaught Swamp, Blackheath** 9am-1pm Swampcare is supporting National Parks efforts to control Himalayan Honeysuckle. Lunch provided. Book with Michael Hensen on [mhensen@bmcc.nsw.gov.au](mailto:mhensen@bmcc.nsw.gov.au) or 4780 5471
- Saturday 30<sup>th</sup> April Bushcare Picnic at Megalong Valley Reserve.** 12 noon - 4 pm (*details front page*)
- 29th April – 1st May Aboriginal Bushcare and Landcare Cultural Camp,** Latanda Conference Centre, Yellomundee. Specialist speakers, bushcare and site visit. Register with Vickii Lett [vickii.lett@environment.nsw.gov.au](mailto:vickii.lett@environment.nsw.gov.au) or 4588 2400
- 30 April-1 May Declare war on the Sycamores at Jenolan Caves** Enjoyable weekend of weeding with a night's accommodation. RSVP Trish Kidd [trish.kidd@environment.nsw.gov.au](mailto:trish.kidd@environment.nsw.gov.au) or 63361972
- Thursday 5<sup>th</sup> May Valley View Reserve Swampcare event, Blackheath** 9am-12.30 pm Join new efforts to look after a swamp on the Reserve east of Sutton Park. Morning tea provided. Book with Michael Hensen (as above)
- Saturday 7<sup>th</sup> May Sassafras Creek Springwood** 9 am – 4 pm Short bushwalk down Wiggins Track to work on a patch of weeds just inside the National Park downstream of two bushcare sites. A joint BMCC Bushcare/NPWS activity.
- Saturday 7<sup>th</sup> - Sunday 8<sup>th</sup> May Capertee Valley Tree Planting** (*details page 5*)
- Tuesday 10<sup>th</sup> May Glenbrook Creek** 9 am – 3 pm Short bushwalk and weeding on Glenbrook Creek and up Zora's Creek to where the landcare group has been working for 5 years. A joint BMCC Bushcare/NPWS activity.
- Wednesday 18<sup>th</sup> May Bushcare Network Meeting 6pm** Lawson library meeting room. All welcome. Light dinner provided. RSVP by Friday 13<sup>th</sup> May and for details of discussion topics, contact Lyndal Sullivan.
- 21st - 22<sup>nd</sup> May Wombeyan Caves 'Weed Whacking' Weekend** Accommodation and meals. Easy terrain treating woody weeds and vines impacting upon the unique karst values. Contact [trish.kidd@environmet.nsw.gov.au](mailto:trish.kidd@environmet.nsw.gov.au) or Ph 6336 1972
- Saturday 4th June Newnes Plateau Swampcare 9.30-3.30pm** Treating pines invading Bungelboori Swamp Work from a base camp or search for remote pine wildlings on the plateau. Book with Michael Hensen (*as above*)
- Sunday 5<sup>th</sup> June World Environment Day** contact Jasmine Payget 4780 5788
- Sunday 19<sup>th</sup> June 2 pm Shale Based Vegetation Community Field Day** in Lower Mountains (*details page 4*)
- Sunday 31st July National Tree Day**
- Sunday 7th August & Sunday 14th August Two Day Eucalyptus Workshop** (*details page 6*)



## THE WORLD OF MACROFUNGI – MUSHROOMS

Les Peto (Friends of Katoomba Falls Creek Valley)  
and photos by Rosemary Brister

In Autumn of 2005 I attended, with Rosemary Brister, a Fungi Foray run by the **Sydney Fungal Studies Group (SFSG)** at Coachwood Glen, Blackheath. In two hours we had collected over 100 different species from Coachwood Glen varying in size from the size of a pin to about 50cm and all colours of the rainbow. We left smitten and began to see what we could find in the Katoomba Falls Creek Valley, on our doorstep. On the 24/5/05 we found 11 species including the orange speckled **Lactarius delicosus** "Pine Mushroom", **Amanita muscaria**, the pretty red "toadstool" with white spots, common around pine trees, **Boletus portentosus** a pored mushroom and **Omphalotus nidiformis** (the fungus which glows in the dark). We have been learning as we go and at the end of the 2010 season we had recorded 316 different species, including several native truffles and the last one in October, when it threatened to snow here in Katoomba – a **Coprinus plicatilis** a species generally edible but not to be consumed with alcohol. It is possible that we are the second bushcare group to have a fungi list and an ongoing study. The first was the Lane Cove Bushland Park near Gore Hill, who have got environmental protection for some of theirs.

### What are Fungi?

It is only recently that fungi have come to be regarded as a separate kingdom alongside plants and animals. Fungi can be categorised as **Microfungi** (microscopic) or **Macrofungi**

("mushrooms"). Some Microfungi like Tinea, Candida, Phytophthora, Myrtle Rust are problems and others like yeast for bread and brewing, Botrytis "noble rot" in wines and penicillium are beneficial.

### Macrofungi – The Mushrooms

Macrofungus are thread- like filaments called **Hyphae** which form a weblike mass called a **Mycellium**. **Amanita mycellia** can sometimes be seen under pine trees as a white cottony mass, though mycellia may be other colours as well. Sometimes they form thick cords called **Rhizomorphs**.



Amanita muscaria





Ramaria

In Oregon in the U.S. is an **Armillaria ostoyae** in the Malheur National Forest which has 890km of rhizomorphs and thought to be 2,400 years old(1), Making it a contender for the largest and oldest living organism in the world! What we recognise as mushrooms are actually the “fruits” or “flowers” of these hyphae, distributing millions, billions even trillions of **Spores** when they are ripe – a few of which become new hyphae. Most fungi appear in autumn when the weather cools down and we get sufficient rain and “fruiting” lasts until about July, although they can appear suddenly at any time of the year when the conditions are right. They range in size from a pinhead to a metre or more across and weighing up to 30 kg and exist nearly everywhere except the polar regions. They are made up of **Chitin** the substance of insect shells and crustacean shells. While appearing to be rooted in the substrate, usually soil or wood, like plants, fungi do not photosynthesize so must absorb their nourishment from their substrate, that is from plant or debris. Hence as a group of organisms they are probably as old as plants! Fungi obtain sugars from plants and produce nitrogen and other nutrients which are absorbed by plants.

Macrofungi are grouped into **Basidiomycota** the typical “mushroom” and the **Ascomycota** “cup-like” fungi. The divisions have to do with the way they form their spores. In the environment there are three types:

**\*Mycorrhizal** – Get nourishment from the roots of plants and give nutrients like nitrogen to the plants in return. An experiment done by NASA had identical pines 1m high planted in a sterile (fungi free) soil and in soil deliberately infected with an *Amanita* fungus. After 15 years the sterile specimen had grown to 1.5m while the infected specimen had reached 8m with a girth of 35cm(2). There are some obvious lessons for agriculture and for-

estry there! Many Australian natives form Mycorrhizal relationships with fungi. Eucalyptus and Leptospermum species often have *Cortinarius* and native *Amanita* species growing with them.

**\*Saprophytic** – digest decaying plant and animal matter: leaf litter, wood, dung, even animal corpses. Without them we would probably be up to our ears in leaf litter.

**\*Parasitic** – living off living plants or animals. Some like **Armillaria luteobubalina** is a serious problem for horticulture, others like many **Mycena spp** don’t appear to harm their host. Others like **Cordyceps spp** parasitize grubs and insects, which ingest the fungus, which then eats them from within. The host when dug up is mummified, attached to the phallus- like fruiting body. These can be found in the mountains. **Cordyceps sinensis** is an important item in Chinese medicine, while only recently an anti-cancer drug has been isolated from a native **Cordyceps sp**.

**What to look for**

Most fungi are **Basidiomycota** and have a **Pileus** (cap) and a **Stipe** (stem), though the stipe is sometimes absent from fungi on wood. They may occur on soil, wood, dung or rotting flesh- some even come up after fire. They come in almost every colour and can be extremely beautiful. Beneath the cap it will have: **Gills**, **Pores** (tiny holes), **Teeth** (spines) or may be **Smooth**. Others may look like coral, puff-balls, earth stars, bird’s nests, phallic, with arms like an octopus, blobs of jelly or grow underground (truffles). There are native truffles which are an important source of food for wallabies or bushrats. Finally **spore prints** will give you the colour of the spores (white- pink- brown- green or black). Place cap gill side down on a sheet of paper with an up-turned glass on top, leave for a few hours or overnight. If it is mature you will get a fine coloured powder. All of these things are needed for identification, including the **substrate** (habitat) they grow on.

**Are They Edible?**

The short answer given by mycologists is that they are all edible **ONCE!** In short don’t eat anything if you are not sure of its toxicity. There is one **Amanita phalloides** “Death Cap” which as its common name implies is fatal. Little is known about most native species and the Aborigines don’t appear to have eaten many of them.

**If you are interested...**

FUNGIMAP at the Royal Botanical Gardens in Melbourne have launched a project to map some common species to get some idea of distribution and they have a little booklet which is a good starting point. Research is being done but too little money is available for research into this interesting kingdom. If you are interested in seeing what is out there the SFSG run annual forays to Coachwood Glen and Waterfall Reserve, Mt Wilson usually in March. Join the SFSG or FUNGIMAP for regular newsletters. Keep a lookout while you are working through Autumn, they will be out there!

And finally there are **LICHENS** – a combination of a **FUNGUS** and an **ALGAE** ... a whole new fascinating other world!

**Footnotes:**

1. SFSG Newsletter Vol. 22 No. 1, 2010, P. 7.
2. Phillips R. Mushrooms MacMillan London 2006. P. 7

**Good Starting Points:**

Fuhrer B. A Field Guide to Australian FUNGI Blooming Books, Melbourne, 2005. Recently reprinted, large range of mainly native species, excellent photos.

Young A.M. A Field Guide To The FUNGI of Australia UNSW Press, Sydney, 2005. Some photos, and drawings, excellent descriptions.

Grey P. & E. Fungi Downunder Fungi-map, Melbourne. 2005. Excellent photos and information on target species.

Phillips R. Mushrooms MacMillan, London, 2006. English, but very comprehensive for all genus of fungi.

Sydney Fungal Studies Group (S.F.S.G.) Contact Don Gover (02) 9661 4898.

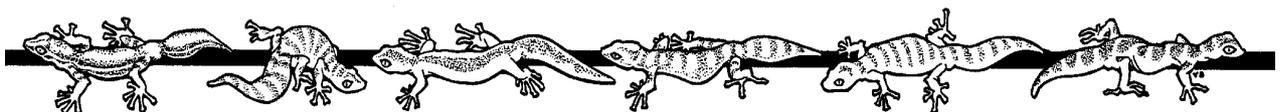
[www.sydneyfungalstudies.org.au](http://www.sydneyfungalstudies.org.au)

FUNGIMAP R.B.G. Melbourne,

[www.rbg.vic.gov.au/fungimap/](http://www.rbg.vic.gov.au/fungimap/)



Lactarius deliciosus - (Pine Mushroom)



## 2010 Aquatic Macroinvertebrate Survey Report now available



Dragonfly Nymph at Terrace Falls Creek Hazelbrook

Blue Mountains City Council conducts an annual audit of the health of our creeks, using aquatic macroinvertebrates (“water bugs”) as biological indicators. The presence or absence of different types of Macroinvertebrates are widely recognised as key indicators because they represent water quality over their entire lifespan. In 2010 a total of 52 sites were sampled (44 ‘urban’ sites and 8 undisturbed reference sites). Results were interpreted using a number of tools, including looking at SIGNAL-SF scores and the number of stonefly, mayfly and caddisfly families recorded at each site.

SIGNAL-SF is a system that allocates grades to macroinvertebrate families, depending on their sensitivity to or tolerance of pollution and disturbance. SIGNAL-SF grades have been developed specifically for macroinvertebrate families as they occur in the Sydney region. Very sensitive families receive a high grade (up to 10), whereas very tolerant families are allocated a low grade (down to 1). The final score for a site is the average grade of all the families recorded.

In 2010, 86.4% of ‘urban’ sites had ‘good’ SIGNAL-SF scores (compared to 100% of reference sites). 13.6% of urban sites had ‘fair’ SIGNAL-SF scores, while 0% recorded ‘poor’ SIGNAL-SF scores. This is in keeping with the general pattern observed since 1999, with the majority of sites always falling within the ‘good’ category. These results suggest that the majority of waterways sampled exhibit consistently good water quality, but that a proportion of urban sites have been degraded by human activities in their catchments.

Another rapid way of assessing creek health is to look at the number of families of stoneflies, mayflies and caddisflies, as these three orders are the most likely to disappear if creek health begins to deteriorate. In 2010 43.2% of urban sites exhibited ‘high-very high’ diversity of stonefly, mayfly and caddisfly families. 38.6% had ‘fair’ diversity and 18.2% fell into the ‘devoid-low’ diversity category. Of the 8 reference sites, 75% had ‘high-very high’ diversity, 25% had ‘fair’ diversity and no reference sites fell into the ‘devoid-low’ diversity category. This suggests that some stonefly/mayfly/caddisfly families have been lost from a proportion of urban sites.

More detailed results are presented in the 2010 Macroinvertebrate Survey Report, available on the BMCC website or by calling Council’s Aquatic Systems Officer (47805 521). The link to download it from the web is <http://www.bmcc.nsw.gov.au/sustainableliving/environmentalinformation/livingcatchments/macrobenthosurveys/> go to Macroinvertebrate Reports on the right side of the screen

The report also looks at how the information can be used to prioritise catchments for conservation works.



### Sunday 19 June 2 pm Lower Mountains Shale Based Communities Field Day with Eric Mahony

An afternoon for Bushcarers working with these vegetation communities from Faulconbridge to Lapstone

A short presentation & walk to identify key features.  
Afternoon tea

Bookings essential:  
Lyndal Sullivan 47805528 or  
[bushcare@bmcc.nsw.gov.au](mailto:bushcare@bmcc.nsw.gov.au)



### Tree Guard Deformity

This hakea at Popes Glen was restricted by the cardboard tree guard and grew in this spiral trying to find its way out.

This unusual ‘treasure’ may be difficult to bring along to the competition at the coming Annual Bushcare Picnic for the most ‘unusual find’ discovered on a Bushcare site! If you really can’t transport your treasure – a photo will do.



Alan Lane

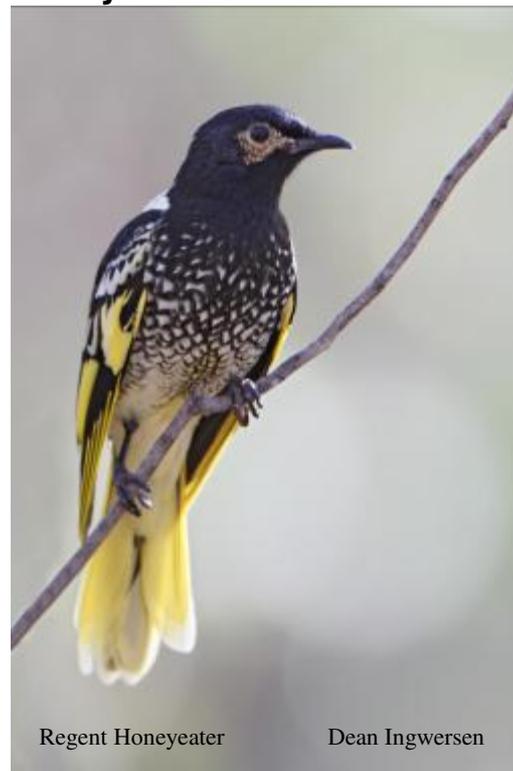


## Capertee Valley Tree Planting 7-8 May

Last year the Regent Honeyeater had its endangered listing upgraded to 'Critically Endangered', the most severe classification before extinct in the wild. This highlights the importance of the ongoing work to replace habitat in the Capertee Valley.

Volunteers are always welcome to come along and be part of this inspiring project. The next tree planting weekend will be held on 7-8 May, when we will be planting 3000 trees and shrubs of local provenance on a property on Huntingdale Road near the geographical centre of the valley, to extend plantings carried out in May 2007. A few people are also needed on the Friday to help with laying out the plants. Accommodation is available at various cottages in the valley for \$40 (1 night) or \$70 (2 nights) and camping is possible. It's always an enjoyable weekend in this most scenic of valleys with the Saturday night dinner a real highlight. Advance registration is necessary so your accommodation can be allocated and directions sent to you. Contact Pixie Maloney at Birds Australia, phone (02) 9647 1033 or email: [basna@birdsaustralia.com.au](mailto:basna@birdsaustralia.com.au)

The second tree planting weekend in 2011 will be 13-14 August.



Regent Honeyeater

Dean Ingwersen



**Recycled Milk Containers** are a good choice for potting up plants. Recently I potted up some Eucalypts but didn't have enough containers which would accommodate a healthy root development – then I came across the recycling of milk containers. They are perfect. I have also since discovered softdrink containers and the beer cups from the recent cricket "Ashes" match.

Even though these containers do break down eventually, for the short time they will be used, they are perfect for potting up. They can then go in the recycling bin for reuse.

Mike Purtell

**Cardboard Milk & Juice Cartons** are also useful. One litre cardboard milk and juice cartons are used to grow trees for the Capertee Valley Regent Honeyeater planting project. Donations of used cartons are always welcome and can be left at 8 Panorama Crescent, Wentworth Falls. There is a bin on the right side of the house to leave them in (or if you are unable to carry them up the steep driveway, they can be left behind the letterbox). The lids can be opened up but please don't fold the cartons flat or cut the lids off, and make sure they are reasonably clean as they get stored sometimes for months, before being transported to the nursery in the Capertee Valley. Any queries, please phone me on 4782 1831. Thank you!

Carol Proberts



## An Introduction to Eucalyptus

In February 25 people attended an informative presentation and field trip on Eucalypts by Jill Dark. Jill provided the following introductory notes for participants. A more detailed two day workshop is planned for August for those interested to learn how to key out species (see notice below).

Eucalypts belong to the family **Myrtaceae**, one of the major plant families with about 70 genera in Australia. The name comes from the Greek *myron* meaning perfume and refers to the characteristic smell of the family. The genus name *Eucalyptus* comes from the Greek *eu*, well; and *calyptos*, covered; and refers to the bud cap covering the flower. *Angophora* comes from the Greek *angos*, jar; and *phoros*, bearing; alluding to the cup-like fruits. *Corymbia* is from the Latin *corymbus*, meaning a cluster of flowers.

There are well over 800 species of *Eucalyptus*. Most are endemic to Australia, about 8 species growing in New Guinea. As new species are discovered, or present species split, 800 is a very conservative estimate. In fact there are probably over 900 species. The first specimens were probably collected by Banks and Solander in 1770. *Corymbia gummifera* collected from Botany Bay was originally called *Metrosideros gummifera* by Solander. Banks was the first person to refer to Eucalypts as "gum trees".

Although many species were collected by various expeditions it was not until 1788, the genus *Eucalyptus* was first named. Charles Louis L'Heritier de Brutelle, who had never seen them growing in their natural state, called a specimen collected from Tasmania on Cook's third voyage, *Eucalyptus obliqua*. The Blue Mnts World Heritage Area contains well over 100 species and the diversity of the *Eucalyptus* genus was one of the reasons for World Heritage nomination. There are probably about 60 species in the Blue Mountains National Park. Some species are common, others extremely rare and restricted to small areas.

### References.

- Brooker, M I H, & Kleinig, D A. *Field Guide to Eucalypts*. Vol 1. Inkata Press, 1990.  
 Burgess, C. *Blue Mountain Gums*, 1963.  
 Hay, A. Gum. Duffy & Snelgrove, 2002.  
 Pellow, B J et al. *Flora of the Sydney Region*. 5<sup>th</sup> ed. Syd UP, 2009.

EUCLID (CD)



*Corymbia gummifera* - Barbara Harley



## Eucalyptus Workshop with Van Klaphake

**Sundays 7<sup>th</sup> and 14<sup>th</sup> August 2011** 9am - 4pm

(alternatively you could join a second workshop on Mondays 8<sup>th</sup> & 15<sup>th</sup>)

**Springwood Depot Office** – Lawson Road, Springwood

**Presenter: Van Klaphake** - botanist and professional bush regenerator.

Van has conducted grass and sedge identification workshops in the Blue Mountains before, as well as for National Parks, AABR, Australian Plant Society etc. He has finalised his new guide to Eucalypts. This practical 2 day workshop will teach you how to key out species using Van's manual. Bring along any specimens you have been pondering over.

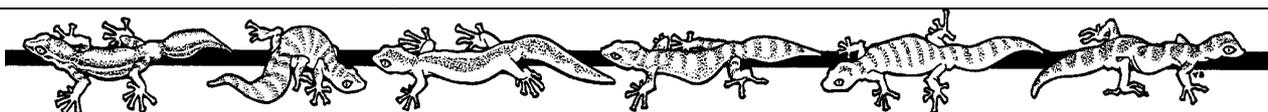
The workshop includes a field trip (transport not included). Morning tea provided, however please bring lunch. Preference will be given to active bushcare volunteers, who will be subsidised for the workshop and manual. Please discuss with the Bushcare office if this cost would still exclude you.

**Cost** Regular volunteers \$50

Other interested people \$200 for two days tuition + \$45 for manual.

**Bookings** should be made asap to bushcare@bmcc.nsw.gov.au or 47805528

Payment by 1st August 2011 to confirm your place.



# BUSHLAND RESTORATION: a training guide for Bushcare and Landcare Volunteers

Our training guide on **Bushland Restoration: why and how** has just been reviewed. If it was a long time ago when you were inducted with the old manual and would be interested to have another look please ask your Bushcare Officer for a copy, or if you missed out for some reason. We hope that the new format and drawings will make it easier to read. Many thanks go to Liz Connor, Alison Basden and Liz Walker for their invaluable contributions in editing and formatting, and to Peter Christmas for his informative drawings.

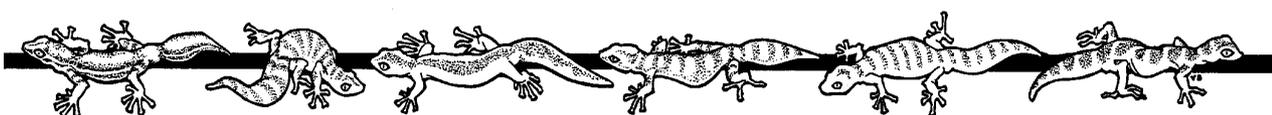


# BUSHLAND RESTORATION

## A TRAINING GUIDE FOR BUSHCARE AND LANDCARE VOLUNTEERS



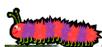
### WHY and HOW



# KIDS IN HATS



We've now got some gorgeous hats for Bushcare kids. They are being modelled here by some junior members



Francis Marks – Valley Heights

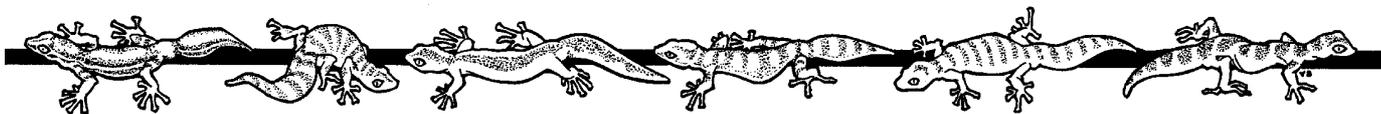


Neo Paton at Red Gum Park, Bullaburra

One of the Blue Mountains' youngest Bushcare volunteers is Neo Paton, 3½ of Bullaburra, who sometimes even undertakes (with gusto) the 15 minute bushwalk into a valley to the Bushcare site with his mum, Margaret. Margaret says: "He brings a favourite toy truck along and likes to visit our snack bag throughout the morning, but he's also gaining an awareness about volunteering, weeds and native plants, as well as chatting with some locals. "I'm quite proud he can identify banksia trees unprompted, too." "While we're not able to make every monthly meeting, it feels good that we can at least contribute somewhat to the preservation of our gorgeous local bushland with Council's guidance."

## Saturday 30th April Annual Bushcare Picnic

**Your Newsletter:** This newsletter is compiled by Lyndal Sullivan (assisted by Sharon Huxley) from Blue Mountains City Council with contributions from volunteers (with special thanks to Barbara Harley & Shirley Brown) and Council's Environmental Management Staff. It is sent to Bushcare & Landcare volunteers and other interested people. Contributions and suggestions are always welcome, as are requests for alterations to the mailing list. Contact: Bushcare, Blue Mountains City Council, Locked Bag 1005, Katoomba NSW 2780; phone 4780 5528 or email [bushcare@bmcc.nsw.gov.au](mailto:bushcare@bmcc.nsw.gov.au).



If undelivered please return to  
Locked Bag 1005 Katoomba NSW 2780



POSTAGE PAID AUSTRALIA

