



# NATURE TERRITORY

June 2010

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 7:45 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.



After a field trip to Crab Claw Island, what could be more appropriate than a crab? But one that climbs trees and runs around the trunk and hides like a spider? Nevertheless, that is what we saw when Emma Francis led a night walk into the mangroves on the Island.

This photo was taken on the occasion by Jon Clark. The species is uncertain but may be *Metapograpsis latifrontalis*.

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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

**June meeting.** Wednesday June 9, 7:45 PM. Blue5.1.23, CDU.

**Ian Morris**

## "Lord Howe Island"

Eminent field naturalist and photographer, and author of that wonderful natural history guide *Kakadu National Park Australia*, will join us for the evening to tell us about the natural history of Lord Howe Island. The Island is home, amongst many others, to large breeding populations of the Red-tailed Tropicbird and Fleshy-footed Shearwater, to five genera of endemic plants, and to the back-from-the-dead Lord Howe Island Woodhen and Lord Howe Island Stick Insect.

Note: the June meeting will be in room Blue5.1.23 – the same room as the May meeting and *not* our regular meeting room. There is a map of Casuarina CDU buildings at [http://www.cdu.edu.au/campusmaps/maps/cas\\_map261109.pdf](http://www.cdu.edu.au/campusmaps/maps/cas_map261109.pdf).

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**June field trip.** Saturday 12 June. *Night critters of Charles Darwin National Park.*

Graham Brown is leading this, so expect the critters to be mainly insects, but we may also do some spotlighting. He will have a UV light and insect screen. **Meet at the entrance gate to the Park at 7PM sharp – the gate has to be locked after us, so don't be late and miss out.** Bear in mind also that because of the locked gate, we will need to depart synchronously.

Graham recommends a broad-brimmed hat, good sunglasses (because UV light is bad for the eyes), mozzie repellent and lights for spotlighting; a chair may also be useful.

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**July meeting** Wednesday 14 July. Greg Miles: *Captive breeding of Australian wildlife.*

**September meeting** Wednesday 8 September. Judit Szabo: *Bird surveys in Venezuela.*

**October meeting** Wednesday 13 October. Emma Francis: *Mangrove snakes.*

**November meeting** Wednesday 10 November. Azlan: *Mangrove birds.*

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### Top End Native Plant Society activities

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 7:30 PM (speaker at 8 PM). Visit <http://www.topendnativeplants.org.au/index.php> or contact Russell Dempster on 8983 2131.

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### ANN Chinchilla

A few vacancies remain for the Australian Naturalists' Network get-together at Chinchilla, Qld from 24 August to 4 September this year. The program includes visits to the Bunya Mountains, Barakula forestry and wildflower areas, the Jimbour Plain, Myall Park Botanical Garden and various brigalow and softwood scrubs. Following excellent summer rains they're hoping for a good wildflower season. For more information, email Kath Truscott, [ann2010@bordernet.com.au](mailto:ann2010@bordernet.com.au).

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### Gregory National Park renamed as Jutpurra National Park

On Thursday May 13, a ceremony was held at Jasper Gorge to mark the handing back of Gregory National Park to its Traditional Owners. As part of the process, the Park has been renamed Jutpurra. The Park is to be leased back to the Northern Territory Government for 99 years.

Source: ABC News, [www.abc.net.au/news](http://www.abc.net.au/news).

Jutpurra landscape with the Victoria River.  
Photo: Don Franklin.



# Club notices

## Welcome to new member: Annie Grattidge

We now have 107 financial memberships (family = 1 membership). This is believed to be the highest level of membership for several decades.

### Memberships almost due for renewal

Annual membership fees are due by the end of June. Please help your hardworking Treasurer and Membership Officer by renewing promptly.

**If you receive your newsletter by conventional mail:** the expiry date for your membership is shown below your address on the back page of the newsletter. Above your address you should find a membership form. You are most welcome to continue receiving a printed copy – but you may wish to consider the value of nature in full colour by ticking the option to receive your newsletter by email in future.

**If you receive your newsletter by email** – and your membership is due for renewal, we will contact you by email during June.

Membership forms may be downloaded from <http://sites.google.com/site/ntfieldnaturalists/downloads>.

If you wish to pay by EFT, please contact Fiona Douglas, email [fiona.douglas@octa4.net.au](mailto:fiona.douglas@octa4.net.au).

### Thank you

The previous issue edited by **Fiona Douglas** in Don's absence, and reformatted by **Tissa Ratnayeke** and **Fiona Douglas**. It was proof-read by **Tissa Ratnayeke** and collated and mailed by **Susan Jacups**. It was printed by **Tida Nou** using equipment kindly made available by **Collections, Biodiversity and Biological Parks** from the Department of Natural Resources, Environment, the Arts & Sport.

### 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 the Club's postal address, or contact him on 8948 1293.

Deadline for the July newsletter: Friday June 25.

### Committee membership

Tanya Carriere has resigned as result of a heavy work burden. We thank her for her contribution.

The Committee is currently seeking a replacement for Tanya.

### Club library

The Club's journal and book collection is available to members. Lists of holdings – and the means to access them – can be found on our web-site: <http://sites.google.com/site/ntfieldnaturalists/library>.

### Northern Territory Naturalist

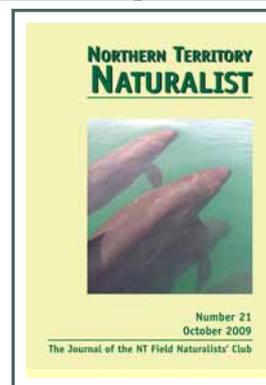
Material for issue no. 22 is approaching completion and we hope to bring the issue out in about September.

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 areas of 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 Cat. 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: <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 Lynda Prior, Dr Michael Braby 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).



## New snails and insects

From the *Recent literature* listings on page 11 of the May newsletter

### Land snails

Northern Australia, and in particular limestone outcrops with deciduous vine-thicket in the region, feature a diversity of land snails. The limestone outcrops provides protection from fire and also the calcium needed for shell growth and reproduction.

Richard Willan from the Museum (MAGNT) and others (2009) described four new species, all in the genus *Torresitrachia* and all confined to limestone outcrops in the Katherine area. They “survive the long dry season in the litter or soil and seal the aperture with a calcified mucous covering ..... that is porous yet offers protection from desiccation”. All have restricted distributions, three having an estimated area of occupancy of less than 5 km<sup>2</sup> and one of these of only 1 km<sup>2</sup>. Two “appear to be under threat of extinction”, the major threatening process being fire, with heavy grazing also a concern.



Shells of a snail in the genus *Torresitrachia*. This one is from Gregory National Park. Photo: Vince Kessner.

A further possible threat to these snails is the spread of Cane Toads “because these snails exhibit restricted geographic distributions, low vagility and ‘slow’ life-histories“ (Pearson *et al.* 2009). Pearson *et al.* conducted laboratory trials and “field surveys to evaluate the likelihood of .... encounters” between Cane Toads and “camaenid” land snails from the Kimberley and the NT’s Victoria River District. “In laboratory trials with 13 camaenid species, Cane Toads were more likely to consume camaenids than were two species



of native frogs that we tested (*Cyclorana australis*, *Litoria caerulea*). However, field surveys suggested that many camaenids are active on vertical surfaces in limestone outcrops, and Cane Toads rarely venture into these habitats. .... Given the restricted distributions of threatened saxicoline camaenid species in the Kimberley, localised management of grazing stock and fire is feasible to maintain vine-thicket vegetation cover and snail populations, as well as reducing open habitats favoured by toads.”

A Camaenid snail from Jasper Gorge. Photo: Vince Kessner.

### New insect species

New insect species described recently from our region include: six carabid beetles (Baehr 2009a,b), two species of diving beetle (Hendrich & Balke 2009; Hendrich *et al.* 2009), and a thynninid wasp (Brown 2009 – Graham Brown, Club and Committee member).

The diving beetles were found in “small pools of shaded and intermittent streams and rivers with sandy or gravelly bottom and without any vegetation” (Hendrich & Balke 2009). One species – *Kakadudessus tomweiri* - was found only in the upper Mary Riv. catchment in Kakadu Nat. Park.

The wasp – *Zaspilothynnus scolioides* (right; photo Graham Brown) – is widely dispersed along the NT coast, where males are found on the wing “from late September to early December” and resemble hairy flower wasps of the genus *Scolia* – hence the specific name *scolioides* (Brown 2009). Females of the species and other thynninid wasps are wingless and “somewhat ant-like”.



# Trees and changing landscapes

From *Recent Literature*, page 11

## Savanna trees and fire

It seems obvious enough that fire affects the survival and recruitment of our savanna trees – and perhaps also their growth. But what are these effects and should we be concerned? This month's *Recent Literature* includes three very substantial contributions to the topic. Two papers are from the PhD work of Caroline Lehmann in Kakadu National Park, and one is based on data from plots in Kakadu, Nitmiluk and Litchfield National Parks monitored under the supervision of Jeremy Russell-Smith and others for 10 years and analysed by Brett Murphy and others.

Using data from 30 locations in Kakadu, Lehmann *et al.* (2009a) examined stand size profiles including the presence of saplings in four dominant tree species including Darwin Woollybutt *Eucalyptus miniata*, Darwin Stringybark *E. tetrodonta* and Cooktown Ironwood *Erythrophloeum chlorostachys*. The good news is that there was no evidence of recruitment bottlenecks, as saplings were widespread. However, recruitment was episodic or individualistic rather than continuous and the abundance of saplings was negatively related to the frequency of fire and to the density of mature trees. Thus, whilst regional tree populations appear to be stable, fire produces local variations in stand structure.

Using analysis of air photos for the 40-year period to 2004 with tree cover estimates validated with field sampling, Lehmann *et al.* (2009b) found that tree cover in Kakadu savannas has increased by 4.9%. However, the rate of change varied across the landscape and in different time periods. Tree cover was greatest in 2004 where it had been greatest in 1964 and least where there had been the most fire activity during that time.

Over the second half of the period, tree cover was more likely to increase if it was low initially, or it had declined during the first 20 years, or where there was less fire activity.

Change to tree cover was greater in the north of the Park, which the authors attribute to greater inherent tree cover with the higher mean annual rainfall in the north and to greater variation in fire activity.

Compared to trees in unburnt plots, those exposed to frequent and/or intense fires grow substantially more slowly and this has major implications for carbon sequestration (Murphy *et al.* 2010). The most frequently burnt plots were: for low mild fires – burnt every year; for moderate fires – burnt in 8 years out of 10; and for severe fires, burnt in 4 years out of 10. The corresponding reduction in growth rates was 24%, 40% and 66% respectively. Frequent fires may reduce the carbon sequestration potential of savannas by 10-20% in the case of frequent mild fires and 25-50% in the case of frequent severe fires.



What is the long-term effect of fire on stands of savanna trees? Photo: Don Franklin.

## Paperbarks on Kakadu floodplains

There's no question that there's been a substantial increase in the area of paperbark (*Melaleuca* spp.) forest and woodland on the floodplain of the South Alligator River in Kakadu in recent decades. But why? This has been the subject of intense debate (Petty & Werner 2010 *cf* Bowman *et al.* 2010), with one party holding that analysis shows that the removal of buffalo in the 1980s had surprisingly little effect on paperbarks and the other that the analysis is seriously flawed. Both parties acknowledge a possible effect of fire regimes and increases in rainfall in recent decades. Another postulated driver is that trees in general are thought to grow



better at higher levels of atmospheric carbon dioxide.

Increasing:  
Cajuput  
*Melaleuca cajuputi* on the South Alligator floodplain.  
Photo: Don Franklin.

# Grass and fire

From *Recent Literature*, page 11

During the dry season, the seeds of many grasses and other herbs persist in the soil until the rains of the wet season arrive. As part of his PhD studies at Charles Darwin University, Ken Scott found (Scott *et al.* 2010a) that the dry season seed bank in savanna at Berry Springs contained the seeds of the dominant grass-layer plants but was missing about half of the species that grew at the site. The density and species richness of the germinable seed bank was higher later in the dry season because the dormancy of seeds was reduced. Annual grasses showed particularly high levels of seed dormancy early in the dry season. Experimental treatment with smoke and especially heat enhanced the germinability of legume species, but in the field fire had no effect on germinability. This was possibly because the experimental fires involved were of low intensity, or because the seeds were buried too deep to be affected.

The ecology of Annual Spear-grass *Sorghum (Sarga) intrans* is of particular interest because of its prevalence and that it may be increasing. Ken Scott *et al.* (2010b) examined the theory that fire increases its prevalence by reducing competition from trees. Using a seed-sowing field experiment, establishment was lower under the canopy of trees than in gaps, and lower in leaf litter than on bare ground, but there was no effect of the prevailing low-intensity fires. Nor was there an effect of fire on seed production. A shade-house experiment also demonstrated the adverse effect of leaf litter on germination both in Annual Spear-grass and in six other savanna grasses: Black Top *Pseudopogonatherum contortum*, Perennial Spear-grass *Sorghum plumosum*, Golden Beard-grass *Chrysopogon latifolius*, Three-awn Wanderrie *Eriachne trisetata*, Giant Spear-grass *Heteropogon triticeus* and Cockatoo Grass *Alloteropsis semialata*. Thus, the competitive effect of trees on Annual Spear-grass operates both through canopy shading and the production of leaf litter, with fire removing litter in the short-term and potentially thinning trees in the longer-term.

Annual Spear-grass *Sorghum intrans* (and Darryel Binns). Photo: Don Franklin.



## Bamboo

Bamboo is a grass too, albeit of a rather aberrant form. Previous studies have demonstrated that the local distribution of the Top End Bamboo *Bambusa arnhemica* is strongly limited by fire, but also that bamboo seedlings recover amazingly well after being burnt to the ground. Perhaps it is mature clumps that are adversely affected. When a plot beside a billabong of the Mary River, in which all 994 culms (stems) on 38 bamboo clumps had been marked and measured, was burnt in a fierce, Gamba-driven fire, Don Franklin was initially dismayed but then saw an opportunity to examine the question. The fate of all culms was assessed immediately after the fire, and they and 698 stems that recruited over the following 4 years were assessed annually during that period (Franklin *et al.* 2010). Surprisingly few culms were killed immediately by the fire even though many lost all their foliage, but those with more severe fire scars on their base were much more likely to die in the following years. This was especially so for culms of smaller diameter. Many small culms came up after the fire, but these also didn't survive well. However, recruitment of larger culms was not obviously affected by the fire. The net effect on the bamboo stand was



to set it back quite severely, with recovery incomplete even after four years. Clumps that were more severely burnt were more severely set back. The authors suggest that bamboo clumps don't cope well with fire because they lose the above-ground stems where they store the large amounts of carbohydrate needed for growth – and that repeated set-backs due to frequent fires may prevent bamboo from surviving especially on harsher sites where its recovery may be slower.

Small bamboo culms (stems) shooting after most of the parent culms have been killed by fire. Photo: Don Franklin.

# Some birds from Argentina

A photo collection by Fiona Douglas



Above left: Monk Parakeet *Myiopsitta monachus* pair in the large twiggy nest, seen here in a eucalypt, a common nesting site for these widespread farmland and open woodland birds.



Above right: Fire-eyed Diucon *Xolmis pyrope* seen here in a low bush near the spectacular Perito Moreno glacier in Santa Cruz province.



Above: Roseate Spoonbill *Ajaia ajaja* was obviously created by a deity on acid!

Right: Rufous Hornero *Furnarius rufus* in the nest which gives it the common name of Ovenbird.



Right: Male Magellanic Woodpecker *Campephilus magellanicus*. This large woodpecker is found in Patagonian and Andean woodland and forests. The female is almost all black and has a curled crest.



Left: Lesser Rhea *Pterocnemia pennata* seen on the Patagonian steppes.

Right: Elegant Crested Tinamou *Eudromia elegans* is widespread but well-camouflaged on dry grassland and steppes.



# Meerkats in the Kalahari

## Report and photos by Stuart Young on his talk at the May meeting

In late March, Stuart was lucky enough to travel to South Africa and to the Kuruman River Reserve research station to visit his sister. The KRR is located in the Green Belt of the Kalahari and by all appearances could be anywhere just north of Alice Springs: a semi-arid environment of sparsely vegetated fossil dunes with a wide variety of plants, insects, mammals, birds and reptiles. The Reserve has been owned and used by Cambridge University since 1993, with both Zurich and Cambridge University primarily conducting research projects. The main research focus is on habituated wild Meerkats with the aim of answering a variety of questions in the fields of evolutionary and behavioural ecology at the individual and population level. While Meerkats might be the stars of the Reserve, co-operative breeding seems to be a main theme with many past and present projects on the Reserve investigating different levels of co-operative breeding in other species, for example Pied Babblers and Yellow Mongooses. Stuart's sister is part of a PhD project investigating Slender Mongooses, in particular their biology and communication. The research is in its early days but it already appears that the Slender Mongoose can tell the difference between a real Caracal (a species of



Above left: young Meerkats.

wild cat) and a stuffed one on wheels, rendering the recording of alarm calls difficult.

In general, it seemed that Stuart spent most of his time relaxing, hanging out with the Meerkats and bird watching. If only we were all so lucky to have siblings living and working in such interesting areas.

Q: what do you do if you fall into the Kuruman River?

A: get up and dust yourself off.



Above right: self-weighing Pied Babblers.

Below: Slender Mongoose.



# Crab Claw Island

## Report on the May field trip

**Don Franklin**

At the invitation of Jacqueline Campbell, Managing Director of the Crab Claw Island Resort, about 20 field natters spent the weekend of May 15-16 surveying plants, birds, insects, reptiles and more on the island. Crab Claw Island is in Bynoe Harbour and is cut off from the mainland only by very high tides. A productive and most enjoyable time was had by all, facilitated by the accommodation and meals so kindly provided by the resort. Lists, photos and natural history notes are now being compiled for Jacquie ... by so many people that if I name some I'm bound to miss others.

As a token of appreciation of Jacquie's wonderful hospitality – and her interest in natural history, the Committee has offered her a free membership for a year.

Here's a selection of the many photos taken by members on



the island.

Left: the orchid *Dendrobium affine*. Photo: Tissa Ratnayeke.



Above: Pacific Baza. Photo: Tissa Ratnayeke.

Below: compiling lists. In foreground: Tissa, Jan Allen, Trish Bate and Will Duiker. Behind: Emma Francis, Don Franklin. Photo: Fiona Douglas.



Above: the Slender Rainbow Skink *Carlia gracilis* with a meal. Photo: Jon Clark.

Below: Beach Hibiscus *Hibiscus tiliaceus*. Photo: Craig Bellamy.



Right: Chequered Swallowtail feeding at the flowers of Caustic Vine *Sarcostemma viminalis*. Photo: Tissa Ratnayeke.



# Interesting bird sightings

24 April to 21 May 2010

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
<b>Seabirds &amp; waterbirds</b>				
Lesser Frigatebird	c. 16/05	Snake Bay, Melville Is.	Clive Garland	80
Black Bittern	c. 16/05	Snake Bay, Melville Is.	Clive Garland	1
Great-billed Heron	c. 25/04	Groote Eylandt	Braden McDonald	1
~	c. 16/05	Snake Bay, Melville Is.	Clive Garland	1
Glossy Ibis	3/05	Millner	Peter Kyne & Micha Jackson	35
<b>Birds of prey</b>				
Black-breasted Buzzard	1/05	Noonamah	Darryel Binns	1
~	1/05	Marrakai Track	A&S Keates and B&L Reid	3
~	4/05	Mary River Park	Peter Kyne & Micha Jackson	1
Pacific Baza	4/05	Mary River Park	Peter Kyne & Micha Jackson	4
Grey Goshawk	26/04	Burrell Creek, Dorat Road	Steve Reynolds	1
Wedge-tailed Eagle	c. 13/05	Humpty Doo	Darryel Binns	1
Little Eagle	25/04	Millner	Peter Kyne & Micha Jackson	1
Eastern Grass Owl	3/05	Arnhem Highway near Jabiru	Clive Garland	1
<b>Other non-passerines</b>				
Diamond Dove	c. 25/04	Bird Billabong	Arthur & Sheryl Keates <i>et al.</i>	1
~	c. 11/05	Shady Camp	Richard Noske	4
Australian Owlet-nightjar	4/05	Bird Billabong	Peter Kyne & Micha Jackson	1
Fork-tailed Swift	1/05	Lee Point	Arthur & Sheryl Keates	1
~	18/05	Progress Drive, Nightcliff	Jessie & Jo	5
Red-backed Button-quail	24/04	Bird Billabong	Arthur & Sheryl Keates	2+ heard
Channel-billed Cuckoo	c. 25/04	Mary River Park	Arthur & Sheryl Keates <i>et al.</i>	2
~	9/05	Bagot Road, Millner	Peter Kyne & Micha Jackson	2
<b>Passerines</b>				
Yellow Chat	c. 11/04	Shady Camp	Richard Noske	1
Banded Honeyeater	4/05	Botanic Gardens	John & Kim Rawsthorne	1; & other sightings
Black-faced Cuckoo-shrike	1/05	Lee Point	A & S Keates	30+ (unusual nos.)
Cicadabird	7/05	Palmerston Sewage Ponds	Peter Kyne & Micha Jackson	1, a male
Little Woodswallow	26/04	Howard Springs reserve	Peter Kyne & Micha Jackson	1
Arafura Fantail	26/04	Mary River Park	Arthur & Sheryl Keates	3 or 4
Grey Fantail	5/05	Palmerston Sewage Ponds	Mike Jarvis	1
Australian Reed-Warbler	18/04	Knuckeys Lagoon	Steve Reynolds	1
Gouldian Finch	c. 26/04	Bird Billabong	A&S Keates	1
~	4/05	Bird Billabong	Peter Kyne & Micha Jackson	30

## Finch counters wanted

James Smith, Wildlife Ecologist with the Australian Wildlife Conservancy based at the Mornington Wildlife Sanctuary in the Kimberley– and former editor of this newsletter – is seeking volunteers for Mornington’s annual finch census:

“This year’s census runs from the 18th to the 23rd of September and involves teams of people sitting at waterbodies in the early morning to count seed-eating birds as they come in to drink. In this way, we get a census of these species (including Gouldians, Star and Long-Tailed Finches; also several species of button-quail) across the southern part of our sanctuary and this helps us test that our management is being effective.

This year has been a particularly dry wet season, so by September water will be scarce and we can expect very high densities of spectacularly coloured birds each morning. It promises to be, as it is every year, a fun and productive event.

We ask you to come here under your own steam, we then provide breakfast each morning and transport to get you to and from waterholes once you have arrived. There will be plenty of room for camping, an amenities block and gas bbqs will be provided for your use. More information will be provided to those interested. If you are keen to attend please contact James Smith at [finch.census@australianwildlife.org](mailto:finch.census@australianwildlife.org) for more information.”

Long-tailed Finch. 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>.

## PLANTS & VEGETATION

Compiled by Don Franklin

### Not so technical

Crowley G, Low Choy J, Keates S. 2007. *Some plants in Casuarina Coastal Reserve*. Northern Territory Field Naturalists Club Inc.: Darwin. 10 pp. <http://sites.google.com/site/ntfieldnaturalists/home/downloads/>.

Kraatz M, Jacklyn P, Clark M, eds. 2009. *The Bush Book: A manual for managing native vegetation across northern Australia*. Greening Australia (NT) Ltd: Darwin. 274 pp. [RRP \$66- + P&P, <http://niblock.com.au/>]

Prior LD (ed.) 2009. *Callitris* in northern Australia. *Callitris Project Newsletter* 5 [Oct. 2009]. [Cypress-pine in the Top End] Available at [http://www.utas.edu.au/docs/plant\\_science/fe/newsletters.htm](http://www.utas.edu.au/docs/plant_science/fe/newsletters.htm).

Sensitive vegetation in the NT, brochures: Mangrove forest; Monsoon rainforest; Old growth forest; Riparian vegetation; Sandsheet heath. Available from <http://www.nt.gov.au/nreta/natres/natveg/brochures/index.html>.

### Tree dynamics

Bowman DMJS, Prior LD, Williamson G. 2010. The roles of statistical inference and historical sources in understanding landscape change: the case of feral buffalo in the freshwater floodplains of Kakadu National Park. *Journal of Biogeography* 37: 195-199. [response to Petty & Werner 2010, below]

Lehmann CER, Prior LD, Bowman DMJS. 2009a. Fire controls population structure in four dominant tree species in a tropical savanna. *Oecologia* 161: 505-515. [Kakadu: 3 eucalypts + Ironwood]

Lehmann CER, Prior LD, Bowman DMJS. 2009b. Decadal dynamics of tree cover in an Australian tropical savanna. *Austral Ecology* 34: 601-612. [Kakadu National Park]

Murphy BP, Russell-Smith J, Prior LD. 2010. Frequent fires reduce tree growth in northern Australian savannas: implications for tree demography and carbon sequestration. *Global Change Biology* 16: 331-343.

Petty AM, Douglas MM. 2010. Scale relationships and linkages between woody vegetation communities along a large tropical floodplain river, north Australia. *Journal of Tropical Ecology* 26: 79-92. [South Alligator River]

Petty AM, Werner PA. 2010. How many buffalo does it take to change a savanna? A response to Bowman *et al.* (2008). *Journal of Biogeography* 37: 193-195. [Kakadu National Park]

Specht RL. 2009. Structure and species richness in wetland continua on sandy soils in subtropical and tropical Australia. *Austral Ecology* 34: 761-772. [Bickerton Island, Gulf of Carpentaria]

### The grass layer

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