

July 2009
ISSN: 1836-2761

OBJECT: To foster an interest in nature



MEETING THURSDAY JULY 2

7.30 pm Australian National University
map and meeting details back page

The Microscopic Structure of Trees Speaker: Roger Heady

The presentation begins with an examination of the tools of the microscopist – light microscopy (LM) and scanning electron microscopy (SEM). Then we compare some of the reproductive techniques of Angiosperms and Gymnosperms by looking at budding through to the production of mature flowers, pollination, and seed formation in *Acacia* (an Angiosperm) with the equivalent cone-orientated reproduction in *Callitris* (a Gymnosperm). SEM images of leaves in cross-section are then used to show the structure and workings of chloroplasts and stomata, and how the various anatomical forms of trichomes (leaf hairs) dictates their function. Fungal infection of conifer leaves is illustrated with high-resolution images. Then the bark (phloem) of trees is examined, showing how bark distributes and stores food (carbohydrates). Images of roots show how they absorb and conduct water and the effect of tree ring-barking is discussed. Finally we look at wood; how it provides water conduction – via tracheids in Gymnosperm wood and via vessels in Angiosperm wood and how the various forms of its microstructure can enable the identification of timber.

Roger Heady worked in the ANU Electron Microscope Unit for 21 years prior to his retirement in 2004. He has published eleven articles on wood in international journals, including three papers on the Wollemi pine. He is currently a Visiting Fellow at the Fenner School of Environment and Society and teaches timber identification.

July Outing

Tour of CSIRO National Insect Collection

On Saturday 4 July, the Manager of the CSIRO National Insect Collection, Dr Beth Mantle, will give a tour of their very extensive collection.

The tour starts at 11:00 am and will last for around one hour. Numbers are limited. If you plan to go please let Tony Lawson know - 6161 9430 or <mailto:tlawson@homemail.com.au>tlawson@homemail.com.au . We plan to go to the Botanic Gardens afterwards, for lunch and a walk around for an hour or so. Please advise if you would like to join us for that too. We will meet outside the CSIRO Discovery Centre (where it should be easy to get a park) by 10:55 am, and from there we will walk over to the National Insect Collection.

FIELD NATURALISTS' ASSOCIATION OF CANBERRA INC. GPO BOX 249

CANBERRA ACT 2601

FIELD NATTER

A PEEK AT PATAGONIA, NOVEMBER 2008 - by Kay Hahne

Part 2 continued from June Field Natter

Penguins on Parade

Another flight, this time from Balmaceda all the way to Punta Arenas, the southern-most city on the continent and capital of the Magallenes Region and Chilean Patagonia. This city lies on the north shore of the Straits of Magellan, discovered in 1520 by Portuguese navigator Hernando de Magallanes, thereby enabling ships to take a safer short cut and no longer sail around the dangerous Cape Horn – where lies many a shipwreck! On our flight we were mostly over Argentina, with the mountains and the third largest permanent ice field on our right, or west. Antarctica is the largest ice field, of course, followed by Greenland. I've read that global warming is most evident in Greenland where ice is melting at a great rate.

You can't get as far south as the Straits of Magellan and not get out on that water! Off we went in an enclosed motorboat to Magdalena Island where the "Monumento Natural Los Pingüinos" is situated. On this small island we were allowed to walk on designated paths amongst the thousands of Magallenic Penguins and their nesting burrows. It was fun to watch them so closely and film them preening, peeking out of burrows, braying noisily with their head



up, or waddling down to the water's edge for a swim and to catch food. We did see the Straits

again on our last day as we visited a reconstructed fort called Fuerte Bulnes. From here we could see across the water to the snow-capped peaks of the Darwin Range on the large island of Tierra del Fuego (which is divided between Chile and Argentina). And we could wave to Antarctica!

Under the Flight of the Condor

Now we are really 'down south', below the Roaring Forties and into the Latitude of the Fifties. We headed back north with our third bus and driver towards those huge ice fields and mountains we recently flew past. Finally – our first good look at an Andean Condor (I don't even have a California Condor on my list yet!) This one was actually on the ground, but soon took off, rose and circled high into the sky. We saw several soaring as the days went by, without a wing flap except on take offs and landings. These vultures are huge, the largest flighted land bird with a wingspan up to 310 cm and weight of 11.5 kg. The Wandering Albatross has the longest wingspan of any bird, up to 350 cm! They are the masters of the air currents over the oceans, but the Condor is master of the thermals and updrafts of the Andes. It is unmistakable with its size, its white fluffed-out ruff or collar, and white on the topside of the wings. We had been seeing the smaller Turkey Vultures and Black Vultures from the first few days – both quite impressive in their own right, the Turkey with its red, naked head, the Black with black head and whitish patches on the underside of the wing tips. All three are carrion eaters, the latter two found in North America as well, and familiar to me. We also saw smaller Chimango Caracaras. They were plentiful, scruffy brown falcons that have taken up the niche that crows or ravens would normally fill, but neither of those exist in Chile. So here you have these small crow-sized brown falcons scavenging in garbage dumps or strutting around plowed fields, or sitting on poles in the towns. Common and ordinary, but endearing – long live Chimangos!

As well as the vultures from back 'home', there were also beautiful little American Kestrels and Long-tailed Meadowlarks with vivid red breasts. Such a surprise! In the USA meadowlarks have

yellow breasts. I had never been in South America before, but things kept reminding me of North America. The Austral Thrush *Turdus falklandii* was so like a paler version of our American Robin *Turdus migratorius* and sounded similar too, as did the warble of the Southern House Wren – so much like our little ‘Jenny’ Wren in Iowa that I could recognise its call immediately. And then there were the humming birds. Only one species in the far south but we saw one twice - a tiny Green-backed Firecrown. Its name is longer than its 11 cm. I prefer the Spanish name ‘Picaflor chico’. I also prefer the Spanish ‘Carpintero’ for the Magellanic Woodpecker. One look at the male with his beautiful red head and crest and you realise how the cartoon character of “Woody Woodpecker” came into being. I miss their rat-a-tat-tat-tat. Fancy Australia having no woodpeckers at all!

Parque Nacional Torres del Paine

Ian knew exactly what he was doing. We explored Chile from north to south. He saved the very best till last. Torres del Paine must have some of the most exquisite, majestic, breath-taking scenery in the world. It was just magic to be there in good weather and to be able to see ‘the Horns’, ‘the Towers’, the hanging glaciers, the blue lakes, and to hear the rumble of distant avalanches while we were walking amongst the wildflowers, birds, guanacos, and peering down at waterfalls. In one Spanish word – Estupendo!

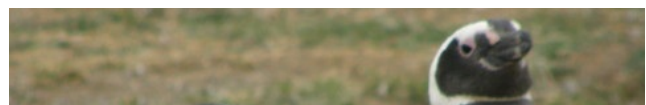
The wildflowers were more of the same plus new discoveries. A gorgeous patch of Maiden’s Slippers *Calceolaria uniflora* had us all on our hands and knees photographing these slipper-shaped orange, bronze and white blooms. There were also *Escallonia* with small pink bells, plus large, dense, rounded cushions of ‘Neno Macho’ *Anarthrophyllum desideratum* were ablaze with hundreds of red narrow pea-shaped flowers. Not so attractive, but very common, with tiny green umbels, were the rounded pincushion clumps of ‘Mata Barrosa’ *Mulinum spinosum*. Very appropriate species name, for these clumps were very spiny and to be avoided at all costs!

Towers of Torres del Paine National Park



The Guanacos *Lama guanicoe* were just delightful to watch. They are smaller, more slender Camelids than their relatives the Llama and Alpaca (neither of which can be found in the wild anymore – they are all domesticated). Guanacos will not breed in captivity, so they just may be safe from the clutches of Man. We saw quite a few in small harem herds – grazing, dust bathing, skirmishing and a few had young ones, called chulengos. Such cute faces with big eyes and long lashes. Pumas are their natural predators, but we saw none of those. However we did get a few looks at the handsome Grey Fox *Lycalopex griseus* or ‘Zorro Gris’. Did you know that el Zorro means fox in Spanish? Remember the sly cunning TV guy in black with his big “Z” ??

Just when we thought there was nothing more awesome to be seen, we were taken on a boat on Lago Grey to see the huge Glacier Grey. We passed various shapes and sizes of blue icebergs floating in the opaque grey water. Sunny, blue skies, great photos, group photo – smile...again! What a wonderful trip. Ian was a super all-round nature guide and we learned heaps!



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FIELD TRIP TO BURRAWANG COASTAL CLUB – MAY 15 – 17

An embarrassment of riches has provided the editor with two reports of this weekend. I have edited them both with apologies for omitted text.

By Sybil Free

I woke on Friday 15th to another cold blustery day in Canberra and resolved to make sure I packed warm clothing and wet weather gear. So what a wonderful surprise to find the coastal temperature was warm, without wind and positively balmy all weekend. The late afternoon sun illuminated the tall forest trees and burrawang understory gloriously.

I met a couple of other guests, who were setting off for the seat at the edge of the cliff to take in the sunset which was shaping up to be a brilliant one. My own vantage point was not quite as good but as I had not seen a sunset for quite some time (my house in Canberra is shut off from a clear view of the west) I determined to stay and enjoy the show.

The planned get-together BBQ took place in front of Sylvie and Helen's cabin where a wood BBQ provided a convivial focus and warmth as the night temperature fell and we shared food and other goodies – mostly wine and chocolate.

Early Saturday Pam, Phil and I spotted a **swamp wallaby** from the cabin and set off in the early morning light to enjoy the surrounding forest. Our first group excursion began at 9 am after choosing a route. We were delighted to find a group of large (8 cm diameter) cup fungi on a branch crossing the track. At that time the forest

was beautiful but the birds were quiet and only a few seen although we did spot another swamp wallaby.

Other vantage points on the cliff face took in the wonderful views of our close by beaches and much further even to Mt Dromedary in the distance. At the next beach on the perimeter of the property a couple of **sooty oyster catchers** were spied on a rock ledge in the shallows. Their enormous long orange/red beaks were unmistakable and could be seen from a distance.

It was a beautiful sunny, warm day again and we lingered a while to be rewarded with the sighting of **dolphins** only a short way out. At first we thought only one but then two and eventually three were seen before heading back for lunch.

So far, in plants we had seen many burrowangs (*Macrozamia communis*); cup fungi as mentioned above; Cup fungi; Bracken (*Pteridium esculentum*); Lomandra; Glycine clandestine (twing Glycine); Ziera sps; Cherry Ballart (*Exocarpus cupressiformis*); *Correa reflexa*; *Olearia tomentosa*; *Banksia serrata*; *B.integrifolia* (Coastal Banksia); *Clematis aristata*; Acacia sps, one in flower; *Westringea fruticosa*; *Pomaderris intermedia*; *Senecia liniarifolius* (Fireweed); Casuarina and Allocasuarinas; the Red Bloodwood (*Corymbia gummifera*); Spotted Gum (*C. maculata*); Southern Mahogany (*Eucalyptus botryoides*); Silvertop Ash (*E. seiberi*); Blackbutt (*E.pilaris*), pretty much a closed canopy forest. In birds (according to my very limited knowledge) Rainbow Lorikeets; Wattle birds; New Holland honeyeaters; Yellow Robin; Kookaburra; Currawong and as mentioned, Sooty Oyster Catchers.

In the afternoon program we visited Tomakin's Melville Point cliffs. This is what Geologists love to see and point out. We lacked a Geologist but we could all see the many rock layers folding back on themselves. According to the Burrawang club's leaflet what you can see is "the junction of the Wagonga and Adaminiby

Groups of rocks, the former having been deposited in a deep oceanic environment from the Mid Cambrian to the Late Ordovician eras (we're talking about 480 million years ago), while the latter were deposited by turbidity currents during the Ordovician."

Either on the beaches or cliffs we observed seabirds fishing eg Gannets and Cormorants, and Sea Eagles exercising their authority overhead.

Last stop for the day was at Tomaga River. It's a fairly wide estuary where people were fishing from the shore, returning from boat trips or gathering bait for later. Very tranquil and typical in the hour before sunset. A pelican cruised nearby in the water. In front of us we were surprised to see two huge sting rays glide by one after the other. Then suddenly a White-bellied sea eagle flew in from behind us toward the opposite bank landing on a large dead tree. As it did so we heard and saw the outline of another sea eagle (perhaps its mate) similarly in a nearby tree high on the skyline. A powerful raucous cry from this bird shattered the tranquility as they greeted each other followed quickly by the cries of alarm from other birds nearby. We returned to Burrawang as the sun set after a very rewarding day.

Additional plants seen on the cliffs on top or behind the beach included Pelagonium; Lomandra; *Correa alba*; Sea Rocket (*Cakile maritime*) and *Pittosporum undulatum*.

Sunday dawned, a free day to do whatever we wanted with the available time. Phil, Pam and I determined to do the perimeter track again but continued to the next beaches (Guerilla Bay included). Whereas on Saturday there was not a lot of bird activity, Sunday in the forest was spectacular with birds everywhere. It was magic and we spent quite some time trying to observe the foraging, playful antics of the small birds as well as the dominant wattle birds and currawongs. The forest with the low early morning sun was spectacular again and Burrowangs (or Cycads) spilled their red fruits on the forest floor in abundance.

Pam and I pressed on to new parts of the track and traced the coast line to the end of the property. We completed the round trip very satisfied with our exploration.

All Field Nats trips are enjoyable and we learn more about the environment with its birds, plants and animals but this trip was especially good and I hope more of us get the chance to do it again on another occasion. Many thanks to Sylvie, who organized the outing, and to those who came and made it such a memorable weekend socially.

Postscript: Helen Carse, being a keen birdwatcher, has provided the following additions to the bird list:

Gang gang; Yellow-tailed Black Cockatoo; Varied Sittella; White-faced Heron; Striated Thornbill; Superb Blue Wren; Crested Tern; Australasian Gannet; Musk Lorikeet; and White-browed Scrub Wren.

in addition Benj observed: Some sightings around the huts on Sunday morning included 7 Little lorikeets, 2 Musk lorikeets, a pair of Whip birds, 3 White-eared honeyeaters, and 2 Brush wattlebirds. At the huts during lunch a flock of 4 Brown-headed honeyeaters were found, which seemed like unusual habitat for them. A wonderful sighting, perhaps not for their beauty but their rarity, was of 4 Brown gerygones. While hanging around the area was a large MFF of LBB mainly Striated thornbills, Brown thornbills, Spotted pardalotes, Varied sittellas, GST, Silvereyes, darting Spinebills, 3 Variegated fairy wrens, Yellow-faced and White-naped honeyeaters. The last two species were heading South. Off in the distance a Grey butcherbird was heard and 2 Yellow-tailed black cockatoos were calling raucously.

By Benj Whitworth

On Saturday night I went spotlighting and saw a Yellow-bellied glider and heard two others. Two Sugar gliders were also heard yapping. A Swamp wallaby crashed around the forest. On returning to the hut I could hear a Sugar glider directly outside the hut. After an extended search the tiny possum was found, it didn't seem to worry about me and continued calling.

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 19081. 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 emphasize 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 Road, Australian National University. Park occasionally at the adjacent building 44. Meetings start at 7.30 pm and are followed by refreshments.



Cup fungi at Burrawang



George, Dierk, Silvie, Kevin, Benj soaking up the sun at Burrawang weekend

**NEXT MEETING
AUGUST 6, 2009**

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

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