



Toodyay Naturalists' Club Inc. THE TNC NEWSLETTER

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*The Toodyay Naturalists' Club Inc.
is indebted to the Wheatbelt NRM
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The TNC Newsletter*

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wheatbelt
natural resource
management

PRESIDENT'S REPORT

FIRST, sorry Sacha and I could not attend my final meeting as president as we had a sick baby.

This has been a great year for the Toodyay Nats. We have had some great talks such as Amy Griffiths talk on reptiles, Greg Warburton's talks on his fantastic walks - one through the Kimberley's with donkeys and his recent trek from Buckland to Bungalbin.

We had Pam Masters speaking on her experiences living in the Kimberleys. Over the year we also had some great excursions and campouts. It was great to learn about the geology of the Wongamine reserve from Doug Blandford as well as a fantastic weekend in the Talbot area.

The Club also had 2 annual litter pick up days which were great successes. In addition to regular meetings and excursions the club also hosted a weekend black cockatoo workshop which was a great success.

I would like to thank all the speakers, excursion leaders and organisers. Without their input we wouldn't have had such a great year. I want to thank our members for their attendance and input and enriching each meeting.

I thank Wayne for his offer of continuing as secretary following his previous eight years and I thank outgoing treasurer, Beth Frayne, for her past four years of contribution.

I would like to thank Desrae for guiding and assisting me as vice president. Her help has been invaluable.

Lastly, I wish to have recorded the wonderful, tireless support from my husband, Sacha, and my parents, Robyn and Brian Foley, to both the Club and me.

I leave you in great hands with the next President and committee. Here's to another great year.

Michalíe Ruoss.



Left: The Dawn Atwell Reserve (with its new signage)

Photo by Greg Warburton

COVER PHOTO: Lyn Phillips is of a Basket fungi, *Colus pusillus* (Berk.) Reichert (*Syn. Clathrus pusillus*), from the fungi family *Phallaceae*. This delightfully colourful fungi (approx. 3cm high).

[Further reading about Miles Berkeley, the author of the fungi's name, can be found in 'Did you know', Page 10.

AMY WILD ADVENTURES

by Amy Griffiths

GROWING UP, all I knew was that I wanted to work with animals, preferably wild ones. If I wasn't drawing or reading about them, I was in the bush actively looking for them. After completing a biology degree with first class Honours in 2010, I spent a couple of years in fauna consulting... Now I'd always had a slight preference for reptiles over other animal groups, but during my time running about the desert with other avid herpetologists, learning about and trapping many of the fantastically diverse Pilbara reptilian species, that 'slight preference' turned into a full-blown passion! I couldn't stop learning, 'herping' and photographing them at every opportunity.

However as time ticked by, a thirst for wilder adventure saw me spend my earnings on a large 4wd and take it on a solo expedition around and through Australia, between 2010 and 2011. Eventually I had to come home though, and a period of quietness in the mining industry pressed me to try other wildlife-related work (I couldn't afford to be too fussy), including several roles as a research assistant, lab demonstrator and field supervisor for different universities. At this point my quest for a meaningful wildlife or reptile-oriented career had truly begun; but it was not to be easy.

Cuts to science work saw me explore my more creative side, developing a website for my art and photography amywild.com.au and taking up casual jobs in face painting for Rosie O, artist assisting (painting for Robert Boris Turpin), as well as wildlife tour guiding at Karakamia Sanctuary for the Australian Wildlife Conservancy (AWC). These jobs reminded me of my passion for people, performance and ultimately, education. Further career research and contemplation eventually led me to start producing mini wildlife 'documentaries' on YouTube: Amy Wild Adventures. Needless to say these seem to mysteriously centre largely on reptiles. I began a PhD in 2014 on the effects of urbanisation on reptiles, but a back injury which prevented extended sitting, plus a reevaluation of my mental capacity to sit at a quiet desk all day, saw me give it up to pursue a more physically and socially active career.

I had decided that being a wildlife presenter on screen would be the most fulfilling career I could imagine. Nevertheless, a recognition that this would be a long and uncertain road to success encouraged me to take the opportunity when it presented itself: taking the reins of a little business, running mobile reptile shows under my own banner, "Amy Wild Adventures" and venomous snake relocation courses through Animal Plant Mineral (APM), which is run by the incredibly knowledgeable and experienced Dr Mitchell Ladyman.

As well as continuing with my YouTube channel and going on all manner of wildlife adventures, I also remain a face painter, artist assistant, wildlife tour guide and the local snake relocater. As hectic as it is, I wouldn't have life any other way. As long as the reptiles are with me!



Left: Jarrah Coutts, Amy Griffiths, Ashley & Naomi Kingston and Kalicia Warmdean, with Amy's other friends, at her reptile presentation in June 2015.

Photo by Beth Frayne

HOW OLD IS 'OLD'?

by Sarah Dudley

HOW OFTEN do you travel along the Toodyay - Goomalling Road?

Do you appreciate the current road works or do you see them as yet one more daily hazard to be negotiated? Could the workers, unknowingly, be digging deep into ancient history?

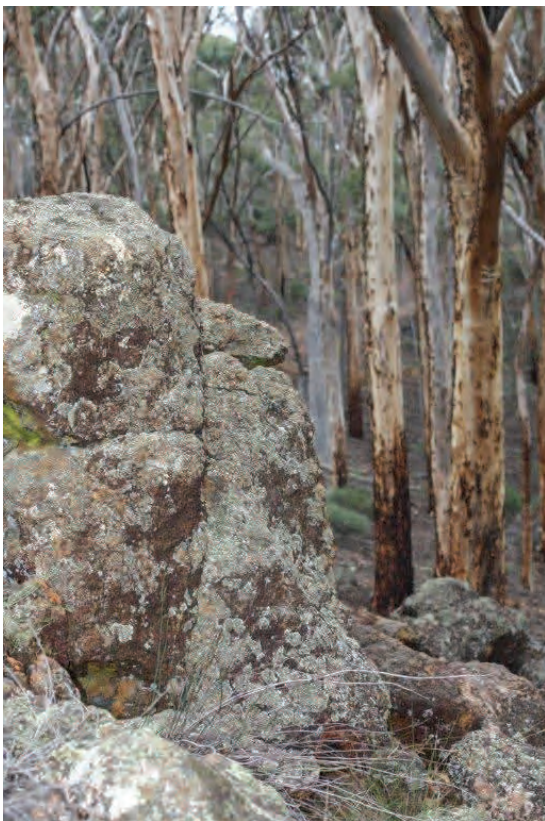
Try stopping at the intersection of the Bejoording Road – and make time to wonder what this all looked like long, long before humans made their presence felt.....

Tucked away to the north of this junction is Wongamine Reserve, a biodiverse patch of remnant vegetation and fauna, sandwiched between the farmlands on Bejoording Road and Forrest Road. This was the area selected by the Toodyay Naturalists Club on an unseasonably bitterly cold May day, with pre-winter icy winds (5°C) sweeping in from the Antarctic, to unearth some of the geological history of such a valuable and remarkable part of Western Australia: our current Wongamine ecosystem.

What does 'once upon a time.....' really mean? And on further reflection,.... 'how old is old'?

How eminently fitting that the leader of the 1974 Australian Antarctic Expedition, Doug Blandford, should be our guest on this chilly day! From this wonderfully intrepid, entertaining and knowledgeable Toodyay resident, a specialist consultant in environmental earth sciences, we learned that 2.5 billion years ago, this part of the country was in fact originally a much higher granite-based surface, associated with sedimentation on a stable shelf. The sediments on this stable shelf were, in turn subjected to rock movements, including shearing and folding. This whole landform, which reaches up to 20km wide in some areas, became known as the Jimperding Metamorphic Belt.

Millions more years passed....during which the climate also changed. The Laterite we are familiar with today was formed by the alteration and leaching of minerals in the upper surface of the granites, due to the hot and humid climate prevalent at that period. This was Rainforest time. Remnant patches of this laterite can still be seen along the top of the Darling Scarp immediately east of the Swan Coastal Plain.



The contours of the land continued to be altered, courtesy of the development of drainage systems and their associated erosion patterns, and minor land movements, as they still do today. Valleys were formed into which the erosion debris, with its weathered iron, accumulated. These iron-rich sediments became re-cemented to form hard, heavy, erosion-resistant, Ferricrete, dominated by iron oxides. The climate was by this time no longer hot and humid but increasingly arid. The prominent ridgelines and hill crests in the Reserve are made from this erosion-resistant Ferricrete. Pea gravel (Pisolite), quartz and erosion debris are common ingredients, all embedded in the varying hues of iron oxide cement. The vegetation in the Reserve is well adapted to the increasing aridity of this warming, inter-glacial period, which will apparently last approximately 120,000 years. Ferricrete is familiar to us locals and is known affectionately as "coffee rock".

Although chemical weathering ultimately decimated both the original granite outcrops and the sedimentary rocks, weathering, erosion, and subsequent deposition have produced the landforms at Wongamine. Extensive sand sheets in the area are testament to this erosion/deposition sequence. Wongamine Reserve is an ancient valley floor.

Above: Ferricrete rocks forming the ridgelines in the Wongamine Nature Reserve.

Photo: Jacquie Lucas

HOW OLD IS 'OLD'? (cont.)

by Sarah Dudley



Thanks to a few sharp eyes, the group managed to locate a football-sized sedimentary rock, folds and all, which had been formed many billions of years beforehand, as a part of the Jimperding Metamorphic Belt.

We were also aware of sand deposits close-by - additional evidence of the gradual erosion of granite and sedimentary deposits over millions of years.

Doug's love of what he does as a hands-on geologist, coupled with his excellent stream of questions, kept all ten of us on our toes and enthralled - despite the ever-present need to thaw! Just to give you a mini-taste of his wide-ranging vibrancy, can you answer the following questions?

Can you explain why so many trees taller than 7 metres lack understorey and remain bare at their base? (Hint - the answer relates to the terminal velocity of the falling raindrops!)

What is the effect on the soil below of a thin skin formed by an algal mat growing on the soil's surface? (Hint: macintosh?)

How many organic dams can you see on your property and how do they affect the run-off? (Hint: Look carefully and count!)

Using pebbles as evidence, can you distinguish between a goanna burrow and a rabbit burrow? (Hint: Unidirectional?)

What does a termite mound look after having been invaded by a hungry Echidna? (Hint: See below!)

*Photo above: Sedimentary rock with folds
Photo: Desraé Clarke*

*Photo at right:
Doug Blandford (left) and Brian Foley (Right)
at a termite mound, raided by an echidna. Take
a close look at how resourceful the echidna that
attacked this mound would have had to be!*

Photo: Jacque Lucas



Unsure of the answers? Come to the next Nats Club meeting on the third Saturday of the month and we will clarify for you... Meanwhile many thanks to Doug for a fascinating and enlightening day. We look forward to a further inspirational study of Wongamine in your company when the sun decides to shine again.

PS And how old is 'old'?' From a Wongamine perspective - at least 2.5 billion years!

WA DAY LONG WEEKEND EXCURSION TO TALBOT

by Wayne Clarke

THE WESTERN AUSTRALIA DAY long weekend excursion for the Club was to Talbot Brook, in the Shire of York. It included a visit to the Boggs Family property on Saturday, and a tour of a number of the Talbot Brook Land Management Association (TBLMA) revegetation sites - led by Colin Cable - on Sunday. Although few members were able to attend the weekend (or the entire weekend), those that did were treated to some wonderful hospitality.

The Talbot Brook Hall was booked for accommodation. There were excellent facilities at the hall with a well organised kitchen and a gas BBQ. The Clarke's opted to sleep in the hall along with a myriad of mice.

The corrugated iron hall was the original Talbot Brook School from 1911 to 1921 and 1925 to 1944 when it closed due to lack of student numbers. Students then caught a bus into York.

At Rob and Eggy Boggs' property sensor cameras were set up. Although nothing (apart from two Club members) was recorded, Rob and Eggy were given a good lesson on how to set their cameras up (and how to switch them on - even those who use the cameras regularly can be caught). Jacquie Lucas drove over for the day and provided them with an inventory of some of their flora.

Saturday night Eggy and Despina (Toodyay Friends of the River) arranged a feast, and Rob kept a great fire going throughout the evening. Their resident Brush-tailed Possum was not concerned with the extra company.



Left: A brush-tailed possum enjoys an evening meal, just off the Boggs' verandah.

Photo: Wayne Clarke

Sunday saw the arrival of more members of the club, and an early start with Colin Cable. Colin is passionate about caring for the land, and organised a tour of the TBLMA sites, and some of the River Conservation Society projects.

Highlights were a visit to the Talbot Reserve, a 15 ha former Shire of York gravel pit now vested with the TBLMA. This was deep ripped to 60-80cm in 2008, and over 10,000 trees were planted. These

included wandoo (*Eucalyptus wandoo*) and inland wandoo (*E. capillosa* - found in the Helena Aurora ranges). The trees were looking very healthy.

Next stop was Sue and Alistair Trinidad's property, where over 100ha has been fenced and revegetated 2010-2011 to counter the effects of salinity and acid sulphate soils. Fencing of the Boyanning Creek has taken a third of their farming area. Riffles have been installed as in winter the creek can become a raging torrent. Rolls of hay and sheep manure have been added to counter the acidity.

A visit to the Edward's property was next, where since 2009 over 30,000 trees (along with sedges) have been planted and fenced. It was noted that the weeds were not sprayed prior to planting, as they kept the moisture in the soil and provided a cover to stop erosion.

Left: Vicki gives Desraé some hints about the Dell Reserve

Photo: Wayne Clarke

The Dell Reserve (named in honour of our co-Patron, John Dell) was our next stop. This 36.6ha reserve is vested with the Vale of York Reserves Committee with the Boggs Family as custodians. It

has a range of habitats from laterite breakaways to open groundwater soaks and therefore a variety of vegetation including paperbark thickets and sedges, with banksia, jarrah and wandoo woodlands and

WA DAY LONG WEEKEND EXCURSION cont...

by Wayne Clarke

sandplain heath and groundwater dependent *Melaleuca* thickets and sedgeland. Salinity is a threat to the reserve, which is traversed by Talbot West Road.

We then drove up Catchment Road (definitely 4WD), past a stand of Drummond's mallee, to the top of Mount Talbot where we had lunch.



Above: Lunch at Mt. Talbot



Above: Colin testing the waters at a TBLMA project site

Photos: Wayne Clarke

After lunch we drove along Helena Road to the 13 Mile Creek, where 3 kilometres of revegetation (50,000 seedlings) were planted by hand from 2005 to 2010. This was a Lotterywest funded TBLMA project. The improvement in water quality since this project commenced had Colin drinking the water (and probably swallowing a tadpole or two).



Above: Artistic participation - Photo Eggy Boggs



Above: Grey fantail participating too - Photo Wayne Clarke

By this time the members were exhausted (but not so Colin). We returned to the Hall to prepare for tea, followed by a spot of entertainment - some Line Dancing - led by Colin! This was a hilarious climax to a really great Toodyay Nats Club excursion.



Left: Time to relax
Photo: Eggy Boggs

Right: The Line Dancers
Photo: Wayne Clarke



PHOTOGRAPHER'S PAGES



Above: A Common Sandpiper Photo: Georgina Steytler.

Georgina recently won the 'Threatened Species' section of Australian Geographic ANZANG Nature Photographer of the Year competition with a photograph of a juvenile Australian Fairy Tern..

You can view the winners at <http://www.anzang.samuseum.sa.gov.au/>

Georgina was a finalist with three other entries - they can also be viewed on the above site.

Congratulations Georgina from the Toodyay Naturalists' Club.



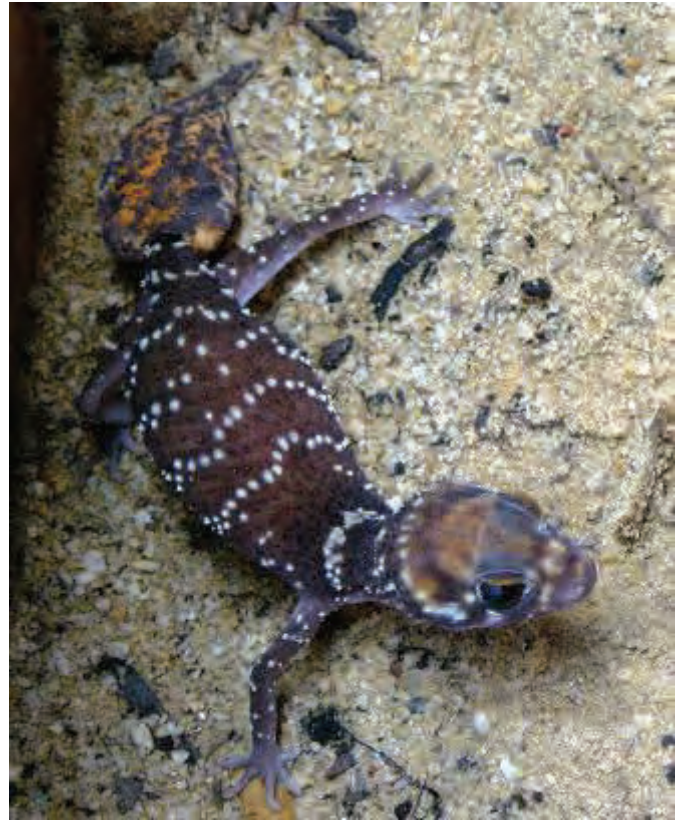
Left: Wongamine Nature Reserve;

Photo: Jacquie Lucas

PHOTOGRAPHER'S PAGES



*Above left: Acacia pharangites from Wongan Hills
Photo: Lyn Phillips*



Above right: Barking gecko Photo: Karen Hansen-

Below: Banksia menziesii in Dell Reserve Photo: Wayne Clarke



Right: A very colourful insect photographed on a TNC excursion.

Photo: Sharon Richards



DID YOU KNOW...

The fungi on the cover, Colus pusillus, was first described in 1845 by British botanist, the Reverend Miles Joseph Berkeley (1803-1889) and named *Clathrus pusillus*. Berkeley was vicar of Sibbertoft, in Leicestershire, England.

Berkeley described some 6,000 species of fungi. His work '*Introduction to Cryptogamic Botany*', published in 1857, and his papers on Vegetable Pathology in the *Gardener's Chronicle* in 1854 and onwards, show that he had a broad grasp of the whole domain of physiology and morphology, as understood in those days. His herbarium at Kew is one of the world's most extensive, containing over 9000 specimens as well as numerous notes and sketches.

His investigations on the potato blight (caused by *Phytophthora infestans*), on the grape mildew (*Oidium Tuckeri*) and on the pathogenic fungi of wheat rust, hop mildew, and various diseases of cabbage, pears, coffee, onions, tomatoes, etc., were important in the life-history of these pests, at a time when very little was known of such matters. They must always be considered as remarkable advances in the biology of these organisms made between 1850 and 1880. When it is remembered that this work was done without any of the modern laboratory equipment, the real significance of Berkeley's pioneering work becomes apparent.

As a field naturalist and collector, Berkeley's earliest objects of study were the mollusca and other branches of zoology, as testified by his papers in the *Zoological Journal* and the *Magazine of Natural History*, between 1828 and 1836. A remarkable plant pathologist who could be termed 'the originator and founder of Plant Pathology.'

From Wikipedia, the free encyclopaedia

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'WHERE DO EAGLES DARE'

by Simon Cherryman

SIMON CHERRYMAN is an award-winning environmental scientist, educator and wildlife filmmaker and an enthusiastic advocate for the unique Australian bush and its creatures.

Simon grew up in the Perth Hills and spent his childhood climbing trees, observing birds and learning first-hand about the local environment.

It was at 15 that he found a giant Wedge-tailed Eagle nest and this captivated and inspired him to spend more than half his life studying, photographing and filming these magnificent birds.

Today Simon continues to spread his passion for the environment through his small business, iNSiGHT Ornithology, which specialises in bird-related research and environmental education.

His presentation at the July meeting of the Nat's demonstrated his incredible passion in learning more and more about Australia's icon which is the largest eagle on this continent.

Simon is endeavouring to raise up to \$60,000 to continue his scientific work involving use of GPS data in the life of the Wedge-tail Eagle.

You can purchase a copy of the DVD 'Where Do Eagles Dare' direct from Simon by visiting his website <http://www.simoncherriman.blogspot.com.au/>



Left: Simon introduces his film 'Where Do Eagles Dare' at the Toodyay Nats Club meeting in July 2015.

Photo: Beth Frayne

ENVIRONMENT MATTERS

IDNYA e-NEWS

**JUNE 2015 REPORT from KATHERINE MOSEBY
(ECOLOGICAL HORIZENS PTY LTD)**

It is gratifying to continue to receive the e-News re the important trial of relocation of the Western Australian Southern Quoll which is known as Idnya by the Adnyamathanha people of the Flinders Ranges, South Australia.

During April of this year a further 37 Idnya, 20 females and 17 males, were released in the partnership between the Foundation for Australia's Most Endangered species (FAME), the South Australian Department of Environment, Water and Natural Resources and the Western Australian Department of Parks and Wildlife with Keith Morris. The Quolls arrived from Perth at 5.30pm, were quickly checked and then taken to the four release sites.

Most of the females have stayed close to the release sites and it is evident breeding had begun with the development of female pouches and the males moving about during the day with the risk of predation.

The animals are using a variety of shelter sites such as rabbit warrens and fallen hollow logs. They are tracked from the air every few days then the participants in the trial check the positions on ground.

Cat predation continues with three newly released animals taken in the first month. A large male cat of 4kg was trapped near two kill sites and thirteen ferals were removed in a month. Trapping and shooting continues to reduce the cat population although many animals are observed around the camping grounds.

Donations are sought to continue this important trial. For more information please contact fame@fame.org.au

In 1995 the Avon River Management Authority requested the Toodyay Naturalists' Club conduct a bird survey over a three year period - prior to and following the Avon Descent. Twenty years on the Club has secured funding from Wheatbelt NRM to repeat that survey.

Wayne Clarke has agreed to coordinate the survey and is looking for others - both members and non-members, to assist. If you are interested in being part of this historic project contact Wayne on 6364 3609 or secretary@toodyaynats.org.au

1995-1997 SURVEY

1995 - 15 volunteers recorded 1,720 birds

1996 - 12 volunteers recorded 2,012 birds

1997 - 23 volunteers recorded 3,345 birds

The late Jim Masters OAM coordinated the survey, and produced the meticulous statistics without the aid of a computer.

The original teams included John Masters, the Boase Family, the Clarkes, the Fraynes, Frank Carr, Frank Turnbull, Sally Craddock, and the Johnsons, all still TNC members.

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THE TOODYAY NATURALISTS' CLUB INC.

PRESIDENT: Brian Foley 9574 5448
VICE-PRESIDENT: Desrae Clarke 6364 3609
SECRETARY: Wayne Clarke 6364 3609
TREASURER: Sharon Richards 9574 5723
OBSERVATIONS OFFICER: Sharon Richards 9574 5723
PROJECT OFFICER: Greg Warburton 9574 5445
ADDRESS: Post Office Box 328, Toodyay. 6566
EDITOR: Desrae Clarke
email: info@toodyaynats.org.au



Format by Wayne Clarke

Website www.toodyaynats.org.au