



NATURE TERRITORY

February 2011

Newsletter of the Northern Territory Field Naturalists Club Inc.

PO Box 39565, Winnellie, NT 0821

President:	Tissa Ratnayeke	8921 8226 (h,w)
Secretary:	Ian Hance	8945 6691 (h)
Treasurer:	Fiona Douglas	8985 4179 (h)
Membership Officer:	Tida Nou	8981 6667 (h)
Newsletter Editor:	Don Franklin	8948 1293 (h)
Committee Member:	Stuart Young	8995 5026 (w)
Committee Member:	Graham Brown	8945 4745 (w/h)
Committee Member:	Peter Holbery	8901 6105 (w)
Committee Member:	Annie Grattidge	8981 1100 (w)
Committee Member:	Bruce Maley	8985 5272 (h)

Club web-site: <http://ntfieldnaturalists.org.au/>

Meetings are generally held on the second Wednesday of every month, commencing at 7:45 PM, in Blue 1.14 (Business Faculty Building) on the Casuarina Campus of Charles Darwin University.

Subscriptions are on a financial-year basis and are: Families/Institutional - \$30; Singles - \$25; Concessions - \$15. Discounts are available for new members – please contact us.



Persistent on-shore winds during phases of the wet season usually bring a few Lesser Frigatebirds inshore to Darwin. But this season, the winds have brought quite a number of bonuses for birdos, amongst them the photographed and other Bridled Terns, a Sooty Tern and a Short-tailed Shearwater (page 3). For more information, see *Interesting Bird Sightings* on page 10.

Photo: Micha Jackson.

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Disclaimer: The views expressed in *Nature Territory* are not necessarily those of the NT Field Naturalists Club Inc. or members of its Committee.

Club activities

February meeting. Wednesday February 9, 7:45 PM. Blue 1.14 (Business Bldg.), CDU.

Matt Barrett

"Fungi of the monsoon tropics"

Fungi have a poor reputation in contemporary Australian culture, however the role they play in the environment is critical. Fungi are the dominant recyclers of plant matter, form vital nutrient-acquisition symbioses with plants, and are integral in the global carbon cycle. Although the 'bodies' of fungi are almost invisible, composed of fine filaments through soil and wood, they are ubiquitous and abundant in many substrates. Monsoonal Australia is often seen as a semi-arid desert, with few opportunities for fungi due to the long dry season, a view seemingly supported by the extremely few collections of fungi from tropical Australia in herbaria. In fact, when it comes to



fungi, tropical Australia is among the least studied biomes of the entire world.

Dr Matt Barrett hails from Kings Park and Botanic Garden in Perth. He has spent the last 15 years collecting larger fungi from the Kimberley and the Northern Territory, and will give a preliminary overview of the diversity of larger fungi found in the monsoon tropics, including their ecology, taxonomy and biogeographic relationships. Contrary to some opinions, the Australian monsoon tropics has a fungal flora of surprising beauty and novelty, and we are only taking the first footsteps into this neglected world.

A fungus photographed locally at Micketts Creek by Graham Brown.

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February field trip. Saturday 12 Feb. A field foray for fungi in Charles Darwin National Park.

Meet at 8 am in the main car park near the picnic area. Biting insects can be prevalent so please come prepared.

We know very little about fungi in the Top End. Matt Barrett is one of the few Australian experts and is writing a book on the fungi of northern Australia. Over a period of approximately 2 hours we will accompany Matt as he explores Charles Darwin National Park. Come along and learn and maybe even help find new ones. For those who have a scientific interest in identifying specimens, there will be an opportunity to attend the NT Herbarium at Palmerston after the field trip for a technical discussion on the process. Numbers to attend the technical presentation are strictly limited AND NOT SUITABLE FOR CHILDREN. Further information is available from Graham Brown on 8945 4745 or 0417 804 036.

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March 2011 meeting. Wednesday March 9. Ruchira Somaweera. *Freshwater crocodiles.*

March 2011 excursion. Crab Claw Island. Saturday 12 & Sunday 13.

Following on from last year's successful visit, Club members have been invited back to Crab Claw Island to conduct a wet season survey of the region's flora and fauna. Numbers for the excursion are limited. More information will be published in next month's newsletter. For further details, contact Tissa Ratnayeke on 8921 8226 or email tissa@imprintdesign.com.au.

Top End Native Plant Society activities

February meeting. Thursday Feb. 17. Brigid Oulsnam: *William Webster Hoare – illustrator to the North Australia Survey Expedition, 1868-69.*

March meeting. Thursday March 17. Marj King & Russell Dempster: *Seed collecting and native plant propagation.*

General meetings are held on the 3rd Thursday of the month at the Marrara Christian College, corner Amy Johnson Ave. and McMillans Road, and commence at 7:30 PM (speaker at 8 PM). Visit

<http://www.topendnativeplants.org.au/index.php> or contact Russell Dempster on 8983 2131.

Club notices

Welcome to new members: Leona Laing; Phil McWilliam; Anna Belford; Erin Britton; Jeanette Brooks; also Andrew Miller as a returned member

Thank you: the previous issue was proof-read by **Fiona Douglas**. It was printed, collated and mailed by **Brock Young** and **Fiona Douglas** using equipment generously made available by **Michael Gunner MLA** at his Fannie Bay electorate office. The back page was printed by **Don Franklin** using equipment kindly made available by the **School for Environmental Research** at Charles Darwin University.

Newsletter contributions welcome: Sightings, reports, travelogues, reviews, photographs, sketches, news, comments, opinions, theories , anything relevant to natural history.

Please note: as Don will be away in late February, Fiona Douglas will finalise the March newsletter. Please email material to her at fiona.douglas@octa4.net.au. Deadline for the March newsletter: Friday February 18.

Need a Club membership form? Go to: <http://sites.google.com/site/ntfieldnaturalists/downloads>.

Club library: The Club's journal and book collection is available to members. Lists of holdings can be found on our web-site: <http://sites.google.com/site/ntfieldnaturalists/library>. The library is housed in two sections:

Books, reports and CDs: at the medical clinic of Dr. Lyn Reid in the Rapid Creek Business Village. This can be accessed directly between 9 AM and 2:30 PM Tuesday to Thursday, and 4–6 PM on Tuesday, or indirectly by phoning Lyn at work on 8985 3250.

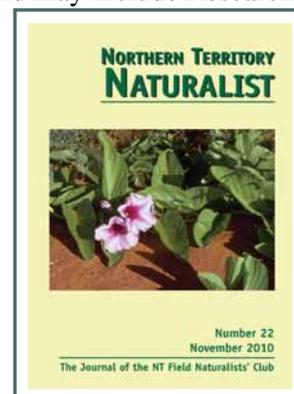
Journals: in the office of Don Franklin at CDU Casuarina (Red 1.2.34). These can be accessed directly during working hours, or by ringing Don on 8946 6976 (w) or 8948 1293 (h).

Northern Territory Naturalist: The Editorial Committee of the Club's journal, the *Northern Territory Naturalist*, is now calling for manuscripts for issue no. 23. The journal publishes works concerning any aspect of the natural history and ecology of the Northern Territory or adjacent northern Australia. and may include Research Papers (Articles or Short Notes), Reviews, Species Profiles and Book Reviews.

The *Northern Territory Naturalist* is a registered, peer-reviewed journal (ISSN 0155-4093) and is recognised as a Category C publication by the Australian Research Council (http://www.arc.gov.au/era/era_journal_list.htm). Author instructions may be downloaded from our web-site: <http://sites.google.com/site/ntfieldnaturalists/journal>.

If possible, manuscripts should be submitted in digital form by email to michael.braby@nt.gov.au. Editors of the journal are Dr Michael Braby, Dr Lynda Prior and Dr Chris Tracy.

The journal page of the web-site also has an order form for back issues of the *Northern Territory Naturalist*, which are available individually or as a set (some are out of print and available as photocopies only).



Sewage Pond Keys – Leanyer: NT Field Naturalists have access to the world-famous Leanyer bird-watching spot. The key can be collected from Graham Brown, (h) 8945 4745. A refundable \$50- deposit is required upon collecting the key, which is available only to members. Conditions imposed by PowerWater Corporation apply; these will be explained when picking up the keys and include that PAWA must be notified during weekday working hours of your intention to visit.

Exceedingly common in southern Australian waters but a rare sight here in the north: a Short-tailed Shearwater photographed at Stokes Hill Wharf by Micha Jackson.



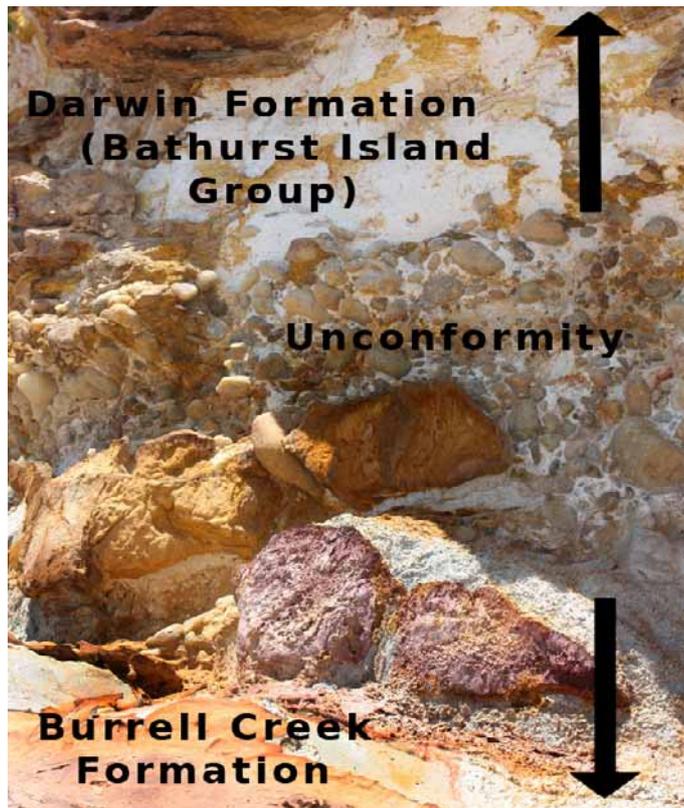
Geology of Bullocky Point

Text and photos by Ben Stuckey

Bullocky Point is well known today as the site of the Museum and Art Gallery and Darwin High School. After reading several reports on Darwin geology, I became aware that the exposed cliffs along the shoreline in this area presented an excellent opportunity to better understand our local landscape and underlying rocks.

Porcellanite and the Darwin Formation (formerly, the Darwin Member or Mullaman Beds)

Everyone in Darwin would be familiar with porcellanite (sometimes described as coffee rock or kaolin). It is the claystone easily seen forming cliffs around Shoal Peninsula. Use of the term porcellanite seems quite loose at best, but for consistency should be used to describe only the harder, silicified portions of the upper strata. This is the rock that has been used in the past as building material, most notably at places like Browns Mart and St Mary's Cathedral. Today it is used much less perhaps due to difficulty of extraction, more modern building materials and a less enthusiastic workforce. Where this rock comes into contact with salt water it becomes slaked and weak, as one notices of fragments found in the tidal zone. Due to leaching processes and movement of iron oxide and silica within the profile it often has spectacular banding of reds and yellows.



In geological speak, these sedimentary rocks are a major part of the Darwin Formation of the Bathurst Island Group. The basal unit of this formation is a conglomerate mix of gravel and cobbles, with distinctly rounded (and thus of alluvial origin) bits of sandstone and quartz (photo, left). Though not obvious in the photo, an often very weathered, red (ferruginous) sandstone is usually deposited above this layer. It is very clear in areas along the Bullocky Point cliff once you are aware of the conglomerate layer. Most of the profile further above is sedimentary clay or siltstone deposited in the early Cretaceous period ~100-130 million years ago (mya).

In some strata one can easily see fossil castes of belemnites. Belemnites were squid-like creatures with ten equal 'arms' and disappeared about 70 mya. The two longer tentacles present in modern squid and cuttlefish were absent in these marine creatures. Today they appear as 'bullet-holes' in the rock. Other fossils that have been found in the rocks include ichthyosaurs and ammonites, though these are not common.

The Unconformity

An unconformity describes the meeting of two layers of rock that contact so as not to make a continuous

sequence in the geological record. The rocks found below the Darwin Formation are the result of much older

sediments deposited ~1885-1870 mya, so contact here presents an unconformity of well over 1.5 billion years. The photo on the right shows the approximate position of the conglomerate discussed above and defines the unconformity.

Due to the permeable nature of the Darwin Formation rocks, and the impervious nature of those below, freshwater can find its way out of the profile at this point. Some plant species have made the most of this opportunity, including Mangrove Fern *Acrostichum speciosum* and Cheesefruit *Morinda citrifolia* (photo right). Wells dug during early settlement of Darwin were dug down to where water accumulates at the unconformity.





Burrell Creek Formation

Low tide is the best time to visit the area and see the much older underlying Proterozoic rocks. The rock is known as phyllite (photo left), a mudstone that has metamorphosed slightly and as some stage tilted, approaching 90 degrees. In some places quartz veinlets can be seen following, and crossing, the deposited layers in the metamorphosed sediments. Like the younger claystones above, strong banding from differential weathering in the phyllite is common. Remnants of more resistant strata are exposed as eroded pillars at low tide (photo below right), offering further evidence of the steep dipping. Walking seaward or scanning Google Earth shows evidence of dramatic folding in the Burrell Creek rocks and there are also some surprisingly large blocks of pure quartz in the area.

Beachrock

Along Vestey's Beach one can see conglomerate ledges or rocks consisting of coral and claystone

cemented together. This beachrock (photo below left) has formed within the body of the beach and has become exposed as the beach retreats. As water seeps through the sand, carbonate cementing occurs binding sand particles together and enveloping the larger fragments. Beachrock formation can occur very quickly (in geological terms) and has been used for studies into sea level changes. Closer to the Conacher Street boat ramp, beachrock overlies the Proterozoic rocks, making for an even greater unconformity than that discussed above.



Once you are familiar with these rocks the non-geologist can find other exposed profiles around town, such as those in road cuttings near the city. It can be difficult to interpret geological features in the landscape without training or help, so I am indebted to Michael Michie who clarified, explained and pointed out many of the features and processes I have described above.

References

- McNally GH, Clarke G, Weber BW. 2000. Porcellanite and the urban geology of Darwin, Northern Territory. *Australian Journal of Earth Sciences* 47: 35-44.
- Pietsch B. 1983. *Darwin 1:100,000 Geology Map Series Explanatory Notes*. Department of Mines and Energy, Northern Territory Geological Survey, Darwin.

Changing Aboriginal populations over 2,000 years From *Recent Literature*, page 11

Williams *et al.* (2010) bring together the results of “1275 radiometric ages from 608 archaeological sites across northern and central Australia” to explore the “changing archaeological signature that can be closely correlated with climate variability over the last [2,000 years]” Overall, there was a “marked increase in archaeological records across northern and central Australia” during the period, indicating an increasing population. However in places, including especially northern Australia, there was episodic notable “disruption or reorganisation of pre-European resource systems” “between ca. AD 700 and 1000 and post-AD 1500”. The declines coincide with periods of climate change, the former with a wetter period and the latter with more variable rainfall.

Call for frog watchers: the Howard River Toadlet

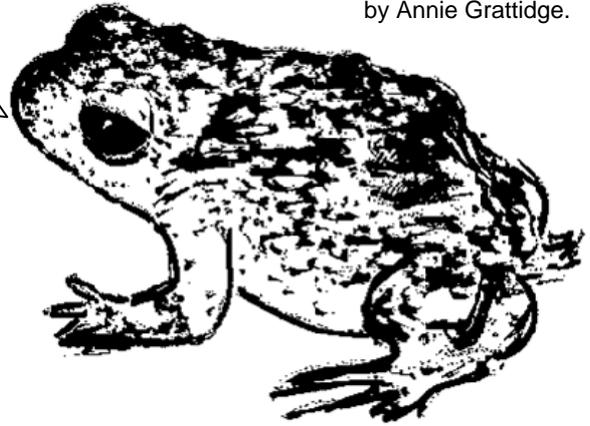
Annie Grattidge

Are you keen to help? VDM-EcOz consulting are seeking a few keen frog watchers to assist with delimiting and discovering more about the Howard River sand sheet.

The Howard River area features the largest and most continuous sand plain habitat in the Northern Territory. It is a hotspot for a diverse range of species, several of which are restricted to sand plains, including the Howard River Toadlet (*Uperoleia daviesae*) and several species of *Utricularia* (carnivorous bladderworts). However, as the sand sheet habitat is also the most significant sand deposit close to Darwin, it is targeted for a fair degree of disturbance. To assist with minimising the conflict between sand extraction and protecting biodiversity values, VDM-EcOz consulting is working with the Extractive Industry Association in the Darwin area to improve the information base for some of the most vulnerable species. They are also investigating rehabilitation options with a greater emphasis on biodiversity outcomes.

Calling for enthusiastic frog watchers

Howard River Toadlet. Sketch from photo by Annie Grattidge.



The Howard River Toadlet is very restricted in range (the Elizabeth River and Howard River as far as we know), and within this range its distribution is very patchy (e.g. pockets of 200m² or less). Determining the distribution of the Toadlet and its habitat characteristics is essential to ensure extractive works can avoid the Toadlet's core habitat in the first instance, but also to assist with guiding rehabilitation of existing disturbed sites so re-establishment of the Toadlet can be encouraged.

Our survey needs to take place in the wet season (now!!), as we are using the call of the Howard River Toadlet to gauge its presence. It's not possible to readily identify it from its appearance. Fortunately, the Toadlet has a very distinct call. Volunteers need to be keen about identifying frog species by call, prepared to work in at least pairs but no more than groups of four (for safety and minimal impact reasons), arrange their own transport, be confident in walking around in wet areas in the dark without getting lost (☺), willing to working into the evening to around 9:30pm or 10pm, and able to commit to checking several sites (e.g. five) until late February or early April.

The areas to be targeted are in the Howard Springs, Gunn Point Road, Girraween and Humpty Doo area. We'll give you an introduction to the calls, the survey sites and what to watch for and record, and then set you on your way. If that all sounds interesting and do-able to you, contact Ann Grattidge at VDM-EcOz Consulting by phone (08) 8981 1100 or email Ann.Grattidge@vdmgroup.com.au.

For more info on the Toadlet and the Howard Sand Plains refer to the NRETAS web site.....

http://www.nt.gov.au/nreta/environment/conservation/pdf/07_howard.pdf and

http://www.nt.gov.au/nreta/natres/natveg/brochures/pdf/220310_sensitive_sandsheet.pdf.

Pied Imperial-Pigeon feeding on the ground

Text and photos by Heather M Ryan

On the morning of Thursday 16 Dec. 2010, I was surprised to see a Pied Imperial-Pigeon (aka Torres Strait Pigeon) foraging on the ground in the walkway/park next to my house in Durack. It appeared to be an adult and in good condition. As a couple of pairs were nesting in the neighbourhood, I can only guess that it was looking for insects for young in the nest. I checked the ground where the foraging occurred and could only see

ants, so dug a shallow scrape in the area and unearthed an 8 mm larvae identified by Graham Brown as being of a beetle in the family Scarabaeidae, probably sub-family Melolonthinae. How did the pigeon know they were there?



Waders and dogs

Promoting a balanced use of Darwin's beaches for waders and dogs: the first Darwin Doggie Dinner and Sausage Sizzle

Peter Kyne, Micha Jackson, Sheryl Keates, Arthur Keates and Heather Moorcroft

Each summer, thousands of waders visit Darwin's beaches on their annual migration from their northern hemisphere breeding grounds. Bird numbers increase from September onwards, peaking in November as a result of the southward migration and peak again in February-March as birds move through on their northward migration. Between these periods many birds remain in Darwin where they 'overwinter' and build up valuable energy reserves for future migrations.

One of the key sites in Darwin is the beach between Lee Point and Buffalo Creek in Casuarina Coastal Reserve, where counts have revealed in excess of 9,000 birds roosting there at high tide. The importance of the roost site is recognised by its designation as a no dog area in Casuarina Coastal Reserve. This is the only no dog area on the reserve's beaches, with dogs permitted on all other beaches (both dog on-lead and off-lead areas are designated).

Several birdwatchers visiting Lee Point (including those undertaking wader counts) had noticed considerable levels of disturbance to roosting birds being caused by people walking their dogs in the no dog area. These concerned wader advocates banded together to campaign for better enforcement of the regulations designating the no dog area, and to raise awareness amongst the community of the importance of the beach to a large number of migratory and resident waders (nearly 30 wader species have been recorded at the site, including breeding by the resident Red-capped Plover).

On 20 November 2010, the inaugural Darwin Doggie Dinner and Sausage Sizzle was held to raise awareness amongst users of Casuarina Coastal Reserve of migratory and resident waders and their dependence on the reserve, as well as the potential harm caused by disturbance. Dog owners and other visitors were treated to information on waders and their migratory feats, a sausage sizzle, drinks and guided viewing of waders at the roost by Darwin's top wader watchers. A team of volunteers minded dogs while their owners visited the beach to view the birds. About 30 dogs attended the event and were treated to doggie treats and a lot of attention from the dog-minding volunteers.

On the beach, a team of local birdwatchers had eight spotting scopes trained on the impressive sight of well over 4,000 roosting waders from 13 migratory and four resident species. A non-stop procession of people coming to have a look at and



learn more about the birds ensured the team had a busy time, with two or more people at each spotting scope at any one time. Apart from dog owners, those interested to see the objects of wader watchers' fascination included wildlife carers, parks and wildlife rangers and interstate visitors. People were grateful for their experience and walked away with an enhanced appreciation of waders and the importance of undisturbed roost sites.

All in all, it was a successful event providing a valuable opportunity to talk to people about the lifestyle of migratory waders, the threats they face and what we can do to help ensure their protection and, in particular, to explain the need for the no dog area as part of the management of the Casuarina Coastal Reserve.

This inaugural event was sponsored by the NT Field Naturalists Club and thanks go to Club's Committee for support. A team of volunteers assisted on the day and thanks are also extended to them for their valuable contributions.

Micha Jackson at work. Photo: Heather Moorcroft.



Photo: Peter Kyne.



Spotting waders. Photo: Tissa Ratnayake.

Siphandone

Report on the December meeting

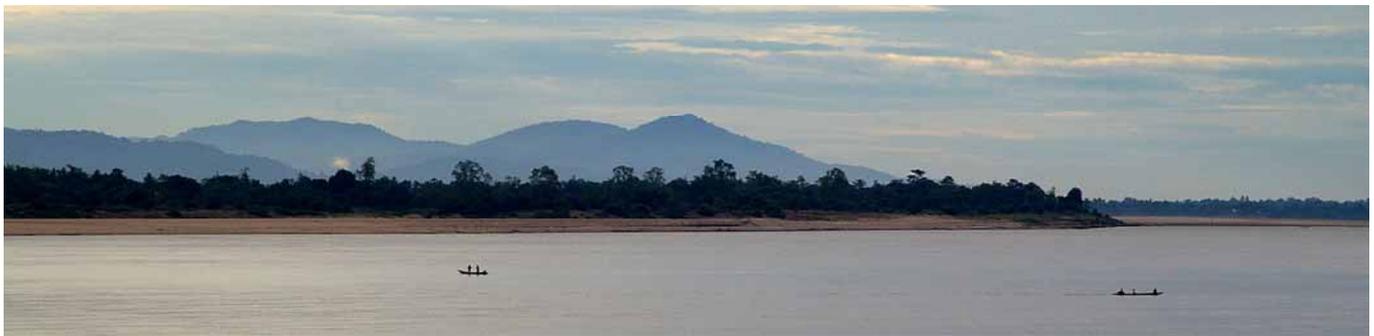
Don Franklin is well-known in the NTFN Club and as the “surprise speaker” for the last meeting for 2010, was very welcome. His short talk, concentrated on the Mekong River in southern Laos, was the second of a series on trips that he made to Laos a few years ago. Don showed numerous slides of the landscapes and wildlife of this beautiful and surprisingly well-forested area. Laos is one of the poorest countries in SE Asia but still has about 50% forest cover.

He started the talk at Pakse, a small city on the Mekong. Nearby was the plateau region of Bolhaven which was lush with rich soils used for growing coffee and surrounded by forested gorges. Also near Pakse is the Champasak temple ruins which were impressive in their sad decay although I was glad to see that nature can eventually slowly take back the constructions of humankind.

Will Duiker; photos by Don Franklin



Surprisingly well-forested: view from the Mekong River a few kilometres downstream from the city of Pakse.



Don spent a few days on several of the numerous islands in the River that form the region called Siphandone (which means “Four Thousand Islands”). He then made his way to the Khiet Ngong wetland. The wetland is part of the large Xi Pian Biodiversity Conservation Area which incorporates a number of villages and suffers the ubiquitous issues of hunting for wildlife. Tigers and other rare and endangered mammals still exist, perhaps only just, within the reserve. Nearly all wildlife are very shy due to hunting, but there was some evidence that the birdlife has responded to conservation agreements made with the villagers.

Further downriver close to the border with Cambodia, Don showed us photos of one portion of the vast system of rapids formed by a 20-km long rockbar that prevents boats from travelling up the Mekong into Laos. Below the falls he found and photographed the critically-endangered Mekong population of the Irrawaddy Dolphin.

The talk given by Don made me want to explore Laos, but perhaps not specifically to view the difficult-to-see, vigorously-hunted wildlife.



The furious Khone Phapheng Falls (in the dry season) block travel up one of the many arms of the Mekong River in Laos.

Below: glimpse of the one of the last – a Mekong River Irrawaddy Dolphin.



Following Don’s talk, and in the spirit of a Christmas break-up,

Sherry Prince ran a natural history trivia quiz. We were all dumbfounded by questions such as “Which ‘ology’ refers to the study of wood?” (A: xylology), and “What is the collective noun for an aggregation of eagles?” (A: a convocation). So “What is an *Ictinogomphus australis*?” Of course you knew it was an Australian Tiger Dragonfly but perhaps, like me, you

forgot. Of course! On such a note the meeting broke to enjoy some nibbles and disperse for the Christmas break.

Charles Darwin NP in the rain

Report on the field trip of December 12

Peter Holbery; photos by Tissa Ratnayake

About a dozen people braved the threatening weather to attend this field trip. Initially, the group headed down the hill from the car park. Bird, reptile and insect life was somewhat less noticeable than usual, no doubt because of the weather. White-throated Honeyeaters were feeding in the flowering trees, as were some Friarbirds. A small number of insects were evident, including Dusky Knight and Orange Ringlet butterflies, and a juvenile Giant Valanga grasshopper (*Valanga irregularis*). The latter is Australia's largest grasshopper and is common in tropical and sub-tropical northern and eastern Australia. Because of its size it can consume a fair quantity of vegetation, making it a sometime garden pest. However, unlike some allied species, it never swarms and is thus not a locust.



The Native Grape (*Cayratia trifolia*) was common in woodland.

Not long after our arrival, the group took shelter from the rain under a large shed about half way towards the base of the hill. The ever-observant Don took this opportunity to see how many species of plants could be seen from our dry refuge. The tally was twenty-nine species, not including grasses. Some of the plants in the vicinity were Sand Palms (*Livistona humilis*), Cycads (*Cycas armstrongii*), Wild Cherry (*Exocarpos latifolius*) and various species of *Eucalyptus* and *Acacia*.

When the rain abated, we continued down the hill to the track which skirts the mangroves. A couple of interesting insects were spotted by Sheryl on a tree trunk. One was a tree cricket (Family Gryllidae) and the other was a small praying mantis (Order: Mantodea). Another species of butterfly seen on the wing was a Dinky Bushbrown. It was interesting to note that all

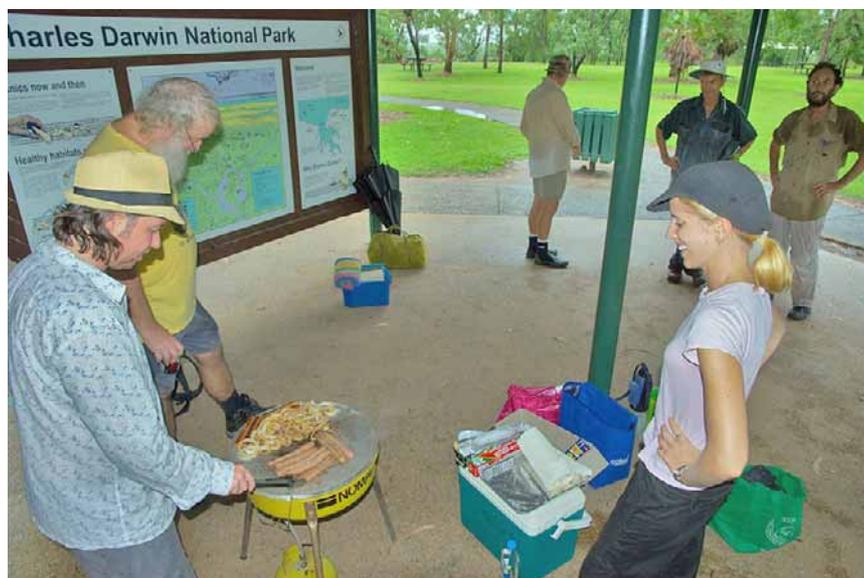
of the butterflies observed on this overcast day belong to the subfamily Satyrinae, a group which includes a many species which prefer flying in



Active (even) on overcast days: the Orange Ringlet.

shaded areas or are crepuscular. A short distance further

along, good views were obtained of a covey of Brown Quail close by the track. A couple of these birds took flight, the remainder stayed in the grass.



Cooking us a feast: Peter Kyne (left) and Micha Jackson (right).

On the walk back up the hill a number of species of fungi were sighted. Also seen was a small skink which was moving through the leaf litter on the ground.

Back at the top of the hill, a Forest Kingfisher was patrolling the picnic area close to the car park. The outing concluded with a barbecue which was enjoyed by all. The barbecue was provided by the organisers of the recent Doggie Dinner wader bird awareness event which had been held at Lee Point. The Northern Territory Field Naturalists Club had provided support for the Doggie Dinner event.

Interesting bird sightings

20 November to 21 January 2011

Compiled by Ian Hance

Sightings are as reported (unvetted, unconfirmed) and have been mostly compiled from the e-mail digest of the NT birder website (<http://groups.yahoo.com/group/ntbirds>) moderated by Niven McCrie.

Species	Date	Location	Observer/s	Nos./comments
Seabirds				
Short-tailed Shearwater	14/1/11	Stokes Hill Wharf	A & S Keates, P Kyne & M Jackson	1
Lesser Frigatebird	10/1/11	Nightcliff	Ian Hance, Fiona Douglas	1, & 50 on 11/1/11 other sightings, other observers
Sooty Tern	12/1/11	Nightcliff Pier	Stephen Garnett	1; & other sightings
Bridled Tern	12/1/11	Buffalo Creek & Lee Point	P Kyne & M Jackson	12 & other sightings, other observers, at Stokes Hill Wharf
Waterbirds				
Great Cormorant	12/1/11	McMinns Lagoon	Chris Parker	1; & on 16/1 by Darryel Binns
Black Bittern	16/12/10	Leanyer Swamp	Sheryl Keates <i>et al</i>	1
~	16/1/11	McMinns Lagoon	Fiona Douglas & Ian Hance	1
~	17/1/11	South Alligator River	Marc Gardner	4
Great-billed Heron	9/1/11	Channel Island	Mike Jarvis	1
White-browed Crake	11/12/10	Fiddlers Lane	P Kyne & M Jackson	1; & 2, 16/1/11 I Hance & F Douglas
Pale-vented Bush-hen	26/11/10	Leanyer Swamp	Peter Kyne & Micha Jackson	1; & other obs., 2 heard
Chestnut Rail	c. 6/1/11	Tiger Brennan Drive	Andrew Miller	3
Waders				
Little Ringed Plover	11/12/10	Leanyer Sewage Ponds	Clive Garland	3; & other sightings by other observers
Oriental Plover	27/11/10	East Point	A & S Keates <i>et al.</i>	31
Australian Painted Snipe	c. 9/1/11	Walker Crt., Humpty Doo	Geoff Corry	1 seen on 3 days consecutively
Swinhoes Snipe	17/12/10	Walker Crt., Humpty Doo	Geoff Corry	6; & c. 22 on 22/12/10, & other sightings
Snipe sp.	5/12/10	Katherine Sewage Ponds	Andrew Bell & Mick Jerram	1
Oriental Pratincole	17/12/10	Spot On Marine	A & S Keates	3
Birds of prey				
Black-shouldered Kite	28/11/11	Anzac Parade, near Fogg Dam	A & S Keates	7
Grey Goshawk	27/11/11	East Point	A & S Keates <i>et al.</i>	1
Spotted Harrier	28/11/11	Anzac Parade	A & S Keates	1
Wedge-tailed Eagle	11/1/11	Humpty Doo	Marc Gardner	1
~	17/1/11	Cnr Stuart H'way & McMillans Rd	Ian Hance	2; & other sightings, Coolalinga, other obs.
Peregrine Falcon	21 & 23/11/10	Lee Point	A & S Keates, P Kyne & M Jackson	1
~	7/1/11	CDU, Casuarina	Peter Kyne	1
Grass Owl	12/12/10	South Alligator River floodplain	Marc Gardner	1; & again on 23/12/11
Other non-passerines				
Crested Pigeon	11/1/11	McMinns Lagoon	D Binns	1
Fork-tailed Swift	20/11/10	Coolalinga	D Binns	100+
Channel-billed Cuckoo	28/11/10	Anzac Parade, near Fogg Dam	A & S Keates	1; & other sighting, Jabiru, other observer
Oriental Cuckoo	17/1/11	South Alligator River	Marc Gardner	1
Red-backed Button-quail	3/1/11	South Alligator River floodplain	Marc Gardner	1
Passerines				
Rainbow Pitta	2/1/11	East Point, revegetated forest	Stephen Garnett	nest with 4 eggs
Gouldian Finch	4/12/10	Katherine East	Andrew Bell & Mick Jerram	2; & 15 on 10/1/11
Yellow-rumped Mannikin	30/11/10	Royal Darwin Hospital	Gavin & Meg O'Brien	1
Yellow Wagtail sp.	11/12/10	Leanyer Sewage Ponds	C Garland, P Kyne & M Jackson	2; & 3 on 8/1/11

Not just one or two Mannikins

Andrew Spiers writes that it is true that at Darwin River Yellow-rumped Mannikins are seen in just very small numbers in association with Chestnut-breasted Mannikins (*Nature Territory* Dec. 2010, p9), but this isn't always the case closer to town. In March or April 2006, he and a number of Diploma in Conservation & Land Management students saw a flock of c. 200 Yellow-rumped Mannikins feeding in the grasses in company with a small group of Long-tailed Finches behind the Free Beach in the Casuarina Coastal Reserve. No Chestnut-breasted Mannikins were seen. Where did they come from, and go to?



The mystery snipe at Katherine generated much discussion but no certain resolution about its identity. Photo: Andrew Bell.

Recent literature about Top End natural history

Back listings and summaries may be viewed at <http://www.cdu.edu.au/ser/profiles/ecologyintopend.htm>.

VARIOUS TOPICS

Compiled by Don Franklin

Geomorphology

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- Oulsnam B. 2010. Frederick Schultz 1804 – 1902. Part 1. The Northern Australian Survey Expedition 1868-69. *TENPS Newsletter* March 2010: 5-6. [collector of natural history specimens in the Darwin area]

Miscellaneous

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The pristine Daly River

Geomorphologist and Club member Prof. Bob Wasson and colleagues (2010) investigated channel dynamics in the Daly River over the last 30 years and the role of sedimentation in influencing this. In particular, they considered whether current land use in the catchment have influenced rates of sedimentation and thus channel dynamics. "Using geochemical tracers . . . , it is shown that, for the last ~ 30 years, 89–97% of the fine sediment originates from erosion by gully and channel change. There is no discernible input of top soil from the cleared land adjacent to the Daly River in the study area." "... benches are being destroyed as the channel widens (contributing sediment to the river) and the bed of the Daly appears to be shallowing, both responses to increased overbank flows. The sediment source created by channel widening is almost all the result of hydrologic change, with no discernible role for land use."



The melioidosis agent in bore water

"We analyzed water parameters and the occurrence of the melioidosis agent *Burkholderia pseudomallei* in 47 water bores in Northern Australia. *B. pseudomallei* was associated with soft, acidic bore water of low salinity but high iron levels. This finding aids in identifying water supplies at risk of contamination with this pathogenic bacterium" (Draper *et al.* 2010).