

OBJECT: To foster an interest in nature

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GPO BOX 249
CANBERRA ACT 2601

FIELD NATURALISTS' ASSOCIATION OF CANBERRA INC.

FIELD NATURALIST

MEETING—THURSDAY
7:30 pm Australian National University
Gould Seminar Room, Building 116, Daley Road, ANU, ACT
details back page

**Unravelling the mystery of freshwater
fish early life history**
Speaker: Danswell Starrs

Obtaining information on the early life history phases of fishes is problematic due in part to their small body size and fragility, precluding most traditional marking techniques. Fortuitously, however, the earstones (otoliths) of larvae and juvenile fishes contain a wealth of biological and spatial information. This information can be used to reconstruct the early life history ecology of fishes, although to date there has been minimal development in this area for freshwater fishes. The over arching objective of my PhD dissertation has been to develop techniques to facilitate studies on early life history phase fishes. In this seminar I will present detailed case studies used to develop and refine techniques for two tropical species with quite different reproductive strategies. I use this and a thorough analysis of the relevant literature to identify promising areas for novel knowledge gain of tropical freshwater fish evolution and ecology.



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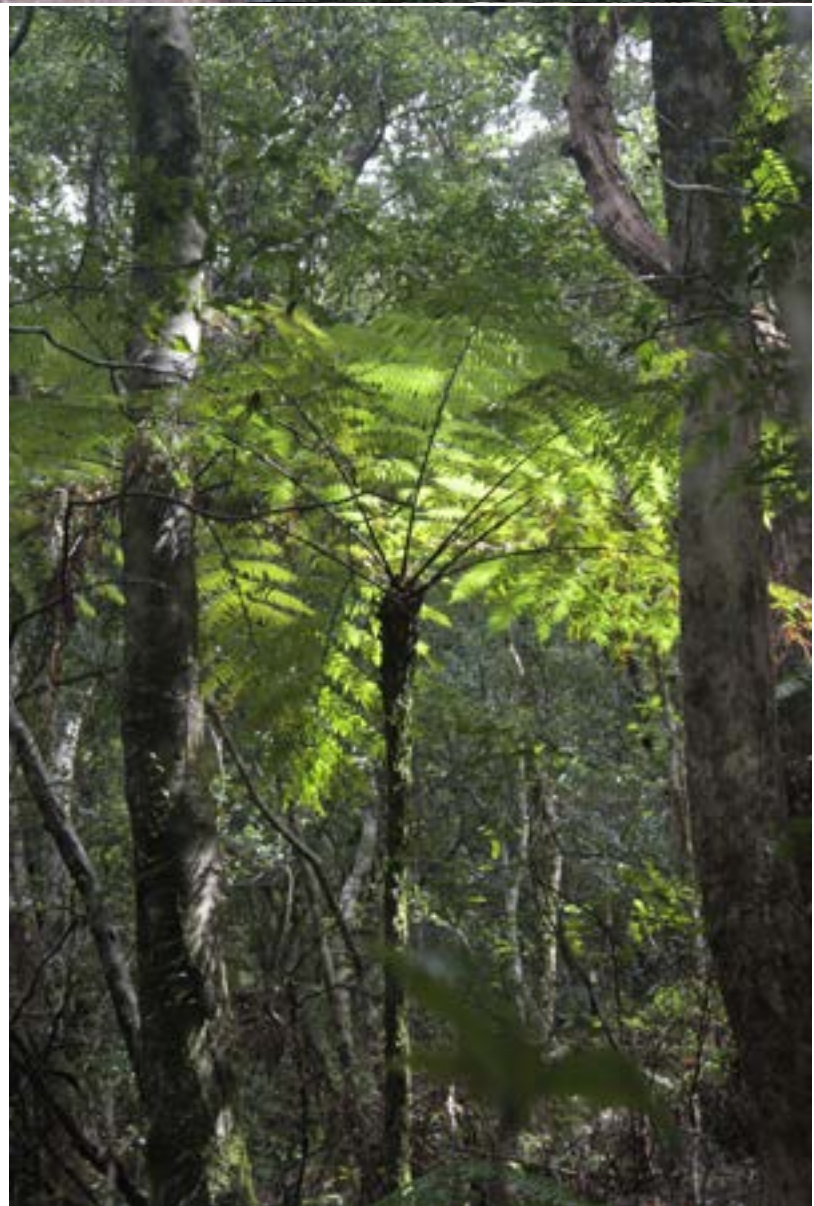
Binna Burra

For those not familiar with Binna Burra, it is located on the Lamington Plateau in the Gold Coast hinterland. My understanding is that while it was initially established outside of the Lamington National Park, parts of it have since been donated to the park.

There are two ‘tourist’ parks at Lamington, both established in the 1930s: O’Reillys at Green Mountain established by Bernard O’Reilly, and Binna Burra, established by Arthur Groom and Romeo Lahey. While O’Reilly’s has gone up market, Binna Burra is largely unchanged.

As part of a trip organised by the Canberra Bushwalking Club, I just spent a week at Binna Burra. For me, this trip was particularly special as it was organised by Linda Groom, daughter of Arthur Groom. Although Arthur died when Linda was only three years of age, she has frequently returned to this area and stories of her later exploits are still related by current Binna Burra guides.

My attraction to this trip was not so much for the bush walks, as for the reputation of the bird life at Lamington Plateau. I was not disappointed.





Accommodation was either the mountain lodges or safari tents (camper vans and tents if you really wanted). Most of our group chose the more 'luxurious' lodges, but I opted for the safari tent, which meant I was closer to the forest and awakened each morning with the exotic calls of the birds. Scrub turkeys constantly wandered through the site. A male was busily building his nesting mound just off the Border Track and pademelons were also seen visiting the tent site.



The tent was very spacious and from the 'porch' I could see the high rises of Surfers Paradise, but being so far away, I didn't mind.

A green catbird could be heard calling each morning very close to the tents. A satin bowerbird was often seen nearby and had built a bower just inside the porch of one of the lodges, with

several females seen nearby. Even more spectacular was the regent bowerbird. I found the spot that he frequented along the Border Track.

Whip birds were of course common. Other species included log runners, rufus fantails, yellow breasted robins, lorikeets, lyre

birds, scrub wrens, grey fantails, currawongs, and kookaburras.

While I didn't see any, this is also home to echidnas and bandicoots, and some members of the party spotted a tiger snake and a python coiled by the side of the track.

However, the bird life is not the only attraction. There are numerous walks into the national park ranging from short (1-5 kms) to long (up to 26 kms). The tracks are gently graded and not hard walking.

The Tullawallah Track takes you to a forest of ancient Antarctic beech trees taking you back to Gwondonaland. Some trees are estimated to be up to 5,000 years old.

I didn't do all the walks, (and Linda took limited groups on harder, off-track walks) but one of particular interest was the Daves Creek Circuit. Linda arranged for this to be a guided walk and our guide Chris was



font of knowledge, particularly about the vegetation.

This is the most interesting track in Lamington National Park. Along its 12 km it has more variety than any other track. It offers geology, tall rainforest, eucalypt forest, open heath land (though being encroached by hacked due to lack of fire), panoramic lookouts (overlooking Germaine Greer's property) and a magnificent open cave.

Many plants along this track are now rare, with one now only found here and in the Blue Mountains. While Chris' knowledge was vast, I sadly could not recall all the details and botanical names.

The view from my tent



I was interested however, in two facts he related. 1: Calistemons have now apparently all been reclassified as Mallalucas (though not widely accepted, especially in South Australia) and 2: the plant known as Manuka in New Zealand, is known as Leptospermum in Australia. Does that mean while many people think we mispronounce Manuka, that we should actually be calling it Leptospermum?



For those interested, a very useful book is *Discovering Binna Burra on foot*, by Tom Lackner. This provides a little information on geology, the rainforest and park history, but also lists all the walks from Binna Burra, listing not only distance but highlights of each walks by mileage points.

The reception area also contains a lot of historical documents and there is a comprehensive library upstairs.

Well worth a visit.

Alison Milton



Month	Speaker	Topic
6 November	Danswell Starrs	Freshwater Fish Ecology
4 December	Christmas party	BOZO meeting room

Rare white possum could soon be a ghostly memory

reproduced from:

<http://blogs.scientificamerican.com/extinction-countdown/2014/09/16/rare-white-possum-ghost/>

By John R. Platt | 16 September 2014

A ghost lives in the Daintree Rainforest in northeastern Queensland, Australia. There, on a single mountain range located 1,100 meters above sea level, scientists have recently found what may be the last few white lemuroid ringtail possums (*Hemibelideus lemuroides*), a species that was all but wiped out by a heat wave in 2005.

They may not be there much longer. Like many mountain species, such as the American pika, these possums can only survive within a very narrow temperature range. In fact, exposure to temperatures above 30 degrees Celsius for just a few hours will invariably kill the arboreal marsupials. Professor Bill Laurance of James Cook University (J.C.U.) in Queensland warns that current climate change models predict that high temperatures on the possum's mountain habitat (called Mount Carbine Tableland) will rise above that threshold, pushing the species into extinction.

Professor Stephen Williams, also from J.C.U., recently predicted that the possums could disappear during the next severe heat wave, either from high temperatures or a potential forest fire. Climate change, he says, is creating unusually dry wet seasons, which could exacerbate any future fires in the rainforest.

Of course, this isn't the first extinction prediction for the rare white possums. They were previously declared possibly extinct after the 2005 heat wave, but three of them were spotted again in 2009. That was it for a few years, though. None were seen until this past July, when scientists observed four or five possums over the course of

10 surveys. "This is best survey in nine years since the 2005 heat wave," Williams says, adding that this may be evidence that the species is actually recovering from the near-extinction event, but the threat of future heat waves remains.

Laurance says there may be more than five possums left, as the Daintree's high elevations and levels of vegetation make it a hard place to survey. "They're easy to spot, though," he says. Pointing a spotlight in the right place easily reveals their white fur and reflective eyes. "If they're there, you see them." He worries that the few animals they observed may be a little pocket population that survived the heat wave.

It hasn't been easy to garner support for the white lemuroid ringtail possums because the white possums may or may not

be simple color variants of regular lemuroid ringtail possums, which have brown fur. Laurance says brown possums also live in the rainforest, although they have a larger habitat range and appear to have a wider survivable temperature range. Meanwhile there is another population of the brown possums 100 kilometers to the south, where they live at elevations of about 600 meters. This population also has a few white possums—about one in every 400, Laurance says.

There have been no genetic studies to determine if the white possums on Mount Carbine are a separate species. Laurance says that doesn't matter. "It's moot to call them a distinctive species," he says. "They're a unique evolutionary unit and therefore worthy of conservation." Whether that will be possible in the face of climate change remains to be seen.

Two books of interest

1. CSIRO invites you to download a free copy of *Biodiversity: Science and Solutions for Australia*. Learn about the ancient origins and unique features of Australian species; Indigenous perspectives on biodiversity; how biodiversity intercepts with agriculture, the resource sector and our cities; as well as how science is helping achieve a more sustainable future.

Download from: www.csiro.au/biodiversity_book

Also available in hard copy.

2. Forthcoming in October from NLA, a book by Dr Fred Ford (son of Vince Ford and Beth Blackall and known to many of you): *John Gould's Extinct and Endangered Mammals of Australia*. NLA describes the book: "Using lavish colour plates from Gould's 1863 book, Fred Ford compares ancient animal life in Gould's relatively untouched world with that in modern Australia. A book for readers interested in natural history and conservation."

To purchase or preorder visit the web site: bookshop.nla.gov.au or phone 1800 800 100.



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.

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All newsletter contributions welcome.

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Editor



Monthly meeting venue: Division of Botany and Zoology, Building 116, Daley Rd, Australian National University. (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:

.....

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

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