SAVANNAH GUIDES

# MESSAGE STICK

JUNE 2020

# THE ROAD TO RECOVERY

Photo Courtesy of Steven Lippis

*In This Issue . . .*



**Enormous Thanks to our Newsletter Sub-Committee**

**Ange Clucas**
**Alex Mudryk**
**Linda Mudryk**

# PRESIDENT'S REPORT

## What a year it has turned out to be ... everything was on track for another well planned Field School at Longreach in early April ... then the world went crazy!

There is a positive though … this "down-time" has created some new opportunities for all of us. For Savannah Guides it has meant the formation of several new Sub-Committees. Most of us have been unable to work in our usual occupations, so there are many Members who are very generously donating their spare time towards keeping Savannah Guides front-of-mind especially in Online Projects. These new Sub-Committees are Social Media, Newsletter, Website Upgrade and Birding Calendar.

The Online Cultural Awareness Course designed by AIATSIS (Australian Institute of Aboriginal and Torres Strait Islander Studies) has proven to be very popular with our Members and Supporters with over 220 people signing up, in two cohorts for this Ten Module Program. Another round will be open later this year and I strongly encourage everyone to undertake this course as it is a marvellous way to continue the reconciliation process and improve your understanding of the challenges that our Indigenous Australians face everyday. Contact Sam (sam@savannah-guides.com.au) for further information.

At this point I must stress to everyone how important it is to stay committed to Savannah Guides during these difficult times. We are a Not-For-Profit Organisation totally reliant on our Members to stay financially afloat. We have been ineligible for any Government assistance during COVID-19. Our Managers Sam and Russ, with the help of our Board, with special mention to Ivor Davies have carefully mapped out a plan to ensure we can ride out the current situation and be totally prepared for the recovery. A huge thank you to the Board and Management Team for striving so diligently to ensure our survival during these unprecedented times.

We have maintained our partnerships with Ulovane Environmental Training in South Africa and although our 2020 participants have had to defer their experience, please be assured that this insightful journey to visit our Gondwanan mates will continue in earnest well into the future.

The Wet Tropics Tour Guide Program continues to attract new Guides eager to improve their skills in this special area of operation. Some tweaking has had to occur and an Online Video Commentary Competition and Ambassador Program via Video Delivery are occurring soon.

EcoGuides Red Centre is another area which continues to gain attention amongst Guides in the Desert Country. Russ ran a Workshop in Alice Springs in February which although in its infancy is gaining momentum for professional guides to further enhance their skills.

Savannah Guides is continually bringing the guiding fraternity together to improve the overall quality of guiding in Australia for the betterment of our important Tourism Industry. Your continued involvement will help us in our mission to achieve this and maintain Savannah Guides as the leaders of best practice guiding in Australia.

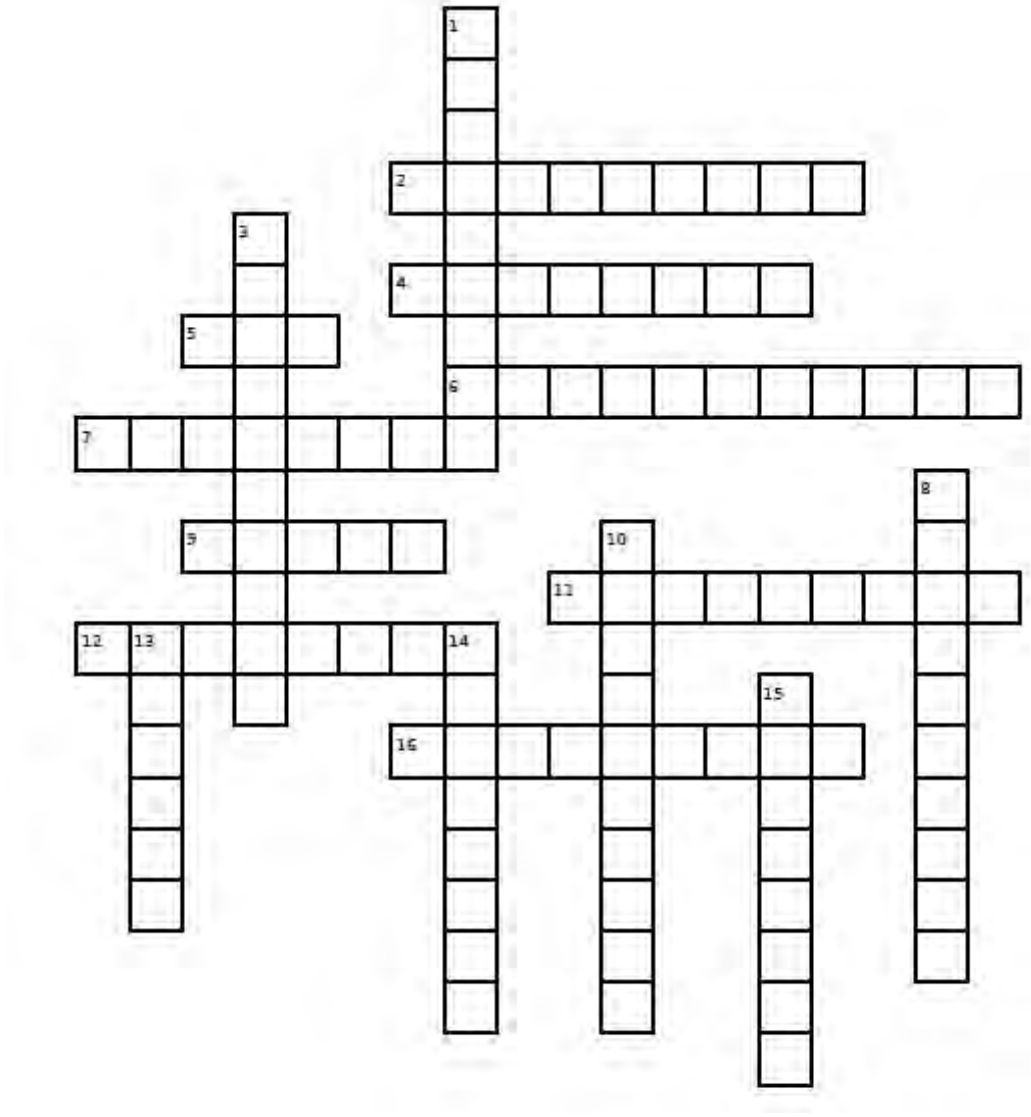
My thoughts go out to each of you during these uneasy times. Stay safe and I look forward to seeing you all at our next Field School.

*Mick Clark*

President
Savannah Guides Limited

# PLANTS OF THE NORTHERN SAVANNAH CROSSWORD PUZZLE

created by Ange Clucas



**DOWN**

1. Papery bark
3. Horizontal branches with white and yellow pom-pom like flowers
8. A medicinal plant with dropping branches, grey-green leaves and dark purple edible fruit
10. Species include Coolibah and Woollybutt
13. Phyllodes and flower heads are spikes or globular
14. Provides excellent protective habitat for small birds, reptiles and rodents
15. Bloodwoods and Ghost Gums belong to this genus

**ACROSS**

2. An introduced species which is declared weed despite bearing beautiful purple and white waxy flowers
4. Freshly cut timber of this grevillea resembles raw meat
5. Flowers are enclosed inside the fruit
6. A bush favoured by Great Bowerbirds for sheltering their bowers
7. Leaves resemble butterfly wings and flowers may be red or white
9. Bright yellow flowers and oval green fruit containing hairy seeds
11. Fruits are woody, boat shaped pods
12. Razor sharp leaves
16. Pollinated by a handsome, small, black, white and red bird

Answers on Page 27

# We have begun the dreaded "THIRD QUARTER" of isolation, when … yes … things get weird!


**In studies of people isolated in submarines, space stations or polar bunkers, researchers have found there appears to be an inflection point where the frustration and hardship of being cooped up inside gets suddenly harder to bear. According to the clinical psychologist who assesses the mental health of Australians in Antarctica, we're entering this phase now.**

Dr Kimberley Norris, an authority on confinement and reintegration at University of Tasmania, told *Hack* that Australians have broadly been through two periods of isolation: an initial point where there was panic buying and confusion, and then a "honeymoon period" when it felt novel and different to stay at home. We may now be entering the dreaded third quarter of hollow-eyed stares, odd fixations and brooding resentment. Time grows sludgy. The days blur into the nights, and the weekdays into the weekends.

The phenomenon was first described in early 1980s studies to determine how long humans could survive in space. These identified three broad stages of reaction to prolonged isolation: "These are a first stage of heightened anxiety, a second stage of settling down to routine marked by depression, and a third stage of anticipation marked by emotional outbursts, aggressiveness, and rowdy behaviour."

In 2000, a study found that those stationed at Antarctic research stations reported significant increases in interpersonal tension during the third phase of their expedition, due to both loneliness and cliquiness. Other researchers found a decrease in mood occurring around the mid-point and third-phase of the stay in Antarctica.

Crucially, they found that this third stage depends on the *relative* passage of time — in a six-month mission it could happen at around the four-month mark, while in a one-year posting it might appear at the eight-month point. What's important is what proportion of the mission has elapsed, and how much is still to go.

How does this relate to COVID? "People who see the curve flattening think we've done it, we've beaten it," Dr Norris told *Hack*. However, the uncertain duration of COVID restrictions could stretch the 'third-quarter period' over many months. Rather than a set amount of time, it's a state of anticipation.

Take it easy on yourself, Dr Norris says. The next few months may be hard. "All things that would energise people and assist them to function effectively have been taken away, so this is a genuinely hard thing to go through. Anybody who is experiencing anything difficult is a normal reaction to an abnormal environment."

Despite the third-quarter phenomenon and other ill-effects, many people who experience isolation once want to do it a second time for what it has taught: They have a better idea of their personal values, and they're more committed to acting on them. "That's why post-COVID we will see differences in the way people engage with each other, in the way people work, in the priorities given to the environment, and the way people think about travel."

She's found that, following experiences in isolated environments, men are more likely to use social support as a coping strategy compared to before they went in, while women have an increased trust in their own abilities. That is, men become less insular and women become more confident.

**Summarised from abc.net.au**

## NATURE NOTES # 1

**Of the dozen or so Australian Cuckoos, the Pheasant Coucal (or Swamp Pheasant as it is sometimes called) is the only cuckoo that rears it's own chicks.**

**It's also our only non-migrating cuckoo.**

**Australian cuckoos do not call "cuckoo cuckoo" as The northern hemisphere birds do. Now that's Cuckoo!**

**Ric Nattrass - Talking Wildlife**

# BUTTERFLIES OF LONGREACH

**By Darren Corke and Jane Monacella**

Belenois aurota

Hypolimnas bolina

Papilio demoleus

We have so many butterflies here at Longreach at the moment so we have made a butterfly board. Currently in our collection we have the Caper White Butterfly (Belenois aurota) which is the most common. The Egg fly Butterfly (Hypolimnas bolina) is also know as the Blue Moon Butterfly. It is the male that has the "egg" or white circle on its wings with the purple iridescence that glows in the sun. The female is brownish black with white marks on her wings (see picture). Our favourite is the Chequered swallowtail (Papilio demoleus), pictured, which was tricky to identify as it is tailless unlike its name suggests. It is in fact the only one in its family not to have a tail tip on its wings.

# ecoguide AUSTRALIA CERTIFIED GUIDE

**Savannah Guides Limited operates the EcoGuide Program in Australia. This national nature-based tour guide accreditation program delivers great benefits for EcoGuides, growing the links between nature-based Tour Guides around Australia.**

Savannah Guides also operates the Wet Tropics Tour Guide Program and of course the original Savannah Guides accreditation, with discounted articulation available between all programs. Just ask if you feel your career could benefit through an additional credential.

Savannah Guides is also working in several regions developing tailored programs for specific situations. Together these programs create a network of well over 500 nature and culture based Tour Guides and many leading Tourism Operators involved in professional and personal development.

The benefits for everyone include access to Regional Workshops, Field Schools, Training Programs and Resources, job links and a National Communication network.

How can you connect more with these opportunities and help us build the professionalism of Tour Guides across Australia?

## CONGRATULATIONS!
## TO THESE NEWLY CERTIFIED ECOGUIDES

| | |
|---|---|
| Susanne Angelis | Alice Springs, NT |
| Timothy Blackburn | Mount Nathan, QLD |
| Chelle Fisher | Porongurup, WA |
| Andrew Gorman | Cowes, VIC |
| Raymond McDonald | Alice Springs, NT |
| Colleen Mack | Alice Springs, NT |
| Stephen Pendlebury | Cowes, VIC |
| Jordan Roberts | Bass, VIC |
| Yujiro Teramoto | Benowa, QLD |
| Wai Sing To | Southport, QLD |
| Meagan Tucker | Cape Woolamai, VIC |
| Jordan Wheeler | Rockhampton, QLD |

# HEY GOOD LOOKING!

## What Plant is Looking Good at Your Place?

### NORTHERN SANDALWOOD (Santalum lanceolatum)

**Longreach by Brett Hintz**

As I look around our yard here at Longreach one of the interesting shrubs that I see is the Northern Sandalwood ... a very interesting plant as it is a root parasite and needs a host tree. All that grow here have a host tree beside them whether they be Bauhinia or Coolibah. We have some Mistletoe (Amyema miraculosa) growing in some of them - this is a stem parasite and has red flowers that have just finished flowering and now we have the yellow fruit as pictured. Incredibly this species of Mistletoe has leaves which are almost identical to our Northern Sandalwood. This Mistletoe is also well known for being a food plant for the Delias Argenthona or Scarlet Jezebel Butterfly Caterpillars. Over the last few weeks we have seen a number of these Butterflies. How incredible is nature, for here we have a beautiful Butterfly, a wonderful flowering plant, and a shrub from which beautiful aromas can be made all existing together.

Sandalwood Leaves

Mistletoe Fruit and Leaves

Healthy Sandalwood

Mature Sandalwood Bark

### RIVER RED GUM (Eucalyptus camaldulensis)

**Carnarvon Gorge by Simon Ling from Australian Nature Guides**

Australia's most widespread eucalyptus species is the River Red Gum. Think about that for a moment ... the most widely distributed gum tree in the driest inhabited continent on the planet is associated with water. It seems counter intuitive.

However, their real trick is their adaptation to variation. They require periods of both inundation and water deprivation to be at their competitive best, which makes them perfectly suited to the continent's variable climate. A wonderful role model for resilience in the face of adversity. How relevant is that?

### BOAB TREE (Adansonia gregorii)

**Kununurra by Ange & Phil Clucas**

Across the Kimberley the iconic Boab Trees are just finishing flowering and getting ready to shed their yellowing leaves for the Dry Season. Soon they will have the appearance of an "upside down tree" with the bare, gnarly branches resembling a root system in the air.

Boabs can live up to 2000 years and their large, bulbous trunks can grow up to 11 metres in diameter. They are like Mother Nature's water tanks because up to 100,000 litres of water can be stored within their trunks, which they rely on to survive the long Dry season.

# HEY GOOD LOOKING!

## What Plant is Looking Good at Your Place?

### SOAP TREE or RED ASH (Alphitonia excelsa)

**Winton by Karen Corkill**

The Soap Tree is currently flowering and fruiting around Winton. It's an easy tree to identify by the two-tone leaves, dark glossy green above and white below, often ragged because they are heavily chewed by insects.

The tree I recently encountered was attracting the Common Egg fly, Caper white and Lesser wanderer Butterflies and Red seed eating bugs.

The Soap Tree has many Indigenous uses … the crushed leaves contain saponin making it a suitable soap substitute, but also a fish poison! The saponin from the crushed leaves and berries leads to deoxygenation of the water stunning the fish causing them to float to the surface.

Also, an infusion using the leaves was applied externally for headaches, sore eyes, insect bites and stings and an infusion using the bark and roots was rubbed on the body to relieve muscle aches or gargled for toothaches!

### DECASCHISTIA

**(Dechaschistia peninsularis)**

**Moreton Telegraph Station, Cape York by Bec Kilpatrick**

A close relative to the Hibiscus, both belonging to the Malvaceae family.

Found growing on deeply weathered soils fringing the bauxite plateaus in northern Cape York.

Aboriginal people near Weipa are reported to have eaten the roots.

### NATURE NOTES # 2

**Do Birds Mate for Life?**

**Well sort of. Bigger birds tend to stay together longer, even until death do they part! Pretty soon thereafter the survivor pairs up again. Raptors for instance have been recorded to mate up within three days. Australian Magpies can sing themselves into a new relationship within hours!**

**It's all about being able to take advantage of a breeding territory vacancy. Birds do not mourn the loss of a partner no matter how romantic the notion!**

**Little birds tend to have many mates and multiple donors to their clutch to help promote the survival of their species.**

**Ivor Davies**

### NEEDLE LEAF GREVILLEA

**(Grevillea erythroclada)**

**Moreton Telegraph Station, Cape York by Bec Kilpatrick**

Not a common tree in Cape York but a good population can be found at Moreton Telegraph station on the sandy alluvial soils. It also occurs on the borders of the Northern Territory with Western Australia and Queensland. Sadly not a lot is known about this tree. It is very special to us here at Moreton. It is not visible from the campground but I always tell people about it. It can be seen on our self guided nature walk.

# BIRD POPULATIONS IN US and CANADA DOWN 3 BILLION in 50 YEARS

By Victoria Gill, Science Correspondent, BBC News, 19 September 2019

**Bird populations in Asia and the US are "in crisis", according to two major studies.**

The first concludes there are three billion fewer birds in the US and Canada today compared to 1970 - a loss of 29% of North America's birds.

The second outlines a tipping point in "the Asian songbird crisis": on the island of Java, Indonesia, more birds may now live in cages than in the wild.

### How have three billion birds disappeared?

The North America study revealed how many birds were being lost across every type of habitat. While it did not directly assess what was driving this, the scientists concluded that, among multiple causes, the major factor was habitat loss driven by human activity.

This study, explained lead researcher Dr Ken Rosenberg from the Cornell lab of Ornithology and the American Bird Conservancy, was the first to "run the numbers" on bird populations. "We knew some species were declining," he told BBC News, "but we thought that, while rare birds were disappearing, the more generalist birds - and those better adapted to human landscapes - would be filling in the gaps." The team's calculations were based on bringing together all the bird monitoring in North America for the past 50 years - every major survey carried out across the continent since 1970. "What we saw was this pervasive net loss," Dr Rosenberg said. "And we were pretty startled to see that the more common birds, the everyday backyard birds and generalist species, are suffering some of the biggest losses." That same pattern, he added, is likely to be mirrored in other parts of the world. And the situation in Asia, as the other study has shown, is a particularly striking case of a human-driven extinction crisis.

### What is the songbird trade?

The buying and selling of songbirds - many of which are caught from the wild - is huge business in parts of Asia, particularly on the island of Java in Indonesia.

Back in 2017, we investigated how the trade pushed more than a dozen species to the brink of extinction.

Around 75 million birds are kept as pets on Java. Many are sought after for bird singing competitions - often referred to as "Kicau-mania". At these events, caged birds' songs are judged on melody, duration and volume. Top prizes for the best singers can earn owners as much as £40,000 in the biggest contests.

This culture, however, drives the capture of birds from the wild to satisfy demand. And that, researchers say, threatens the survival of numerous species.

Harry Marshall, lead researcher on this study, explained: "The trade is estimated to be worth tens of millions of dollars to the Indonesian economy, so it is no surprise that it is a key regional source of both supply and demand for songbirds, with hundreds of markets running across the archipelago, selling more than 200 different species."

Mr Marshall, who is a PhD student at Manchester Metropolitan University and Chester Zoo, led a survey of 3000 households across Java, which is Indonesia's most densely populated island. From this, he and his colleagues were able to estimate that there were as many as 75 million caged birds living in Javanese households.

### What can be done to reverse these declines?

Both teams of scientists were keen to highlight the optimism among the obvious "doom and gloom" in these new findings.

Prof Stuart Marsden, from Manchester Metropolitan University - an authority on the Asian songbird trade - pointed out that the national obsession with keeping caged birds in Indonesia was driven by a love of birds.

"I think that passion can be channelled into conservation," he said.

Dr Rosenberg pointed to a striking example of bird conservation success as a reason for what he called his "weirdly optimistic" view about the dramatic decline in North America's bird population.

"In US and Canada, it was the duck hunters who noticed a decline in waterfowl and did some thing about it. Millions of dollars have been put into wetland protection and restoration - in order to have healthy populations for duck hunters.

"That's a model - if we can replicate it for birds that are not hunted and birds that people love in other habitats, we know that bird populations can be resilient and will come back."

America has lost more than a quarter of its birds since 1970

Image Copyright Gary Mueller, Macaulay library at Cornell Lab of Ornithology

The Caged Bird Trade could be worth tens of millions of dollars to the Indonesian economy

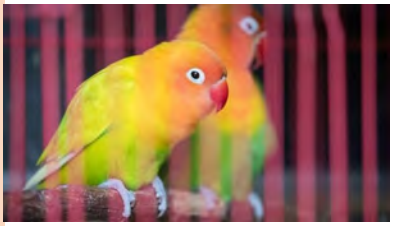
Image Copyright Gabby Salazari

Birds are declining in every type of habitat from grasslands to deserts

Image Copyright Brian Sullivan, Macaulay library at Cornell Lab of Ornithology

Bird Singing Competitions are hugely popular in Indonesia

Image Copyright Bernd Marcordes



Lovebirds are popular in the Asian Songbird Trade

Image Copyright Gabby Salazari

# WET TROPICS TOUR GUIDE PROGRAM

**Savannah Guides continues to work with its partner, the Wet Tropics Management Authority, to deliver The Wet Tropics Tour Guide Program.**

COVID-19 has changed the delivery of this Program to include an Online Video Commentary Competition and several Wet Tropics Ambassador Workshops being delivered via Zoom! The Workbook covering the knowledge units of Flora, Fauna & Landscape; Presenting the World Heritage Area as a Cultural Landscape and Commentary Excellence will be available online very soon.

Our Two Day Field Schools will resume when easing of restrictions allows so stay tuned for these details.


# HOW ACCURATE IS YOUR GPS?

**By Alex Mudryk**

https://360.here.com/australia-is-a-difficult-continent-to-pin-down-especially-with-gps-technology

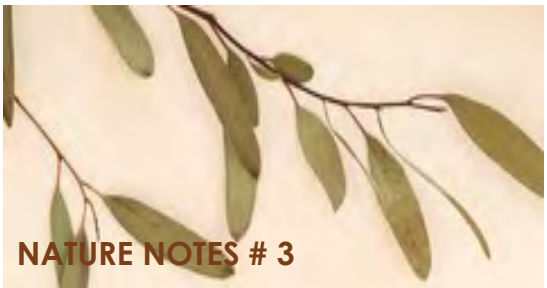
The tectonic plate under Australia is the fastest moving in the world. How can we be certain that Australian GPS systems will remain accurate and up-to-date? The Land Down Under seems to be a difficult continent to pin down these days – especially with GPS technology. That's because satellite GPS systems measure geographical positions based on longitude and latitude, which are fixed and do not change with the movement of continents. Indeed, all continents drift at various speed, but Australia seems to be winning the race by drifting at around 70 mm per year. While the rest of the world has been diligently making adjustments in order to keep up with the GPS grid, Australia has not made any adjustments since 1994. For the past 25 years, the continent has moved about 1.8 meters to the north.

Let's compare this to our own body. Australia is moving twice the distance that our nails grow in one year, or more than four times the rate our hair grows. How much does our hair grow in 12 months? The short answer, average hair grows 5mm to 17mm per year.

https://www.medicalnewstoday.com/articles/326764

How much do our nails grow in 12 months? The short answer, generally about 0.1mm per day or 36.5mm per year.

https://www.scienceabc.com/humans/fast-nails-grow.html



## NATURE NOTES # 3

**Artists in Silk**

The wheel-shaped orb web is the ultimate use of silk to trap prey, especially when woven where flying insects abound.

There are many different types of orb spiders. Some orb webs are complete circles others are incomplete. Some species like the St Andrews Cross Spider weave extra stabilising and strengthening threads to their webs.

When a spider moves on its web it holds the sticky silk with claw-like bristles on the ends of its legs. If it is knocked onto the web itself, oil on its body prevents it from sticking to the strands.

When a victim blunders into an orb web it is snared by the sticky threads. Alerted by the vibrations caused by its struggles, the female spider quickly trusses it in silk, preventing it tearing the web apart. She injects venom into the victim and sucks out its juices.

Moths are caught in webs less often due to them having scales on their bodies that prevent webs sticking.

**Thanks Ivor Davies**

# TANYA MELLAR

# MEMBER PROFILE

I have lived in three states of Australia – Victoria, South Australia and Queensland; and travelled throughout all States and Territories.

I completed "most" of my schooling in South Australia, growing up in the picturesque Barossa Valley, at a place called Cockatoo Valley.

When I was nine years old my parents sold our hobby farm and, with my little sister, the four of us went on a 14 month lap of Australia. This is where I believe I gained my real interest and curiosity in the natural world. Winton, Queensland, was not a stop on this trip as it was too far inland during our costal route, nor was it then widely recognised for the fossil bounty it was hiding under the black soil. I did correspondence Schooling during this time.

I started a Bachelor of Science at the University of Adelaide, intending to major in Palaeontology, then life happened and I ended up transferring to the University of Queensland, Brisbane (for a boy) and completed my Degree there, majoring in Ecology and Zoology (Palaeontology wasn't offered). I loved my field trips, so if it had a field trip component, I wanted to do that subject. I like to call it a Natural History or Evolutionary Biologist Degree. I did a bit of Geology, Chemistry, Zoology, Botany, Evolution, Ecology, Australian Biota, Insect Science, Plant Identification, Animal Behaviour, Fish Biology, Marine Mammals, Outback and Rainforest Ecology, Ecophysiology of Plants and Animals; and a Research Project looking at the shape of bird claws and relating them to a function. And for something different I also did Sustainable Communities and Japanese (which I had been studying since Primary School). So I have a pretty broad background, which I think I few people have wondered how I know what I do sometimes.

It was as a student at UQ that I first heard of Australian Age of Dinosaurs and the Winton dinosaurs. I volunteered at the UQ Vertebrate Palaeontology Lab on Campus. I was washing, drying and sorting dirt from the Winton area. This funnily enough is what I am still doing 15 years later! The only difference being is that I am actually doing it in Winton instead of St Lucia! During my studies I also developed an interest in Science Communication and dreamed of joining the Questacon Science Circus one day ...

I had been following AAOD for a number of years on Facebook when I saw a job advertised, and I thought "Hey, I can do all those things!" I applied and ended up in Winton. As I drove up from Adelaide, I was thinking to myself "I can't believe these people are going to pay me to do this stuff!"

It was such a joy to work with like-minded passionate people. I was definitely drawn to the Outback. I love the wide open spaces and lifestyle. I was also pleasantly surprised that I could continue my pastime of fishing in the Outback! That one surprised a few of my friends too when I shared the photos online.

At the start of my third season with AAOD I asked to be assessed as a Savannah Guide, after getting a taste for it at my first Field School at Burketown (and meeting many of you for the first time). I was accredited and sat in the Hot Seat at Carnarvon Gorge in all my 80's outfit glory (we were celebrating 30 years of Savannah Guides)!

Savannah Guides has allowed me to keep exploring my beloved Australian countryside and meet so many like-minded people from all kinds of backgrounds. I wish I could go to all the Savannah Guides Field Schools! My list of top places I want to visit are Undara, Cobbold Gorge and Capricorn Caves.

Today I live in Winton with my loyal companion, Jazz (almost 13 years old). While living in the city, Jazz and myself competed in Obedience, Agility, Lure Coursing (dog sports). She is now comfortably retired and enjoys sleeping a lot. I have been doing lots of gardening while the tourists stay away, so I expect to give away lots of cucumbers and tomatoes soon!

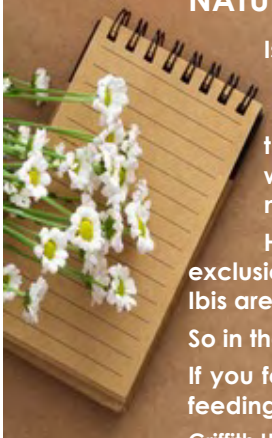
# FRIEND NOT FOE … WORKING TOGETHER!

**A Story with an Important Message … by Brett Hintz**


**A woman's scream rends the air, echoing around the small carpark and fringing rainforest at Frangipani Bay …** Looking around I quickly realise it's one of my passengers so, disentangling myself from the guest I had been trying to assist down the last few rocks onto solid ground, I race back to assess the injuries of an elderly lady. Pulling the first aid kit from my backpack I silently mutter to myself that I had only just stopped the whole group and told them not to rush the last few yards down to the carpark as they are tired, thirsty and worn out from their two hour journey over 600 metres to the Tip and back. Sound familiar? Yep you're right, it has or will happen to every guide that takes on a Cape York trip. "My ankle's broken for sure" claims the guest as a reassuring hand grabs my shoulder and a familiar voice asks "Do you want me to ring Bamaga Hospital and tell them you will be there in around an hour and a half?" "Awesome, that would be fantastic, thanks!" I said to another guide, from another tour company, who has just come down off the walk to the Tip.

Just another day in paradise and just another instance of the amazing camaraderie that exists between, not only Savannah Guides but nearly all guides that we meet and travel with on extended tours. To see a friendly face when the chips are down, you are bogged, broken down or have a medical issue is truly a wonderful thing. No matter that all the tour companies are fighting for the tourist dollar - we as the people that deliver the products promised so lavishly in the glossy brochures, are the ones at the coalface. On our level we all help each other out whether it be moving our guests so that another company can share the lunch shelter, or even setting up your own tables and chairs so that other companies guests have more room. Maybe it's talking to each other about where flowering plants are blooming at the moment or where you might find some special bird's nest. A quick chat on the UHF as you pass each other to update road conditions and a friendly wave is par for the course within this special group of guides. Even though as Savannah Guides we may work for different companies, our guests pick up on the fact that this organisation has, at its heart a very caring and sharing attitude which can only enhance their journey.

All the sentiments expressed in this article are my own and I purposely have left out names of individuals and companies to protect their privacy. I remember many years ago when three tour companies met at Seisia Wharf to put our guests on the ferry to Thursday Island - each group had someone on crutches with sprained ankles. Just as well we love doing what we do!



## NATURE NOTES # 4

**Is it bad to feed birds?**

**Well yes and no not really. Dr Darryl Jones and students at Griffiths University showed that no matter how well and persistently you fed native birds they would only take up to 16% of their daily diet. If food is suddenly taken away from the feeder birds will just forage as normal with no harmful effects just the same as in nature, that's why birds move around and even migrate for food.**

**However feeding birds can cause particular species to populate a feeding area to the exclusion of less aggressive birds and their populations can explode. Lorikeets and Australian White Ibis are good examples. As always biodiversity is always better than developing mono-clusters.**

**So in the end we feed birds for our own enjoyment not the birds!**

**If you feed birds keep feeders very clean to prevent mites and disease. Take food away following feeding times to allow other birds back into your areas.**

**Griffith University**

# BIRDING IN THE NORTHERN TORRES STRAIT

**By Ivor Davies**

What a great experience! Rainy season, certainly friendly mozzie season but with the promise of new birds, trans-flys (just passer-by's), and vagrants on offer what birder could resist? Well I couldn't.

So, at the beginning of March I flew to Horn Island where we met up with our fellow nutty birders, eight in all, plus a few Eurasian Tree Sparrow around the wharf. From there a catamaran to Little Tuesday Island for the Ashy-bellied White-eye, an endemic on the unpopulated islands off the tip of the Cape York. Then onto Boigu then to Saibai within easy sight of PNG.

Our biggest thrill (we're birders right!) was the third ever sighting of the Papuan Spine-tail in Australian territory. It took ages of very patient watching and watching covered in generous layers of DEET and there amongst the Martins it was, flying high as they do. Great excitement of course, a Lifer!

Papuan Spine-tail

Whilst there we saw the Yellow-bellied Sunbird, a mob of Singing Starling, House Swift, Fork-tailed Swift, Uniform Swiftlet, Pacific Swallow, Collared Imperial Pigeon, Tawny-breasted Honeyeater, Varied Honeyeater, Brown-backed Honeyeater, a Brown Goshawk - very likely to be split from our regular one, it is darker and noticeably smaller.

Another very patient search and wait saw a great look at the Papuan Flowerpecker. They are in the same group as our Mistletoe bird and looked like a cousin too. We also passed "Beware of Crocs" sign as we made our slippery way across a creek!

The boat was ideal. Airconditioned, the crew were really great, food excellent - a real treat all round!

Amongst our list of 96 bird species other birds of interest were Zitting Cisticola, Curlew Sandpiper, Oriental Plover, the Torres Straits version of the Emerald Dove (common) and Oriental Cuckoo.

A very memorable Birding Trip!

# BEING A TOUR GUIDE SUCKS SOME DAYS …

**Wise Words from Hirani Kydd**

Being a tour guide sucks some days. Things go wrong, or things don't even go, and some days everything goes to plan but your guests just aren't happy people and guess what? It's your job to keep smiling and make the most of it!

That being said, there are things you can do to make your day improve a bit: Firstly, don't take it personally; whether it's a broken-down bus or a rude client, the fact is, you can't control everything and sometimes you just have to accept what's happened and realise it's not your fault … well, hopefully it wasn't!

From there you might need to try a different tack ... Stuck on the side of the road? It's time to distract from what's happened. Talk to your passengers and make them feel special, most people love telling you their life story. Also, if its going to be a while, look around and see what impromptu interpretation you can do (this is where clients start to hear a lot about the role of insects within the environment from me)! Rude customer? You don't have to keep smiling, but you DO have to stay professional. Make it seem like you want to resolve whatever their issue is, unless they're being completely out of line, in which case (politely) telling them they're being out of line can actually pull them into line sometimes (like the time a client told me wearing my hair in a bun really didn't suit me. Not cool)!

Just having a down day? It happens. To everyone. It doesn't matter what job you do, you're going to have days where you wake up and you just don't want to go to work and there's absolutely nothing wrong with that. The catch is, that as a guide you are often the only option, and also probably employed as a casual, and so cancelling or "chucking a sicky" just isn't an option. For me, I like to think about other things throughout the day, like what's for dinner, and what I'm doing on my next day off. This has helped me through plenty of days.

Down time is important: When I do have time off, often I like to catch up with friends and do fun stuff, but you know what? Some days I just do nothing. I become a hermit, and live in my little cave at home and read and only talk to other humans if necessary. This is how I recharge after the rough days, so don't forget to just chill out sometimes.

Lastly, even tour guides can suffer from depression, and forcing yourself to seem happy for someone else's sake can really get to you, so if you do find that you're struggling don't be afraid to talk to someone. Talk to your friends, talk to your boss, even talk to your fellow Savannah Guides. If you don't feel comfortable talking to any of those, you can always talk to a group like Lifeline or Beyond Blue, but don't keep it to yourself.

So there you go! Hopefully this will make your next bad day a little better!

# TERMITES OF NORTHERN AUSTRALIA

**Termite mounds are a distinctive part of the Northern Australia landscape. These mounds range in size from small structures hidden in the undergrowth to giant monoliths up to eight metres high across the savannah landscape!**

More than 2600 termite species have been described around the world, Australia is home to at least 350 of these, with more than 90 of them not yet given names.

Although we think of termites as pests which eat our timber framed houses, only a handful of Australian species fit this description. Termites are often referred to as "white ants" and their mounds referred to as "ant hills" … this is a misconception. Termites are related to cockroaches and have a diet almost exclusively of cellulose, which they obtain from dead grass, wood and other plant material. Termites are mostly blind, living within the mound they rarely see sunlight, their bodies have very little capability of withholding moisture. If exposed to direct sunlight they will quickly dehydrate and die.

Termites live in colonies with populations that can number in the millions. The founding parents of a termite colony are the King and Queen which are called the primary reproductives. Together they produce all other colony members which can be workers, soldiers and reproductives. The most prolific are the workers which may represent over 90% of all colony members. They are responsible for building the nest, foraging for food, cleaning the nest and looking after the brood. The soldiers are considered the defence force - when the nest comes under attack, the soldier termites bang their head against the gallery walls to send warning vibrations throughout the colony.

The primary reproductives become sexually mature and grow wings then fly from the nest, usually in the early evening after the first rains of the wet season during November and December. These winged termites are known as alates and meet up with the opposite sex to start a new colony thus becoming the founding parents, the new King and Queen. Most of the protein rich flying termites get eaten by birds, skinks, dragons, bandicoots, quolls and bats. Many wildlife species rely on this nutrient redistribution via termites to attain breeding condition and complete their own reproductive cycles. In countries such as India, people also harvest and eat termite alates.

The mounds and nests play a role in creating comfortable temperature and humidity conditions for termites. Mounds and nests act like small patches of favourable habitat for the termites, protecting them from the often harsh conditions in the surrounding environment.

Magnetic termites build their wedge shaped mounds on floodplains. The long axis of the mound is orientated in a North/South direction. These termites are in tune with earth's magnetic field. When the sun rises, the Eastern face of the mounds receive full sunlight, the termites quickly move to this side of the mound to warm up after the lower evening temperatures. During the middle of the day with the hot summer sun directly overhead the

mounds receive very little direct sunlight due its North/South orientation, helping to keep the mound at around 32 degrees, the optimum temperatures for termites to live and breed in.

Termites are the lifeblood of northern Australia's tropical savannah ecosystems. Savannah ecologists believe that a combination of infertile soils and high seasonal rainfall means that northern Australia is incapable of supporting vast numbers of mammals so often seen in parts of Africa, thus insects reign supreme in this part of the world, and are the driving force in ecosystem dynamics.

**Thanks Mick Clark. More Info on Page 26**

**Reference material, "Termites of Northern Australia" by Alan Andersen, Peter Jacklyn, Tracy Dawes-Gromadski and Ian Morris.**

# HANGING AROUND ADELS GROVE ...

## ... RESTRICTIONS MEAN THE WILDLIFE COME OUT TO PLAY!

**By Michelle Low Mow**

There is a small silver lining to the COVID-19 Restrictions ... with no guests at Adels Grove, we are finding a lot more native animals are visiting and hanging around...

The dingos are coming into the campground, so the Stations are planning to bait in June. Legless lizards are certainly on the rise and we spotted one eating a Gilbert's Dragon! Most exciting of all though - we ventured into a cave the other day and spotted a Children's Python eating a bat!

# MEANWHILE IN LONGREACH

**Thanks to Smithy!**

A very full male, or a very pregnant female on the lawn at Rosebank. It's great to see the return of the Goannas. We have seen a couple outside the yard at Rosebank since we moved here about three years ago. The Cane Toads annihilated all of the Goannas at the river over the last 20 years. It's great to see a strong specimen here today!

# ONLINE CULTRAL AWARENESS COURSE

**We are very proud to advise that to date Savannah Guides has had over 225 Participants take part in this important initiative from the Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS).**

**This is an innovative and valuable Online Course developed to strengthen your cultural capability. The Course consists of Ten Modules covering a broad range of topics focussing on Aboriginal and Torres Strait Islander peoples' cultures, history and society to assist people to enhance their cultural understanding, gain a deeper sense of self-awareness and critical reflection; and enhance their personal and professional capacity to engage respectfully and effectively in an intercultural context.**

**You complete the Course at your own pace and receive a Certificate on Completion.**

**This Course is 100% Online and will take approximately ten hours to complete. The Modules covered are:**

| | |
|---|---|
| **Module 0** | **Introduction** |
| **Module 1** | **Thinking about Cultures and Identities** |
| **Module 2** | **My Country, Our Country** |
| **Module 3** | **History Lives in Us** |
| **Module 4** | **Too Much and Not Enough Change: Commonwealth Indigenous Affairs** |
| **Module 5** | **Communities in Control: Recognising the Role of Community Organisations** |
| **Module 6** | **Recognising Aboriginal and Torres Strait Islander People's Rights to Country** |
| **Module 7** | **Self-determination and Autonomy** |
| **Module 8** | **Engaging with Aboriginal and Torres Strait Islander Communities** |
| **Module 9** | **Helping to Build and Inspire the Australian Nation** |
| **Module 10** | **Continuing Your Journey** |

**The cost of the Course is $99 plus an $11 Administration Fee – Total $110 per person.**

**We have put two cohorts through this Course this year. Another Round will be offered later this year.**

**To register your interest please email:**

**sam@savannah-guides.com.au**

# TOM'S BIRD TRIVIA (Part One)

**With thanks to Tom Collis, Birdlife Northern Queensland and Alan Gillanders** - **Answers on Page 27**

Q1: Identify this bird 

Q2: Complete these Australian bird names?

Zitting _____

Grey-crowned _____

Flock _____

Chirruping _____

Q3: This bird is a ...



Q4: In the famous Monty Python parrot sketch, what breed of parrot had John Cleese supposedly been sold?

A: Norwegian Blue

B: Ring neck

C: Blue Macaw

D: Past Parrot

Q5: Identify the waders in this photograph

Q6: What is the red throat of a Lesser Frigate bird called ?

Q7: What sort of bird was Zazu from The Lion King ?

Q8: What bird is on the Queensland Coat of Arms?

A: Emu

B: Cassowary

C: Brolga

D: Regent Bowerbird

E: Wedge-tailed Eagle

Q9: This bird shares its name with the often unpopular Australian Rules football team.

Q10: What are the three colour variations of the head of Gouldian Finch in the wild?

Q11: Which single word completes these bird names?

Red }

Brown } _____

Grey }

Q12: Name these four red-eyed birds:


Q13: This bird could easily lead the Merry Men through Sherwood Forest!

Q14: What bird has the nickname "Turbo Chook?"

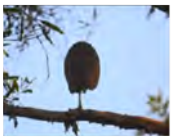
Q15: What bird is this? 

Q16: Who wrote this classic Field Guide? 


Q17: What is the toe arrangement of a bird with zygodactyl feet ?

Q18: What bird is featured on the Australian $10 note?

Q19: Which bird was the title for a song that was a Number One Hit by the band Fleetwood Mac?

Q20: Identify this bird 

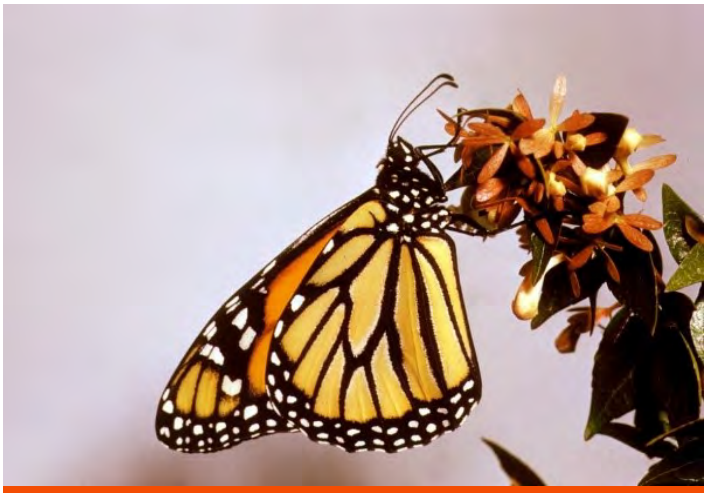
Q21: Identify this bird 

Q22: What is this bird? 


Q23: When would you see a bird that is crepuscular?

Q24: What bird is this? 

Q25: Why do bird's 'knees', such as this stilt, bend the wrong way ? 



# WHY ARE INSECTS DYING IN SUCH NUMBERS?

What has been called the Bugalypse is showing in research from across the globe pointing to dramatic declines in insect populations. In Germany, an 82% fall in midsummer invertebrate populations across 63 nature reserves between 1990 and 2017; in the Puerto Rico rainforest, a 75% reduction in the volume of insects between 1976 and 2013; in the UK, a one-third fall in the honeybee population over the past 10 years. Across the US, Monarch butterfly and Ladybird beetle numbers are at record lows.

In alpine NSW, there's been a collapse in Bogong moth populations, resulting in starving Pygmy possums, who feed on them. Most worrying, a research review of 73 existing surveys, released last year by the University of Sydney's Institute of Agriculture, discovered that 40% of insect species will likely be in catastrophic decline within a century.

While certain "beneficial" insect populations (butterflies, grasshoppers, mayflies, dragonflies, ground beetles, fireflies) appear to be in unprecedented retreat, others considered pests and a risk to human health (tsetse flies, ticks, mosquitoes) are on the offensive again.

So what's causing the bug die-off? The top culprit is likely to be wilderness loss – many insects feed off native plants, and the relentless spread of single-crop farmland and insecticides has shrivelled their range, says Yeates. Another culprit: global warming, which favours some insects over others. Cut out insects and you lose all the creatures that feed on them, including frogs, lizards and birds. Of course, a large proportion of the food we eat comes from plants pollinated by insects, and they also clean up the environment. "Waking up in a world without insects would be like waking up in a garbage dump." notes Dr David Yeates, director of the Australian National Insect Collection in Canberra.

**From the Sydney Morning Herald**

## NATURE NOTES # 5

### Seed-eating birds

**Our tropical savannas are home to 55 of Australia's 90 species of seed eating birds. 13 of the species plus 10 sub-species are endemics which include parrots, finches, pigeons and quails.**

**Modern bushfire burning regimes, or the lack of them, to suit increased human habitation and farming, has caused less seed availability compared to traditional burning practices that saw smaller areas burnt more often. The result causes stress for our seed-eaters.**

**Finches and seed-eating pigeons suck water with the head down rather than scooping and tossing back water like other birds.**

**Crimson Finches eat large amounts of spiders during the wet season to supplement their protein needs during breeding.**

**Gouldian Finches in the wild have about 70-80% black faces and crowns. The remainder are red or red with a few ochre-yellow**

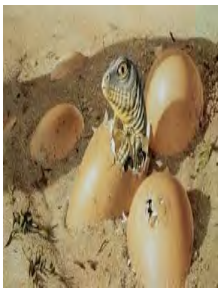
**Tropical Savannas CRC**

# HOW EGG-CITING!

## Dinosaurs were massive, so why aren't dinosaur eggs bigger?

Eggs can only be so big before they wouldn't work. If the egg is bigger the shell has to be thicker. If it's too thick no air gets in and the baby suffocates and no baby hatches or the shell would be too thick for the dinosaur to break out of. So they can only be as thick as what will allow enough air for development.

Dinosaur eggs are rare to find (anywhere in the world) and unless we find them right next to a skeleton, or in a rare case have bones fossilised inside of the shell, we can't usually name them. So we put them into groups of similar looking eggs and we end the name a oogenus ending in –oolithus which means "Stone Egg". We do the same with footprints when we are unsure of the track maker and end the name in –opus meaning foot!



**Many thanks to Trish Sloan**

# MALE GOANNAS ARE VERY WELL-EQUIPPED!

**Mar 3, 2011 By Denise Lawungkurr Goodfellow**

In the 1980s I ran a guiding course. One day a trainee operator and I came across a large goanna, lying freshly dead in the burnished iron pisolate gravel on the side of the road. "Shall we see whether it's a boy or a girl?" I asked this rather sweet, gentle man. He agreed. As we both bent over the corpse I pressed gently behind the goanna's vent, and behold, two large toadstool-like appendages, the hemipenes, sprang into view. My operator jumped back, startled. He never said a word all the way home, and I thought I'd upset him. But his wife later assured me that he was 'so impressed, he was struck dumb'!

Around that time the tourism industry asked me to address operators regarding the course. On the whiteboard, I drew a shape that somewhat resembled a pair of lumpy-headed toadstools. Not one of the operators present could identify my sketch, and so I told them. "That, ladies and gentlemen, is what you get when you sex a dead goanna".

I knew that at least one in the audience wasn't past putting the hard word on more attractive clients. But when it actually came to talking about sex in the context of wildlife, that was a different kettle of fish! Few were interested - unlike the operator mentioned previously, most thought the topic irrelevant if not downright bestial. After all, tourism was a glamour industry, all about spotless sun-drenched beaches, picture-postcard waterfalls and air-conditioned coaches, and polite, professional, spotlessly-attired staff. That was the image the NT wished to promote. And of course, that's what many visitors wanted. But not all.

Some visitors were very interested. There were two glamorous Americans whose main goal was to see the reproductive organs of a female marsupial. We found a freshly dead female Antilopine Wallaroo near the turnoff to Fogg Dam and opened her up.

Marsupial reproductive organs are fascinating, having a bipartite uterus and the equivalent of three vaginae. The women were ecstatic. As the air-conditioned coaches drove past on the way Kakadu National Park, their passengers waved at us. We waved bloody arms in return.

Then there were the couple of women who sat in the dirt with me dissecting Black Whip Snakes so we could examine their reproductive organs.

Were these people perverts? Well, one of the first two was the Curator of Primates at the San Francisco Zoo and her sister, a biology teacher. The fellow snake-sexer was a church minister, who, along with her companion, was also a wildlife carer. To the adults I guide, the topic of sex, if it arises, is part of life, a small part, but present and important at the same time.

And this is why sex is mentioned in my fauna books. I sometimes do this with humour. For example, in *Fauna of Kakadu and the Top End* (1993), I compared a goanna's hemipenes, with its little bumps and frills to the tickler condoms one could buy at a sex shop. I also included a chapter on sex in *Birds of Australia's Top End,* published in 2000 and 2005.

When the Northern Territory tourism industry discovered I was showing visitors, not just dead animals, but their private parts, many were horrified.

The fauna book was reviewed in the Northern Territory News as a 'sex manual'. More enlightened was a review of BOATE by the respected American *Birdwatcher's Digest*. Praising the book the author added that it contained 'the most detailed description of bird sex I have ever seen in a book of popular ornithology".

Some in Top End tourism did like the books; tour guides considered both, along with a plant book by Brock, as their 'bibles'. But I have the distinct impression that many still consider wildlife as sexless, as well as harmless. The Bambi syndrome still reigns!

**Savannah Guides is a Proud Member of WILDLIFE TOURISM AUSTRALIA - Thank you for this Article**

# ROCK THROUGH THE AGES!

**A Wander through our Geological Timeline with Phil Clucas**

Since I am in Kununurra at the moment, I will focus on the local rocks in the region of El Questro in the North East Kimberley. It all started about two billion years ago when a lump of material that had solidified and was floating on our molten planet, bumped into a group of other lumps (later to be known as Western Australia). That particular lump, is known as the Kimberley Craton and it is the relatively stable bedrock of the Kimberley. When it hit the other lumps, they both crushed and deformed on the joining edge, forming a mountain range, then as high as the Himalayas. Over tens of millions of years, the mountain range was eroded away and the resulting sand was deposited over an area greater than the Kimberley over a kilometre deep. This sand (particles between 0.063mm and 2mm in size) compressed and turned into sandstone, now known as the King Leopold Sandstone. About 1800 million years ago we sprung a leak and the molten rock below the Kimberley poured up through the ground and basaltic lava covered a large portion of the Kimberley, (a lot of it under water at that time), to a depth of about 300m to 500m. This is now known as the Carson Volcanics. The volcanoes stopped erupting, and weathering again, wore down mountains into sand of a slightly different mixture, forming another layer of sandstone about a kilometre deep, known as the Warton Sandstone. Some tens of millions of years later, the weathering process changed and a much finer silt was formed and sedimented down, compressed and formed the Elgee Siltstone, which is about 200m thick. This finer silt (particles between 0.063mm and 0.004mm) may have been formed by changes in rainfall, climate or possibly changes in the flow of water. Much later, water cut through this siltstone to create the parts of the Pentecost and Chamberlain Rivers. Conditions changed and sand rather than silt flowed down towards the sea. It sedimented out and compressed into sandstone known as the Pentecost Sandstone being about 800m thick. At the edge of El Questro two more sedimentary formations appeared. Mud, finer particles than the sand and silt, sedimented down to form the Wyndham Shale. This is formed from exceedingly small particles (<0.004mm) of clay and other minerals which breaks into thin layers. Nearby more sand particles formed into the Cockburn Sandstone, you may have heard of the Cockburn Ranges, now a very striking feature of the area.

All of this happened between 1900 and 1750 million years ago at a time when we were not joined to the rest of Australia. Another slow speed crash occurred as we joined Australia to the east and again pushed up a mountain range, the Durack Range. At the south margin, the long-buried King Leopold Sandstone rose to create the King Leopold Ranges. This sandstone also surfaced at Zebedee Springs and El Questro Gorge. The other layers on top of this sandstone were also forced to the surface from this collision. Volcanic activity again commenced but with different effect. Instead of an outpouring of lava, magma formed sills and dykes where it forced its way along joins in the layers or up through layers. This magma cooled faster than granite but slower than basalt and is known as the Hart Dolerite. To the west of El Questro a particular type of dyke, called a pipe, containing carbon impurities which were pressurised and heated was formed. The Argyle Diamond Mine is now working this pipe, producing 90% of Australia's diamonds and it is one of the few sources of pink diamonds in the world.

While other parts of Australia came and went with plate tectonics, the Kimberley remained fairly stable until about 600 million years ago when, as part of Gondwana, we were then sitting at the North Pole and in the grip of an ice age. Ice sheets ground the landscape flat. The effect of this is that in places where the layers were all uplifted, the glaciers cut off the top, leaving the layers side by side rather than on top of each other. Somewhere around 350 million years ago the northern parts of the Kimberley tore off and joined China and possibly Siberia. These enormous forces stretched Australia, creating a rift valley from Halls Creek to Darwin, resulting in the sea pouring in. Volcanic activity ensued and lava spread from the Kimberley as far as Mount Isa, known as the Antrim Volcanics. A small section of this rock is visible near El Questro but much of it was scraped away in this area by another ice age about 300 million years ago. More sandstone and some conglomerate (containing gravel of particle sizes above 2mm) were deposited in the area we now call the Bungle Bungles (Purnululu National Park). Further south in the Kimberley, coral reefs formed where there is now land and the resulting limestone can be seen at Windjana Gorge and Geikie Gorge (Danggu). Over millions of years, wind and water have cut into the landscape creating the features we see today.

As you can see, our rocks have come from various events over thousands of millions of years. Australia is the oldest, flattest, driest continent and although we have moved around the globe (and are still "floating" north at a rate of ~70mm per year), being in the centre of a tectonic plate, we are very stable. Having said that, there was a 6.8 magnitude earthquake in the Banda Sea on 6/5/20 which apparently shook Kununurra, but both Ange and I slept through it. The sea level has risen and fallen, land has been pushed up and worn down. A large portion of our continent is covered by soils formed over millions of years and weathered over the last 200 million years. Our world is constantly changing.

# DOMESTIC CAT RESEARCH

**Domestic cats are killing an estimated 230 million native Australian birds, reptiles and mammals every year!**

This is according to new research published in the journal Wildlife Research and reported in The Guardian that quantifies the pet's national toll on native animals for the first time. Researchers said owners of Australia's 3.7 million domestic cats needed to make sure their pets were indoors or contained to reduce their impact on native species.

There are about 2.1 million feral cats in Australia, with numbers almost tripling during wet periods. Each feral cat kills an average 576 native birds, mammals and reptiles per year.

Pet cats kill an average of 110 native animals every year – 40 reptiles, 38 birds and 32 mammals making a total of 66.9 million native mammals, 79.7 million native birds and 82.9 million native reptiles every year. Frog and insect numbers are unknown. All cats will prefer a mammal such as a feathertail glider if they can find one and learn to stalk around bird feeders. Blue-tongue lizards and possums were also known prey items. Cats that roamed at night tended to kill more mammals, while daytime roaming cats killed more reptiles and birds.

The RSPCA advises that cats are healthier and longer lived if kept at home and away from the risk of traffic accidents, insect and snake bites and fights with other cats and dogs. They do not need to roam to be happy.

DutchNews.nl reported in 2019 that people who allow their cats to roam outdoors are actually breaking European rules on nature protection. A paper by environmental law professors in the Journal of Environmental Law argues that the domestic cat (Felix Catus) is posing a serious threat to some 370 species in the Netherlands. Some 140 million animals, from birds to bats, reptiles and fish, are thought to be killed annually by cats in the Netherlands and half the killings are carried out by cats with owners. The Netherlands is home to between two and three million cats and some 10,000 feral cats and strays.

The Australian Geographic in 2013 reported that a Smithsonian Institution study showed that free-ranging pet and feral cats in the USA kill perhaps 2.4 billion birds and 12.3 billion mammals each year, most of which are natives, rather than introduced species.

## NATURE NOTES # 6

### Pseudo Fossil: Dendrites

**Dendrites are mineral growths that commonly are mistaken for plant fossils, particularly ferns.**

**They are usually black with fine, complex branches. Dendrites form when minerals grow along a crack or joint surface in the rock. The minute mineral crystals grow end to end, forming delicately branched patterns. Common minerals that form dendrites are iron and manganese oxides.**

**Dendrites are usually more complex and less regular in pattern than plant fossils and they lack vein structures found in leaves. They also commonly occur over differently angled fracture planes in the rock, rather than the flat parallel strata normally associated with fossil fern fronds.**

**Trish Sloan**

# FOSSILISATION and PETRIFICATION … What is the Difference?

**Thanks to Trish Sloan**

A fossil is any evidence of life that has been preserved in rock, usually in traces of plant or animal life (eg: dinosaur bones, footprints, forest floor, skin impressions).

Petrifaction literally means "turned to stone", where the original material is replaced with mineral while preserving the original structure. Animals can be petrified, but their lack of cellulose makes it less likely than for plants. Petrified wood is where the wood has been replaced with minerals.

The process of fossilisation, or preserving evidence of ancient life, can occur in a number of different ways. Petrification is one of these.

Petrification is a two-stage process. Firstly, the pore spaces within the future fossil are filled in with sediments, which are carried by groundwater. This process is called permineralisation. Once this has occurred the original material of the future fossil is replaced by water-carried sediment grains as well; this process is called replacement. Both are necessary for a fossil to be called petrified, and wood is quite commonly fossilised in this way: the fluid and nutrient pathways within the tree fill with sediment first, then the woody material itself is replaced.

Wood (and other fossils) can also be preserved through a process called carbonisation, which is the process that forms coal: wood is buried, which puts it under increased pressure and temperature from the weight of the sediment above it. This process "cooks" and condenses the wood, forming coal and other hydrocarbons (eg: oil and gas).

When the original fossil material is destroyed before it can be preserved, but an impression or natural mould of the shape of the fossil is preserved, this is known as a trace fossil. If a natural mould is filled in with sediment then a cast is formed. Casts do no preserve any internal textures of fossils.

Fossils can be preserved in other ways too, although those outlined above are the most common. In Latin, petrified means 'turned to stone', while 'fossil' just means 'dug up'. Fossils are simply the evidence of past life. This can be the remains of the body itself (body fossils), like our dinosaur bones, or traces of life, such as footprints, tracks, burrows and coprolites (trace fossils). This means our 12-metre-long petrified wood branch is still a type of fossil as petrified wood is one type of fossil.

In the permineralisation process the organic material of the bone or wood is replaced with minerals, most commonly silica, and the pores of the object also get filled, which is why fossils are so heavy!

# THE FRUSTRATION OF BIRD IDENTIFICATION!

**By Ange Clucas**

Maybe your COVID-19 hibernation has given you an opportunity to brush up on your birding skills or even get into twitching for the first time. You may be feeling frustration because the moment you try to identify a bird, it uses its wings and flies, usually into a vegetated area and annoyingly disappears, just as you get your binoculars poised.

If you have ever joined a Savannah Guides Twitchathon Team you may have heard mutterings about the GISS and this is something that can be useful in establishing where your identification process should begin.

Essentially GISS refers to the bird's "General Impression of Shape and Size". Ask yourself … How big is the bird? Is it small like a finch, medium -sized like a dove or a large bird, like a raptor? Think of the shape of the bird as a silhouette. For example the GISS of a Kingfisher is

completely different to that of a Parrot, even though they may be similar in size.

The bill of the bird is another good place to look for clues. What is the shape and colour? Would this bill be designed to reach deep into a flower for nectar or to peck at grass seeds?

Legs can be diagnostic, especially the length and colour. Long, strong legs suggest a terrestrial lifestyle, possibly a wader?

Plumage is obviously important, so ask yourself what colours and patterns can I see? This can be misleading though because males and females often differ considerably and many birds only exhibit eye catching colours during breeding time.

When you refer to your bird guide, two important factors to remember are distribution and habitat, as you will probably not be looking at a mangrove habitat species if you are standing out amongst red sandhills and spinifex. It also pays to double check that your bird's range includes your area, before jumping to a conclusion.

Some birds have specific habits that can be very handy for identification. For example, the way the tail moves or the way the wings flick.

Last but not least is the call. Following a call may lead to an interesting sighting that you might otherwise miss and sometimes learning the language a bird uses can give a more accurate identification than sight alone. Birding really is 50% eyes and 50% ears.

So the principle of using the GISS to focus in on the bird's features helps you to narrow down which section of your bird guide to refer to and study and helps you add to your life list of birds observed. Remember to have fun and practice makes perfect!

**Congratulations to our good colleague John Nethery FAusIMM for his AusIMM Service Award for services to geotourism in Far North Queensland . He will be presented with this well deserved Award at the annual AusIMM Congress to be held in Queenstown, NZ in July 2020 https://lnkd.in/f6uHB8n**

**John gave a Presentation at our Chillagoe Field School in April 2013.**

**With Thanks to Friend of Savanah Guides Angus Robinson,**

**Coordinator, National Geotourism Strategy,**

**Australian Geoscience Council Inc**

# WEDDING BELLS RING FOR TWO SPECIAL COUPLES!

**Linda Allen and Alex Mudryk**

**22 February 2020**

On 22 February 2020 an excited crowd gathered at Sutton's Beach Pavilion to witness the marriage of two Savannah Guides, Linda Allen and Alex Mudryk. After lots of wet weather in the week preceding, the weather gods sent some sunshine and breaks of blue sky at 2.22pm . A strong wind tousled Linda's blonde curls as she walked along the beach on the arm of her son, Logan.

The groom was grinning from ear to ear as his beautiful bride joined him in the Pavilion. A very special touch was that the celebrant, Dennis, had been a guest on the Outback Aussie Tours trip when Alex proposed to Linda on Sunset Island in the Gulf of Carpentaria in 2019. Their wedding rings also reflect their new lifestyle as Savannah Guides, having been especially made to feature spectacular pieces of opal, which were sourced from the Winton area.

Although not your traditional wedding, the day was filled with so much love, laughter and fun, as the guests embraced the "Bush, Biker, Beach" theme and danced the night away creating a thoroughly happy, joyous and memorable occasion. There were five Savannah Guides in attendance and two Friends of Savannah Guides, as well as several other Outback Aussie Tours work mates. Congratulations Mr & Mrs Mudryk - we wish you both every happiness!

**Words by Ange Clucas**

**Michelle Whitehouse and Simon Ling**

**07 December 2019**

It's hard to believe we've been married for six months already! Gee, time flies! Looking back we still couldn't be happier with how the day turned out. All we wanted was an event to match our class … or lack thereof. Just a simple day full of good people, good food and fun! Mission accomplished!

The Port Fairy Yacht Club was our venue. But don't get too excited, it's nothing like the Royal Brisbane Yacht Squadron, more like a community bowls club…. with boats! Being able to support a volunteer-run organisation was really important to us, and was one of the main reasons for our choice. Plus, it was right on the beautiful Moyne River.

80 guests from around the country (and two from the US) joined us to celebrate with a few old friends playing major roles. Kim Hill, the former Carnarvon Gorge Wilderness Lodge Manager, was our Celebrant. Maggie, from Tavistock Catering, who we know from her catering work for school and university groups at Carnarvon Gorge, put on an amazing spread. She worked wonders with the whole lamb donated by my sheep farming Aunty and Uncle, and sourced other local produce wherever possible.

My Mum made the decorations, my Aunty arranged the flowers, which were picked from her own garden. We borrowed bits and bobs from another recent wedding, and many others helped set up and pack down before and after the event. So the "event" became much more than a wedding. The catch-ups, and eating of leftovers, went on for days!

The one thing that we really splurged on was the Jumping Castle! Not the sort of thing one would normally expect at a wedding, but we weren't your average bride and groom. Oh, and it was a Boxing Ring Jumping Castle, which appealed to kids and big kids alike, and was the source of many laughs throughout the afternoon, especially during our "first dance" as husband and wife (Punch & Judy).

**Words by Michelle Whitehouse**

# WAVING THE WADERS GOODBYE

## A Course Review by Ivor Davies

**Just before ... and I do mean JUST before (18-22 March 2020) COVID-19 Restrictions were introduced, I managed to sneak in a Four Day Shorebirds Identification Course at Broome Bird Observatory ...**

Like many of us, shorebirds have been a tricky bunch of mainly little grey birds in the distance, to identify accurately for me.

So off to Birdlife Australia's Broome Bird Observatory (BBO), for a four-day Shorebird Identification Course which neatly coincides with our shorebird northerly migration from Australia to China and other parts each March and April.

The Course was well structured. After the introductions, sustenance and settling-in it was a plunge into the deep end, Migration Watch. This consisted of sitting on a shore-side bank scanning for distant grey birds on grey mud flats, thousands of birds like camouflaged specks. "Eek" was the general feeling though we kept it to ourselves at this point.

Early the next morning it was back to the shore, gentler this time as the program unfolded. Bigger birds, more easily recognised and up reasonably close first. Nice. Oystercatchers, Godwits, and Stilts. Phew!

Pied Oystercatcher

Bar-tailed Godwit just starting breeding plumage

As the heat and humidity moved from hot to very hot we adjourned to an air-conditioned room for education sessions with lunch in between.

Shorebirds are a group of wading birds that can be found feeding on swamps, tidal mudflats, beaches and open country. For many people, shorebirds are just those brown birds feeding a long way out on the mud but they are actually a remarkably diverse collection of birds including stilts, sandpipers, snipe, curlews, godwits, plovers and oystercatchers. Some shorebirds are fairly drab in plumage, especially when they are visiting Australia in their non-breeding season, but when they migrate to their Arctic nesting grounds, they develop a vibrant flush of bright colours to attract a mate. We have 37 types of shorebirds that annually migrate to Australia on some of the most lengthy and arduous journeys in the animal kingdom, but there are also 18 shorebirds that call Australia home all year round.

There's a great download at Birdlife Australia that explains the feeding and migratory process nicely.
https://birdlife.org.au/documents/SB-Wing-Thing.pdf

So, we got the in-depth version which was great. In summary:

How to identify shorebirds by size, behaviour, bill size, plumage (breeding and non-breeding), leg length and colour and calls (if you are good enough).

Plover group feed by sight therefore they have short, straight bills. They are busy feeders with stop start actions.

Sandpiper group feed by touch with various shaped mostly longer bills and continuous probing.

Easy! Well not so when you are out there in front of the scope, but this was a very good start.

Then came the fine detail on each of the harder to identify species, comparing two of the easily confused species side by side. Lesser and Great Sand Plover, Whiskered and White-winged Black Terns in breeding and non-breeding plumage are just two examples.

Greater Sand Plover

Lesser Sand Plover

The Course provided an excellent Field Booklet too!

There were excellent Presentations from the Wardens at BBO – Why Roebuck Bay? The special importance of the Shore Ecology, Citizen Science, Birding with Purpose, Shorebird Ecology and Shorebird migration with the latest and best scientific data, stories and images of wader watching and counting in China. At the end of each day a bird sighting log was updated

These are just the birds we observed in two hours of watching for four days. Shorebirds migrate anytime of the day and through the night.

Greater Sand Plover 254, Far Eastern Curlew 84, Great Knot 877, Common Greenshank 9. Thousands of birds migrate from New Zealand via Australia, Southern and Eastern Australia as well as Western Australia with Broome's Roebuck Bay being of significant importance.

Farewell to this year's waders. A great experience!

# SOCIAL MEDIA SNAPSHOT

**The past few months has seen a major ramp up in the approach of Savannah Guides Social Media. A dedicated and talented Social Media Sub-Committee has been established and we thank Hirani Kydd, Michelle Whitehouse and Bram Collins for the huge amount of time they have volunteered to make this possible.**

The Sub-Committee has looked hard at what people want to see, and the best approach for showing them that. They then looked at the core values of Savannah Guides and how we wanted the world to see us. The result? Regular Posts with a blend of content from all our Enterprises and Members.

They have discovered we need to be pretty smart with our #hashtags to get Posts noticed by the wider community, and as a result they have begun to play the Facebook and Instagram Algorithm game!

You can help Savannah Guides by "Liking" and "Sharing" our Posts, as well as "Tagging" Savannah Guides in any relevant content you might Post!

**For Instagram:**
@savannahguides
#savannahguides
#protectorsandinterpreters
#savannahguidesshoutout

**For Facebook:**
@Savannah Guides Limited
@savannahguides

And don't forget you can also Tag any one of our 14 fabulous Savannah Guides Enterprises!

Over the next few months we will be watching our results with a renewed interest. If you have any feedback, feel free to share as we are always looking to improve and learn.

# THE BOARD AND MANAGEMENT OF SAVANNAH GUIDES LIMITED

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# WORLD NAKED GARDENING DAY!

**Savannah Guide Wil Kemp and his partner, Mel Meaglia, go viral as this North Queensland couple embrace World Naked Gardening Day!**

**Courtesy of ABC Far North (12 May 20) by Sharnie Kim and Adam Stephen - Edited**

Wil and Mel have their friends to thank for getting them into the event and pushing them to up the ante every year.

Held on the first Saturday of May since 2005, the event encourages people to tend to their garden unclothed "as nature intended".

Wil and Mel wore nothing but hats and shoes in a series of cheeky photos in their Cairns backyard using cleverly placed props, including a large pet python!

Their photos have been shared more than 149,000 times. Wil said it was "a little bit of a fluke". "There was no way we expected it," he said. "It was something that was supposed to be shared amongst family and friends on Facebook.

Wil said he was stunned to wake up to a text message from a friend the morning after posting the photos saying they were taking off.

Mel wasn't overly excited with the news I'd accidentally made it go public. I said, 'Look sweetie, the internet has it now. It's alive, it's a monster, let it grow'."

The couple has been inundated with Friend Requests from a legion of new fans and thousands of appreciative messages, including some from people in countries hit hard by COVID-19. "A lot of people have said thank you so much for the laugh. This was so good to wake up and see in our Newsfeed instead of how many people have died. Just really brightened our day," he said.

"We've had a lot of people say we can't wait to see what you guys do next year."

## BIRDSVILLE

1. Birdsville was originally called 'Diamantina Crossing' until officially surveyed in 1885.

2. Burke & Wills set up 'Camp 76' in this region on their return from their disastrous transcontinental trek in 1860.

3. Soon after, pastoral occupation began in the area, and a depot of sorts was set up by merchant Mathew Flynn to service the area and which also became a customs point for stock and supplies entering South Australia.

4. William Blair first built the now iconic, Birdsville Hotel in 1884. A destination in its own right, the pub has endured floods, fires and even cyclones to stand as a symbol of the spirit and character of the outback.

5. 'Big Red' is the name given to a particular sand dune that marks the symbolic edge of the Simpson Desert. Situated approximately 35kms west of Birdsville and on private property, Big Red (original name Nappanerica) stands well over 30 metres tall and is part of a series of around 1,140 parallel sand dunes stretching across the desert. The dune is red from rusting iron particles in the sand.

Information taken from https://birdsvillehotel.com.au/

**Thank you Linda Mudryk**

B I T S & P I E C E S

**Have a look at this link from Birdlife Australia's Website for some great "Birding at Home" Tips and Activities!**

https://www.networkbirdlife.org/birding-at-home

https://koala.net/webcams

https://taronga.org.au/taronga-tv

**The WOW app is ready to use!**
www.app.wildorchidwatch.org

## Research News:

**The first issue of the Online, Open Access, Peer Reviewed, free *International Journal of Tour Guiding Research* is live and available at:**

https://arrow.tudublin.ie/ijtgr/

**You can download and read any or all of the articles in this first issue and all subsequent issues.**

https://www.naidoc.org.au/news/naidoc-week-2020-postponed

**THE SECRET TO CREATIVITY by JOHN CLEESE**

**A Link Worth Looking At ...**

https://www.youtube.com/watch?v=Pb5oIIPO62g

**THE GREAT POLO SHIRT MAIL OUT OF 2020!**

## SAVANNAH GUIDES ZOOM GET TOGETHERS DURING LOCKDOWN!


**Useful Links for Information on Termites ...**

http://www.treehugger.com/natural-sciences/nature-blows-my-mind-miracles-termite-mounds.html

http://insects.about.com/od/termites/a/10-Cool-Facts-About-Termites.htm

https://www.ncbi.nlm.nih.gov/pubmed/25341102

http://blog.londolozi.com/2015/05/discover-how-termites-are-influencing-modern-design/

**Watch this informative Video "Snakes of the Savannahlander" by our very own Savannah Guide Wil Kemp!**

https://www.facebook.com/Savannahlander/videos/640028790191854/?sfnsn=mo&d=n&vh=e

## RESOURCES WANTED

We'd like to build the guiding content resources on the Savannah Guides Website to help support our Members. Please let us know if you have any documents relating to flora, fauna or landscape topics, appropriate cultural information, local heritage or other commentary content.

Please send us any documents, website links or organisation contacts to help build this important library. You'll find our current documents at:

http://savannah-guides.com.au/members/

Members can contact Sam at:

sam@savannah-guides.com.au if you have forgotten the access password!

# PUZZLE and TRIVIA ANSWERS!

## No Cheating!

### Tom's Bird Trivia (Part One)

1. Rufous Shrike Thrush (formerly Little Shrike Thrush)
2. Cisticola, Babbler, Bronzewing, Wedge bill
3. Spotted Nightjar
4. Norwegian Blue
5. Black-tailed Godwit, Bar-tailed Godwit, Asian Dowitcher
6. Gular Pouch or Gular Sac
7. Red-billed Hornbill
8. C. Brolga
9. Magpie – for the Collingwood AFL Team also called the 'Pies'
10. Red, Black and Gold (Yellow)
11. Goshawk
12. White-winged Chough, Metallic Starling, Oystercatcher, Spangled Drongo
13. Hooded Robin
14. Tasmanian Native Hen
15. Radjah Shelduck (Burdekin Duck)
16. Neville Cayley
17. Two toes forward and two toes back
18. Sulphur –crested Cockatoo
19. Albatross
20. Nankeen Night Heron
21. Rufous Whistler
22. Hornbill Friarbird
23. At Dawn and / or Dusk
24. Australian White Ibis
25. They are actually ankles. The knees are further up under the feathers!

### Savannah Guides Uniform Item Price List

| | |
|---|---|
| Hat Band | $ 11 |
| Savannah Guide Patch (Large or Small) | $ 15 |
| Savannah Guide Pin | $ 15 |
| Name Badge | $ 25 |

### Savannah Guides Membership Price List

| | |
|---|---|
| Friend of Savannah Guides (Individual Employed by SGL Enterprise) | $ 50 |
| Friend of Savannah Guides (Individual) | $ 90 |
| Friend of Savannah Guides (Enterprise) | $215 |
| Savannah Guide | $105 |
| Senior Savannah Guide | $205 |
| Retired Savannah Guide | $ 80 |
| Special Member | $105 |
| Enterprise Membership | $500 |

### EcoGuide Price List

| | |
|---|---|
| Application | $130 |
| Annual Membership (Discounts apply for many already accredited Guides) | $ 99 |
| EcoGuide Pin-On Badge | $ 15 |

### Plants of the Northern Savannah Crossword Puzzle

**DOWN**

1. Melaleuca
3. Leichhardt
8. Sandalwood
10. Eucalyptus
13. Acacia
14. Spinifex
15. Corymbia

**ACROSS**

2. Calotrope
4. Beefwood
5. Fig
6. Conkerberry
7. Bauhinia
9. Kapok
11. Kurrajong
12. Pandanus
16. Mistletoe

### NATURE NOTES # 7

**Sclerophyll comes from two Greek words: *skleros* meaning hard and *phullon* meaning leaf.**

**This plant group includes melaleucas, acacias, grevilleas and banksias.**

**Eucalypts of about 40 species cover 64% of Cape York Peninsula.**

**18 species of melaleucas cover about 14% of the area with Eucalyptus *tetrodonta* and Melaleuca *viridiflora* dominating.**

**Ivor**

# THE ONGOING WORK OF SAVANNAH GUIDES IS GENEROUSLY SUPPORTED BY THE FOLLOWING CORPORATE PARTNERS

Tourism and Events Queensland

Queensland Government

eco TOURISM AUSTRALIA

**The Department of Environment and Science**

**Queensland Parks and Wildlife Service**

WET TROPICS MANAGEMENT AUTHORITY

NICOLE MEERTENS
CHARTERED ACCOUNTANT & BUSINESS ADVISOR

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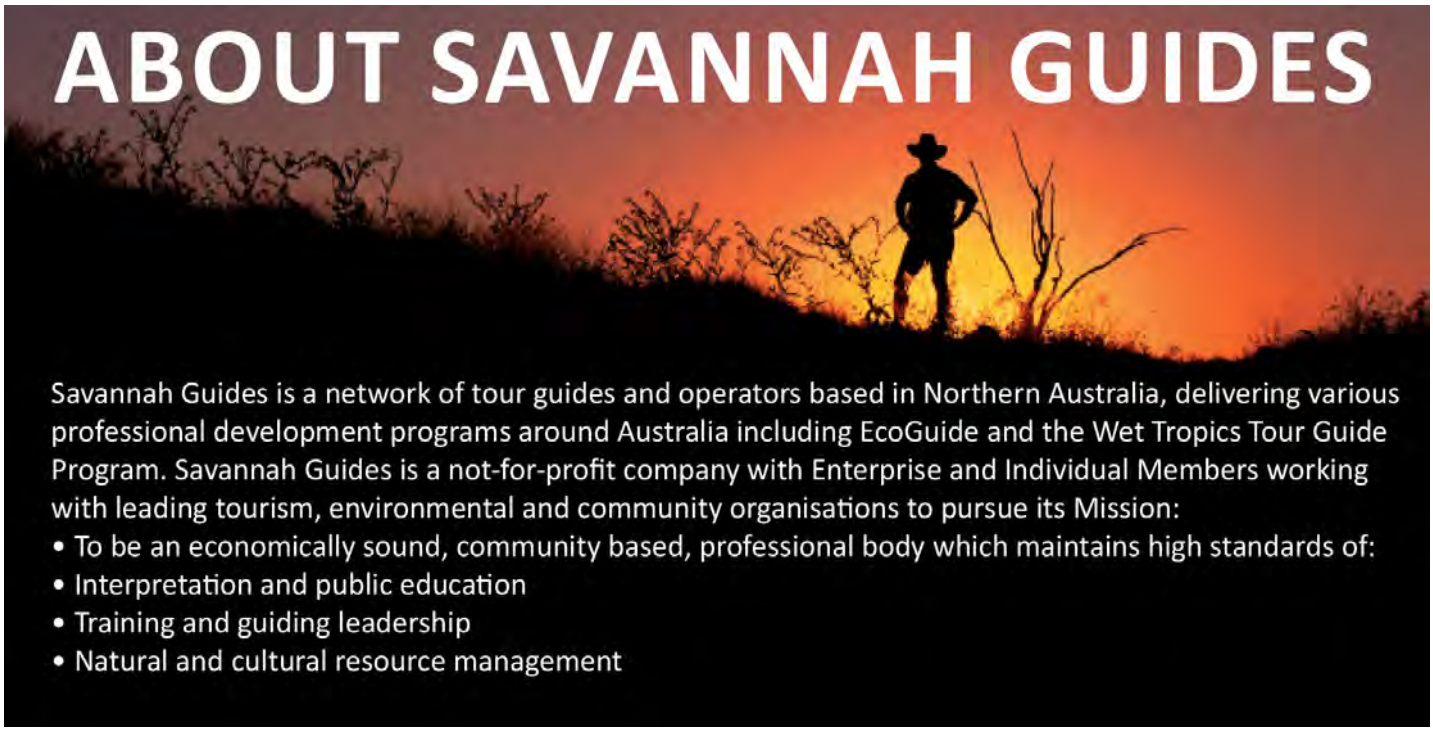


Savannah Guides is a network of tour guides and operators based in Northern Australia, delivering various professional development programs around Australia including EcoGuide and the Wet Tropics Tour Guide Program. Savannah Guides is a not-for-profit company with Enterprise and Individual Members working with leading tourism, environmental and community organisations to pursue its Mission:

- To be an economically sound, community based, professional body which maintains high standards of:
- Interpretation and public education
- Training and guiding leadership
- Natural and cultural resource management

**www.savannah-guides.com.au**