

NATURE TERRITORY

April 2021

Newsletter of the Northern Territory Field Naturalists' Club Inc.

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



This close-up image of a Giant Water Bug (*Lethocerus* sp.) photographed by Mon Atkins in Kakadu National Park was posted to the Club's facebook. At approximately 70 mm in length, these large predacious aquatic insects are Australia's largest true bugs.

FOR THE DIARY

April Meeting: Wednesday 14, 7.00 pm
Using DNA to Track Crocodile Movement

April Field Trip: Sunday 18, 8.00 am
Visit Crocodylus Park

• See pages 2 - 3 for more details •

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

April Meeting

Using DNA to Study Crocodile Movement

presented by Sam Banks

Wednesday 14 April 7:00 pm - CDU Casuarina. Room BLUE 2A

Sam Banks is a conservation biologist at CDU's Research Institute for the Environment and Livelihoods. His research focus has mostly been on the ecology and conservation of terrestrial mammals (i.e. cute furry animals) and in the development of genetic methods to understand things about animal populations that we can't study in other ways. Some of his research has focussed on developing genetic methods to estimate abundance of threatened species and for studying how populations of animals respond to changing patterns of fire in the landscape. Prior to moving to Darwin from ANU in Canberra three years ago, he started collaborating with Yusuke Fukuda from the NT Government on a project to use DNA to track the movement of saltwater crocodiles to help with the management and conservation of this iconic species in the NT.



Photos: from CDU website

Sam will talk about using DNA to study crocodile movement and what we have learnt so far from this study. The project started out with the aim of identifying the origins of crocodiles that turn up in Darwin Harbour but has since expanded to mapping the movement of crocodiles across northern Australia and southeast Asia, as well as understanding the legacy of hunting on the genetic diversity of the species.

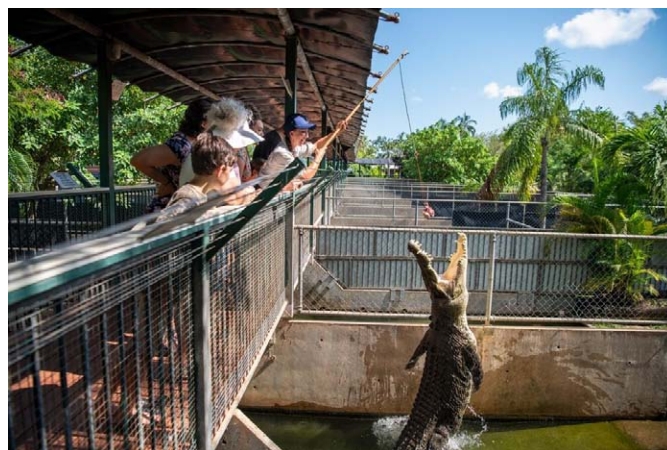


April Field Trip

Visit to Crocodylus Park - Sunday 18 April, 8.00 am Sharp

Please note reduced entry fees are available for this event, see below.

Entry will include a croc feeding tour and baby croc handling. There is an additional paid option to do a boat cruise on the billabong. Professor Grahame Webb, owner of Crocodylus Park has also kindly offered to make a presentation. Following these events you are welcome to stay on and in your own time explore the rest of the park, its wildlife and crocodile museum.



Photos: from Crocodylus Park website

Location: Crocodylus Park, McMillans Road, Knuckey Lagoon.

Entry Fee: Crocodylus Park has offered an adults entry fee of \$30 pp and the Club will subsidise financial club members half of that - therefore Club members only pay \$15 pp. The optional boat cruise is \$13 per adult.

Participant numbers strictly limited, to book your place RSVP to Leona Sullivan: groovygrenants@aapt.net.au or 0423 951 874

Bring: Camera, binoculars and have sun protection for exploring outdoor areas.

Upcoming Field Nats Events

May Meeting - Wednesday 12 - Invasive Species in the Galapagos Islands by Veronica Toral-Granda

May Field Trip - Sunday 16 - "Mynasweep" at Rapid Creek (Larkin Avenue forest walk) to look for the invasive Common Myna and anything else of interest.

March Field Trip Report

Bat Trapping at Lee Point - Saturday 13 March

Text and photos by Tissa Ratnayeke

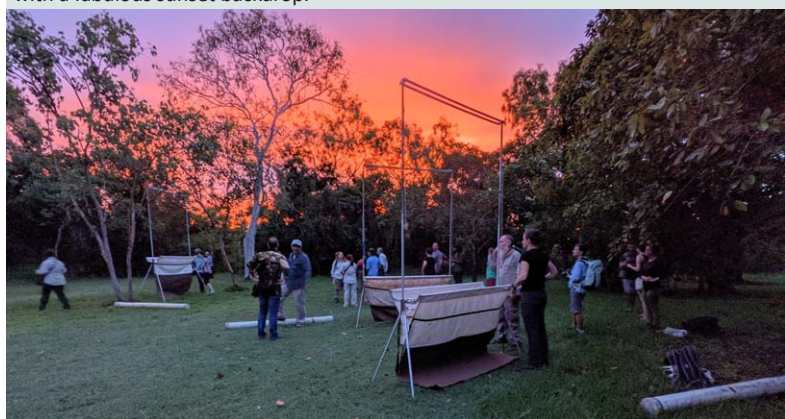
We met before sunset on a cool evening in the car park at Lee Point where fortunately the rain held off. While there was still light we moved to the adjoining park area carrying three rolled up harp traps where they were assembled and strategically placed between trees that might have been in the flight path of the microbats. As darkness set in we noticed bats begin to appear around us so we retreated from the traps and returned to the carpark.

Our three bat researchers Damian Milne, Nicola Hanrahan and Laura Ruykus then gave us an overview of the local species of microbats describing how each species explores a different niche of the habitat and how the echo location call of each species is also adapted to suit its hunting technique. We then split into three groups with hand-held sonar detectors and were able to observe visual representation of the bat call on the display screens.

After some time had passed, and with great anticipation we returned to check the traps but unfortunately on this occasion the bats had managed to avoid the traps. All was not lost, Damian anticipating this possibility had earlier visited a culvert and captured a few microbats which we were able to examine in close detail.



Above: Unwrapping the three rolled up harp traps. Below: The just assebled traps with a fabulous sunset backdrop.



Attentive listeners at the bat talk in the car park.



Above and right: A Bent-wing Bat (*Miniopterus schreibersii*).

Below: Large-footed Myotis (*Myotis macropus*), specialises in using the long claws on its hind feet to catch small fish and insects near the water surface.



Bat Encounters

by Denise Goodfellow

I first encountered bats as a teenager when a microbat flew into a room of the Adelaide hostel where I was staying. While the other girls carried on a bit I fetched a ladder and rescued the little animal. Brought up on a diet of bats as winged horrors that hung around Frankenstein and his like they calmed down a little on viewing the little creature lying quietly in my cupped hands.

As a biological consultant in the 1980s I sometimes surveyed bats. When working with colleagues we set up mist nets, trip lines across water and harp traps. Yet because I often worked alone setting up complicated nets wasn't possible. But at least I could survey ghost bats.

I suspected that these carnivorous animals were 'squeakable' as are many birds, and so to survey them that's what I did. The first time I tried this I was standing on top of a hill in the middle of nowhere on a pitch black night. Within seconds a pale grey mass rocketed out of the gloom straight at my chest. Then realising I wasn't a suitably-sized prey *Macroderma gigas* did a rapid 90° turn, just missing my nose and zoomed up and out of sight. So surprised was I at the brief encounter that I nearly tumbled off the hill!

In the early 90s Dr. Brett Lane and I carried out surveys at Mt Todd, between Pine Creek and Katherine. We were to survey old mine workings for bats until it was discovered that the sulphides in the rock would necessitate us wearing breathing outfits and having backup in case we got into trouble. At a cost of \$20,000 the mining company decided against it. However, I did enter one small adit.

I'd discovered a ghost bat roost not far from the entrance and lying on top of it appeared to be the remains of a small mammal. At the time I was working with a field assistant, a large man that I'd never met previously and who demanded that I take no faunal specimens. I wasn't going to argue with him, not in the remote bush. So when we caught a dunnart that we couldn't identify he let it go. But I wasn't going to ignore the specimen lying on top of the heap of ghost bat poo. And yes, it was the

dunnart, and although its middle was missing the all-important feet and head were present. We preserved it in my field assistant's bottle of rum.

In 2009 a television producer rang from the other side of the world. I'd been working as a wildlife/cultural adviser to television for some years but his request was a new one. Representing the program *Deadly 60* he wanted to know if I could find him some interesting predators. He was mainly interested in semi-tame kookaburras. I found him what he wanted, but also suggested that I might have something with more appeal for the show.

When colleagues and I did net ghost bats I was surprised at the animal's calm demeanour when compared with that of flying-foxes, one of which sank a long canine into a field assistant's thumb nail. Their rather laidback attitude and lovely silky fur, made them one of my favourite animals. So I asked the producer, if he'd be interested in something that looks like a demented rabbit, but fur like mink. The kookaburras were instantly forgotten. He fell for the Ghost Bats hook, line and sinker.

Through a mining company I arranged access to a very large ghost bat colony that inhabited an adit near Pine Creek. The floor was pitted with large deep holes - we crossed them on narrow planks. Worse, the walls were crawling with huge cockroaches and spiders, both of which I loathe. It was not my favourite place. But for our Australian cameraman it was hell on earth. Claustrophobic to begin with he was terrified on seeing the invertebrate wildlife in the narrow

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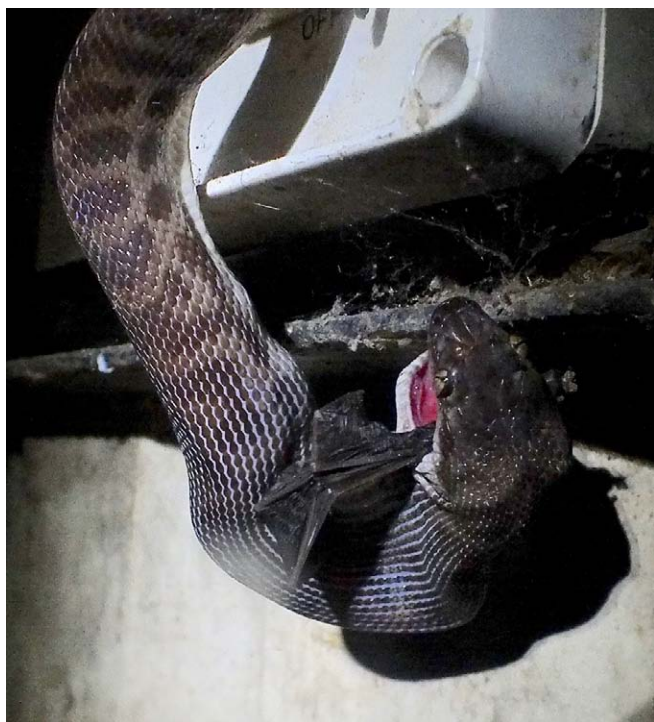


Yours truly (second from left) with *Deadly 60* presenter Steve Backshall and crew. The cameraman is wearing the bat t-shirt!

tunnel. Then Steve, the presenter who was ahead of him, scared the bats and several of them flew at the cameraman. To his credit he didn't drop the camera in fright or cut and run, but his language was truly colourful. We could hear him shouting from outside the entrance. Later he showed us his takes. His body language said it all. We couldn't stop laughing, but truly I believe he deserved a medal.

There is a section on bats in my book *Fauna of Kakadu and the Top End* (1992) including information from my Kunwinjku relatives. They call Ghost Bat Buma buma. While they eat flying-foxes elders assured me that they left Ghost Bats alone. Incidentally, at my sister's country, Kudjekbinj (Baby Dreaming) in western Arnhem Land, *Eucalyptus tectifica* is recognised as a tree important for bats. Indeed, it is known as a Bat Dreaming tree. *Eucalyptus tectifica* is a common species on our Darwin River property.

On our Darwin River property, Michael and I have worked hard to keep the natural vegetation and habitat as intact as possible, putting in hundreds of hours a year removing gamba and mission grass, for example. We've also planted a wide selection of native trees to ensure a supply of blossom and fruit the year around. Our only failure has been in encouraging microbats to roost in our house. They know better for the Children's Pythons that also share the place with us like to dine on these little bats.



Our resident Children's Python swallowing a microbat.

Not long after we arrived at Darwin River I had another moment with a microbat even more intimate than the meeting in my teenage years. Late one night a little Long-eared Bat, *Nyctophilus* sp. flew into a fan and broke a bone in its wing. I tucked the stunned animal into a box fully expecting it to be dead by morning. But when I opened the box the little creature was well and truly alive. It snuggled into the warmth of my hand while looking up at me seemingly unafraid. That was it. I was rapt. I rang Wildcare and the little bat was taken to a vet. That tiny animal gave me even more incentive to look after our twenty acres and to spread the word about Gamba Grass.

Wildfires fuelled by Gamba kill mature trees, and such blazes are more prevalent than ever. More and more woodland is degrading to monotypic weedy grassland. Yet it appears there is no long-term monitoring of much of our fauna and flora. So, I expect that many our bats like other wildlife will just quietly disappear from the landscape. And the only mark of their disappearance will be the absence of their calls, the increase in mosquitoes and other pest invertebrates, and the slow decline of the trees they pollinated. I will at least be grateful, that I once stroked the fur of a Ghost Bat, and that on two occasions a vulnerable little microbat snuggled into my hand.

Henry David Thoreau, American essayist, poet and naturalist wrote that,

"I once had a sparrow alight upon my shoulder for a moment while I was working in a village garden, and I felt that I was more distinguished by that circumstance than I should have been by any epaulet I could have worn."

I think I know how Thoreau felt.

Chitter Chatter - excerpts from the Club's Facebook group



Mon Atkins - 16 Mar

Thought I'd try my luck at finding some critters today, so off to the Darwin Botanical Gardens I went. Seriously is an awesome place after a bit of rain.

Tissa Ratnayeke: Male *Carlia sexdentata* fighting - this species originally from the Nhulunbuy region of the NT was introduced to Darwin. Tortoise beetle (*Aspidomorpha deusta*). Shining Oakblue caterpillar with attendant green ant.



Marlis Crocker- 15 Mar

Some orb? spider living in a dome shape web.

Tissa Ratnayeke: *Cyrtophora moluccensis*, Australia's largest tent spider - sometimes they can be seen in large aggregations with overlapping webs. All the little orange ones are thief spiders (*Argyrodes* species), some of them are helping themselves to a free feed of the trussed up grasshopper, they also clean up the little insects that are too small for the resident spider.



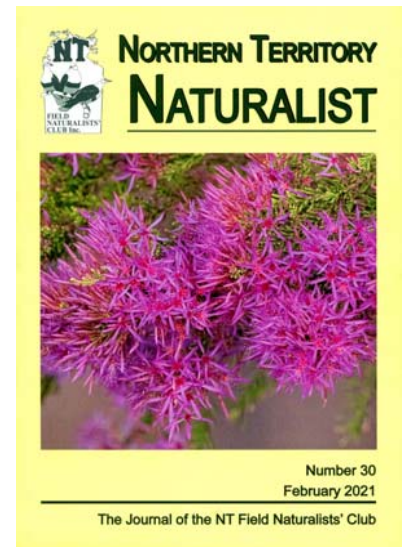
Harn Sheng Khor - 15 March

Hundreds of Great/Red knots. Photo from yesterday around Lee Point and Casuarina Coastal Reserve

NT Field Naturalists' Club Directory

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NT Naturalist Editor	Vacant	
Website and Facebook:	Tissa Ratnayeke	0417 659 755

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



Club notices

Thank you: The previous issue was formatted and despatched by **Tissa Ratnayeke**.

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Newsletter contributions welcome: Sightings, reports, travelogues, reviews, photographs, sketches, news, comments, opinions, theories , anything relevant to natural history. Please forward material to news.ntfieldnatsnt@gmail.com

Deadline for the May newsletter: 30 April 2021

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Need a Club membership form? Go to: <http://ntfieldnaturalists.org.au/membership/>

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Northern Territory Naturalist:

Number 30 has been published and the first copy deposited at the NT Library. Members who haven't personally collected a copy will soon receive their copy by post.
The position of Chief Editor is currently vacant and the Club would like to hear from any suitably qualified person who would like to take on this role.

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Top End Native Plant Society General meetings are held on the 3rd Thursday of the month at the Marrara Christian College, corner Amy Johnson Ave. and McMillans Road, and commence at 7:30 pm (speaker at 8 pm). Visit <http://www.topendnativeplants.org.au/index.php> or contact **Russell Dempster** on 0459 440 665.

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NT Field Naturalists' Club Meetings are *generally* held on the second Wednesday of every month, commencing at 7:00 PM, 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.