Issue 2 - February 2007

Wombat Forestcare Newsletter

Welcome to Wombat Forestcare's second newsletter. This month we welcome our 50th member, and thanks to everyone for showing their support for local biodiversity. This issue explains more about our community project, includes a timely article on living with fire in the Wombat Forest, and Murray Ralph writes about the phascogale and shrubby foothill forest. Plus more, so enjoy... Tibor Hegedis *(editor)*

The Wombat Community Biodiversity Research Project

By Gayle Osborne and Tanya Loos

A big thanks to all those who attended the December picnic, where we celebrated the completion of the vegetation survey component of the project. Many of our readers are familiar with this project, however newcomers to Wombat Forestcare may be interested in a short update.

The project commenced in 2005 with the aim of looking at the remaining areas of mature forest in the Wombat Forest, establishing what inhabits these areas, and looking for links between these inhabitants and the vegetation.

Due to the mining and logging of the forest that occurred in the 1800's, all the old growth forest has long gone, and what we call 'mature' forest in the Wombat is 100 year old regrowth.

Scientists from the Arthur Rylah Institute for Environmental Research (ARI) and our community group developed the project, choosing 30 sites throughout the Wombat Forest and undertaking the following; spotlighting for arboreal mammals and birds, hair tubing for mammals and vegetation surveys.

The spotlighting was conducted by the ARI scientists whose extensive knowledge and experience enabled positive identification of hard to see nocturnal fauna. Greater Gliders were identified at 7 sites.

The hair tube exercise was the responsibility of the community, and involved structures with double-sided tape and a food source which attracts the animals. Hairs are left on the tape, and are examined microscopically for identification.

Ground hair tube placed by project volunteer *(photo by Tibor Hegedis)*

Interestingly, these surveys have shown that some animals are more readily picked up by one method over another. For example, spotlighting surveys did not reveal Common or Mountain Brushtail Possum at some sites, but hair tubing did.

The vegetation surveys were also wholly community focused, and involved fortnightly excursions out into the Wombat Forest, so that each site's vegetation could be analysed and recorded. Tree species and sizes were noted, and the relative density of ground layer and shrubby vegetation was estimated.

Presently, data collected from the above surveys is being transferred from paper to Excel spreadsheets, which will then be sent to the ARI for analysis. We will have another picnic or information night to share these results.

The project has been incredibly rewarding for all those involved, both from a community participation perspective and the fact that we have increased knowledge of the Wombat forest ecosystem. ■

Do you want to play a part in helping the environment? Become a member of Wombat Forestcare. See back page for details...

Wildlife Release

By Gayle Osborne

Have you ever seen a native animal injured and been unsure how to help? Or perhaps you have taken a bird or animal home to nurse it back to health and felt the satisfaction of releasing it into the wild. Our native animals and birds, however, have a complex existence; family groups, safety from predators, shelter and food sources, how do we know if we have done the right thing?

Gayle Chappell from the Hepburn Wildlife Shelter explains that where possible adult recovered animals and birds should be released where they were found and in an environment which is familiar. This way they may rejoin their family groups and find familiar roosting sites, tree hollows. They will also have familiar food sources and know who's who in the scheme of things. This is known as Hard Release.

Soft Release on the other hand, involves the reintroduction to the wild of babies of a species who have been raised without their mothers or family groups. These animals and birds cannot be released just anywhere. Many fauna are territorial and will often attack a stranger, even if it is the same species. Kookaburras for example, have family groups and established territories that they defend aggressively from other Kookaburras. Wombats will usually injure an intruder Wombat in their home range. Orphaned animals need the opportunity to communicate and spend time with their own kind so they can recognise territorial and other signals from their wild counterparts.

Kangaroos and Wombats can take up to two years to release, gradually spending more time away until they leave permanently. It is very special to see Wildlife carers going for a walk with young Wombats running behind. This way they can gradually learn to find their own food and dig burrows.

Recognising their natural food sources in the wild is another challenge for some of the hand-raised orphans. Gayle says it can be difficult to teach hand-raised birds to source their own food. Magpies hunt exclusively on the ground and take about a year in the wild with their parents' tutelage to learn to hunt well enough to feed themselves.

At the Hepburn Shelter there are a few adult Magpies who are not fit for release but will feed the young orphaned magpies and help with their education.

The diet and delivery of food for fauna in care is important so that they can recognise their food in the wild. Honey Eaters have their food smeared on branches and flowers so that they have to forage; insect eating birds are given live insects. Supplements and treats must be carefully considered and completely withdrawn for some time before an animal is ready to be released back into the wild.

No animal is fed from a human hand nor are they given 'human' foods such as bread or cooked meats. This is to reduce the chances of released animals seeking humans out for food. An animal must be able to maintain its body weight on a wholly natural diet from the area where it is to be released before it is fit for survival out there.

Possums in care at Hepburn Wildlife Shelter *(photo by Gayle Chappell)*

The actual release needs to be planned and take into account the time of day and the weather forecast. Has the animal a nesting or roosting site? Possums are usually released with a nesting box, which in winter needs to be on the sunny side of the tree and in summer on the shady side.

Care must be taken that there are not branches for Ravens or other birds of prey to sit and wait for an easy dinner. Most Possums and Gliders have several nesting sites so they are less vulnerable to predation and it also helps with hygiene and keeping sleeping areas free of irritating parasites.

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It is not uncommon for people to raise Joeys or baby Wombats which, as they grow become a handful to have around, and are dumped in the bush without proper training or consideration.

These distressed animals will often find their way to other peoples' doorsteps in a confused and aggressive state.

Often they have been fed inappropriate foods such as fruit and bread which can cause "Lumpy Jaw", infected teeth, upset stomachs and increase their vulnerability to disease and parasites. Wombats and Kangaroos need to pull and chew grass, (with dirt on it) to keep their mouths and digestion healthy.

Gayle's advice is that people should never try to raise or care for wild birds or animals themselves without some training and good advice. Besides, it's illegal without the proper permits… yes even that little magpie is a protected native species.

So, what do you do when you come across an injured or confused native animal or bird? Well, talk to an expert. All the volunteers from both the Hepburn Wildlife Shelter, and other shelters around Victoria, are happy to take any enquiries and offer their support, or call Wildline on 0500 540 000 – Victoria's 24 hour wildlife help line. To contact Hepburn Wildlife Shelter call 5348 3932. ■

Brush-tailed Phascogale or Tuan (Phascogale tapoatafa)

By Murray Ralph

Brush-tailed Phascogales or Tuans are small arboreal (tree dwelling) mammals that have a black 'bottle-brush' tail with hairs up to 40mm long as its' most conspicuous feature. It is a member of the Dasyuridae family which includes Quolls, Dunnarts, Antichinuses, Planigales and the Tasmanian Devil.

Preferred habitat is dry, lightly treed, open forest on ridges with little or no understorey, and with mainly rough-barked trees. But Tuans also live in a variety of other forest or woodland habitats, including wetter areas. Sites usually need to have large, hollow bearing trees to act as dens, plus a range of foraging habitats and potential food sources within 500m of a den.

Diet consists mainly of large insects, spiders and centipedes, but Tuans also eat small vertebrate species or the occasional meal of domestic poultry. Dead trees are favoured foraging sites. Ironbark or Box nectar may be eaten when these Eucalypts are in flower.

Mating occurs over the early winter months. The males expend so much competitive energy in the period leading up to the mating period, that they all die soon after, at an age of 11-12 months. Females seldom survive to breed in the second year. Birth occurs between late June and early August, and the young Tuans emerge from the nest at about five months of age. Males disperse over long distances, usually in early summer. Females disperse after mating.

The Phascogale *(photo from The Mammals of Australia, edited by Ronald Strahan)*

Tuans usually nest in tree hollows in living or dead trees. Particular nests appear to be used when breeding, usually tree hollows with deep cavities and narrow entrances. Trees used as breeding dens tend to be large and old. Research in the Jarrah forests of Western Australia found that the average age of trees used as dens were estimated to be 125-300 years.

At other times the hollows used are less protected from the weather and predators. Where tree hollows are scarce, Brush-tailed Phascogales will also nest in tree stumps, fallen logs and under flaking bark. Artificial nest boxes will also be used for shelter and breeding.

Nests are used for sleeping during the day. Animals emerge to feed at dusk, and continue hunting throughout the night. It is estimated that over a one year period Tuans use up to 35 different nest sites. Except for females with dependant young, animals spend only 2-5 days in any particular nest before moving to a new nest site.

For an animal of its size the Tuan forages over a very large home range and only small populations can exist in relatively large areas of habitat. Females occupy largely non-overlapping home ranges of 30-60 hectares. The home range for males is over 100 hectares and overlap extensively with females and other males. During the mating season males can travel over ten kilometres to seek out females.

Tuans are listed as threatened at both a State and National level.

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It is estimated that distribution of the Tuan has declined by at least 40% since European settlement and may still be decreasing.

The main threats to the Tuan are widespread clearing of preferred habitat, loss of tree hollows due to logging and firewood harvesting, predation by foxes and cats, prescribed burns and unplanned fire, and drought and climate change.

There is little detailed information on the distribution and abundance of Brush-tailed Phascogales in the Wombat Forest and surrounding areas. It has been recorded in the Rocklyn, Shepherd's Flat, Spring Hill, Spargo Creek and Glenlyon areas, and in the Hepburn Regional Park. ■

Ecological Vegetation Classes of Wombat Forest

By Murray Ralph

The types of native vegetation that occur across Victoria vary significantly. This variation reflects differences in geology, soil type, aspect, climate, altitude and position in the landscape. Depending on these environmental conditions, particular plant species and groups of plants will tend to grow together. The term used to describe these distinct native vegetation types or plant communities is Ecological Vegetation Class (EVC).

Within the Wombat Forest approximately 30 different EVC's have been mapped (although more mapping is required). The most common EVC in the Wombat Forest is Shrubby Foothill Forest. It occurs on both sides of the Great Divide, but is particularly extensive on the southern side of the divide.

Shrubby Foothill Forest

Occurs on moderately fertile clay soils derived from shale and sandstone towards the top of the Great Dividing Range at higher elevations (500-900m above sea level) and rainfall zones (750-1200mm). In wetter areas it may occur on all slopes and aspects, but in drier areas it is restricted to sheltered slopes and gullies.

The overstorey is a medium to tall forest often dominated by Messmate *(Eucalyptus obliqua)* and Narrow-leaf Peppermint *(Eucalyptus radiata)*. Candlebark *(Eucalyptus rubida)*, Manna Gum *(Eucalyptus viminalis)* and Mountain Gum *(Eucalyptus dalrympleana)* may also be present, and dominate some areas. Blackwood *(Acacia melanoxylon)* often occurs as an understorey tree.

As the name implies the understorey contains a variety of shrubs. Often this shrub layer is quite open and scattered, although in some areas it can be quite dense. The most common medium-sized shrub species are Prickly Moses *(Acacia verticillata)* and Narrow-leaf Wattle *(Acacia mucronata)*. Other medium-sized shrubs that may be present include Large Leaf Bush-pea *(Pultenaea daphnoides)*, Prickly Tea-tree *(Leptospermum continentale)*, Common Cassinia *(Cassinia aculeata)* and Hop Goodenia *(Goodenia ovata)*. Smaller shrubs include Gorse Bitter-pea *(Daviesia ulicifolia)*, Common Heath *(Epacaris impressa)*, Moth Daisy-bush *(Olearia erubescens)* and Wombat Bush-pea *(Pultenaea reflexifolia)*.

Gorse Bitter-pea *(Daviesia ulicifolia)*
(photo by Gayle Osborne)

The groundflora tends to be sparse and species diversity is low. Common species include Spiny-headed Mat-rush *(Lomandra longifolia spp. longifolia)*, Ivy-leaf Violet *(Viola hederacea)*, Mountain Clematis *(Clematis aristata)* and Common Raspwort *(Gonocarpus tetragynus)*. Red-fruited Saw-sedge *(Gahnia sieberiana)* may also be present. Forest Wire-grass *(Tetrahena juncea)* and Austral Bracken *(Pteridium esculentum)* are also common and may dominate in response to disturbance.

This vegetation community has a long history of intense and repeated logging, resulting in reduced species diversity. ■

FORESTRY ON TRIAL

A Landmark Legal Decision was delivered in the case of *Brown v Forestry Tasmania* by the Federal Court on 19 December 2006. The case sets an important precedent for the interpretation of obligations for the protection of threatened species under the ***Environment Protection and Biodiversity Conservation Act 1999***.
Further information at **www.on-trial.info/index**

Living With Fire In The Wombat Forest

By Gayle Osborne

For all of us living close to a forest the summer is a time of apprehension. Will this be the year we have the Big Fire? Lessons have been learnt, there are now guidelines to help us survive and save our houses. We reduce the fuel around our houses, prepare our pumps and clothe ourselves appropriately.

However the Fuel Reduction Burning in the forest gives rise to a diversity of opinion. Some residents wish for regular burning of the forest while others raise environmental concerns.

Fire Effects Study Area at Kangaroo Creek
(photo by Tibor Hegedis)

The issues are complex, fuel reduction burning may assist in the control of a wildfire, but the primary issue is the relationship between the fire and the weather. The temperature and the humidity create the conditions and the wind controls the rate of spread of the fire. On Ash Wednesday the temperature rose to 43 degrees and the wind reached gusts of up to 102 km/h. We will never have control over these elements.

Our forests are also complex. Fallen leaves and litter is part of the nutrient cycle. Small insects convert this into nutrients and minerals which are absorbed by the trees. Fire destroys this cycle, nitrogen is lost and nitrogen fixing shrubs replace the litter and can become a fire hazard.

Charcoal records point to our wet forests burning every 300 years prior to European settlement.

The Wombat is not a wet forest but this leads us think about what the natural fire frequency would have been in the Wombat. In the past 200 years we have radically changed the Australian environment, we have used fire as a tool to clear the land and accidentally lit fires which have spread out of control. Frequent large fires and the extinction of many species are our European legacy.

Our forests are flammable but we need to ask if we are making our forests more fire prone by frequently burning large areas. If we leave the forest alone and allow the natural systems to operate, will the forest be more resistant to the damage from wildfire?

Thousands of hectares of the Wombat Forest are listed for fuel reduction burns over the next three years. In most of these burns 80 – 90% of the area will be burnt regardless of gullies or drainage lines. One thousand hectares is listed for an area west of Blakeville, which is home to our largest population of Greater Gliders. The Gliders are not necessarily safe in their hollows during the burn; they can suffer smoke inhalation which can lead to pneumonia and death.

As a community we need to consider these issues, can we be more strategic with fuel reduction? Is it necessary to repeatedly burn large areas in the forest?

Members of Wombat Forestcare have made submissions to the Fire Operations Plan raising many ecological issues and are hopeful that DSE in the planning of fuel reduction will consider these issues.

BURN, The Epic Story of Bushfire in Australia, by Paul Collins is recommended reading on this topic. BURN is published by Allen & Unwin (ISBN 1-74175-053-9). ■

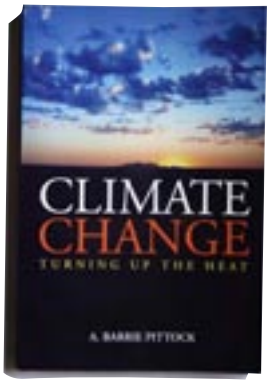
WRITE TO US

Newsletter articles (and suggestions) are most welcome. Please limit articles to about 500 words and send a photo if appropriate. For more information contact Tibor Hegedis at **wombatoz@iprimus.com.au**

Book Review

By Angela Halpin

'Climate Change – Turning up the Heat' by A. Barrie Pittock



Published by CSIRO Publishing
ISBN 0 643 06934 3

The 2006 International Panel on Climate Change (IPCC) is in the process of releasing the summary of its latest findings over the next few months. 600 scientists from 113 countries wrote the summary. They agree that the evidence is 'unequivocal' – the world is warming fast and humans are almost certainly to blame. Planet Earth is in serious trouble. My special interest is how climate change will affect biodiversity and how can our actions best protect our plants and animals? What should we do to give the Wombat Forest a helping hand in the face of impending crisis?

If, like me, you are interested in Climate Change science reports but are not a trained scientist yourself, how do we navigate through the data maze?

A CSIRO book reprinted last year called 'Climate Change – Turning up the Heat' by A. Barrie Pittock has given me a much better understanding of the terms involved and the risks and uncertainties that the future holds.

Dr Pittock was a senior scientist with CSIRO for over 30 years where he led the Climate Impact Group in the 1990's and is considered one of the World leading scientists in atmospheric research. He is now retired and presumably can say what he likes.

I am a science magazine addict and I appreciated all the explanations of facts and statistics. Obviously Dr Pittock is worried at our situation but he sees that action now can achieve positive results in the future. There are some great quotes in the book and Dr Pittock covers a wide range of relevant topics. He examines the scientific basis of the changes observed to date, how they relate to natural variations and why the evidence points to larger changes later this century.

To enjoy this book you do require an interest in statistics and their meaning as the book is packed with information. If you have a 'tell me more' mentality you will thoroughly enjoy being enlightened by Dr Pittock. Biodiversity was not the focus of the book but now I will be able to better deduce those details for myself. ■

Wombat Forestcare Membership Form

Wombat Forestcare Inc. is dedicated to enhancing the biodiversity and amenity of the Wombat State Forest by utilising the skills and resources of the community. Let's monitor activities affecting our forest and work with government departments and their officers to benefit forest flora and fauna. By becoming a member you will have input into our activities and projects, and give support to caring for our forests. For memberships and further information contact Gayle Osborne on 03 5348 7558 or gayle.osborne@bigpond.com - Membership Fees are only $10 Single and $15 Family.

Application for Membership of Wombat Forestcare Inc.

I (We) ..... (Name(s)
of ..... (Address)

hereby apply to become a member of Wombat Forestcare Inc.
In the event of my admission as a member, I agree to be bound by the rules of the Association.
(Available upon request)

.... (Signature of the Applicant(s) ..... (Date)
(.....)..... (Telephone Number) ..... (Email)
Please list skills which may assist the group, or any relevant interests: .....
.....
.....
Please return this form with enclosed payment to:
Wombat Forestcare Inc. c/- Gayle Osborne RMB 3538, GLENLYON 3461
Membership from October 2006 to June 2007 - $10 Single, $15 Family