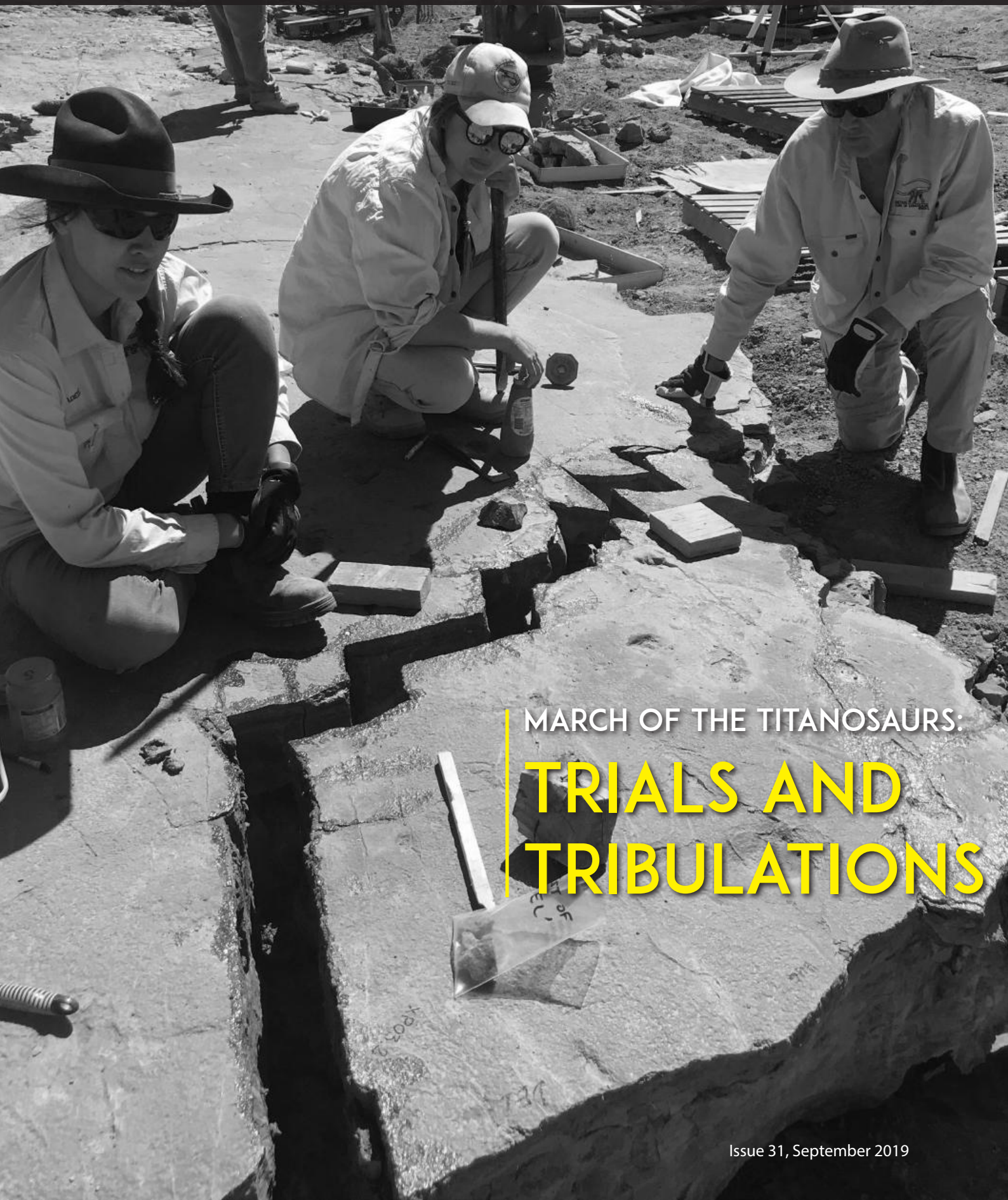
Australian Age of Dinosaurs

museum newsletter

September 2019, Issue 31



MARCH OF THE TITANOSAURS:

TRIALS AND TRIBULATIONS

Issue 31, September 2019

NEWS FROM THE JUMP-UP

CONTAINERS FOR CHANGE

A recycling program has commenced on The Jump-Up following the Queensland Government's recently appointed container refund scheme through Container Exchange (CoEx) in Longreach. Proceeds from the initiative will be donated at the end of the year to a community program or organisation – as voted by Museum staff. This year Museum staff elected that the refunds from the initiative would be donated to the Winton District Historical Society.

REMEMBERING TIM FISCHER

It is with great sadness that we say goodbye to former Australian Age of Dinosaurs' patron, the Honourable Tim Fischer. Mr Fischer was a great supporter of the Museum in its formative years and unveiled the Museum's foundation stone on The Jump-Up in a sod-turning ceremony on 30 July 2008. The opening was attended by around 60 people including state Members of Parliament and Mayors from several nearby shires. But it was Mr Fischer's memorable opening line that particularly resonated with the assembled guests and Museum staff: "The spirit of Flynn is alive in Winton!".

Mr Fischer's influence and enthusiasm for remote Australia lives on. We recognise his remarkable life and legacy.

EDUCATION OUTREACH

Sisters Romana and Jordan recently spent a week at the Museum participating in the work-experience program. Romana spent her time in the Laboratory learning how to prepare and puzzle fossils and sort and sieve the loose matrix from different fossil material. Jordan spent time in both the Laboratory and the Reception Centre, assisting in the Cretaceous Café, Museum Shop and with behind-the-scenes administration. Romana and Jordan were an absolute delight to have at the Museum and the entire team are eagerly awaiting their return.

I am a keen palaeontologist in the making, so when Mum mentioned that I might have an opportunity to work at the Australian Age of Dinosaurs I thought that it would be an amazing experience and I jumped on to their website. After some research I emailed the Museum's Education Co-ordinator, Grace Elliott, and was soon booked in. I helped with making plaster of Paris claw replicas for school children, preparing fossils, filing papers, reorganising collection cabinets and so much more! It was an amazing experience and all the people there were so welcoming. I don't think I could have gotten a better work experience opportunity anywhere else!
–Romana

I learnt a lot during my work experience at the Australian Age of Dinosaurs and had an amazing time. I would like to thank the Museum for such an awesome experience, my time working there was unforgettable. To everyone reading, if you have someone you know who would be interested in work experience at a world-famous facility, let them know because the Museum is great! **–Jordan.**

If you or someone you know is interested in gaining practical experience in tourism, palaeontology, hospitality or museum services, please contact Grace about the Museum's work-experience and internship positions. Email Grace Elliott today.

MARCH OF THE TITANOSAURS:

TRIALS · AND TRIBULATIONS

BY DAVID ELLIOTT

In April 2018 the Museum uncovered Australia's best-preserved sauropod dinosaur trackway on a property west of Winton. Due to its location in the bed of a small creek, parts of the trackway were rapidly deteriorating. A decision was made to relocate it to the Australian Age of Dinosaurs Museum as soon as possible in an effort to prevent its destruction. The freshly uncovered section of the trackway was extremely fragile so its removal was prioritised as an urgent salvage operation. This work was carried out in the second half of 2018 and, luckily, was completed before the devastating floods that inundated much of Outback Queensland in February 2019.

Water run-off from 600mm of rain over a period of less than a week is substantial and, as a result, a large portion of the remaining trackway was buried under up to a metre of silt. This, combined with washed out roads and saturated paddocks, put a stop to our relocation efforts for nearly three months.

Museum staff and volunteers remove a large section from the main trackway slab. Work in this area has slowed significantly due to the thickness and weight of the rocks being relocated. PHOTO DAVID ELLIOTT

Moving a block of trackway back into position with a forklift. PHOTO CAROL TREWICK

It was not until early June that we were able get back to work. A big thank you goes to the Winton Shire Council who graded the road to the site once it had dried out, an another to Mike Elliott who helped us uncover the remaining trackway. One of the most memorable moments was digging out two pallets that were stacked with the glued-together pieces of sauropod footprints from a fragile section of the trackway. The pallets were buried under nearly a metre of silt but were exactly the same as how we had last seen them. Likewise, plaster jackets around a few fragile track sections were also carefully excavated and allowed to dry out. In spite of this, by mid-June the trackway looked exactly as it did before the floods and we were once more back into the full swing of things.

Relocation of the trackway has been underway again for three months. I would love to say that it is going well but I would be kidding myself if I did. In short, this job is proving to be one of the most challenging projects the Museum has ever undertaken and I would like to pay tribute to Judy and Anna and their team of trackway volunteers who have been methodically bringing it back together. Dismantling rock slabs that often weigh in excess of two tonnes and loading them on to a trailer is not easy, but putting them back down again in a new location is even more difficult. Every load involves a slow three-hour trip back to The Jump-Up and it is not unusual to take a week to get just one trailer load of trackway back into place. It is slow-painstaking work but I am determined to get the trackway back together as close as possible to its original configuration, so shortcuts are not an option.

We have had support from several amazing groups of people. I would like to thank the Dinosaur Dreaming crew from Victoria for their efforts and the Oasis crew from Townsville who put in a solid week helping out. Thank you also to the many other volunteers who have spent anywhere between a few days and a few weeks giving us a hand. Over the past three months the trackway has gone from around 25% complete to over 50% complete and has finally reached the milestone where *what we have done* looks better than *what we have left*. We are hoping to have most of the trackway relocated before the end of 2019 as construction of the new *March of the Titanosaurs* building is due to commence in a month or so. While the pressure is on to get the job done, the heat of summer is going to bring a whole new set of challenges so, at present, it is anybody's guess as to what will be finished first: the trackway or the building over it. Both Judy and Anna are hoping that it is the building because it will mean that they can finally work in the shade. In the meantime they are making the best of a bad situation – one rock at a time!

Anna Dam and David Elliott remove straps from a block of trackway after fitting it into position with a forklift. PHOTO CAROL TREWICK

View of the trackway in its new position at Dinosaur Canyon in July. Over 50% of the trackway has now been relocated to the Museum.

PHOTO CAROL TREWICK

PHOTO **STEVE LIPPIS**

THE AAOD LEGACY FUND

was established to build an investment portfolio that will provide ongoing and permanent income for operations and development of the Australian Age of Dinosaurs Museum of Natural History.

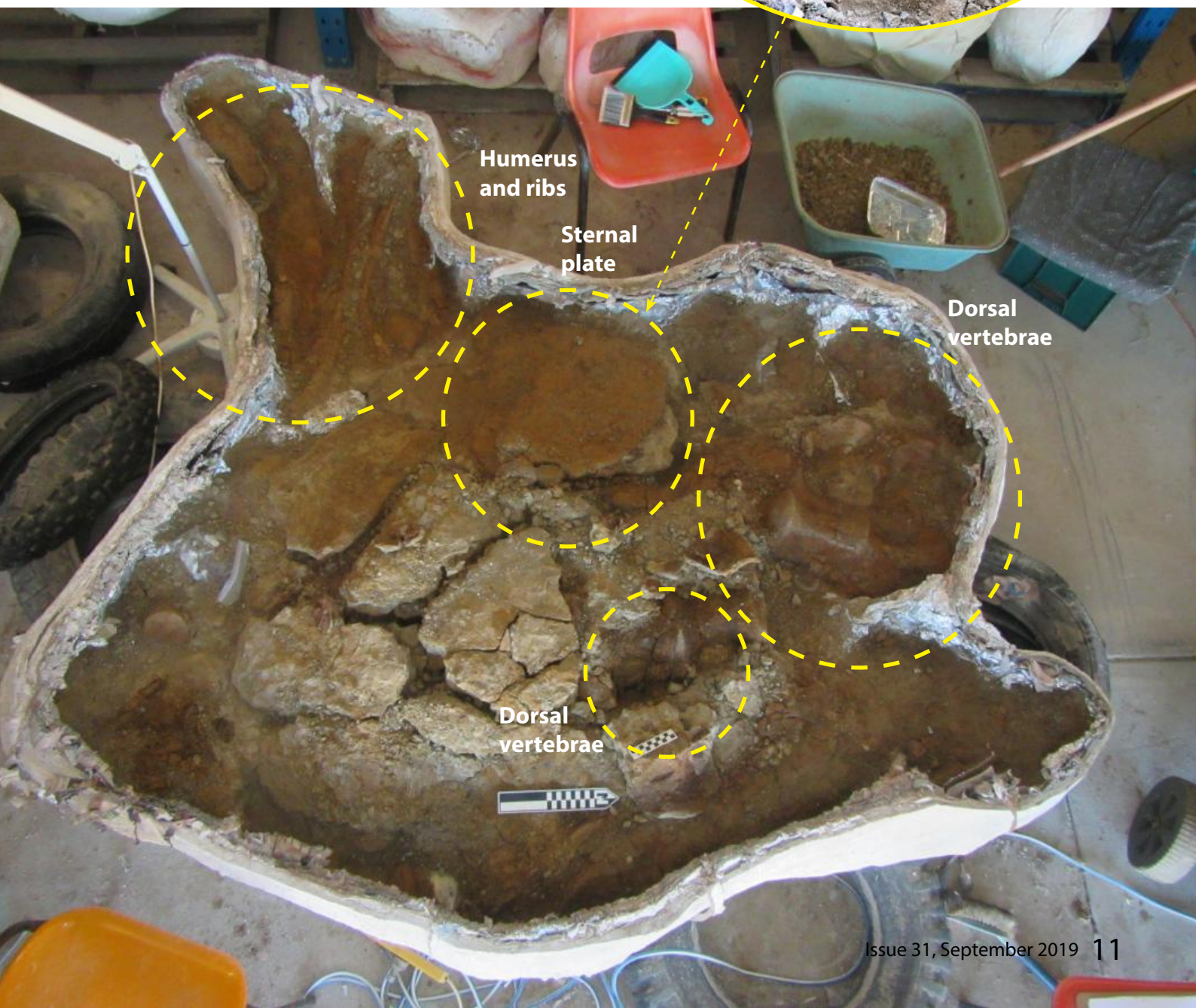
Tax-deductible donations are a great way to contribute to a worthy cause. Every time you make a gift to the AAOD Legacy Fund, provided your donation is $2 or more, you will most likely be able to claim the full amount of your charitable donation on your tax return (check with ATO if you are unsure). The AAOD Legacy Fund relies on the generosity of Museum supporters to ensure a lasting legacy to Australia's natural heritage.

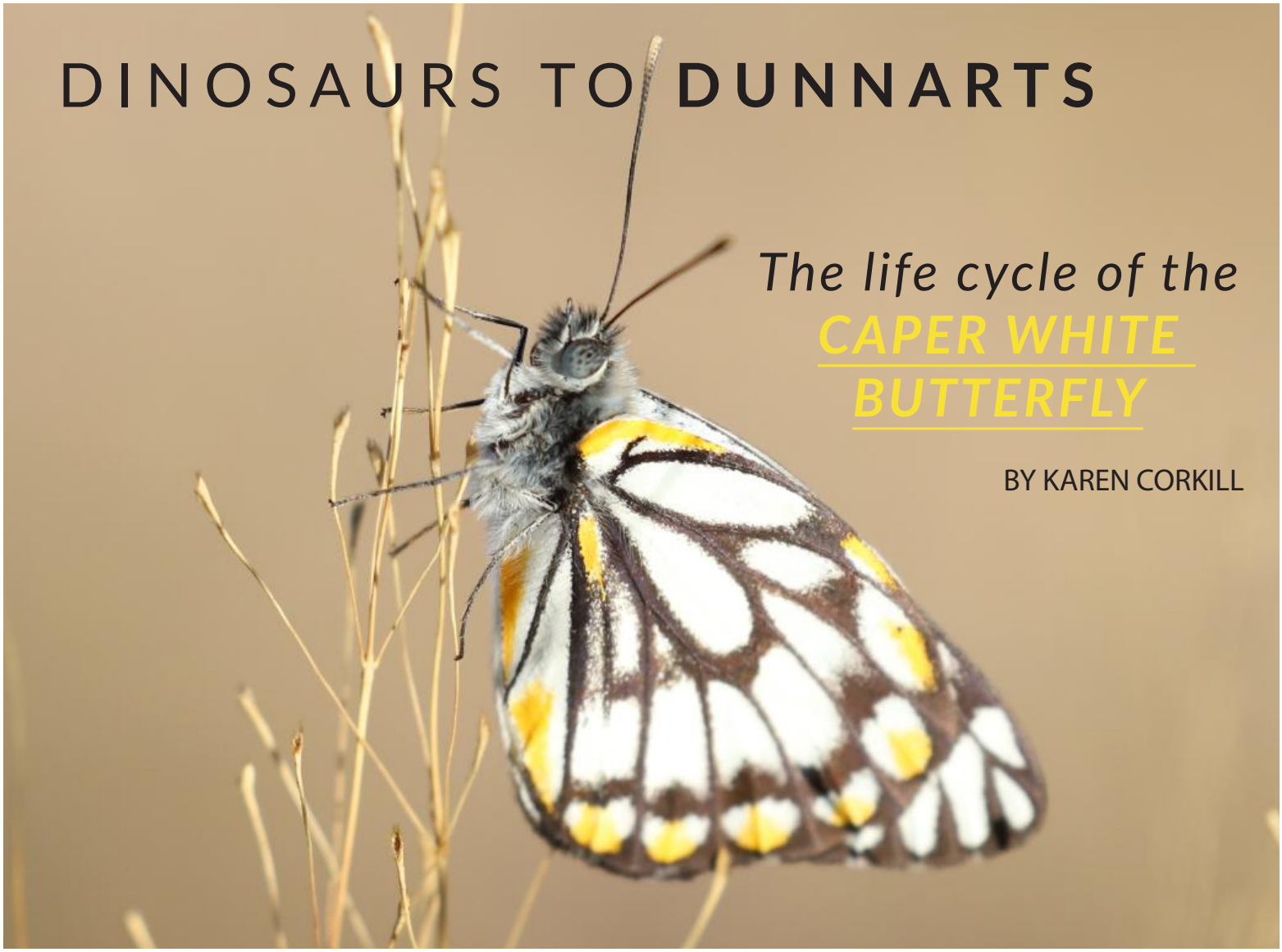
To donate, visit *make a donation* and select **AAOD Legacy Fund.**

LABORATORY **UPDATE**

JUDY SITE: PROGRESS REPORT

Preparation of the Judy site material has continued unabated over the last few months. A large two-metre jacket from the site has been started. The jacket contains the ribs, sternal plate, humerus and thoracic vertebrae fossils of the sub-adult sauropod. As the siltstone around the fossils is removed, additional fossil material has been exposed, much to our delight. This new material includes six to eight dorsal vertebrae, some of which are still fused together in life position.





The life cycle of the CAPER WHITE BUTTERFLY

BY KAREN CORKILL

SPECIES *Belenois java*

DISTRIBUTION Caper white butterflies are found around Australia – where caper shrubs grow.

IDENTIFICATION Adult caper white butterflies are mostly white with black margins to their upper wings and yellow-orange, black and white underwings. The caterpillars are dark brown to olive green with white and yellow dots. **MIGRATION** In spring many caper white butterflies migrate to where caper shrubs and creepers are more common. They usually fly inland, west of the Great Dividing Range, but they can also be found along the coast. They maintain a rapid flight about two to three metres above the ground during the day, resting on shrubs and trees at night. **DIET** The caterpillars of the caper white butterfly eat plants belonging to the caper family and Australian sandalwood.

I recently witnessed and captured the extraordinary life cycle of the caper white butterfly, a small butterfly found across Australia, Indonesia and Melanesia. After spending many days waiting for the recently laid eggs to turn from white to orange, small caterpillars began to emerge. These caterpillars began eating in earnest and within three weeks had begun to pupate. This is their story.

THE EGGS

The eggs from caper white butterflies are laid in a group, with generous spacing across the surface of a caper leaf. When the caterpillars of the caper white butterfly emerge they are pale yellow and sparsely covered with long hairs and a shiny black head. As the caterpillars grow and shed they become dark brown, tinged with green and decorated with raised yellow spots. A fringe of long white hair runs down the side of their body.

THE CATERPILLAR

Once the caterpillars emerge from their eggs, they begin to feast. However, unlike other species of caterpillar, the caper white butterfly usually only consumes around three medium-sized leaves during its whole life cycle.

THE PUPA

After the caterpillars of the caper white butterfly have eaten for three weeks they will reach a length of 3cm and begin to pupate. The pupa or cocoon is white with black markings and is about 2.5cm long.

THE BUTTERFLY

After two weeks within their cocoon the caper white butterfly emerges. The adult male butterfly has white wings and a wing span of around 5cm while the adult female will sport various colours and generally have a larger wingspan of around 6cm. To see these stunning butterflies, you can look for them feeding on various types of caper shrubs and Australian Sandalwood.

IS YOUR MEMBERSHIP CURRENT?

While many members are up to date with their membership fees, to ensure you do not miss out on the next AAOD Journal and another year of quarterly newsletters, please check your membership status **here.**

DINOSAUR DIG 2019

On 27 May the annual dinosaur dig commenced at Elderslie Station, at a new site dubbed the Mitchell site. The dig was carried out over three weeks and included 39 participants, Museum staff, Adele Pentland, Dr Steve Poropat, Dr Matt White and the Elliott Family.

The Mitchell site was split into four sections (A, B, C and D). Sections A and B had very concentrated surface material, whereas sections C and D seemed to contain the majority of bones in an ancient flood deposit.

> "The Mitchell site was, in short, a mixed bag. The larger bones discovered initially were not as impressive as previous years, but the teeth more than made up for that. To find such a variety of teeth (from sauropods, theropods, plesiosaurs, crocodylomorphs, lungfish and even [possibly] pterosaur) within a single site was exceptional. This one site has produced more sauropod teeth than was previously known from the entire state of Queensland."
>
> **Dr Steve Poropat**

The ancient environment

Initial discoveries from the site included a piece of pelvic bone, a small cylindrical tooth from either a crocodile or plesiosaur, *Austrosequoia wintonensis* (pine cones), crocodile osteoderms and a theropod tooth. Given the variety of fossil material discovered from both terrestrial and aquatic animals, the Mitchell site was most likely a deep, fast-moving creek or river. Given the wavy sediment layers at the site, it is likely that the ancient creek or river existed for a long period of time and had a fast moving water current. The small fragments of fossils encased in

A drone shot of the Mitchell site in week 1, split into four distinct sections. PHOTO TRISH SLOAN


A
B
C
D

rock, conglomerates of dense plant material and isolated teeth support the idea that the site is an ancient flood deposit.

Section A
The surface material recovered from the site was incredibly rich and diverse. This included 15 crocodylomorph or plesiosaur teeth, 12 pine cones (*Austrosequoia wintonensis* and *Emwadea microcarpa*), 12 sauropod teeth (partial and complete), six crocodile oestoderms, five theropod teeth and one lungfish tooth plate (*Meraceratodus ellioti*).

Section B
In this section sauropod ribs, pelvic bones, vertebrae and a possible ornithopod radius were discovered.

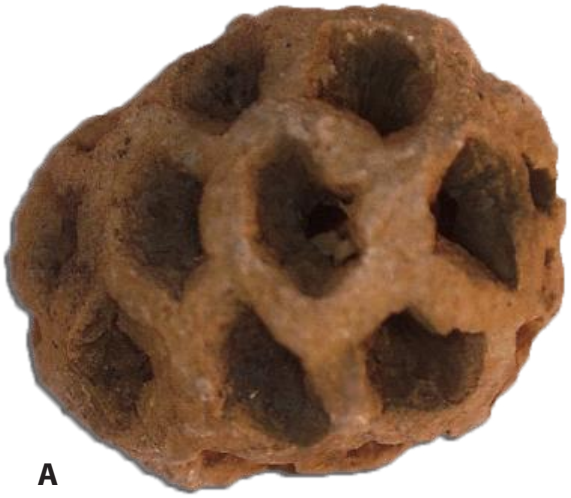
Section C
Completely barren.

Section D
Section D represents the very edge of the flood deposit and yielded two very weathered vertebrae. Other indeterminate sauropod bones were so poorly preserved they appeared to have been laying in water for many years before becoming rotten.

The dig wasn't all about digging. Every week the diggers also spent half a day at the sauropod trackway site. By the end of the three-week dig event the diggers and the trackway team had removed all of the silt that was deposited during the last flood. While removing this material a small section of previously undiscovered trackway was found off to the side of the main site. These new tracks included *Skartopus* footprints and the underside of at least four sauropod footprints.

As always, these extraordinary discoveries would not be possible without the hard work and commitment of many dedicated people, and the continued support of Ian and Sandra Muir who allow the Museum to hold digs on their property. We are very grateful to the Winton Shire Council for their support with a generator and cold room, to the Elliott family for their earth-moving machinery, to Mike and Glenda Carmody and Jo Fisher for providing home-cooked meals, cleaning the quarters and keeping the water hot every day of the dig, to Charlie and Margaret Sloan and Judy White for their voluntary services over the duration of the dig, and to the 39 participants who came from all corners of the country to help us. It's a big team effort, a lot of hard work and a lot of fun.

A drone shot of the Mitchell site in week 3, with the large sauropod fossils pedestaled before being plaster jacketed. PHOTO TRISH SLOAN



A

B

C

D

E

H

G

F

"There was so much fossil diversity in the site that I think it is one of the top ten sites we have excavated thus far."

Trish Sloan, Dig Co-ordinator

A	Pine cone, *Austrosequoia wintonensis*
B	Theropod tooth
C	Crocodile osteoderm
D	Lung fish plate, *Meraceratodus ellioti*
E	Sauropod tooth (with wear facet)
F	Plesiosaur tooth
G	Sauropod teeth
H	Pine cone, *Emwadea microcarpa*


AUSTRALIAN
AGE OF DINOSAURS
WINTON Q


AUSTRALIAN
AGE OF DINOSAURS
WINTON Q


AUSTRALIAN
AGE OF DINOSAURS
WINTON Q


AUSTRALIAN
AGE OF DINOSAURS
WINTON Q

CHEERS, FOR TEN **YEARS**

In July Museum staff and volunteers marked the ten-year anniversary of George Sinapius's arrival at the Museum. This fabulous milestone was celebrated with a dinner, cold drinks (including George's favourite – ginger beer), stories, photos and of course cake!

George's journey with the Museum began in 2009 when the fresh-faced 21-year-old became a Tour Guide at the newly opened Laboratory. As George settled in, tours through the Lab began to extend and it was soon found that George could talk about dinosaurs for over two hours at a time! It is certain that George has an unparalleled passion and enthusiasm for palaeontology.

For over ten years George has worked hard and become an indispensable member of the Museum team. As the Laboratory Supervisor, George oversees the preparation of "world first" fossils, attends dinosaur digs, responds to Museum maintenance requests – all with the friendly and good-natured spirit that has become synonymous with George.

Thank you for ten years of unbridled enthusiasm, passion and unrelenting humour. For ten years you have gone above and beyond to help this Museum grow and you are an integral part of its future. From all of us at the Australian Age of Dinosaurs Museum – congratulations!

"One of my earliest memories of George was in early 2010, about six months after he started working for the Museum. In those days we used to have tour group dinners in a U-shaped enclosure of brown-painted logs between the Laboratory and the edge of The Jump-Up. Our guests would do their Lab tour in the late afternoon followed by drinks and a barbecue dinner. I was working on The Jump-Up on this particular day and was invited to stay for the BBQ.

I had not seen George in action up to this point so was quite unaware of his tour guiding flair. I still remember the guests filing out of the Lab where George assembled them into a group. Once he had them all together, he gave this great flourish with his arm and said, "Alright everybody, before we start the evening activities, we're going to have a little safety talk." Then he gave this funny little look-about nod and said, "If you look over the cliff you will notice that it's really steep." (or words to that effect). He then gave another funny little look-about nod followed by a prolonged silence. Nobody spoke. George gave another little nod, "Alright everybody" he said, "that's it for the safety talk!"

Needless to say, everyone packed up laughing. George eventually did get a bit better at his safety talk, but he never did stop the funny little nod. He still does it and I reckon he should get it trademarked. George of The Jump-Up – Legend!"

–David Elliott, 2019

GETTING THE SHOT
In January 2010 George smiles patiently as his photo is taken for the Museum website.

PHOTO TRISH SLOAN

PALAEO PETE FUN

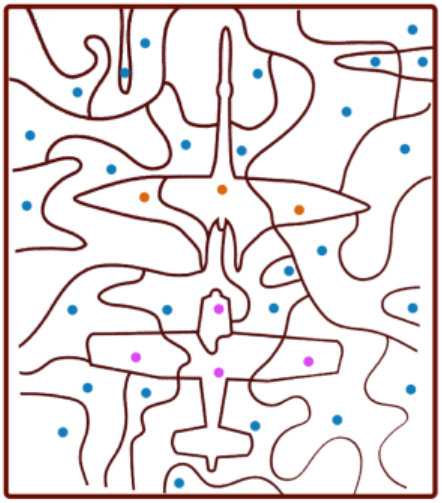
HOW TO PLAY
To see what Pangaea looked like, **COLOUR** in the map to match the coloured dots. Can you find the modern continents on your map?

AFRICA
NORTH AMERICA
SOUTH AMERICA
EURASIA (Europe and Asia)
ANTARCTICA
AUSTRALIA

PANGAEA
"Pan-JEE-uh"

Colour the shapes!

HOW TO PLAY Colour the shapes the same colour as their dots to see how big this Aussie *ornithocheirus* got?



WE WANT YOUR FEEDBACK

It's been over a month since AAOD Journal, Issue 16 was released and we want to hear what you think about it.

Click the link and fill in the form. Your insight is vital to creating a more comprehensive and interesting Journal.

START