



# NATURE TERRITORY

March 2011

Newsletter of the Northern Territory Field Naturalists Club Inc.

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

**Meetings** are generally held on the second Wednesday of every month, commencing at 7:4pm, 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.**



*Marasmius* sp. Examples of a genus commonly seen on the February field trip.

Photo: Graham Brown

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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

**March meeting. Wednesday March 9, 7:45pm.** Blue 1.14 (Business building), CDU Casuarina.

### Ruchira Somaweera

#### "It's hard being a freshy: Nesting Ecology of Freshwater Crocodiles "

In most, if not all, crocodylian species, adults provide some level of parental care to their young. However aspects of this behaviour are poorly known for the Australian freshwater crocodile or 'freshy' (*Crocodylus johnstoni*). Given the secretive lifestyle and highly wary nature of crocodiles, most of these



Freshy hatching. Photo: Ruchira Somaweera

unique behaviours are not often observed or reported. As part of an ongoing broader study on the ecology of freshwater crocodiles at Lake Argyle in the arid east Kimberley region of tropical Australia, Ruchira is using field surveys and remotely-triggered digital cameras set up in nesting sites to study nesting ecology and behaviour of hatchlings of this species. Data obtained since 2008 have given new insights into characteristics such as nest site selection, egg laying, nest predation, hatching, transportation of hatchlings by adults, crèche formation and parental guarding, and dispersal of young.

**Ruchira Somaweera** is a PhD student from University of Sydney, currently based in Darwin for field research. Some of his early work (including a poster on the snakes of Darwin) can be seen at <http://www.srilankanreptiles.com/>.



#### **March field trip. 12-13 March 2011.** Natural History Survey at Crab Claw Island.

The notices in our February newsletter and at the Club's last meeting produced excellent responses when we asked members for a show of interest in participating in a Wet Season survey of flora and fauna at Crab Claw Island Resort. The resort's owners have again invited us to be their guests, in order to do a follow up to last year's successful survey.

At the time this newsletter went to press, there were a few places that hadn't been confirmed, so if you're still keen to go let Tissa know ASAP and we can place you on a backup list.

All who have registered will be contacted by email prior to March 2 with information on travel options and on the proposed program. If you haven't received a confirmation email by March 2, or if you require further details please contact Tissa Ratnayeke on 8921 8226 or [tissa@imprintdesign.com.au](mailto:tissa@imprintdesign.com.au).

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## Top End Native Plant Society activities

**March meeting.** Thursday March 17.

Marj King & Russell Dempster: *Seed collecting and native plant propagation.*

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

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

# Club notices

**Welcome to new members: Jyoti Choudhary, Brenton Bartsch**

**Thank you:** the previous issue was proof-read by **Fiona Douglas** and collated and mailed by **Anne Highfield** and **Fiona Douglas**. It was printed by **Fiona Douglas** and **Don Franklin** using equipment kindly made available by **Michael Gunner MLA** at his Fannie Bay electorate office and 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 forward material to Don at [eucalypt@octa4.net.au](mailto:eucalypt@octa4.net.au) or via the Club's postal address, or contact him on 8948 1293.

Deadline for the April newsletter: Friday March 25.

**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 9am and 2:30pm Tuesday to Thursday, and 4–6pm 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).

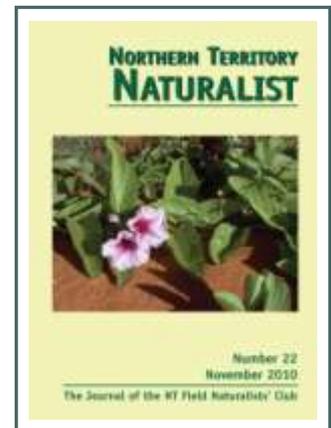
**Northern Territory Naturalist:** The Editorial Committee of the Club's journal, the *Northern Territory Naturalist*, is now calling for manuscripts for issue no. 23. The journal publishes works concerning any aspect of the natural history and ecology of the Northern Territory or adjacent northern Australia. 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](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](mailto:michael.braby@nt.gov.au). Editors of the journal are Dr Michael Braby, Dr Lynda Prior and Dr Chris Tracy.

An order form for back issues of the *Northern Territory Naturalist* is also available from the journal page of the Club's website. Issues are available individually or as a set (some are out of print and available as photocopies only).



## Leanyer Wastewater Treatment Pond key:

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 required by PowerWater Corporation apply and an agreement to observe these must be signed. Conditions are not onerous and will be explained when picking up the keys. However, PWC must be notified during weekday working hours of your intention to visit.

# Snakes and bull ants in the rain

## Report on the January excursion to East Point

John Rawsthorne

A band of hardy folk, perhaps 15 in number, met at Pee Wees on the morning of Sunday 23 January, in between squally showers and with the high tide lapping at the top of the beach along East Point Rd.



Neat fungi. Photo: Malika Okeil

Led by Peter Holbery, we set off through the vine forest, eyes peeled and ears straining, particularly for pittas, but also for anything else that cared to move in the damp conditions. Initially we contented ourselves with some really neat fungi, but once the first rain shower passed birds became slightly more active and several Rainbow Pittas were heard, with brief views of one bird for some of us.

We emerged to a powerline clearing, where our only butterflies of the day were spotted – a Small Pearl-white and a Common Crow. Unfortunately our leader Peter neither netted nor saw either of these butterflies, and no more presented themselves for the remainder of the walk.

The clearing also gave relatively good views of several birds, including Little Shrike-thrush, several honeyeaters, Rose-crowned Fruit-dove, Lemon-bellied Flycatcher and orioles, with Spangled Drongos being particularly obvious and numerous both here and in the forest depths. We also saw numerous Agile Wallabies in the cleared areas of the Reserve, perhaps displacing the Bush Stone-curlews as sentinels of the East Point grassland.

On re-entering the vine forest for the second half of the loop, we heard the distinctive ‘woof-woof’ calls of a Barking Owl, and it wasn’t long before we set up camp under a calling bird. It is always nice to see these birds by day, and great to be able to find them so much more easily than in southern Australia.

While most eyes were upwards, Ruchira Somaweera was hunting in the leaf litter, and found several different centipedes and some rather nasty bull ants before turning up a Northern Small-eyed Snake (*Cryptophis pallidiceps*) of about 40cm, slightly smaller than average size. This was the highlight of the walk for me and it was great to get a good close up view of this snake. Under the next log, only a metre from the snake’s lair, Ruchira then found a Northern Brown Bandicoot (*Isoodon macrourus*), which bounded away across the rainforest floor. I still cannot figure out exactly how that bandicoot fitted in the spot where it was sitting, tight under a small log.



Northern Small-eyed Snake. Photo: Ruchira Somaweera



Fruiting in the East Point vine forest: Peanut Tree (*Sterculia quadrifida*). Photo: Tissa Ratnayake

The last remaining find of the morning was also due to Ruchira, who turned up a small Northern Bar-lipped Skink (*Eremiascincus isolepis*) from under a rock. This skink was formerly considered to belong to the genus *Glaphyromorphus* along with some of our mulch-skinks, but is now considered to be congeneric with the Australian inland’s sand-swimmer skinks. There are at least seven skinks in the *Eremiascincus* genus.

Thanks to Peter for leading this outing, and thanks to all who shared knowledge on the plants, birds, reptiles and other parts of this fascinating reserve. And thanks to the sun, which emerged only as we drove out of the carpark at the end of the walk.

# Larger Fungi in the Australian Monsoon Tropics

## Report on the February meeting

Text and photos by Ben Stuckey

The somewhat forgotten and neglected world of fungi was unveiled to all in an informative talk by Dr Matthew Barrett, who hails from Kings Park and Botanic Garden in Perth, WA. While fungi in southern Australia are reasonably well studied, the northern wet-dry tropics remain much neglected; and that neglect also occurs on a global scale, Matt believes.

There are many microscopic types of fungi such as rusts, smuts and those that affect our health living in almost every possible habitat, but only the macro fungi - those easily seen with the naked eye - were discussed on the night. In most cases the 'fungus' we see can be considered analogous to the fruit and flowers of a flowering plant though, as Matt did point out, fungi are actually more closely related to animals than to plants. The actual organism is made up of a network of thread-like hyphae, which feed on (mostly) dead organic matter until such time that conditions or resources prove suitable to produce a fruiting body. Usually this involves a lot of moisture, hence the large number of fruit bodies seen after monsoonal rain events in a Top End wet season. Like the fruit of a flowering plant the ultimate aim of a fruiting body is to disperse its genetic material. This has evolved in many ways and has led to various dispersal mechanisms, translating to an amazing array of shapes, sizes, colours and odours.



*Hygrocybe* sp. - an often brightly-coloured genus of gilled fungi

The feeding mechanisms of some fungi are no less dramatic. Consider *Cordyceps* of which the spores, once in contact with an underground insect larva, begin to grow inside and feed on its hapless victim. Release of behaviour-altering chemicals forces the victim towards the soil surface and after the host's death the fungus emerges above ground. Another fiercely predatory species *Pleurotus ostreus* (Oyster Mushroom) attacks nematodes with toxin-releasing appendages and soon devours them with corpse-invading hyphae.

As well as being **Predatory**, other species of fungi can be:

**Saprophytic** - most fungi prefer dead or decaying material like those we see on rotting timber. Interestingly there are two types of wood-rotting fungi – white rot (only lignin is eaten) and brown rot (cellulose eaten and lignin tissue is left behind) species.

**Mycorrhizal** - these fungi form a (mostly) mutually beneficial association with plant hosts. Most are either ectomycorrhizal or endomycorrhizal. The latter actually enter the cell walls of the root of the host plant.

**Lichenised** fungi associate with photosynthetic partners such as algae, benefiting from the production of sugars.

While the diversity of fungi in northern Australia may be overlooked, even more so is the role of fungi in the ecological context. An example Matt gave was the role of small mammals in the dispersal of truffle-type fungi. Of course, without detailed information on fungal ecology the ultimate dependence on spore dispersal and the effect of recent mammal declines is unlikely ever to be known. One can imagine the difficulty of studying such an idea.

Some fungi are cosmopolitan, others are more restricted. Availability and extent of habitat and hosts are key drivers of specific fungal distributions. A good example of this are the many mycorrhizal species associated with endemic hosts such as a majority of the eucalypts.

Matt finished up the talk by summarising various 'groups' of fungi according to their general shapes and habits. Some of these are outlined below:

**Gilled** (Agaric) – the most familiar type of fruiting body as in the edible mushroom *Agaricus bisporus*



*Boletellus emodensis* - a bolete which stains blue when tissue is damaged

**Boletes** (Pored) – often similar to the gilled types but with spongy pores replacing the gills.

**Polypores** (Bracket) – stems less common, often forming brackets, having a pores which are usually very small.

**Puffballs, Earth Stars and Stinkhorns** (Gasteromycetes) – spores produced inside the fruiting body and released as the fruit body matures.

**Steroid and Paint** fungi – pores essentially absent, paints are almost as the name suggests.

**Truffle-like** fungi – various evolutionary lines of fungi have evolved a hidden existence with spores in complex internal structures.

**Cups** – discs or cups of the Ascomycete group (most well known macrofungi are Basidiomycetes)

**Jellies and Corals** – look like their respective edible and marine namesakes of course; spores borne on the outer surface.

There are more types of fungi. These 'groups' are used as a convenience to describe a fruit body and in some instances can be very misleading in a taxonomic sense.

Thanks to Matt for a great introduction to north Australian fungi.



An undescribed truffle with a fruity smell, perhaps representing a new genus

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## Fungal Forays - Journey into an Unknown Kingdom

Report on the February excursion to Charles Darwin National Park

Bruce Maley

After a night of rain, a somewhat damp bunch of field naturalists gathered under the shelter at the Charles Darwin National Park with Matt Barrett of the King's Park Botanic Gardens in Perth. Although the rain eased soon after, leaden skies gave an air of Wet Season gloom to the bushland. We had, in other words, ideal fungi hunting conditions.

We had barely stepped off the asphalt of the car park when Matt plucked an *Amanita* sp. from the leaf litter and immediately demonstrated why we had him along. He pointed out characteristics of the genus; the two rings on the stem (the remnants of veils on the immature fruiting bodies), the shape of the base of the stem, the colour of the cap and of the spores (which are often, but not always, the colour of the gills), scales and/or sliminess of the cap, and the taste. Many of the agarics are poisonous, and a few are hallucinogenic; nevertheless, taste is a useful characteristic. Matt helpfully pointed out that one won't be poisoned if the specimen isn't actually swallowed but, obviously lacking a spirit of adventure, no one was prepared to put this reassurance to the test.

Next discovered were tiny *Marasmius* sp. fruiting bodies on rotting leaves; a dead branch sported split-gilled wood-rotting *Schizophyllum* spp. ... and then suddenly fungi were everywhere – the slippery-capped *Cortinarius*, the bracket fungus *Fomitopsis*, *Gymnopilus*, *Punctularia strigosazonata* and the pantropical *Flavodon flavus*. Paint fungi, jelly fungi, the coral fungus *Ramaria* sp. Even the slime mould *Lycogala epidendrum*, which is not a fungus, presented itself. Altogether, about 37 species of fungi were found. (Thanks to Brian and Lyn Reid for species count.)



*Phellinus* sp. - a woody polypore  
Photo: Ben Stuckey

At this point, Matt commanded us to walk 50 metres into the bush without looking down or we'd never get out of the carpark – and then broke his own injunction by observing various wood-rotting polypores, such as the common

*Polyporus arcularius*, the eponymous pores on the surface of the fungus being clearly visible with a hand lens. He mentioned that many of the polypores have synonyms – in fact, this is a frequent difficulty in fungal taxonomy. Many genera and species are ubiquitous, but apparently earlier workers had not always realised that the same species would be present in different countries and so had named them differently. Although recent developments in genetic techniques have made the task of revisions easier and more accurate, there is, as in biology generally, a worldwide dearth of fungi taxonomists, which is leading to the death of taxonomy.

Matt also spoke of the close associations between the mycorrhizal fungi and flowering plants, both symbiotic and parasitic, and that the mycorrhizal associates of one species of plant may exchange nutrients with the mycorrhiza of an entirely different species of plant. (This seemed to me to be a literal example of the old cliché in ecology, that everything is connected to everything else – a sort of underground internet of fungal hyphae.)

After a couple of hours of collecting and conversation mining Matt's knowledge – unlike many of the Field Nats' subjects, fungi are not often startled by human voices – we called it a day. Half a dozen of us, however, went on to the Northern Territory Herbarium in Palmerston to see the collection of mainly flowering plants, and to discuss in more detail and with the help of a microscope, the structure and classification of some of the collected fungi. Many thanks are due to Ben Stuckey of the Herbarium, for this. Thanks also, of course, to Matt for his ever flowing wealth of knowledge. (Any inaccuracies in this report are mine!)

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### **Weeds in the bush** from *Recent Literature*, page 11

Preece *et al.* (2010) surveyed weeds at 718 points along 2,000 km of transects through more or less undisturbed savanna from Gove to Port Keats and from Katherine to Darwin. They recorded 21 species of weeds on a total of 207 occasions. The most frequent weeds were Hyptis (*Hyptis suaveolens*) – 106 records, Wild Passionfruit (*Passiflora foetida*) – 25, Rubberbush (*Calotropis procera*) – 13, Grader Grass (*Themeda quadrivalvis*) – 11, and Mimosa (*Mimosa pigra*) and Sicklepod (*Senna obtusifolia*) (10 each). Weeds were more prevalent on pastoral than Aboriginal land tenures, and closer to watercourses and infrastructure.

Eradication of pests is better than control, but usually it is not easy to achieve. Gardener *et al.* (2010) document and explore attempts to rid the Victoria River District of Devil's Claw (*Martynia annua*), led by the Parks & Wildlife Service in Gregory (Jutpurra) National Park. These attempts have not achieved eradication, but have reduced the weed "to a level where ecological impact was negligible". Challenges with Devil's Claw that have prevented eradication have been "occasional inaccessibility during the crucial seed production window; many widely dispersed small infestations; a perennial seed bank; and long-distance dispersal mechanisms". Another positive effect of the program has been "extensive community engagement" through "a biannual event called the Devil's Claw Festival, [which] has trained and educated hundreds of local, national and international people about biological invasions and conservation issues in remote northern Australia." The authors also note that "Long-term institutional leadership and investment have been crucial for this project."



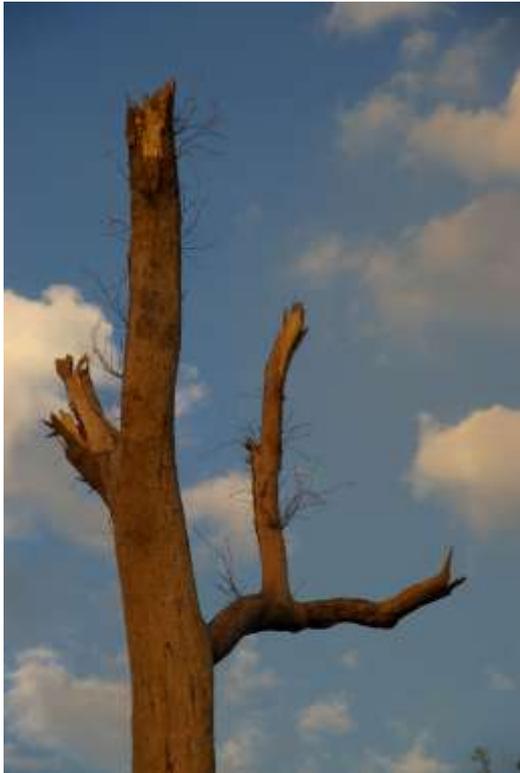
Aftermath of fire in weedy grasses in an urban landscape. Photo: Fiona Douglas

Setterfield *et al.* (2010) measured and confirmed what we've long believed – that fires driven by Gamba Grass (*Andropogon gayanus*) are hotter and more destructive than those driven by native grasses. "... complete canopy scorch occurred in most [Gamba Grass] fires, even at low [fire intensities]." Fuel loads in Gamba Grass were 3.2 times as high as in native grass and reached to 4 m high, by comparison with 0.5 m in native grasses.

# Savanna trees & shrubs from *Recent Literature*, page 11

## Resprouting after disturbance

Eucalypts are well-known – from studies in southern Australia – to survive fire and resprout vigorously afterwards because they have epicormic (reserve or resprout) tissue protected deep below the bark. But what about in northern Australia? Burrows *et al.* (2010) examined the epicormic structures in 21 species from 11 genera in the family Myrtaceae from northern Australia. All seven eucalypts examined had well-developed epicormic strands that extended from the bark surface through the bark to the trunk pith. Other genera displayed a wide diversity of epicormic structures and placement, but were generally less well-protected than the eucalypts (e.g. *Syzygium*, *Lophostemon*, *Allosyncarpia*, *Calytrix*, *Verticordia*). Those of *Melaleuca* were protected only by the layers of papery bark. The Myrtle Mangrove *Osbornia octodonta* was the only species examined to lack epicormic structures.



Near the centre of the tornado path: this large Darwin Stringybark (*Eucalyptus tetradonta*) in the south of Kakadu National Park resprouted after being severely damaged by a tornado, but the sprouts and the entire tree died in the following months. Photo: Don Franklin

Savannas trees cope with fire by various means which include resprouting and regenerating from seed. But do these adaptation serve them well when faced by a tornado? Franklin *et al.* (2010) examined resprouting responses of eucalypts, Cooktown Ironwood (*Erythrophleum cholorostachys*) and several species of *Acacia* 15 months after devastation by a severe tornado in the south of Kakadu National Park. Survival rates varied with the extent of damage and among species, and were lower in *Acacia* than eucalypts. Survival rates were lower at the centre of tornado path than the level of structural damage otherwise indicated, which appears to be because trees were twisted and suffered internal breakage – some large eucalypts resprouted from the upper trunk or branches after the tornado but died afterwards, and examination showed that some of these had deep cracks in the trunk. Resprout stems near the ground grew quicker than those higher on the trunk, which the authors suggest is an adaptation to grow above the flame zone of ground fires as quick as possible. The authors concluded “that the adaptation of eucalypts to frequent fire does not jeopardise their survival (by comparison with the more generalist *Acacia* spp.) following severe windthrow”.

When trees are small, they are less likely to resprout from stems after a fire because the stem is destroyed. The alternative for saplings of many savanna trees is to resprout from underground organs. If a very small sapling is burnt, it may recover its height within a year, but a larger sapling may take several years. The effect can be, in the face of

frequent fires, to create a recruitment “bottleneck” in which saplings are unable to grow large enough to develop fire-resistant trunks. Using measurements taken in the Kapalga fire experiment in Kakadu National Park, Prior *et al.* (2010) demonstrated that this is indeed the case. Saplings were more likely to grow into adults in unburnt plots. Furthermore, in the presence of fire, the stems of saplings were more likely to survive as they grew taller (presumably because they were also growing thicker). Furthermore, after controlling for height, short-lived understorey species such as *Acacia* were less likely to survive a fire than were saplings of eucalypts or longer-lived midstorey species such as Billygoat Plum (*Terminalia ferdinandiana*).



## The fate of Djutpi – not resprouting well enough after disturbance

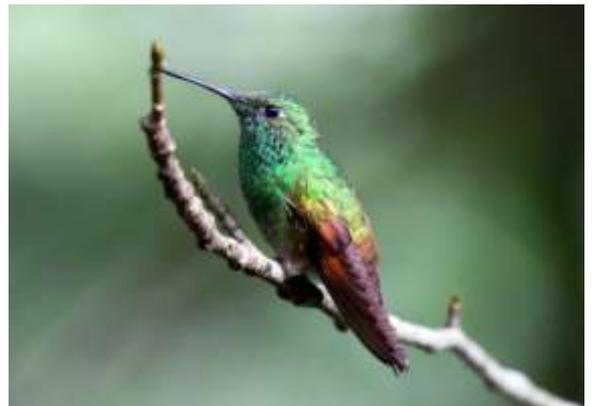
Djutpi is the Aboriginal name in the Ngukurr area for the shrub *Antidesma ghesaembilla* (also known as Murrungun and Black Currant). Concerns were raised when local rangers noticed a decline in fruit production by this species, as the fruit is edible and highly favoured. A combination of local Indigenous knowledge and scientific data were used to evaluate a number of possible causes (Ens *et al.* 2010) and rule out change in rainfall, change in fire regimes or browsing by feral animals. The decline in productivity, it was eventually agreed, was most likely attributable to use of non-customary harvest procedures – including removal of branches and sometimes even whole bushes – whereas customary harvest involved removal only of the fruit.

# Mexican hummingbirds

**Text – Peter Kyne & Micha Jackson; photos – Micha Jackson**

Mexico is home to 58 species of hummingbirds including 12 endemics. These miniature nectarivores were a highlight of a recent trip to Veracruz state and Mexico City. We caught up with 17 species and delighted in their bright plumages, fascinating flight and exotic names (Emeralds, Sheartails, Sabrewings, Hermits...). We were also lucky enough to find a Bumblebee Hummingbird nest and to watch the female returning several times to feed the two chicks. Here is a collection of photos of a few of those species.

Our visit to Veracruz was with Wildside Nature Tours' annual Veracruz 'River of Raptors' tour (see [www.wildsidenaturetours.com](http://www.wildsidenaturetours.com)).



Clockwise from above:  
Wedge-tailed Sabrewing; Violet Sabrewing; Berylline Hummingbird;  
Azure-crowned Hummingbird; Buff-bellied Hummingbird.



# Interesting bird sightings

22 January to 18 February 2011

Compiled by Ian Hance

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

Species	Date	Location	Observer/s	Numbers & comments
<b>Waterbirds</b>				
Black Swan	31/1	Leaning Tree Lagoon	Mike Jarvis	1; other observations
White-browed Crake	13/2	Fogg Dam	John Rawsthorne & Jon Clarke	2
<b>Seabirds</b>				
Lesser Frigatebird	15/2	Kulaluk Bay	Fiona Douglas	16 & 50+
~	17/2	~	Ian Hance	8
~	17/2	low over Bagot Rd., Millner	Peter Kyne	5
<b>Waders</b>				
Swinhoe's Snipe	22/1	Sattler Estate Humpty Doo	Ian Hance	15; other observations
~	15/2	~	Geoff Corry	20
Little Ringed Plover	23/1	Leanyer Sewage Ponds	Peter Kyne <i>et al.</i>	4
Marsh Sandpiper	23/1	~	Peter Kyne <i>et al.</i>	57 (large numbers)
Great Knot	23/1	~	Peter Kyne <i>et al.</i>	2
<b>Birds of prey</b>				
Boobook Owl	6/1	Wagait Beach Rd	Ian Hance	1
Barn Owl	29/1	Anzac Parade	Darryel Binns <i>et al.</i>	7
~	1/2	~	Peter Kyne & Micha Jackson	10
Eastern Grass Owl	29/1	Anzac Parade	Darryel Binns <i>et al.</i>	1
Barking Owl	29/1	Anzac Parade	Darryel Binns <i>et al.</i>	4; other observations.
Little Eagle	c. 2/2	Rapid Creek	John Rawsthorne	1
~	8/2	Fannie Bay	John Rawsthorne	1
Black-breasted Buzzard	8/2	Gunbalanya Airport	Marc Gardner	1
<b>Other non-passerines</b>				
Partridge Pigeon	5/2	Humpty Doo	Darryel Binns	1
Chestnut-quilled Rock Pigeon	30/1	Gubara, Kakadu	Marc Gardner	1
Common Bronzewing	30/1	~	Marc Gardner	1 (not so common)
<b>Passerines</b>				
Eastern Yellow Wagtail	23/1	Leanyer Sewage Ponds	Peter Kyne <i>et al.</i>	6
White-lined Honeyeater	30/1	Gubara, Kakadu	Marc Gardner	1
Sandstone Shrike-thrush	30/1	~	Marc Gardner	1
Black-faced Woodswallow	13/2	Anzac Parade.	John Rawsthorne & Jon Clarke	12

## Snipe near McMinns Lagoon



Swinhoe's Snipe along Caldwell Road. Photo: Micha Jackson

Since the onset of the wet weather Geoff Corry has been reporting many snipe in and around his backyard in the Sattler Estate. When he reported that a bird occasionally present in the early morning near his house fitted the description of a Painted Snipe, snipe aficionados got in a flurry. Several early morning forays onto the estate by Biggles, Ian Hance, Peter Kyne & Micha Jackson, John Rawsthorne and others failed to reveal the bird, so this sighting remains as yet unconfirmed.

Other snipe are notoriously difficult to tell apart, unless in the hand when the tail-feathers are easy to examine in detail.

However, the majority of snipe seen were thought to be Swinhoe's. Whatever the species, they were seen in dozens and at close range, by several observers, during the wettest phases of the January monsoon.

# Recent literature about Top End natural history

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

## PLANTS & VEGETATION

Compiled by Don Franklin

### Not so technical

- Barrett M, Stuckey B. 2008. *Phallus merulinus* newly reported for the Top End. *Fungimap Newsletter* 38: 16.  
Biggs C. 2010. Mimosa on the march. *Magazine of the Environment Centre NT* April: 7.  
Liddle D. 2010. *Typhonium*: a group of plants of conservation interest. *TENPS newsletter* Oct. 2010: 6-7.

### Weeds

- Gardener MR, Cordell S, Anderson M, Tunnicliffe RD. 2010. Evaluating the long-term project to eradicate the rangeland weed *Martynia annua* L.: linking community with conservation. *The Rangeland Journal* 32: 407-417.  
Natural Resources Division. 2010. *Weed Management Plan for Andropogon gayanus (Gamba Grass) 2010*. Department of Natural Resources, Environment, The Arts and Sport: Palmerston. 31 pp.  
<http://www.nt.gov.au/nreta/natres/weeds/find/gamba/index.html>  
Natural Resources Division. 2010. *Weed Management Plan for Bellyache Bush (Jatropha gossypifolia) 2010*. Department of Natural Resources, Environment, The Arts and Sport: Palmerston. 25 pp. Available at:  
[http://www.nt.gov.au/nreta/natres/weeds/find/bellyache/pdf/final\\_mgmtplan\\_bellyache.pdf](http://www.nt.gov.au/nreta/natres/weeds/find/bellyache/pdf/final_mgmtplan_bellyache.pdf)  
Parr CL, Ryan BJ, Setterfield SA. 2010. Habitat complexity and invasive species: the impacts of Gamba Grass (*Andropogon gayanus*) on invertebrates in an Australian tropical savanna. *Biotropica* 42: 688-696.  
Preece N, Harvey K, Hempel C, Woinarski JCZ. 2010. Uneven distribution of weeds along extensive transects in Australia's Northern Territory points to management solutions. *Ecological Management & Restoration* 11: 127-134.  
Setterfield SA, Rossiter-Rachor NA, Hutley LB, Douglas MM, Williams RJ. 2010. Turning up the heat: the impacts of *Andropogon gayanus* (gamba grass) invasion on fire behaviour in northern Australia savannas. *Diversity & Distributions* 16: 854-861.  
Short P, De La Rue K. 2010. Notes on species of *Hyptis* Jacq. (Lamiaceae) naturalised in the Northern Territory, Australia. *Northern Territory Naturalist* 22: 95-105.

### Savanna trees & shrubs

- Burrows GE, Hornby SK, Waters DA, Bellairs SM, Prior LD, Bowman DMJS. 2010. A wide diversity of epicormic structures is present in Myrtaceae species in the northern Australian savanna biome – implications for adaptation to fire. *Australian Journal of Botany* 58: 493-507.  
Ens E-J, Daniels C, Thompson W, Ponto S, Rogers K, Roy J, Dixon P, Nelson E. 2010. Combining Aboriginal knowledge and Western science to investigate possible explanations for the decline in fruit production of a bush tucker shrub, Djutpi, near Ngukurr, Northern Territory. *Ecological Management & Restoration* 11: 146-148. [*Antidesma ghaesembilla*]  
Franklin DC, Gunton RM, Schatz J, Lawes MJ. 2010. Resprouting responses of trees in a fire-prone tropical savanna following severe tornado damage. *Austral Ecology* 2010: 685-694. [Mary River area, Kakadu]  
Kanniah KD, Beringer J, Hutley LB. 2010. The comparative role of key environmental factors in determining savanna productivity and carbon fluxes: A review, with special reference to northern Australia. *Progr. Phys. Geog.* 34: 459-490.  
Liedloff A.C. and Smith C.S. (2010) Predicting a 'tree change' in Australia's tropical savannas: Combining different types of models to understand complex ecosystem behaviour. *Ecological Modelling* 221, 2565-2575.  
Liddle DT. 2009. *Management Program for Cycads in the Northern Territory of Australia 2009-2014*. Dept. Natural Resources, Environment, the Arts and Sport: Darwin. 37 pp. Available at: <http://www.nt.gov.au/nreta/wildlife/programs/approved.html>.  
Prior LD, Williams RJ, Bowman DMJS. 2010. Experimental evidence that fire causes a tree recruitment bottleneck in an Australian tropical savanna. *Journal of Tropical Ecology* 26: 595-603.  
Russell-Smith J, Price OF, Murphy BP. 2010. Managing the matrix: decadal responses of eucalypt-dominated savanna to ambient fire regimes. *Ecological Applications* 20: 1615-1632.  
Van Der Merwe M, Spain CS, Rossetto M. 2010. Enhancing the survival and expansion potential of a founder population through clonality. *New Phytologist* 188: 868-878. [*Erythroxylum pusillum*, Gove Peninsula]

### Miscellaneous

- Andersen AN. 2010. Persistence of gaps in Annual Sorghum following burning of fallen trees. *N Territory Naturalist* 22: 79-80.  
Bowman DMJS, Murphy BP, Banfai DS. 2010. Has global environmental change caused monsoon rainforests to expand in the Australian monsoon tropics? *Landscape Ecology* 25: 1247-1260.  
Bowman DMJS, Prior LD, De Little SC. 2010. Retreating *Melaleuca* swamp forests in Kakadu National Park: Evidence of synergistic effects of climate change and past feral buffalo impacts. *Austral Ecology* 35: 898-905.  
Cowie ID. 2010. Notes on the identity, distribution and conservation status of the threatened plant species *Utricularia singeriana* F. Muell. (Lentibulariaceae). *The Beagle, Records of the Museums and Art Galleries of the NT* 26: 119-121.  
Franklin DC, Matthews R, Lawes MJ. 2010. History of the East Point monsoon forest. *Northern Territory Naturalist* 22: 2-16.  
Orchard KA, Cernusak LA, Hutley LB. 2010. Photosynthesis and water-use efficiency of seedlings from northern Australian monsoon forest, savanna and swamp habitats grown in a common garden. *Functional Plant Biology* 37: 1050-1060.  
Scott KA, Setterfield SA, Douglas MM, Andersen AN. 2010. Fire tolerance of perennial grass tussocks in a savanna woodland. *Austral Ecology* 35: 858-861.  
Short PS. 2010. New species of *Cleome* L. (Cleomaceae) from the Northern Territory, Australia. *The Beagle* 26: 1-12.  
Walsh JL, Laurence MH, Liew ECY, Sangalang AE, Burgess LW, Summerell BA, Petrovic T. 2010. *Fusarium*: two endophytic novel species from tropical grasses of northern Australia. *Fungal Diversity* 44: 149-159.