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FIELD NATURALISTS' ASSOCIATION OF CANBERRA INC. GPO BOX 249 CANBERRA ACT 2601

FIELD NATTER

OBJECT: To foster an interest in nature

MEETING–THURSDAY 2nd May
7:30pm Australian National University

Gould Seminar Room, Building 116, Daley Road, ANU, ACT
details back page

Traditional Environmental Knowledge: the Yanyuwa

Professor Richard Baker

Pro-Vice Chancellor (Student Experience)

Richard's areas of expertise cover Social And Cultural Geography; Forestry Management and Environment; Higher Education; Sociology of Education; Recreation, Leisure and Tourism Geography; Forestry Fire Management; Aboriginal and Torres Strait Islander Environmental Knowledge; Natural Resource Management and Human Geography.

Richard has published two books: *Land is life: From bush to town; the story of the Yanyuwa People,* 1999, Allen and Unwin, Sydney and *Working on Country: Contemporary Indigenous Management of Australia's Lands and Coastal Regions*, 2001 Oxford University Press. He has numerous other publications, and conference papers to his credit and has won five Teaching and Learning Awards.

INSIDE: The value of logs; Eastern Quolls and rabbits; book review "*Australian backyard Naturalist"*

Report on our April outing to Mulligans Flat April 14 Chris Bunn

Rosemary, Dierk, Jorge, Sybil and I attended the Mulligans Flat outing "Natural Treasures of the ACT" organised by the Conservation Council and the ACT government. Ranger Grant Woodbridge took participants on a guided walk and David Shorthouse spoke to us in the woolshed. Both men outlined the various features of Mulligans Flat which make it a special place to visit and study.

I have summarised information from the talk and other material I downloaded from the internet

Restoration experiments, for example, that manipulate ecosystems can inform us about cause and effect, and help in later management decisions. Baseline data collected prior to the application of treatments allows accurate estimation of changes taking place on the experimental units, and random allocation of treatments ensures that relations between causes and effects can be established.
Four features typify Mulligans flat: the addition of 2000 tonnes of coarse woody debris, the exclusion of kangaroos from some zones within the park; the removal of foxes and rabbits (ongoing) and fire management. Random variation in biophysical variables occurs at several levels. The experiments provide a strong framework for tracking the effects of restoration treatments on woodland biodiversity over the coming years. It also provides a model for other similar experiments elsewhere. A newly constructed feral animal-proof fence has allowed the reintroduction of 30 Tasmanian bettongs. One year later they now number 47 or 48. The experiments are like an 'outdoor laboratory' for ecological restoration research, and community and student learning.

The value of logs

Logs play an important ecological role in temperate woodlands and forests by providing focal points for water infiltration, seed aggregation, nutrient cycling, food and shelter for invertebrates and foraging sites for vertebrates. High levels of grazing also can have indirect effects on many ecological processes such as plant seed dispersal and recruitment and the cycling of nutrients.
Insects comprise a significant component of ground-layer vertebrates. Managing for appropriate levels of vertebrate grazing is therefore a key objective for the management of plant and insect communities, particularly in cases where vertebrate herbivores occur in high densities. There has been little focus, however, on the manipulation of habitat structure at small scales to increase biodiversity. Beetles are an abundant and diverse component of the fauna of grassy eucalypt woodlands. The experimenters predicted that overall abundance and species richness of beetles would be positively affected by reduced densities of kangaroos.
The effect of reduced grazing on beetle abundance and species richness depended on the volume and arrangement of logs (All log treatments had positive effects on beetle abundance and species richness inside the enclosures with low grazing.) Sites with added logs in the high grazing treatment, however, tended to have a negative effect on beetle abundance and species richness relative to the control sites. We suggest this is attributed to a 'corralling effect' that concentrated kangaroo grazing on the open areas between the logs. Results have shown that reducing kangaroo densities to 40 animals per km^2) had significant positive effects on beetle assemblages and suggests population densities near this figure would be beneficial for the restoration and maintenance of this component of the insect fauna. Further, logs appear to be acting as important centres for beetle activity, but the usability of the surrounding grassland away

(Continued on page 3)

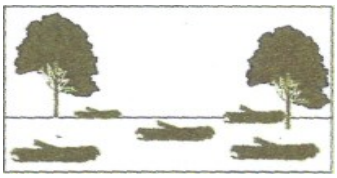
Field Outing

OUTING: May 5th 2013, 10 - 12 am

Explore Mt Taylor. Please meet on the park side at the junction of Sulwood Drive and Mannheim Street, Kambah. Bring the usual sunscreen, water, snacks/ lunch, and good walking shoes. Rosemary vB on 6254 1763

(Continued from page 2)

from the logs is significantly affected by the levels of grazing. Our results suggest that first, enclosure fences could be used to exclude vertebrate herbivores from particular areas and to maintain desired levels of grazing. Secondly, logs can be added to increase ground-layer structure and provide localized, microhabitat refuges from grazing. In the presence of high vertebrate herbivore densities, however, this may put further pressure on the grassland at the site scale by concentrating grazing on areas interspersing the logs and potentially resulting in no net benefit. Thirdly, enclosure fences and logs could be used together to achieve benefits for insect diversity at both site and microhabitat scales.



Dispersed Logs

Clumped Logs

Dispersed and Clumped Logs

Reference
Journal of Applied Ecology (2011), 48, 943–951

At the time of producing this newsletter, grey-headed flying foxes (*Pteropus polioencephalus*) have been raiding the neighbour's Japanese Pagoda tree (*Sophora japonica*) which is heavy in seed. At first there was a lot of squabbling but now only a few are visiting at night. We had them visit once before about two years ago. Unfortunately the neighbour keeps their children's trampoline immediately under the tree!
I have recorded the observation on inaturalist.org Chris Bunn

BOOK REVIEW: AUSTRALIAN BACKYARD NATURALIST

By Peter Macinnis

This book is written by Peter Macinnis, the recipient of the Eve Pownall award in the 2010 Children's Book Council of Australia Awards for the sister publication, Australian Backyard Explorer. In Australian Backyard Naturalist, the author enthusiastically explores the animals that inhabit the places in which we live, from the furry to the slimy, the large to the tiny. He keeps readers entertained with stories about his own adventures with Australia's creepy crawlies and other creatures, as well as collectors' and naturalists' stories from the times of first European settlement to recent times.

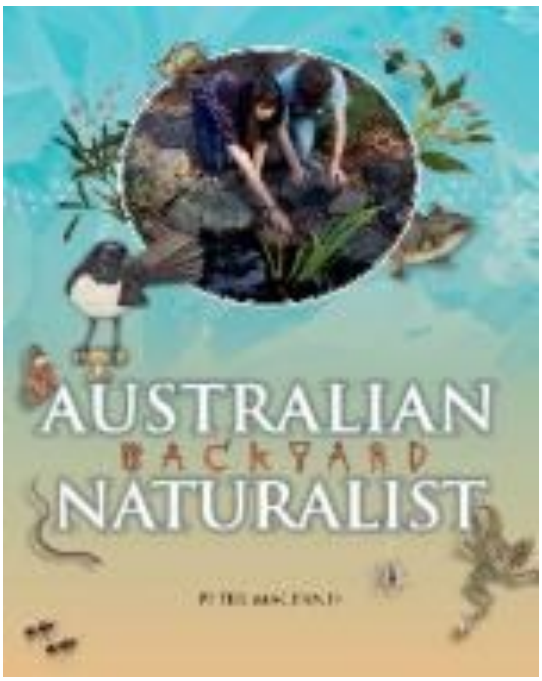
A perfect gift for older children, *Australian Backyard Naturalist* is a visually exciting book that contains lots to interest readers.

Each chapter contains:

• an introduction to the biology and ecology of a group of animals

• fun and practical projects to do in the backyard, e.g. making nest boxes for possums or birds; making a frog pond; catching and keeping spiders; breeding flies

• amazing facts e.g. did you know that daddy long-leg spiders hunt and eat redbacks? Did you know that the maggots of flies are used to clean up people's wounds?



• a detailed look at a particular topic, e.g. how cuckoos trick its host birds into bringing up their young; how snake anti-venom is produced; how the compound eyes of the fly evolved.

For $30 this book is a real visual feast. But what I like most is that it provides guidance on hands-on projects for older children (and children at heart). Projects like catching and keeping spiders; finding small animals in leaf litter, and looking at bees. It also doesn't "talk-down" to the reader. An example from the book chosen at random "M*osquitoes: There are two types of mosquitoes— the culicine, whose wrigglers (larvae) hang down in the water, and the anopheline, whose larvae lie horizontally*."

Peter Macinnis, is a Sydney-based science writer. As well as receiving Eve Pownall award for Australian Backyard Explorer in 2010, his 2006 book, Kokoda Track:101 Days, was short-listed for the NSW Premier's History Awards in 2007 and was an Eve Pownall Honour Book in the 2008 Children's Book Council of Australia Awards. Other recent books include Australia's Pioneers, Heroes and Fools (2007), Mr Darwin's Incredible Shrinking World (2008) and The Speed of Nearly Everything (2008)

I hope my grandchildren will enjoy learning about nearby nature and tackling some of the projects. If they don't I will.

Chris Bunn

MONTH	SPEAKER	TOPIC
MAY 2	Richard Baker	*"Traditional Ecological knowledge: the Yanyuwa"*
JUNE 6	Marianne Horak	The scribbly gum moth (Canberra the scribbly moth capital)
JULY 4	Dierk von Behrens and Rachel Marks	Clouding the Vision
AUGUST 1	Ric Longmore	Dangerous snakes of Australia
SEPTEMBER 5	AGM, members' night	Member's choice
OCTOBER 3	Trish McDonald	Macquarie Island, rabbit, rat, mouse control during her time as station manager for the Australian Antarctic Division
NOVEMBER 7	Under construction	
DECEMBER 5	Christmas party	

THE EASTERN QUOLL AND RABBITS

The following is an extract from a book published in 1907 *Rambles of an Australian Naturalist* written by Paul Fountain from the notes and journals of Thomas Ward, a Queensland stock-farmer. Although I have an hard copy, the book is available on-line. I have chosen a section about the native cat (or eastern quoll)

The native cat *(Dasyurus viverrinus)* is found at the base of the Kosciusko, but is a scarce animal in most parts of the Alps. This curious and handsome little animal is of a darkish colour spotted all over with white blotches. It does not at all resemble a cat. Except that it is a marsupial, it is much more like a pole-cat, especially in its habits. It is a fierce little animal, and those that I have kept were dangerous pets, and never reconciled themselves to captivity. It is a thorough beast of prey, and attacks any animal it is strong enough to overcome, the exotic rabbit excepted, and it is singular that the latter pest appears to have no enemies in the country. The usual prey of the native pole-cat (as it should be called), consists of birds both small and of considerable size. For though it is arboreal in habits, it leaves the trees at night, and neglecting the swarms of rabbits, seems to make straight for the homesteads of the squatters where it, or at most a pair of them, show their truly weasel-like instinct by destroying fowl after fowl. Sometimes as many as twenty head of poultry are killed in a single night, apparently for the sake of their blood, which always seems to be sucked from the body. Not many of these animals are caught in traps; and they work so silently that, unless they are specially watched for, the unfortunate squatter or farmer is seldom made aware of the fell work going on in his hen-roost.

In the trees they destroy many young birds; and pigeons and parrots are surprised in their nesting and roosting places, and captured in great numbers. This I have clearly traced by means of the feathers and such remains the feet, beaks, and bones. The head is usually eaten, or at least the brains and eyes sucked out. The allied animals, known to the colonists as 'possums, also suffer greatly from their more powerful kinsmen; and an occasional tree-snake falls a victim to these ravenous " cats," but though the opossums eat insects, I have never found any evidence that the cats do so, and I think they are altogether too fierce and ravenous to concern themselves with such small prey. It is a wonder and a pity that the native cat does not take to preying on the rabbits which abound in so many parts of the country; but, as I have already hinted, none of the Australian carnivorous animals have as yet taken to making serious attacks on them. I have never seen an eagle or a hawk with one in its talons ; the snakes and the dingoes may destroy a few, but I have only met with scant evidence that they do so. Ferrets and weasels have been imported into the country from England for the purpose of thinning their numbers; but these ferocious little animals preferred attacking the poultry they were brought to protect, and proved only an addition to the nuisance.

Historically, the Eastern Quoll was widely distributed throughout south-eastern Australia, from south-east South Australia, throughout Victoria and Tasmania to eastern NSW. This species experienced a dramatic decline and is now considered extinct throughout most of its former range. However, it is still relatively common in Tasmania. In NSW, Eastern Quoll populations once occurred from the mid-north coast to the Victorian border. There have been recent unconfirmed sightings in the Wyong and Cessnock districts on the central coast and inland of Kempsey, however extensive surveys have not found any evidence of the species and its current distribution in NSW remains uncertain.

Tony Lawson recently sent information on *Natchat* about the possibility of re-introducing the quoll onto the main -land. In Lithgow, the Australia Ecosystems Foundation (AEF) has been breeding eastern quolls from Tasmania for 10 years and is in talks with national parks about reintroducing them into the wild.

"Our project here is to maintain a genetically robust population of eastern quolls with the view to release them back into the wild on the mainland. I have been working with this population for over 10 years now and we are close to an agreement for release," says Trevor Evans from the AEF. Can we train them to tackle rabbits!

The committee is looking at producing a new brochure and are interested in photographs, especially showing people 'field natting'

Field Naturalists' Association of Canberra Inc.

Who are the Field Naturalists?
The Field Naturalists' Association of Canberra (FNAC) was formed in 1981. Our aim is to foster interest in natural history by means of meetings and regular field outings. Meetings are usually held on the first Thursday of each month. Outings range from weekend rambles to long weekends away. Activities are advertised in our monthly newsletter. We emphasise informality and the enjoyment of nature. New members are always welcome. If you wish to join FNAC, please fill in the member application below and send it in with your subscription to the FNAC Treasurer at the address below.

President: Rosemary von Behrens pH: 6254 1763
Email: fieldnaturalist@yahoo.com.au
Website: under construction
All newsletter contributions welcome.

Monthly meeting venue: Division of Botany and Zoology, Building 116, Daley Rd, Australian National University. Park (the Xmas meeting is at the adjacent building 44 and will start at the earlier time of 6:30 pm)

Field Naturalists' Association of Canberra
GPO Box 249
Canberra ACT 2601

MEMBERSHIP APPLICATION OR RENEWAL

Family name: …… First name: ……..
If a family membership, please include the first names of other members of the family:

……..

Postal address: ……

Suburb: …….. State: …… Postcode: …… Home phone: ……..

Work phone: …… Email address: ……

Subscription enclosed: $……(Single/Family $25) Donation: $.....

How did you hear about FNAC? Please circle: FRIEND? OTHER? Please specify: