April 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 April 2
7:30 pm Australian National University

Meeting details back page

Platypus & Koala - a science historian's view

Speaker: Ann Moyal

Writing about the platypus and the koala: a science historian's view

Ann will give a broad picture of the curious history of the platypus and a key finding or two from the recent Platypus Genome study. Then by contrast she will look at the koala with its different history and the question that this national flagship animal poses for today's policy makers.

Ann Moyal has had an exhilarating life. A noted scholar of the history of Australian science and telecommunications, and a biographer, she began her career as a personal research assistant to the famous British press lord, Lord Beaverbrook, joining him in the writing of his books on British political history and travelling with him as he entertained such figures as Sir Winston Churchill and the Kennedys in America. This time is covered in her book *Breakfast with Beaverbrook* (1995).

She returned to Australia in 1958 to help found the Australian Dictionary of Biography at the Australian National University and then to pioneer a new field of the history of this country's science. In 2002 she received the degree of Doctor of Letters from the Australian National University for her published work and in 2007 the degree of Doctor of Letters from Sydney University. She is an Honorary Fellow of the Australian Academy of the Humanities, and holder of the Centenary Medal.

Publications include *Scientists in Nineteenth Century Australia: A Documentary History* (1976), *Clear Across Australia: A History of Telecommunications* (1984), *A Bright & Savage Land: Scientists in Colonial Australia* (1986), *Portraits in Science* (1994), *Platypus: the Extraordinary Story of how a Curious Creature Baffled the World* (2001) and *Koala - A Historical Biography* (2008). Ann will be basing her talk on her research for these latter two books.

All her books have attracted critical acclaim and attest to the contribution she has made to Australian history and to an understanding of the role of science and technology in Australian society.

Bring along a friend

April outing

Honeyeater Migration- Sunday April 19th, 9am- 12pm.

The honeyeater migration is one of the most dramatic animal events in the ACT and occurs twice a year. Autumn is much better than the Spring migration. I will take you to a little known site near Angle crossing, (South of Canberra) that funnels the migrating birds. We are likely to see hundreds of white-naped, yellow-faced and white-eared honeyeaters. Also possibly some fuscous. Other birds will include red wattlebirds, silvereyes, pardalotes, even little ravens. If the weather is good it is possible to see up to 8000 birds in half a day, but don't expect too much. Last year we saw 2000. We will sit and absorb the migration for an hour or so.

Afterwards we will visit Tharwa Sandwash. A good spot for birds in the ACT, at any time of year. Walking is easy. Bring a chair, suncream, hats, morning tea and coffee and of course binos and cold and wet weather gear. Don't miss it. Car pooling from Canberra- Call Benj on 0400 250 230. Or meet at Williamsdale turnoff at 9:30am. Directions- About 10km S of Canberra, along Monaro Highway, turn Right at Williamsdale at sign for Angle crossing. Map of Murrumbidgee corridor- http://www.environment.act.gov.au/__data/assets/pdf_file/13636/Pages_from_WEB_MRC_brochure.pdf

Field Trip to Burrawang Coastal Club Friday May 15 to Sunday May 17.

This trip is suitable for active and no-so-active field nats, so join us for a relaxing weekend at the coast. Burrawang is a private club on 40 hectares of high conservation value headland, between Guerilla Bay and Tomakin. There are beautiful walks through diverse plant and animal communities, to the rocky headlands and secluded beaches of Long Nose Point. The weather is generally mild in May and the water can be warmer than in December. It's around two and a half hours drive from Canberra.

The two-storey cabins are grouped around a covered recreation area and BBQ's. The comfortable cabins are open-plan with a kitchen, bathroom, dining/sitting and a queen-bedroom area downstairs. The upstairs loft area has two single beds. The kitchen has a microwave and a stove and even coffee plungers are provided. You will not need to bring pillows and blankets just linen/sleeping bag and your food and drinks.

Cabins cost $93.00 per night for the Saturday and Sunday nights. If you wish to extend your stay, the cost per cabin will reduce to $61.00 per night. Sharing cabins is possible depending upon individual needs. If you would like to camp for the weekend there is a nearby caravan park. We would need to seek approval from the club for our campers to access the property to join our walks.

A get-together BBQ dinner is planned on arrival Friday and we may have lunch or dinner out somewhere local.

As accommodation at Burrawang is limited please **contact Sylvie on 6251-2524 asap or email her at sylviesampson@bigpond.com to discuss accommodation and transport needs.**

If you a member of Burrawang Coastal Club and you would like to share your knowledge of its flora and fauna with us, Sylvie would be delighted to hear from you.

March 22 outing report Tallangda NP Benj, Sybil and others

A large group of 19 Field Naturalists and friends met at the park in Captains Flat at 10:30am. We headed south and then down Wild Cattle Flat Rd. Stopping at a dry forest site of mainly candlebark and broad leafed peppermint. We hoped to see spotted quail thrushes, as this is a reliable site. However, no such luck. But a few plants were in flower. (see list below)

Moving on we missed the lunch spot but instead headed up to Rocky Pic Rd and camped in a great little spot. While Michael, Bill, Trisha and I discussed folk music, a lyrebird called and others investigated {native peppers etc}

A couple of gang gangs flew in and then the group divided into two, one group heading up through snowgum and heath and we were very excited when Diedre spotted a quail thrush. The other group got to see a satin bowerbird, possibly a female or young male, as identified by Mike, in the wet forest.

After lunch we headed East down the main Braidwood/Captains Flat rd. Stopping at a spot with huge Brown Barrel and Ribbon Gum we observed interesting butterflies, thornbills and honeyeaters.

Further down we journeyed down a path, as dark thunderous clouds threatened, and observed a group of butterflies gathered around a small pool in the path, perhaps drinking or taking up salts and minerals.

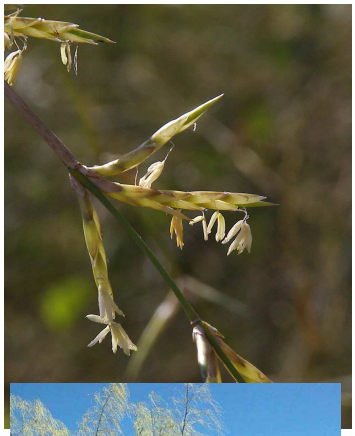
Right on time, the rain started as we piled into cars and headed back into town, to have pancakes and chocolate cake at the

(Continued on page 4)

THE MYSTERY OF FLOWERING BAMBOO

Many bamboos (Poaceae: Bambuseae) remain in a vegetative state for between 30 and 60 years, and several species for more than 100 years, before engaging in a suicidal bout of sexual reproduction. The technical term for this type of plant is semelparous.

Early in the 20th century, a Japanese scientist by the name of Kawamura examined the historic records of mass-flowering in a species introduced to that country from China, and noticed a remarkable periodicity - mass-flowering took place every 58-62 years. Kawamura suggested that this had to be the product of an internal clock mechanism, and thus that the timing of flowering had little if anything to do with environmental conditions. Since then, several more bamboo species have been shown to exhibit remarkable periodicity of flowering, and the idea that flowering is driven by a biological clock in the plants' cells has been fairly widely endorsed. It was reinforced when, in 1976, the eminent American tropical ecologist Daniel Janzen proposed an ecological pressure on bamboo – consumption of its seed by a wide range of animals – that could promote the evolution of delayed and synchronous flowering.



However, skeptics persisted. There were three problems with the biological clock theory that promoted this skepticism. The first is that the existence of such a clock is virtually impossible to demonstrate in any direct sense. The second and perhaps more troubling problem was that many bamboos flower in a "wave" rather than totally synchronously, and the biological clock theory offered no explanation for this phenomenon. The third was that measured descriptions of bamboo flowering patterns are at best fragmentary. In the absence of resolution of these problems, bamboo flowering behaviour remained the subject more of mythology than science.

Two recent advances have permitted greater acceptance of the biological clock hypothesis. The first is the unequivocal demonstration of the existence of biological clocks in shorter-lived plants, and also in humans and other animals. Out of this research has come the recognition that biological clocks come in two basic types, cyclical (the one that causes jet-lag in humans) and linear (such as the triggers for the onset of puberty in humans or first-flowering in plants). The idea of a linear biological clock seems to fit bamboo flowering behaviour well.

The second advance came in the Northern Territory when by good fortune, study by Dr Don Franklin coincided with a flowering wave, and he was able to provide a more detailed description of the phenomenon.

So what is a flowering wave? Simply, it means that mass-flowering occurs in patches rather than for the whole species at once, and that after decades in which there was virtually no flowering activity, a succession of patches flower in consecutive years. Importantly, the wave is a pattern in time but not in space - it does not sweep across the landscape in a spatially ordered manner. Another intriguing aspect of the wave is that patches vary hugely in size. Yet another important point which has sometimes caused confusion, bamboos being clonal plants (a population of identical individuals that are formed vegetatively from the same single parent), is that synchronous flowering clumps are not clonally identical - each clump is the product of a seedling produced by the previous flowering event.

Biological clocks differ from mechanical or atomic clocks in that they have to count something external to themselves, and that "something" is often environmental. Thus, the sharp distinction made between internal and external cues to flowering may be misleading. Plausibly, the bamboo clock could be counting annual fluctuations in day length, or cycles of wet and dry, or something to do with dry season minimum temperatures (or a combination of these). If it is cycles of wet and dry, or temperature, then an unusual climatic event could alter the count, importantly without altering the underlying clock setting to be passed on to the next generation. If, for example, a dry season downpour affected some areas but not others, then that "patch" would have its timing pushed forward or back a year, and since the clock itself remains intact, the patch would thenceforth and forever (until another unusual climatic event interfered) flower one year out of synchrony with the neighbouring patch. An accumulation of such events over many generations could explain a flowering wave.

Dr Don Franklin is a research fellow at Charles Darwin University, with an interest in bamboo ecology and management. "Reprinted with permission of the author from the October 2004 issue of *Nature Territory*, monthly newsletter of the Northern Territory Field Naturalists Club Inc. ". .

Photos *Bambusa arnhemica* , the top end bamboo in flower (photos from the author)

What to do if you find a dead bird (in good condition)

The COG chatline recently had this posting from Mark Clayton, which may be of some interest to Field Nats.

"I, and the chat-line, often get requests about what to do with birds found dead. In fact many people don't realise that they have potential value as scientific specimens. In Canberra, for those that are not aware of it, is the Australian National Wildlife Collection, held at CSIRO Sustainable Ecosystems, off the Barton Highway at Crace. This is the Federal Government's official vertebrate museum collection (except fish) and contains specimens preserved as skins, skeleton and in spirit of mammals, birds, reptiles and amphibians. It is a research museum and as such is not open to the public except on special occasions.

So, what do you do if you find a dead bird? If it is in a good condition, try and put some tissue or cotton wool into its throat – this is to stop any blood or gut ooze from leaking on to the feathers. If it is possible try and take some notes on the colour of the iris, bill, legs, toes and claws and things such as facial skin, e.g. Blue-faced Honeyeater, wattles, e.g. as on a Red Wattlebird, or an eye ring, e.g., White-naped Honeyeater. Then wrap the bird in some tissue or toilet paper, or if it is a biggish specimen, in newspaper, then wrap it in a plastic bag and place it in a freezer as soon as possible. At the same time you are wrapping the bird PLEASE take notes on the following: - the **date** on which you found the bird, the **locality** as precisely as possible as to where you found the bird, the **habitat** that you found the bird, what you think is the **cause of death** e.g. found as road kill, hit window, beach washed, etc, and your **name** and contact details as the finder. Place all this information **in the packet with the bird** in such a way that it will not get lost as it may be sometime before it is processed by staff at the ANWC.

Having done all that you can then contact any of the following to arrange for the bird to either be picked up or if you are so inclined, to deliver the bird to the ANWC-
● Mark Clayton (h) 02 62413620; ● Robert Palmer, ANWC Collection Manager (w) 02 62421369; ● Ian Mason, ANWC Senior Research Officer (w) 02 62421680; ●Alex Drew, ANWC Research Officer (w) 02 62421552; or ● Dr Leo Joseph, Director of the ANWC (w) 02 62421689. Hopefully someone will be around to take your call!

A note of caution! It is technically illegal to have dead birds in your possession but generally the wildlife authorities should not become too concerned if they are told the specimens are going to an authorised State or Federal museum. The decision is yours as to whether you are prepared to take the risk. The ANWC does have licences covering the acquisition and holding of specimens.

If anyone wants to know what to do with banding recoveries involving live or dead birds, they can contact the Australian Bird and Bat banding Schemes on email abbbs@environment.gov.au ."

If people want more information they can contact Mark at chollop7@bigpond.com or by phone (see above).

(Continued from page 2)

The Outsider Gallery. I shared my huge pancakes with Pam, while George and Sylvie struggled through theirs. As the rain teemed down Phyl got stuck into a huge mud cake.

Sybil's plant list

At first stop: mainly E.rubida (Candle bark) and E.mannifera
At stop 2 mainly E.fastigata (Brown Barrel)
Also spotted E.dives (Broad leaved peppermint), E.pauciflora (snow gum) and E. dalrympleana (Mountain gum)
Other plants: Tasmannia insipida (Mountain pepper bush) - abundant at lunch spot; Lomandra, Dianella, Pomaderris aspera; Blechnam sps(ferns); Pittosporum sps; Cissus sps; Exocarpus stricta; Coprosma sps; Centaurium erythrea (introduced sps); Stylidium graminifolium (trigger plant); Dipodium sps (dark Hyacinth orchid); Brachycombe (still flowering); Bracteantha sps; Blandfordia; Lomatia ilicifolia (Holly lomatia); Bossia sps; Cryptandra; Clematis microphylla; Cassinea; Derwentia,
Bird list (compiled over pancakes) Flame robin;satin bowerbird; spotted quail thrush; Gang Gang; Yellow-tailed black cockatoo; spotted pardalote; White throated tree creeper; yellow-faced; white-naped, , brown headed , Fuscous, crescent honeyeaters; Galah; swift, brown falcon and forest raven.

The native pepper *Tasmannia lanceolata, note the smooth red branchlets.*

Photo Kevin Squair:

ACT Waterwatch Platypus Count

The Australian Platypus Conservancy is encouraging surveys of platypus distribution and abundance.

The platypus is one of the most remarkable animals in the world. Although the species is still officially regarded as common, surprisingly little is actually known about the size and distribution of platypus populations in most areas. There is an urgent need to map where platypus occur in river systems, so practical actions can be undertaken to protect small or declining populations. The Australian Platypus Conservancy, in cooperation with other organisations, has initiated Platypus Care to collect vital information about the status of the platypus.

If you have ever seen a platypus in the wild (or encountered the species in some other way, for example by finding a dead platypus), you can make a valuable contribution to Platypus Care by providing details of your sighting.

Their site (http://www.platypus.asn.au/) provides some advice about how best to go about observing the species in the wild, and describes the geographic range of the platypus in eastern Australia and the types of aquatic habitats where the animals may be found. It also gives some interesting basic facts about this very unusual species.

Under the auspices of ACT Waterwatch, the platypus is being surveyed in this region as indicators of river health. They are looking for helpers to do the surveys.

Platypus are most often observed near dawn or dusk, although they are also seen at midday, particularly when they are relatively abundant. They are surprisingly small, around 40 - 60 cm long. They float very low in the water, with their head and rump protruding slightly. At a distance they can resemble a floating stick and are often first noticed because of their bow wave as they paddle along.

Platypus can swim strongly, but more often they dive and resurface in a leisurely manner as they feed. They generally resurface within 25 m from where they dived. When foraging they usually stay underwater for less than a minute at a time. They return to the surface to chew their food or to groom themselves.

Platypus dives usually create a very distinctive circular ripple pattern; with sometimes a few bubbles at the centre, caused by pockets of air escaping their fur. When alarmed, the platypus will 'splash-dive', making a relatively loud single or double splashing noise as the animal dives abruptly. Normal 'duck-dives for food are much quieter, sometimes producing an audible 'plop'.

The main threats to the platypus are litter, fishing lines and fishing nets, and poor water quality, caused for example by household chemicals, salinity or nutrient enrichment.

In the ACT the most reliable place to see the platypus is in Tidbinbilla Nature Reserve.

Tony Lawson (drawing heavily on a Waterwatch pamphlet)

Learn about fungi at the ANBG with Heino Lepp

This course is again being offered in 2009. I attended two years ago and found it very informative. Fungi play a very important role in the environment, and most native plants have some form of symbiotic relationship with a fungus.

The course comprises 10 lectures, plus a microscopy session and a walk around the ANBG to see the fungi. The lectures start on Thursday 30 April and end on Sunday 5 July. Each week the lecture is given at 2:30 pm on the Thursday in the Theatrette, and repeated on the following Sunday at 11:00 am, so you have two chances to get to each class. The lecture topics comprise: The basics; Spore release and dispersal; Some aspects of fungal ecology (2); Fungi and humans; Mycogeography and knowledge of Australian fungi; Some history, mostly 1500 to 1850; Reproduction and survival (2); and Structure, classification and identification.

If you would like to attend the course just turn up. A Gold Coin donation towards the work of the Friends of the ANBG would be appreciated.

Incidentally, the ANBG has some useful information on fungi at http://www.anbg.gov.au/fungi/index.html . Tony Lawson

ANBG Lunchtime Talks - Thursdays at 12:30 pm in the Theatrette

There are some interesting talks coming up at the ANBG in the next few weeks, including:

9 April Morrie Duggan Volcanic Hotspots and Botanic Hotspots

16 April David Young Borneo - jungle and mountain

23 April Peter Taylor The National Reserve System: new directions and challenges

Field Naturalists' Association of Canberra Inc. **GPO Box 249 CANBERRA ACT 2601**

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:

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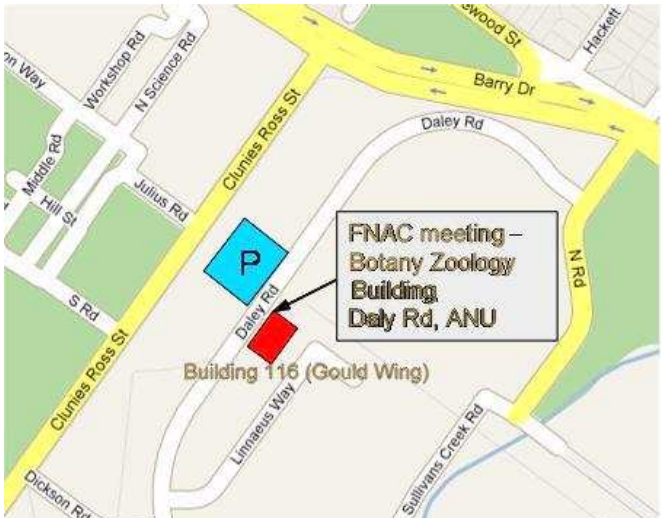

Monthly meeting venue: Division of Botany and Zoology, Building 116, Daley Rd, Australian National University. Park (occasionally the adjacent building 44). Meetings start at 7:30 pm and are followed by refreshments.

From Charmian Lawson

(Natchat)

I was wondering about these spider webs and also the bee activities in our garden and thought that perhaps someone can explain them to me?
I was under the impression that spiders wove symmetrical webs unless there was something wrong with them. This particular web is all over the place - is it unusual perhaps?
The bees congregate in the same stems of plants in one of our fishponds - sometimes as many as twenty or thirty, all heads down, piled on top of each other, as if they are drinking.

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: