

May 2009
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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 MAY 7

7:30 pm Australian National University

Meeting details back page

Fungi: a fascinating kingdom

Speaker: Heino Lepp

Heino's talk will deal briefly with the ecological roles of fungi but he will spend much of the time explaining what are the functions of the striking, and often colourful, bits that you see.

Heino is a very enthusiastic and knowledgeable amateur mycologist, so much so that now he is generally considered to be the local leading light on fungi matters. He is an honorary science associate at the ANBG Cryptogram Herbarium and the Centre for Plant Biodiversity Research, with a particular interest in a group of wood-inhabiting fungi which are very poorly known in Australia. He also contributes to the national Fungi map project which is trying to learn about the distribution of fungi species in Australia, and to the Encyclopedia of Life which is a global attempt to describe all life.

Heino is responsible for the very helpful site on fungi on the ANBG website – see <http://www.anbg.gov.au/fungi/index.html>, and also the site on bryophytes. He also regularly runs a fungi course at the ANBG. The next one starts on Thursday 30 April and runs for 10 weeks. The one hour Thursday lectures at 2:30 pm in the ANBG Theatre are repeated on Sundays at 11:00 am.

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Field Trip- Mt Tennant: Sunday 10th May 10:30am.

This trip will climb the impressive Mt Tennant. We will leave from the Namadgi Visitors Centre, a couple of km South of Tharwa along Naas Rd. The Visitors centre often has many rare birds including Restless flycatchers, Jacky Winter, Diamond firetails and crakes. The climb up the mountain is steep but affords great views of the valley, even down to the Murrumbidgee. Honeyeaters may also be seen migrating and you often get Wedge-tailed eagles.

Bring suncream, hats, morning tea, wet and cold weather gear and of course binos. Car pooling from Canberra- Call Benj on 0400 250 230.

What we are reading?

Rosemary Blemings has suggested a new feature for *Field Natter* about what we are reading. Beneath are two items from Rosemary

David Lindenmayer is one of the editors of ***Ten Commitments: reshaping the Lucky Country's Environment***. Collingwood, Vic., CSIRO, 2008.

With Stephen Dovers, Molly Harris Olson and Steve Morton he's drawn together state-of-the-system-contributions from experts on Australia's ecosystems. 'Each chapter included ten key issues that must be urgently addressed to improve Australia's environment.' The influences of Fisheries, Mining, Agriculture, Grazing and Tourism on Australian species and habitats are detailed with solutions to problems drawn from on-the-ground practice. Twelve Cross-cutting themes such as Biodiversity, Population, Landscape fires, Energy are presented in their contexts as threats, influences and recurring problems. The 238-page book is informative. The theme of surveying flora and fauna and being more aware of species behaviour and landscape-scale vision is constant. Working effectively to 'save' species and their habitats isn't achievable unless we know what exists and how species interact. **Ten Commitments** shows pathways to saving Australia.

Alan Weisman takes on a global scenario in ***The World Without Us***. London, Virgin, 2007.

Weisman shows what will eventuate if we do too little to prevent the collapse of civilisation. Iconic European forests, New York City, African safari-lands, Chernobyl, England's agricultural research-base at Rothampstead, the oceans are among the places he's visited whilst investigating their significance. He names and describes plants and animals which are poised to re-possess the lands, cities, rivers, lakes and oceans once people are no longer around to manage the creations of their dominant culture.

We could learn much from these two descriptors of our natural world. Let's hope there is time to steer Australia away from environmental collapse and that all nations can heal their own wounds. There is time for co-operation and vision...just!

Several people have commented on the cups we use after each meeting. They are corrugated for insulation & heat retention & 1000 were bought several years ago from EarthBasics in Fyshwick. (Maryke Booth, the business' director, has quite recently joined FNAC but is also a very keen and involved Friends of Grasslands member). The cups' advantage is that they are recyclable or biodegradable in the compost situation. Perhaps we should take them home after using them or find one of ANU's recycling stations!

Since we are visitors to BOZO we can't very well use the mugs that are already in the ANU's kitchen there. Polystyrene mugs were another option but my understanding is they must go to landfill as rubbish.

I think I read that there's little to choose between 'china' mugs, polystyrene and EarthBasic mugs when the resources and manufacturing mathematics is done. But at least the EarthBasics mugs are useful after use.

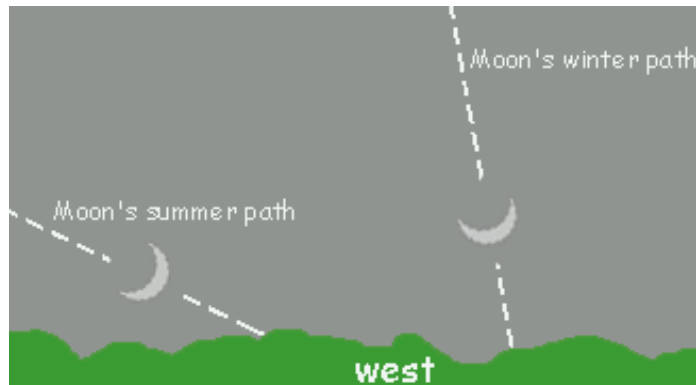
SMILEY MOON

A month or so ago, my wife noticed that the moon looked like a horizontal smile rather than a vertical crescent. We had not noticed this before, but were intrigued and tried to find out more. I found this explanation on the internet (they refer to a boat shape rather than a smile), at <http://curious.astro.cornell.edu/question.php?number=393>.

Is the Moon seen as a crescent (and not a "boat") all over the world? Is the same phase of the moon visible from the Northern and Southern hemispheres?

The orientation of the crescent moon depends on the latitude of the person observing it (the *size* of the crescent, however, is the same wherever you are). Think about a crescent moon as seen from the Northern hemisphere, and the same Moon as seen from the Southern hemisphere; if we take the people in the Northern hemisphere as "right-side up", then those in the southern hemisphere are "upside-down", since the Earth is spherical. Since the existence of the crescent Moon depends only on the relative locations of the Moon, Earth and Sun (and not on one's location on the Earth), the Moon seen in the Southern hemisphere is *upside down* when compared to that seen in the Northern hemisphere. This means that if the concave part of the crescent points "left" in North, it will point "right" in the South. Since the transition from a "left" pointing crescent to a "right" pointing one must be smooth, we require that the Moon be a "boat" instead of a crescent at the equator.

The appearance of the crescent moon will also change depending on the season for an observer staying at a single location on the Earth. We know the Earth does not sit right-side-up in its orbit - instead the Earth's axis is tilted and this tilt is what causes the seasons. Just as the Sun's path is different across the sky depending on the season (the path is longer during the summer giving us more direct sunlight and hotter days), the Moon's path will be different as well. What part of the Moon gets illuminated (i.e. whether it looks like a crescent or a boat) depends on how high the Moon is in the sky. During summer in the northern hemisphere, we are tipped away from the Moon's orbit, putting the Moon lower in the sky and creating more of a crescent. During winter in the north, we are tipped toward the Moon's orbit, putting the Moon higher in the sky and creating more of a boat.



The Moon's path (and thus appearance in the sky) will depend on the season. Credit: Goddard Space Flight Center

The lunar orbital plane is only inclined by about 5 degrees relative to earth's orbital plane, so the same phase of the moon would be simultaneously visible to two people at the same longitude but different hemispheres of Earth, as long as the skies are sufficiently dark.

However, given the near-ecliptic orbit of the moon, people viewing the moon from Earth's northern hemisphere will generally look southward while those in the southern hemisphere will look north. This causes the lunar surface to be viewed in roughly opposite orientations. Consequently, while the same phase of the moon will be visible from both hemispheres, the appearance of the lunar surface and the orientation of the phase as viewed from the northern hemisphere will be inverted relative to those as viewed from the southern hemisphere. This also means that the moon appears to wax from its right limb when viewed from the northern hemisphere and from the left limb when viewed from the southern hemisphere.

During this international year of astronomy, if you have any interesting observations to report please pass them on to our editor.

Tony Lawson

There will be a number of local events as part of the International Year of Astronomy. You can find details of these events on the Canberra Astronomical Society website at: <http://msowww.anu.edu.au/cas/IYA2009.html>.

Kangaroos vs. Sheep

Kangaroos drink less water and consume less energy than sheep, according to a University of Sydney study that could help dramatically reduce the environmental impact of farming.

Adam Munn, a lecturer in Sydney's faculty of veterinary science, has been tracking kangaroos and recording their energy requirements. His conclusion **that kangaroos consume only about 13 per cent as much water as sheep** has important implications for grazing practices. A sheep's diet consists mainly of saltbush. "Sheep feeding on saltbush will drink around 12 litres of water a day, as opposed to kangaroos, which drink around 1.5 litres per day," Munn says.

The discrepancy between the water requirements is attributed to their different diets and bodily functions. "Kangaroos are better at concentrating their urine, and sheep eat more saltbush," Munn explains. The quantities of salt in saltbush have "to be flushed out the body and this is done by drinking and urinating".

According to the study, **kangaroos also consume only one-third of the energy of sheep.** "In the past it has been thought that kangaroos used 70 per cent as much energy (as) sheep," Munn says. "But we've shown that when kangaroos and sheep are studied at the same time period, in the same environmental conditions, **kangaroos only use 0.3 to 0.35 the amount of energy as sheep.**"

Previous studies calculating the energy requirements of kangaroos were based on assumptions about the resting metabolic rate of marsupials compared with non-marsupial mammals. "Marsupials have a metabolic rate 70 per cent of non-marsupials when at rest in the lab," Munn says. Researchers assumed that free-ranging kangaroos used 70 per cent of the energy of sheep. These estimates did not consider the body size of the animals, or their movements. **"This is the first study of the metabolic rate of kangaroo in the field, not in the resting state.. The kangaroo will turn over around 5000 kilojoules per day, and a sheep will turn over about 15,000,"** Munn says.

Knowing the energy requirements of kangaroos and sheep allows researchers to calculate the amount of plant each animal will eat. These calculations are the next step in Munn's research. "If you know what they are feeding on, you can measure the standard energy content of the food they are eating," he says. "We can then look at how much energy they need from a real, on-the-ground food source."

As kangaroos have significantly lower energy requirements than sheep, it's expected they will need less food than sheep and their environmental impact will be lower. "It's important to get the message out there that kangaroos may not have as great an impact as people once thought," he says.

He hopes his research will encourage greater uses for kangaroos. "With climate change, most rangelands are going to need to look at diverse options for land management for sustainability,". "You could use kangaroos for eco-tourism without the environmental impact once thought, or increase the use of kangaroo for human and pet food consumption."

Extract from an article in The Australian 16/04/2009

Written by Wendy Zuckerman

www.theaustralian.news.com.au/story/0,25197,25334630-27703,00.html

THE ACT KANGAROO MANAGEMENT PLAN

The **purpose** of the Kangaroo Management Plan is to set out the approach to be adopted in managing the environmental, economic and social impacts of eastern grey kangaroos in the ACT, while ensuring the welfare of the animal. .

The **goals** of kangaroo management in the ACT are:

- i) to maintain viable populations of kangaroos as part of the fauna of the 'bush capital'
- ii) to manage and minimise the environmental, economic and social impacts of those kangaroo populations on other biota, ACT residents and visitors.

The plan outlines the legislative and policy framework for kangaroo management in the ACT. It briefly outlines current knowledge of the biology and ecology of eastern grey kangaroos and discusses kangaroo populations and impacts. It sets out the *principles* that underlie kangaroo management in the ACT and the *general policies* that apply to management issues wherever they might arise. The plan includes policies for managing the environmental impacts of kangaroos in grassy ecosystems, as well as policies for managing economic and social impacts of free-ranging kangaroos.

Particular consideration is given to managing grazing pressure on lowland native grasslands and grassy woodlands. (including Mulligans Flat Woodland Sanctuary and National Land areas (managed by the Commonwealth Government)). These areas are very important because they contain threatened species and ecological communities. There are also policies for the Googong Dam Area (managed by the ACT Government), Namadgi National Park, Tidbinbilla Nature Reserve and the Lower Cotter Catchment.

The full plan can be downloaded from:

http://www.tams.act.gov.au/live/environment/local_wildlife/kangaroo/draft_act_kangaroo_management_plan

Submissions on the Plan will be accepted up to close of business 11 May 2009.

Forward comments by post to:

Senior Strategic Planner, Research and Planning
Parks, Conservation and Lands

Department of Territory and Municipal Services
GPO Box 158 Canberra ACT 2601

- **Forward comments via Email to:** ParksConservationAndLands@act.gov.au

Please ensure 'Kangaroo Management Plan' is entered in the subject field of your email.

Field report Honeyeater Migration - Sunday April 19th.

It is always a mistake to party the night before a field trip and in a daze I thought 'who the heck is ringing me at 8:30 am on a Sunday morning!'. But luckily I was car pooling and they did- it was Kevin. After a scramble Kevin and I managed to get to Williamsdale by 9:35 (yes, Dierk was right, I meant leave Canberra at 9am) to meet a happy gaggle of enthusiasts, including Naarilla, Robin Judy, etc. Unfortunately the weather was not so and menacing clouds were looming. We got to our site and it was cold and very windy, with a few spots of rain, and over the period of half an hour not one honeyeater had passed through. Although, we did see wedge-tailed eagles. After a quick check of the forest, which was teeming with birds including speckled warblers, thornbills, scarlet robin female and others, we decided to go to Tharwa Sandwash. The hills paralleling Tharwa Sandwash afforded protection from the wind to some extent and we managed to see lots of thornbills, swallows, pardalotes, double-barred finches and even a brown treecreeper, restless flycatcher, speckled warbler and got good views of scarlet robins. In fact the swallows landed quite close to us and gave us a great and rare opportunity to see their beauty and take photos. I am also pretty sure we had 2 female/juvenile flame robins. We did manage to see some honeyeaters including yellow-faced and white-naped and a white-eared, plus silvereyes- most were heading North, strangely. People were impressed after such a poor start, and some of us stayed on to have lunch, including Kevin, John, Jean, Sybil and her friends Marilyn and Nola. It was interesting to hear differing views on explorers and their actions, mainly focussing on the guy who crossed the Tasman sea to NZ by canoe and died.

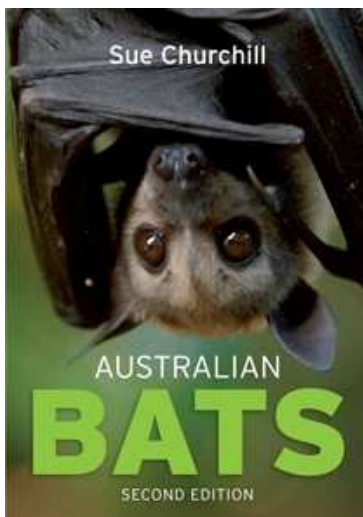
Benj

Book Information

A new field guide to Australian bats (2nd edition), complete with identification keys has just been published.

Description

An identification guide to all 75 species of bats known from Australia. The species are illustrated with colour photographs, and each species account includes a detailed description of the bat, measurements, a distribution map and notes on where they live, what they eat, and how they find food and reproduce.



The book also provides general information on their evolution, why they hang upside down, roosting and reproduction, echolocation, and how to catch, survey and care for bats, including health hazards for carers. An identification key to the eight Australian bat families is provided, with important features illustrated by line drawings and photographs, as well as illustrated keys to all the species.

About Sue Churchill

Sue Churchill is a wildlife ecologist who specialises in mammal ecology, primarily bats. In 1981 she undertook the first Australia-wide survey of bats: the WWF (Australia) study of rare and endangered bats. Since then she has conducted several large-scale bat surveys in northern and central Australia and spent three years studying the ecology of cave bats in the Northern Territory. She has published more than 20 scientific papers.

This book is currently available at the National Library for \$45

Friends are welcome at our monthly meeting

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: Benj Whitworth, tel 02 6272 3192 W mobile:0400250230

Secretary: Tony Lawson, tel 02 6161 9430 fieldnaturalist@yahoo.com.au

Website: www.geocities.com/fieldnaturalist/index.html

Newsletter editor: Chris Bunn <chris_b@webone.com.au> Tel 02 6241 2968. Member contributions welcome.

Published and distributed by Bob Lehman



Monthly meeting venue: Division of Botany and Zoology, Building 116, Daley Rd, Australian National University. Park (occasionally the adjacent building 44). Meetings start at 7:30 pm and are followed by refreshments.



For the first time in almost 30 years I have been noticing geckoes around our house in Cook.

First time in the bathroom a few months ago. This one was in the skimmer box of our pool.

Philip Bell

Around the House

All huntsman spiders can be distinguished from other spiders: the front two pairs of legs are noticeably longer than the back or hind two pairs of legs. Huntsman spiders roam, stalk and run down their prey. The wandering habit of hunting spiders is the reason you are more likely to find them indoors.

This one was photographed in our hall a few weeks ago.

Chris Bunn



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 \$20) Donation: \$.....

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