



NATURE TERRITORY

September 2008

Newsletter of the Northern Territory Field Naturalists Club Inc.
PO Box 39565, Winnellie, NT 0821

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Committee Member:	Brian Thistleton 0448 687 921

Club web-site: <http://www.geocities.com/ntfieldnaturalists>

Meetings are *generally* held on the second Wednesday of every month, commencing at 7:45 PM, in Blue 1.03 (room 22.03; 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. Part-year discounts are available for new members from January 1 each year.



This striking insect is a cockroach.
Graham Brown has identified it as *Ellipsidion* sp. in the family Blattellidae. It was photographed by Louis Elliott in the Carr Boyd Range south of Kununurra, WA. More photos by Louis may be found on page 7.

**Club activities .. p2; Club notices .. p3; Fogg Dam .. p4; bird names .. p5-6;
The Keep .. p7; Vietnamese plants .. p8; bird observations .. p9;
miscellanea .. p10; recent literature .. p11.**

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

September field trip. *Welcoming the Waders*

Saturday 6th September from 8:30 am at Sunset Park, Nightcliff foreshore (between the Nightcliff Jetty and the western end of Aralia Street). A repeat of past year's popular event to mark 'Threatened Species Day'.

At this time of year, international migrants are arriving on the shorelines around Darwin, with no visas and mostly unnoticed by the majority of Territorians. Everyone is invited to come to the Nightcliff foreshore from 8:30 am onwards, to learn about the amazing shorebird species that have travelled from as far as Russia to experience the Territory lifestyle. Spotting scopes and some of the Top End's best bird experts will be on hand to help identify the birds. For more information call Arthur and Sheryl Keates on 8948 1794.

September meeting. Wednesday September 10, 7:45 PM.

Venue: Blue 1.03 (= 22.03, Business Building), CDU.

Mark Ziembicki

"Stuffed mammals"

Mark will be talking about a project in which he interviewed Aboriginal communities across the Top End about their knowledge of native mammals. The aim was to discover which Territory animals are in decline and the reasons for that decline. Of particular concern were the quolls, bandicoots, possums, smaller wallabies and larger rodents. The project also reinforced the importance of Aboriginal communities to environmental conservation and management. Mark travels with a suite of stuffed museum specimens of each species to stimulate discussions and help with the identification of mammals.

Mark has worked on biodiversity conservation issues for the past eight years, half of which has been in northern Australia. He is currently completing his PhD through the University of Adelaide on the ecology and movements of the Australian Bustard, and working for the Tropical Savanna CRC Communications Unit.

October 2008 meeting. Wednesday October 8. Peter Dostine: *The Flock Bronzewing*.

November 2008 meeting. Wednesday Nov. 12. Don Franklin: *Slow boat on the Mekong*.

The annual ERA Bird Count at Jabiru will be held over the weekend Nov. 1–2. More details later.



Club library notice

The Club receives the *Western Australian Naturalist* by reciprocal arrangement with the WA Field Naturalists Club. This is perhaps the premier regional natural history journal in Australia (apart from our own, of course!), and has been in publication since 1947. By further reciprocal arrangement we have filled gaps in our holdings; we now have a full set from 1955 and hope to receive issues from 1947 to 1955 shortly.

Other recent additions to our library are:

Brennan K. 2007. *A field key to the trees and shrubs in the Jabiru area*. Supervising Scientist Report 187: Darwin. 99 pp. [purchased for ANN; reviewed in the May newsletter]

Video: "The Call of Kakadu", a film by David Curl (purchased for ANN)

DVD: "The Big Wet", ABC Natural History Unit and Discovery Productions (purchased for ANN)

DVD: "In the Old People's Footsteps", a film by Kim McKenzie, donated by Peter Cooke & Kim McKenzie.

The Club's journal, magazine and reference collection is available to members. Lists of books, reports, CDs and journals held can be found on our web-site: <http://www.geocities.com/ntfieldnaturalists>.

Club notices

Welcome to new member: Ella Meumann

Thank you

The previous issue was proof-read by Christine Maas and collated and mailed by Susan Jacups. It was printed by Gay Crowley and Don Franklin using equipment kindly made available by the Biodiversity Unit, Department of Natural Resources, Environment and the Arts, Berrimah and the School for Environmental Research at Charles Darwin University.

Election results

No, not *that* election; elections for the Committee of your Club.

Gay Crowley was re-elected as President. The position of Secretary remains vacant. Fiona Douglas was re-elected as Treasurer. Graham Brown, Lyn Reid, Ashley Carlson and Don Franklin were re-elected as Committee members, and Louise Harrison and Brian Thistleton as new Committee members.

We thank retiring Committee member Sheryl Keates for her extensive and invaluable service over a number of years. We also welcome new Committee members Louise and Brian.

Your Committee has since met and co-opted Susan Jacups (she did have a choice!) to fill one of the vacant Committee positions.

One vacancy remains. If anyone is interested in joining the Committee (we're especially seeking a Secretary), you'd be most welcome; please contact Gay Crowley or another Committee member.

Newsletter contributions welcome

Sightings, reports, travelogues, reviews, photographs, sketches, news, comments, opinions, theories , anything relevant to natural history. Please forward material to eucalypt@octa4.net.au or the Club's postal address, or contact the editor on 8948 1293. Deadline for the October newsletter: Friday September 19.

Need an NTFNC membership form? Go to: <http://www.geocities.com/ntfieldnaturalists/subscription.htm>.

Northern Territory Naturalist

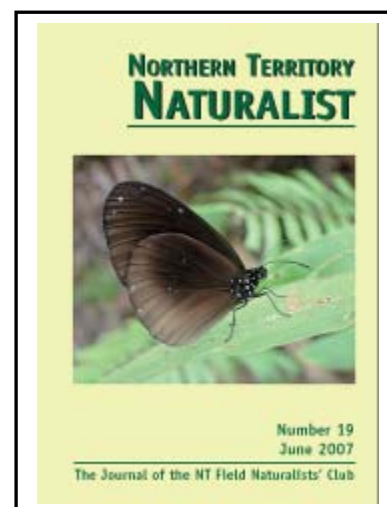
Issue no. 20 is almost ready to go to the printer. It is nearly time to hold your breath in anticipation! A new feature: some photographs in the text will be in colour.

The Editorial Committee of the *Northern Territory Naturalist* is now calling for manuscripts for issue no. 21. Manuscripts may relate to any aspect of natural history or ecology relevant to the Northern Territory, and may include reviews, papers, research reports, species profiles and thesis abstracts.

Northern Territory Naturalist is a registered, peer-reviewed journal (ISSN 0155-4093). Author instructions may be downloaded from <http://www.geocities.com/ntfieldnaturalists/journal.htm>. If possible, manuscripts should be submitted in digital form by emailing to lynda.prior@cdu.edu.au. Editors of the journal are Dr Lynda Prior, Stephen Reynolds and Dr Michael Braby.

Sewage Pond Keys - Leanyer and Alice Springs

NT Field Naturalists have access to this world-famous bird-watching spot. The key can be collected from Graham Brown (h) 8945 4745. A refundable \$50.00 deposit is required at time of collecting the key, which is available only to members. Conditions imposed by PowerWater Corporation apply to all visitors to the ponds. These are not onerous and are made clear at time of picking up the keys.



Winner of the Best
Wildlife Subject
category at the
Darwin Show
photographic
competition, a prize
sponsored by the
NTFNC. This photo
of a female Figbird,
was taken by Karin
Jarvis.



FOGG DAM FIELD DAY

SUNDAY 21 SEPTEMBER - Activities for the whole family. Come and spend the day

- experiencing this tropical wetland paradise only an hour's drive from Darwin
- exploring its diverse habitats - monsoon rainforest, billabong boardwalk, open water, savannah woodland
- enjoying its wonderful wildlife –water birds, bush birds, pythons, turtles, frogs & cane toads
 - engaging with the traditional owners – culture & history, bush tucker & music
- educating your family - learning about the amazing research projects being undertaken at Fogg Dam by Sydney University & CDU
 - exercising your creativity in art & photography workshops
 - activities on the hour every hour from dawn to dusk.
- bus transport from Palmerston, barbecued lunch available for purchase



The Field Day will start with a Bird Walk at 8am – meet at the rotunda. Field Day visitors will be met and directed to separate parking on the western side of the causeway. For more information, contact Heather or Jeremy on 8988 5599.

(Eastern) Great Egrets,
Intermediate Egrets and
..... at Fogg Dam.
Photo: Heather
Boulden.

What's in a name? Scientific bird names

Arthur Keates

Have you ever wondered about the meaning of a scientific name of a plant or animal? Like many a birdwatcher, I am familiar with the common names of species but often look at a bird's scientific name in wonderment.

The first thing to appreciate in scientific nomenclature in zoology, including ornithology, is that each species is given a unique two-part name comprising the name of the genus (a noun) followed by a name identifying the species within the genus (an adjective or specific epithet). For example, the scientific name of the Little Kingfisher is a perfect match for its scientific name *Alcedo pusilla* made up of the Latin words *Alcedo* meaning kingfisher and *pusilla* meaning tiny. However, the meaning of the scientific name of a species does not always match its common name. In the case of the Little Tern *Sterna albifrons*, its scientific name means white-fronted tern. The Little Tern does in fact have a white forehead in breeding plumage but the translation of its scientific name matches the common name of another tern species.

There are even more confusing, but amusing examples, of mismatches in scientific and common names. What we know in Australia as the Silver Gull *Chroicocephalus novaehollandiae* is commonly (and perhaps more accurately) known in New Zealand as the Red-billed Gull while the scientific name of the Herring Gull *Larus argentatus* means silver gull. *Larus melanocephalus* is the scientific name of the Mediterranean Gull, but actually means black-headed gull. The specific epithet of the Black-headed Gull is *ridibundus* meaning laughing but the specific epithet of the Laughing Gull is *atricilla* which means black-tailed. The scientific name for the Black-tailed Gull is *Larus crassirostris*, meaning large-billed gull which is the old common name for *Larus pacificus* now appropriately known as the Pacific Gull.

The sources of scientific names for birds fall into the following main categories.

Appearance

The plumage, colours and physical characteristics of birds form the largest category, accounting for over 55% of all specific names and nearly 45% of all generic names. Physical attributes generally highlight physical features as in *rostris* (bill), *cilla* (tail), *collaris* (neck), *pennis* (feather) and *ptera* (wing). Specific names incline more towards:

- colour as in *flava* or *ops* (yellow), *fuscus* (dusky) and *alba* or *leuco* (white)
- pattern as in *guttatus* (speckled or spotted) and *striatus* (striped)
- size as in *major* (greater) *mega* (great) and *minor* (lesser).

Some species have a combination of these. The generic name of the Australian Pied Oystercatcher *Haematopus longirostris* is derived from the Greek *haima*, blood-red (as in haemoglobin) and *pous*, the foot, while the specific epithet *longirostris* is made up of the Latin *longus*, long and *rostrum*, the bill, literally translating as long-billed blood foot. Similarly, the scientific name of the Yellow White-eye *Zosterops luteus* means yellow girdle eye.

People's names

The names of people and mythical or fictional characters account for nearly 20% of all specific bird names. For example, the specific epithet of that prehistoric looking megapode of the Top End, the Orange-footed Scrubfowl, is *reinwardt*, after CJC Reinwardt, a Dutch ornithologist. More obvious and well known, the Gouldian Finch is named after Elizabeth Gould, artist and wife of John Gould, and hence its specific epithet *gouldiae*.

Native names

Many names are taken or modified from classical Latin (for example *Columba* being a pigeon or dove as in the generic name of the Rock Dove *Columba livia*) and ancient Greek (for example *Circus* the generic name of the Spotted and Swamp Harriers derived from the Greek, *kirkos*, a partly mythical hawk).

Nature Territory, September 2008



The "yellow girdle eye".

Photo: Trevor Collins.

Geographical names

Over 1 100 specific toponyms or geographical epithets have been assigned to birds reflecting the origins of discoveries, designating a continent, part of a continent or a region or type of locality. There are numerous names in this category, including *australis* (the south), *capensis* (Cape of Good Hope), *chinesis* (China), *novaehollandiae* (New Holland), *orientalis* (the east), *philippenis* (the Phillipine Islands) and *papuensis* (Papua). Interestingly, the scientific name of the Eastern Curlew is *Numenius madagascariensis*. The specific epithet is a reference to the island of Madagascar but in this case it is obviously an error, intended to be *macassarensis* after the port of Makassar, Sulawesi.

Classification

A variety of bird names, all suggesting a relationship, are included in this category. *Dacelo*, the generic name of the Blue-winged Kookaburra is an anagram of *Alcedo*, coined to reflect a relationship with the kingfisher. The specific epithet of the Spotted Harrier *Circus assimilis* indicates it is similar to the Greek, *kirkos*, a partly mythical hawk.

Habitat

The habitat of some bird species gives it part of its scientific name. For example, the Bar-tailed Godwit *Limosa lapponica* gets its generic name from the Latin *Limosus* meaning mud, a reference to its feeding habitat, while its specific name is modern Latin for Lapland. The specific epithet of the Marsh Sandpiper, *stagnatilis*, literally translates as belonging to pools or marshes.

Behaviour

Mostly display behaviour is referred to in this category. The generic (Greek) and specific (Latin) names for the Ruff *Philomachus pugnax* give a tautological example essentially meaning a combative combatant, a reference to the males gathering in leks to dance with and fight one another. The scientific name of the Wedge-tailed Eagle *Aquila audax* means a bold or courageous eagle.

Food

Food items and prey including spiders, flies, bananas, seeds, carrion, fish and even monkeys are reflected in this category. *Myzomela*, a genus of Australian honeyeaters lives up to the family's common name which literally means to suck honey, so for example, the Red-headed Honeyeater *Myzomela erythrocephala* is translated as the red-headed honey sucker. In Greek mythology, Myiagros was a god invoked against flies (*muia*, a fly; *agreo*, to seize). So the Broad-billed Flycatcher *Myiagra ruficollis* is the red-necked flycatcher.



Male "red-headed honey suckers".
Photos: Trevor Collins.

Voice

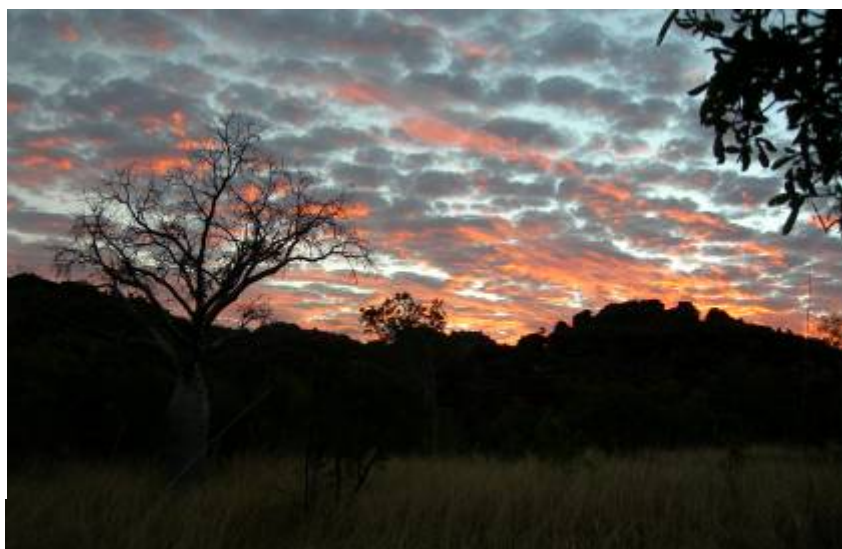
The songs and calls of birds are enjoyed by many but only a few names in nomenclature refer to their voice. The specific epithet of the Grey Shrike-thrush *Colluricincla harmonica* is an obvious reference to its harmonious voice. However, the scientific name of the Whistling Kite *Haliastur spheurnus* does not describe the voice. Rather curiously it translates as wedge-tailed sea hawk.

For further reading about how the rules of zoological nomenclature came into being and explanations for the meanings of scientific names of birds, an excellent book (but difficult to obtain) is *A Dictionary of Scientific Bird Names* by James Jobling, published by Oxford University Press (1991).



The Keep

Photos from “The Keep”, Keep River National Park, by Louis Elliott



Four botanical tales from Vietnam

Reporting back on the talk at the August Club meeting

Louise Harrison

Photos by Gay Crowley



In the rainforest of Cuc Phong National Park – Terminalia myriocarpa, sometimes known as Jhalna or East Indian Almond.

Gay Crowley and her family agreed on Vietnam as a destination for a family holiday last year based on the premise there would be little of environmental interest (particularly birds or plants) to distract them (Stephen and Gay) from enjoying quality time as a family.... well little did they know!

After presenting us with some key facts on the country such as population (~85 million in July 2007), land area, topography, climate etc, Gay divided her talk on botanical tales from Vietnam into 4 parts starting with **biogeography**. Vietnam is the 16th most biologically diverse country in the world and has an estimated 7-13,000 plant species, many of which are still being described. The plants show influences from the flora of China (Conifers, Birch, Walnuts, Laurels), Indian-Myanmar (*Bombax*, *Terminalia*), and Indo-Malesia.

Next was **utilisation** of plants and Gay presented a pictorial overview of the vast and diverse uses of plants in Vietnam including for food, medicine, building, boating, dyes and fibres. More than 6,000 plant species are used for some purpose or other, and more than 60% of the population is employed in the agriculture sector, with a further 30% dependent on forests for employment.

Gay then spoke about the **destruction** of native plants and forests in Vietnam where the most significant threats are

agricultural development, fire and weeds. The Vietnam War from 1945 to 1975 also had a major impact and bombing completely obliterated 1% of forests and damaged a further 40%. Another 10% of the country was sprayed with napalm and defoliants, such as Agent Orange.

Finally (and to end on a more positive note!), Gay spoke about **conservation and reconstruction** efforts in Vietnam where 87 protected areas have been declared since the 1960s covering an impressive 3% of the land area. Australian species such as eucalypts, acacias and casuarinas are also widely planted in plantations and as part of revegetation and land stabilisation efforts. Forests are often occupied by local people and the values of the forests, particularly for sustainable livelihoods, are widely recognised by many Government officials within the country: “forests are gold”.



Challenging arithmetic: conservation notice in Cuc Phong National Park.



Medicinal fungi, Hanoi.

Gay's presentation was full of colourful slides and all the “rubbery figures” were well supported by impressive and informative graphs and tables. Thanks Gay for the botanical tour through Vietnam! We will certainly need to brace ourselves for any future presentations on trips by Gay that are chosen for their environmental interest!

Interesting bird sightings

25 July to 23 August 2008

Compiled by Sheryl Keates

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
Emu	24/07/08	Arnhem Hwy 12km in Kakadu	M Gardner	4
	2/08/08	Arnhem Hwy 60km W of Jabiru	via M Gardner	1
Partridge Pigeon	28/07/08	300 m east of Magela Creek	M Gardner	3
	16/08/08	Anbangbang Rd, Kakadu	A Wright	?
Diamond Dove	28/07/08	airport road at Gunbalanya	M Gardner	6
	17/08/08	Casuarina Coastal Res	B Hensen	1
	20/08/08	outside Leanyer sewage ponds	N McCrie	1
Banded Fruit-dove	17/08/08	Gubara walk, Kakadu	A Wright	2
Australian Pelican	7/07/08	Yuendumu	B Gosford	3 gliding over
Black Bittern	15/08/08	Mary River Park	A Wright	1 on bamboo walk
Great-billed Heron	14/08/08	Buffalo Creek	A Wright	2
Square-tailed Kite	25/07/08	Jingili Water Gardens	B Hensen	1
	6/08/08	CDU, Casuarina campus	R Noske	1
	20/08/08	Leanyer sewage ponds	N McCrie	1
Pacific Baza	9/08/08	behind Darwin hospital	A & S Keates	1
	10/08/08	Scott Ck, nr Corroboree Tavern	M Gardner	1
	16/08/08	Wagaman Primary School	T Hertog	1
Grey Goshawk	28/07/08	Marrakai Street, Tiwi	A & S Keates	1 adult + 1 chick
	12/08/08	Rapid Creek	J Estbergs	1 flying over
	20/08/08	Wagaman Tce, Wagaman	N McCrie	1 flying over
Spotted Harrier	2/08/08	Sth Alligator floodplain	M Gardner	1
	4/08/08	Fogg Dam	F Douglas & D Lowe	1
Swamp Harrier	25/07/08	Fogg Dam	F Douglas	1
	28/07/08	Harrison Dam	L Eclipse	1
	4/08/08	Fogg Dam	F Douglas & D Lowe	1
Grey Falcon	28/06/08	145 km west of Katherine	A Carlson	1 circling overhead
Black Falcon	13/08/08	Holmes Jungle	N McCrie	1 harassing Black Kite
Peregrine Falcon	8/08/08	5 km from Yuendumu	B Gosford	1 just after dawn
Wood Sandpiper	9/08/08	Leanyer sewage ponds	A & S Keates	1
Franklin's Gull	5/08/08	off Croker Island	H Larson	possible sighting
Silver Gull	25/07/08	Hart's Range	S Cooney	1, breeding plumage
Ground Cuckoo-shrike	1/08/08	60 km west of Katherine	D Binns	2
Cicadabird	11/08/08	Casuarina Coastal Reserve	B Hensen	1 male
Mangrove Golden Whistler	10/08/08	Leanyer sewage ponds	N Adlam	1
	20/08/08	Adelaide Rv bridge	A Wright	pair
Masked Woodswallow	27/07/08	Rocklands Road, Tiwi	B Hensen	3-4
	29/07/08	near Darwin hospital	B Hensen	c. 5
White-browed W'swallow	29/07/08	near Darwin hospital	B Hensen	c. 5
Arafura Fantail	20/08/08	Lee Point	S Keates	1
Buff-sided Robin	29/07/08	Lee Point	B Hensen	1
Golden-headed Cisticola	27/07/08	Alice Springs sewage ponds	D Hadden	1, out of range
Gouldian Finch	Jul' 08	Djelk Ranger stn, nr Maningrida	R Noske	300+
	25/07/08	3 km Sth of Ferguson River	A & S Keates	1 black-headed male
	26/07/08	Bullita Access Rd	A & S Keates	c. 100
	27/07/08	Victoria H'way, c10k W Buntine	A & S Keates	c. 330
	27/07/08	Buntine H'way	A & S Keates	c. 37
Yellow-rumped Mannikin	25/07/08	Boat ramp, Victoria R. Access	A & S Keates	3
	25/07/08	Policeman's Point, Timber Ck	A & S Keates	1
Pictorella Mannikin	26/07/08	Buntine H'way, Timber Ck	A & S Keates	40

Needed – someone to compile these bird records

Sheryl Keates is leaving town (a great loss). Her efforts in compiling these lists have ensured that sightings go on more permanent record than via a email chat-line. It would be great to keep the process going. If anyone is willing and able to take this task on, please contact Don Franklin, phone (h) 8948 1293 or email eucalypt@octa4.net.au.

Miscellaneous notes from *Recent literature*, page 11.

What do corals and cypress-pines have in common?

Extending the work of Baker *et al.* (2008) reported on page 11 of the last newsletter, D'Arrigo *et al.* (2008) examined cypress-pine growth rings from the NT along with tree rings and evidence from coral in Indonesia and coral luminescence from the Great Barrier Reef for the period when rainfall records are available to test their ability to identify monsoonal droughts. They concluded that: "All three proxies show considerable explanatory value for reconstructing monsoon rainfall variability over much of Australia and environs, which will improve as additional records become available."

A new fish from the Katherine River

Helen Larson from MAGNT has described a new species of carp gudgeon – *Hypseleotris barrawayi* (Barraway's Gudgeon) – from the upper Katherine River near Sleisbeck in the far south of Kakadu National Park (Larson 2007). It was discovered in 1988 by a biologist working for a mining company. This fish grows to about 50 mm long and lives in "clear quiet water with shelter, such as near steep banks with overhanging vegetation, where it may form loose schools". If you have a copy of the book *Freshwater fishes of the Northern Territory* (now out of print) by Helen along with Keith Martin, you'll find it on page 87 under the name *Hypseleotris* sp. cf. *kimberleyensis*. Barraway's Gudgeon is named for the late Sandy

Barraway, who was traditional owner of the Sleisbeck country where the species is found.



Male Barraway's Gudgeon. Photo by Neil Armstrong; reproduced courtesy of the Museum and Art Gallery of the Northern Territory.

Mine monitoring

Scientists from ERISS and Charles Darwin University continue to monitor for leakage of radioactive material from defunct uranium mines. Ryan *et al.* (2008) tested freshwater mussels from the upper South Alligator River valley, whilst Frostick *et al.* (2008) examined erosional sediments downstream from Nabarlek near Oenpelli. Both studies found evidence of elevated levels of contamination, but in both cases, levels are considered to be of minor severity and do not extend far downstream.

As part of a history of monitoring associated with the current Ranger Mine at Jabiru, ERISS staff have sought to identify the levels of contamination that would affect downstream aquatic fauna in the event of a leakage. The latest contribution to these studies is that of Hogan *et al.* (2008).

Australian Naturalists Network (ANN) - 2010

There is a mailing list of people who might be interested in attending ANN events around Australia - like the one we hosted at Mary River Park in May - which happen every two years. As Rosalind Smallwood, who maintains the list, said: "... you guys have now done more than your share of the ANN hard yakka and from now on it's your turn to go elsewhere and be looked after. Chinchilla in 2010 shouldn't be too far to come to, either. So may I please issue a general invitation to all interested NTFNC members to let me have names, addresses, email addresses, plus phone numbers and I'll add them to the general list."

Anyone who would like to receive details of future meets should send the requested contact details to:

- e-mail: bigred737@westnet.com.au
- post: Rosalind Smallwood, PO Box 24, Point Lonsdale, Vic. 3225.

Recent literature about Top End natural history

Miscellaneous including freshwater systems

Compiled by Don Franklin

Not so technical

- Cropp B. 2007. A day in the life of a billabong. *Australian Geographic* 87: 47-53. [McReadies, Labelle Downs Station]
Jones DR, Humphrey C, van Dam R, Webb A. 2008. *ERISS research summary 2006–2007*. Supervising Scientist Report 196, Darwin. Available on-line at: <http://www.environment.gov.au/ssd/publications/ssr/index.html>.

Toxicity and pollution in aquatic systems

- Frostick A, Bollhofer A, Parry D, Munksgaard N, Evans K. 2008. Radioactive and radiogenic isotopes in sediments from Cooper Creek, Western Arnhem Land. *Journal of Environmental Radioactivity* 99: 468-482.
Hogan A, van Dam R, Houston M, Lee N. 2008. *Toxicity of Ranger mine RP2 and Pit 3 waters to native freshwater species: 2007 wet season*. Supervising Scientist Report 197, Darwin. Available on-line at: <http://www.environment.gov.au/ssd/publications/ssr/index.html>.
Ryan B, Bollhofer A, Martin P. 2008. Radionuclides and metals in freshwater mussels of the upper South Alligator River, Australia. *Journal of Environmental Radioactivity* 99: 509-526.

Taxonomy and biology of fish and crustaceans

- Larson HK. 2007. A new species of carp gudgeon, *Hypseleotris* (Pisces: Gobioidae: Eleotridae), from the Katherine River system, Northern Territory. *The Beagle, Records of the Museums and Art Galleries of the Northern Territory* 23: 111-117.
Page TJ, Short JW, Humphrey CL, Hillyer MJ, Hughes JM. 2008. Molecular systematics of the Kakaducarididae (Crustacea : Decapoda : Caridea). *Molecular Phylogenetics and Evolution* 46: 1003-1014.
Vazquez FJ, Greco LSL. 2007. Intersex females in the red claw crayfish, *Cherax quadricarinatus* (Decapoda : Parastacidae). *Revista de Biología Tropical* 55 Supplement 1: 25-31.

Miscellaneous

- D'Arrigo R, Baker P, Palmer J, Anchukaitis K, Cook G. 2008. Experimental reconstruction of monsoon drought variability for Australasia using tree rings and corals. *Geophysical Research Letters* 35: L12709.
Faulkner P. 2008. Patterns of chronological variability in occupation on the coastal margin of Blue Mud Bay. *Archaeology in Oceania* 43: 81-88.
Samuel JM, Sivapalan M, Struthers I. 2008. Diagnostic analysis of water balance variability: A comparative modeling study of catchments in Perth, Newcastle, and Darwin, Australia. *Water Resources Research* 44: W06403.
Shine R, Brown GP. 2008. Adapting to the unpredictable: reproductive biology of vertebrates in the Australian wet-dry tropics. *Philosophical Transactions of the Royal Society B-Biological Sciences* 363: 363-373.

Freshwater shrimps and crayfish

With a family name of Kakaducarididae, one might expect strong local representation, as is indeed the case for these freshwater shrimps. A molecular study (Page *et al.* 2008) provides support for a north Australian origin for the family, but concludes that they are of recent origin and not a relictual group of species.

The north Australian Red-claw Crayfish *Cherax quadricarinatus* has “normal” genetic-based gender determination. However, as with a number of other crayfish, there is a high incidence of “intersex” individuals - individuals whose gender is mixed - attracting considerable research interest. Vazquez & Greco (2007) examined intersex individuals and found that they had genitalia of both sexes but were functionally female.

Living with unpredictable flooding

I (your editor) must state my considerable reservations about this reference – Shine & Brown (2008) – because it confuses the unpredictability in the timing of flood events in northern Australia with unpredictability in our climate in general. This leads to inappropriate emphases and considerable overstatement. However, the authors do provide an interesting review of how floodplain creatures (snakes, rats, Magpie Geese, Agile Wallabies, Saltwater Crocodiles) cope with the somewhat unpredictable likelihood of being flooded out. Common features include the ability to vary the timing of breeding, and parental care behaviours that buffer flood effects on offspring including judicious choice of nest sites. Reptiles exhibit flexibility at the embryonic stage including diapause (embryonic dormancy), flexible time of hatching and temperature-dependent sex determination that facilitate life on the floodplain.
