



MEETING THURSDAY 5th MAY

7:30 pm Australian National University

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Cryptogams

Speaker: Dr Chris Cargill

Chris Cargill has been the Curator of Cryptogam Herbarium at the Australian National Botanic Gardens (ANBG) since 2001.

She is a Cryptogam taxonomist with an interest in art and photography - a very rare person indeed. In 2005 she mentored artist Julie Ryder who held a fascinating exhibition of cryptogams in the Botanic Gardens Information Centre.

Bryophytes are a diverse and fascinating group of plants often overlooked or maligned by the general public. Mosses, liverworts, hornworts (collectively known as bryophytes), reproduce by spores, do not have flowers and do not have seeds. They are amongst the earliest members of the plant kingdom to come out of the water and begin to colonise the land millions of years ago, long before the dinosaurs or the flowering plants. Dr Cargill will open your eyes to this often overlooked miniature world. Come and see what they are, where they are, how they have survived for millennia on land and their role in nature.

Photo: *Eurhynchium praelongum* Chris Cargill

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Photo: Leaving Mt Clear camping ground

On 6th March, Chris Bunn lead a group through the Naas Valley starting from the Mt Clear campground. Mt Clear is the southern tip of ACT, 90km from Watson.

The excursion to Naas valley went well with 9 people attending. The area is green, some flowers still present, some interesting birds (brown headed and whitethroated treecreepers). We saw an absolutely beautiful patch of *Dillwynia prostrata* and dusky wood swallows constantly hawking for insects at the creek. The most interesting aspect for me was the variety of eucalypts in the area. Plenty of kangaroos and a some swamp wallabies.

The walk is undulating with a few short steep hills to climb. We look the walk in a leasurly manner, stopping to observe things of interest and took a break for lunch in relaxing surroundings.

Chris Bunn and Margaret Kalms



Photo: A prostrate pea



Photo: Finding something special

All photos by Jean Geue

May Outing - Native Truffle Hunt at Mulligan's Flat

10.30am, Sunday 1st May

Please note, this is the weekend before the next meeting.

There are plans to re-introduce locally extinct species (or their near cousins) into the Mulligans Flat Sanctuary. But to be successful, amongst other things there needs to be food for them. One of the first species to be re-introduced will be the bettong (from Tasmania). Truffles are the major part of their diets. Professor Jim Trappe is a world authority on truffles and he has been coming regularly from the United States to Australia, which is regarded as one of the world's megadiverse truffle hotspots. He has also been checking out the availability of native truffles in the Sanctuary. This will be a joint activity with the Friends of Grasslands. We will be joining Jim and Jacqui Stol for the search.

Meet at the Mulligans Flat Nature Reserve carpark (just off Amy Ackman St between Cleggett and Jessie Sts in Forde). Please come prepared for a walk of one kilometre or more into the Reserve to view some (hopefully) of the extraordinarily good truffles for which Mulligans Flat is known.

This event should run for approx. 2 hours.

Please contact Tony Lawson to register your interest or to seek more detail - email tony.lawson@fog.org.au or 6161 9430 - as there may be a limit on numbers.

Ulladulla - Gondwana Coast Fossil walk

On the 10th April I was very tired and couldn't handle full-on bushwalking/ birding and wanted something different. The Ulladulla fossil tour sounded intriguing, but it is only mentioned for summer. Luckily they now have tours year round although these depend on the tides, which makes it tricky.

Interesting birds were 3 white faced herons and masked lapwings fossicking through the seaweed at low tide. Plus common terns, rainbow lorikeets and king parrots flying over, although I only recorded 7 bird species.

After an interesting overview of the geology, climatology and biology by Phil Smart (or volunteers) (where you get a brochure, Timescale bookmark and soil particle size pamphlet which are pretty handy), we set off to the Ulladulla harbour rock platforms. Check out their website for a better overview than mine and photos, <http://gondwanacoastfossilwalk.com.au/>.

The rock platforms show multiple siltstone layers, which were deposited about 273- 269 Mya (the Wandrawandian siltstone). They contain many many fossils of mainly bottom dwelling species, from calm, cold water (ie when Australia was Gondwana and over the Antarctic). Many of these species (~95%) became extinct in the great Permian extinction. The most beautiful fossils were of the sea fans and sea lilies (Crinoids, ie related to starfish) as these look like the cells of a plant when under the microscope. I also liked the shells that look like Bivalves (but are Brachiopods) called

the Productids as you can see the tiny holes in the fossil layers from their spiny shells. My invertebrate text book says that of 26000 Brachiopod fossil species only 335 still survive.

Dropstones were pretty bizarre, ie stones (some very large >50cm) embedded within the siltstone layers, which had probably travelled many km from the mountains within glaciers. I was surprised that I also found the Glendonites interesting. These large crystals and crystal clusters form in <5 degree temp water in organic rich silt. Cannon ball secretions (calcium carbonate, iron carbonate, silica) form around another object, whether it be a fossil, glendonite, or drop stone.

Phil showed how the harbour's cliffs also had huge ripples in the otherwise flat rock layers and explained how these were formed due to earthquakes rather than continental drift. Whereas the tessellation (ie tile like) pattern of the rock platforms are likely to have been formed due to geological rifting when NZ separated from Australia ~80mya. It was interesting to see what made Australia and all its species.

My Buddy and I travelled 22 hours to see the wall of dinosaur footprints in Bolivia and 2 days to see 'Lucy' in the Serengeti yet one of the best fossil displays I've seen is on our doorstep in Ulladulla. I encourage you to go if you can and I think they have tours over Easter. The main problem with the tour is the tides and the weather.

Benj Whitworth

Book Review

Wow, we have been lucky in Canberra having two books released about natural history in the ACT in the last couple of months. At our March meeting we heard about *A Bush Capital Year* by Ian Fraser, which presents a natural history of the Canberra region. The standard advertising blurb states the following

A Bush Capital Year introduces the fauna flora habitats and reserves of the Australian Capital Territory and includes the most recent research available. It also emphasises often unappreciated or even unrecognised urban wildlife. For each month of the year there are 10 stories which discuss either a species or a group of species such as mosses and mountain grasshoppers. While never anthropomorphic many of the stories are written from the organism's point of view while others are from that of an observer. Beautiful paintings complement the text and allow better visualisation of the stories and the subjects.

While not disagreeing with the above I would like to go further. I think this is the best natural history writing I have read for a long long time. Ian combines science, beauty and wonderment at the natural world seamlessly. An example (taken almost at random) “*A few cockies screech at me from the trees, flaring their big yellow crests in warning — these are the sentinels of Australian folklore, though here the flock is more tolerant than a rural one might be. The power that must be in the bills, to allow them to crush acorns to extract the seed, is phenomenal; it is aided by the hinge of the top mandible where it attaches to the skull, allowing extra leverage.*” What I like is that the writing is active, the reader is not being lectured but at the same time you are gaining information and are being given food for thought. The paintings by Peter Marsack also make the book come alive.

This is a book to dip into, not one to read from cover to cover. My one disappointment is the lack of even a simple index. There is a species list as an appendix, but without page numbers! Also, some indication of written sources drawn on would also have been useful.

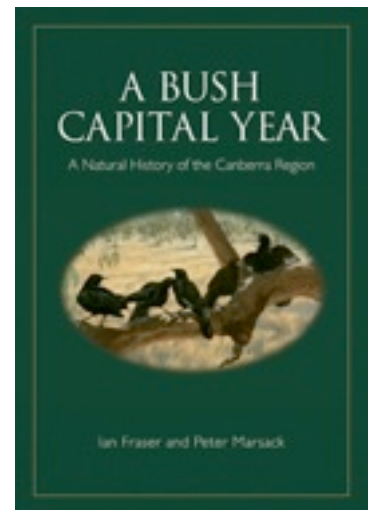
My advice is that if you live in Canberra and like the natural environment (and if you have not done already) buy the book.

The second book is *Namadgi A national park for the National Capital*, a glossy coffee table book produced by the National Parks Association. At first I was slightly disappointed, not by the photographs, but by the text, but then I realised this is a book of introduction to Namadgi and should be seen as a complement to the range of field guides available from the National Parks Association.

The contents are divided into logical headings covering the geology, fauna and flora, aboriginal and European heritage. Very useful is the last section about walking in the park. I was disappointed that while reference was made to bushfires through out the book, no specific part was provided covering the 2003 fire and the bush's recovery after that catastrophic event.

The book will be an invaluable introduction for many people to the wonders and beauty of Namadgi for many years to come. Hopefully also it will help to contribute to the future protection of the park.

Chris Bunn



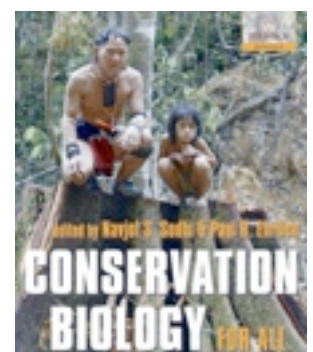
This new CSIRO book on climate change can be downloaded (free) as a pdf or as an e-book:

<http://www.csiro.au/resources/Climate-Change-Book.html>

In support of "the International Year for Biodiversity", Oxford University Press is making a 2010 Conservation Biology textbook freely available. Many of the authors are famous conservation biologists.

Free to download it at the website:

<http://www.mongabay.com/conservation-biology-for-all.html>



Koala Care Centre Lismore NSW

The koalas of the Northern Rivers region of NSW are suffering ill-health and a range of diseases. Robyn Williams visits the Koala Care Centre in northern NSW and meets koala carers Barbara Dobner and Lola Whitney.

Robyn Williams: Let's leap from there to northern NSW to visit some koalas to see how they're getting on.

Let me have a look at what's on the door. It says 'I'm in care because I'm blind', 'I'm in here for observation'. Zeus, there's a koala called Zeus. That's pretty impressive.

Barbara Dobner: Here is his mum.

Robyn Williams: I'm with some of the carers here and now. What's your name?

Barbara Dobner: Barbara.

Robyn Williams: And yours?

Lola Whitney: Lola.

Robyn Williams: Barbara and Lola. And you've got Joanna, Myra, Zeus, Hera and Rosalie. They don't seem to be at all perturbed by having people.

Barbara Dobner: No, koalas don't really seem to worry about people too much, they just spend an awful lot of time sleeping. As long as you stay out of their space, they're quite happy.

Robyn Williams: What sort of leaves do you have around them? Any special sort of eucalypts?

Barbara Dobner: Yes, these are all koala food trees. So we've got our tallow wood here and our forest redgum, and there will probably be some swamp mahogany here too because that's one of their favourites. They get at least three varieties, it's really important for us to give them a good variety.

Robyn Williams: Picky, like kids.

Barbara Dobner: They're very, very picky.

Robyn Williams: I saw some research the other day suggesting that they ate bark. Have you heard of that?

Barbara Dobner: Yes, I've definitely seen my little ones that I've raised at home, they would love eating the bark off the branches, they would chew at the bark. The swamp mahogany, more the rough bark trees like a swamp mahogany, but they also really like the paperbarks off the Melaleucas as well too.

Robyn Williams: I remember seeing the pictures in the research paper of all sorts of scratch marks and bite marks on the gum itself.

Barbara Dobner: Yes, they definitely make distinct scratch marks and we can often see around the care centre where our koalas have been in the trees because of the marks on the trees.

Robyn Williams: I've been hearing about some of the tracking that was done to see what happens to the koalas when they're let loose. Were you involved in that?

Barbara Dobner: Yes, we certainly were. We started that just over two years ago now, we put our first koala out with a collar on it, Matthew was our first koala that we tracked for two years. They have all been koalas that have been released into the urban areas of Lismore, and we track them once a week once we know that they are okay out there. We've had ten collars on animals up now, and we just took

our first one off not that long ago, off Matthew, who had had it on for two years.

Robyn Williams: It's nice to know they can be let loose in such an urban area.

Barbara Dobner: It is. A sad side of it is we have lost a few, we lost one of our males to a dog attack, he was attacked by a dog late one evening, and one of our young females we lost to disease, and she had only been out there...it wasn't long at all, it was only a few months.

Robyn Williams: They are brought to you by the public when they are sick, run over, found, needing care. Do you ever get too many?

Barbara Dobner: We get very busy sometimes, yes. I think Lola had 17 in here for a few weeks, and that was just the ones that we had in our care centre as well. We've got another eight or so in home care, young animals go into home care rather than coming into the care centre, and we also have several up at the Australian Wildlife Hospital, the more intensive care animals. So there has usually been...this year has averaged at about 30 to 35 in care at any one time, which has been busy for us.

Robyn Williams: Most of the ones we've been looking at here are fairly somnolent. This one on the other hand is leaping around all over the place. Who's this guy?

Barbara Dobner: This is Roxy, she has been in care for quite a while. She originally came into care because she was quite a severe dog attack, and she is getting ready to go.

Robyn Williams: She has leapt onto the ground and she's walking very, very fast, and now climbing up another bit, absolutely full of beans.

Barbara Dobner: She's deciding what she is going to eat for the night, I think, which leaves are her favourite.

Robyn Williams: Now tell me, finally, are you involved in some sort of national koala campaign to look after these creatures?

Barbara Dobner: We focus mainly on our area and the whole of the Northern Rivers which is quite a large area because we go right up to the Queensland border out to Tenterfield and down to just north of Iluka. So I think it's 10,000 square kilometres that we cover as a voluntary organisation. So we just stick to our area, that's enough.

Robyn Williams: Indeed. So you're not involved in the controversies about the fact that they are being removed from certain areas in the south.

Barbara Dobner: No, we have very, very different problems, we have more the problem that we are losing our koalas and our numbers are really on the decrease and we have such a huge incidence of disease. Our main diseases that affect the koalas here are the chlamydia, which usually affects them in terms of conjunctivitis or cystitis. We also seem to have a very high incidence of leukaemia and cancer in our area, and retrovirus which is basically a koala who has a poor or no immune system.

Robyn Williams: Barbara and Lola at the Koala Care Centre in Lismore, doing a tremendous job.

<http://www.abc.net.au/rn/scienceshow/stories/2011/3192992.htm>

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 the member application below and send it with your subscription to the FNAC Treasurer, GPO Box 249 Canberra, ACT 2601:

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Monthly meeting venue: Division of Botany and Zoology, Building 116, Daley Rd, Australian National University Park (occasionally at the adjacent Building 44).

Meetings start at 7:30 pm and are followed by refreshments.

ANBG Lunchtime Talks (12:30 – 1:30 pm, Thursdays – from Feb to Nov)

Thurs	5 May	Paul Scholtens	Landscape Architecture in Canberra
Thurs	12 May	Hazel Rath	Gudgenby Bush Regeneration
Thurs	19 May	Murray Fletcher	Bugs I Have Known and Loved
Thurs	26 May	David Taylor	Planting with a Purpose
Thurs	2 June	Brett Odgers	What Were Walter and Marion Burley Griffin up to in 1911
Thurs	9 June	Pat Wright	Beautiful Flowers of New Zealand South Island

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: