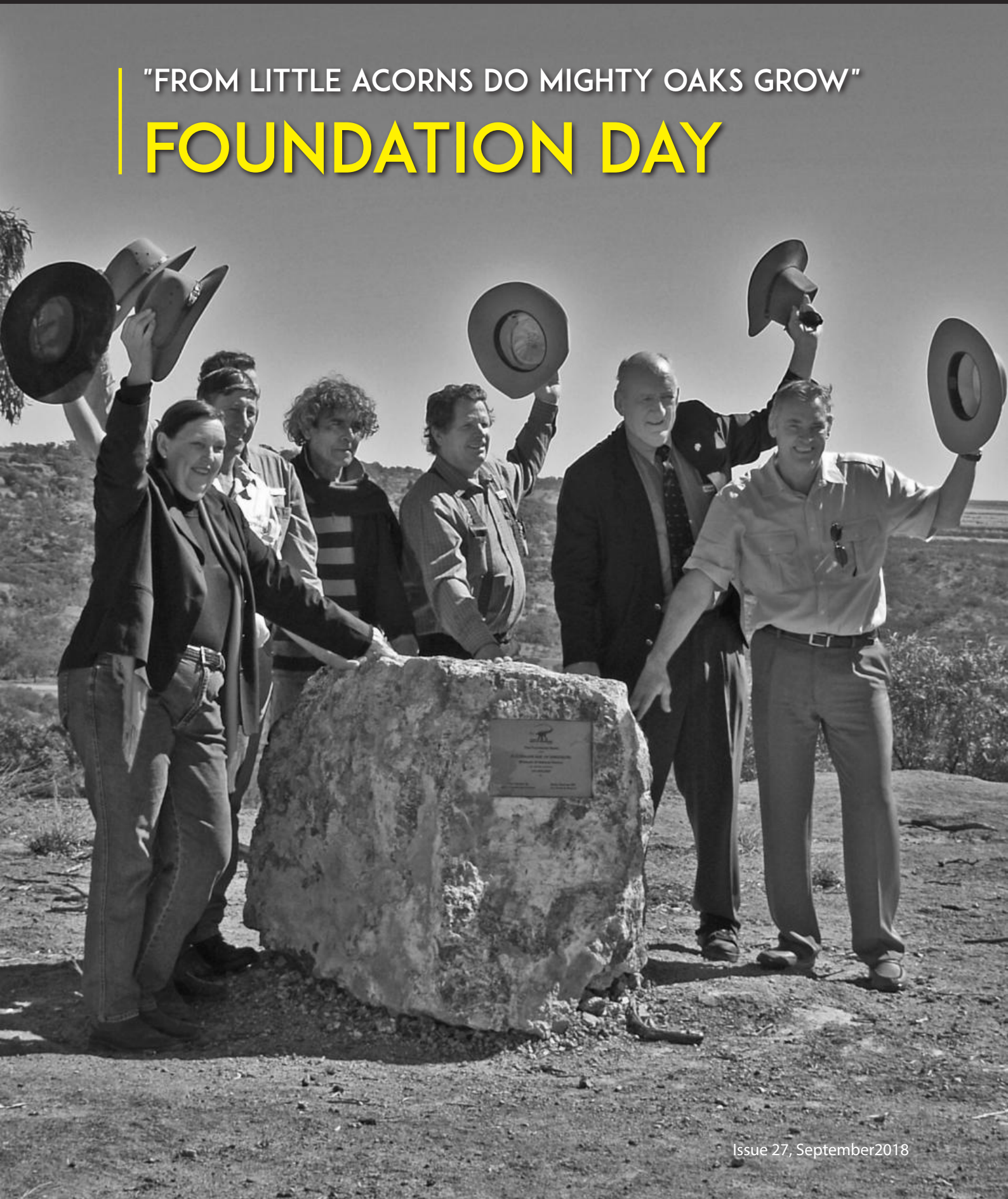
Australian Age of Dinosaurs

museum newsletter

September 2018, Issue 27

"FROM LITTLE ACORNS DO MIGHTY OAKS GROW"

FOUNDATION DAY



NEWS FROM THE JUMP-UP

THE BUTCH LENTON WAY

In July long-serving Winton Shire Councillor and Mayor Butch Lenton was posthumously honoured at the opening of the Butch Lenton Way, the drive route to the Museum. Following Butch's passing in October 2017 Queensland Premier Annastacia Palaszczuk announced that the drive route to the Museum would be named after the legendary mayor, stating that it was "...fitting that people who make the journey to the iconic Queensland outback in Winton travel on a road named after him."

The sealing of the road that connects the Museum to the Landsborough Highway (Matilda Way) was strongly supported and promoted by Butch during his time as mayor.

Minister for Transport and Main Roads Mark Bailey, who opened the re-sealed and re-named road, said Butch played a significant role in diversifying Winton's economy: "he showed us why we should have a special program so that we can fund infrastructure related to tourism sites and icons and make them easier to access so we can get more people out here."

Butch's wife Ros said, "he probably wouldn't have wanted the honour because he wouldn't have thought he deserved it, but people just appreciated what he did and it's a very proud moment." Butch's daughter Carly also said it was a great honour as "he loved the Age of Dinosaurs [*sic*] and used to come out all the time and check the road even before it was sealed, so it's very fitting."

Butch was a great mayor and the perfect ambassador for Winton. Butch's achievements, vision and support will not be forgotten.

NEWS FROM THE JUMP-UP

MATILDA'S METACARPUS

In April 2012 the Lab team opened one of the last big plaster jackets recovered from the Matilda site. After some investigation, using heavy duty-tools it was discovered the plaster jacket contained several of Matilda's toe bones.

As the fossilised toes had been encased in a thick ironstone deposit, the plaster jacket containing this material became known, within the Lab, as the northern concretion. Over the years many preparators have chipped away at the ironstone to reveal more details of the toes. It wasn't until this year that it was discovered that the toes were front right-sided metacarpal bones. This means that the toes already on display in the Collection Room are definitely the front left-sided metacarpal bones.

The Matilda site is located near Elderslie Station, 60km west-north-west of Winton in the upper midsection of the Winton Formation. The bones from this site form the holotype of *Diamantinasaurus matildae*, nicknamed Matilda.

ON THE ROAD WITH GRACE

The Young Tourism Leaders Program provides influential and inspiring role models to encourage young people to consider a career in the tourism industry. As a Young Tourism Leader, Museum Tour Guide Grace Elliott has, over the last two months, delivered presentations at the Longreach and Hughenden State High Schools. As part of her role as a Youth Tourism Leader, Grace is commited to delivering tourism knowledge, industry experience and work-related stories to other regional young people looking to make the most out of their skills and talents. Grace is a fantastic role model for those interested in tourism (particularly palaeo-tourism) in regional Queensland – the entire Museum team could not be more proud!

LABORATORY **UPDATE**

BY DR STEPHEN POROPAT

Preparation on the sauropod specimen from the Judy site is progressing quickly. All but two of the jackets that were collected from the site have now been opened. The fossils within these jackets are excellent and the preparation of both shoulder girdles, the femur, the ulna (with metacarpal) and two articulated dorsal (thoracic) vertebrae is almost complete.

Another huge vertebra (most likely the first dorsal vertebra) was largely exposed in the field but is now undergoing final preparation. This vertebra is remarkable for its large size, but also because it is seemingly undistorted.

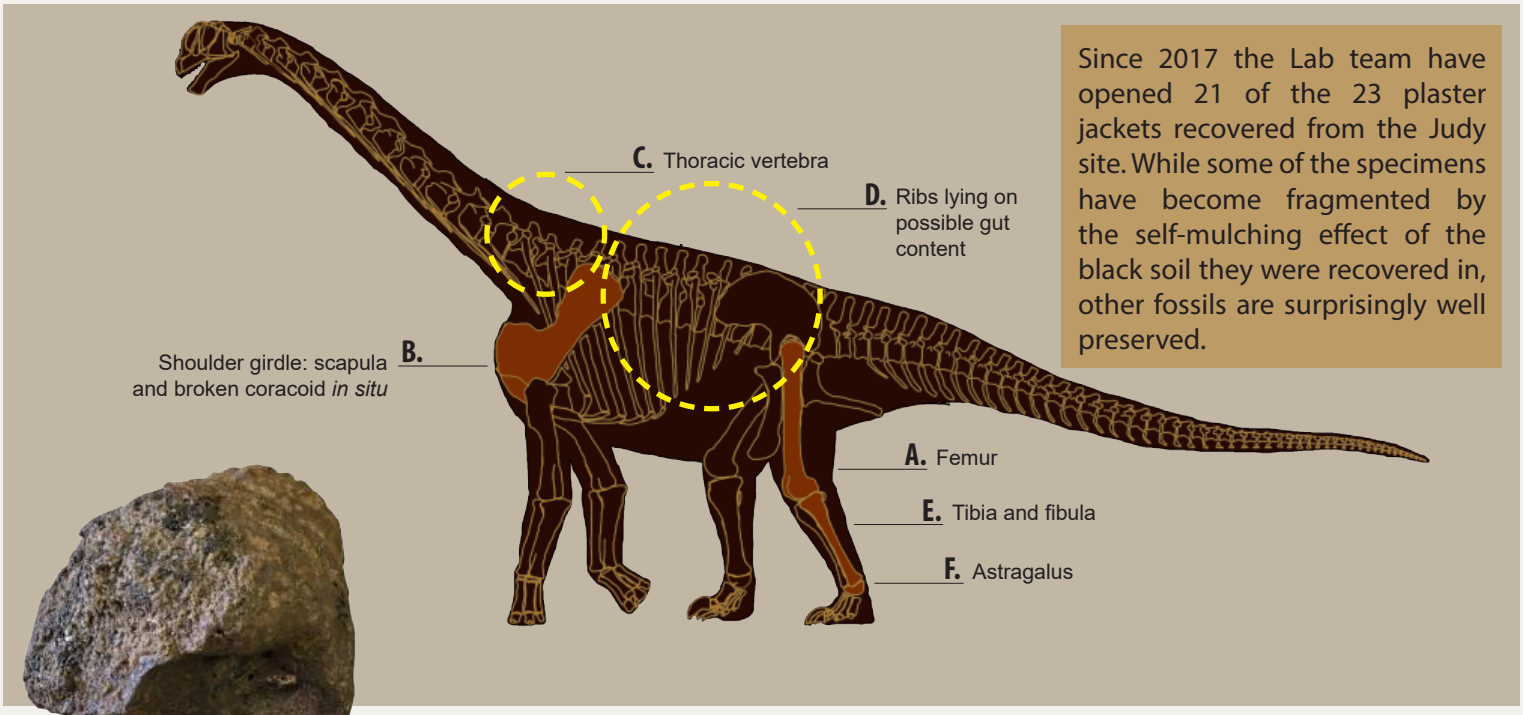
The underside of the articulated neck has been completely prepared, revealing the delicate, super-elongated cervical ribs. Some ribs are as long as four vertebrae and overlap three other cervical ribs. The underside of the neck will soon be cradled so that it can be flipped, allowing the sides and top of the neck to be prepared.

However, one of the most significant parts of the Judy site material is one of the smallest: the astragalus or anklebone (equivalent to the human talus). This astragalus is almost identical to Matilda's, which means that the Judy site material is almost certainly another *Diamantinasaurus*, the third in the Museum's collection! Between Matilda, Alex and Judy, we will have an almost complete understanding of *Diamantinasaurus'* anatomy; all that is missing now is the tail, back feet and the front of the skull.

Matilda herself is still being prepared; three small concretions to go. One of these contains the metacarpals and manual phalanges, which together make up the sauropod's front right foot. Now that all ten of Matilda's metacarpals have been prepared, it appears that four of her metacarpals were interpreted incorrectly. All the published ones are actually from the same foot: the front left foot. The same concretion also preserved a sternal plate, and we are hoping to compare it with those of Wade (*Savannasaurus*) when preparation is complete. Otherwise, portions of Matilda's sacrum and girdles are still being prepared, and will hopefully be completed by early next year.

All in all, the Lab is humming along. Who knows what other surprises the plaster jackets from the Matilda and Judy sites have in store?

Phil working on Judy's thoracic vertebra



Since 2017 the Lab team have opened 21 of the 23 plaster jackets recovered from the Judy site. While some of the specimens have become fragmented by the self-mulching effect of the black soil they were recovered in, other fossils are surprisingly well preserved.

"FROM LITTLE ACORNS DO MIGHTY OAKS GROW"

FOUNDATION DAY

BY DAVID ELLIOTT

Foundation day was sort of sprung on us by Museum patron and former Deputy Prime Minister Tim Fischer. In early July 2008 I received a call from Tim to say that it was necessary for him to step down from his Australian patronages as he was relocating to Rome following his appointment as the Australian Ambassador to the Holy See. As his final duty as Museum Patron he suggested that we organise a sod-turning ceremony on 30 July. As we didn't have any building construction about to start (this was six months before we started building the Lab) I suggested unveiling a Foundation Stone to officially launch the Museum project instead. We had three weeks to make it happen...

A few months before this Kylie Piper, along with my wife Judy and I, had been very active in raising Museum foundation memberships and were aiming to have 100 foundation members by 30 June 2008. With Tim Fischer arriving on 29 July we decided to extend the deadline to 30 July and name the day Foundation Day. On the evening before the inaugural day we held a big sit-down dinner catered for by Mandy Grant at the Waltzing Matilda Centre. After the dinner there were a lot of speeches and the foundation members were announced. We ended up with 137 of them!

The Foundation Stone was a large Jump-Up rock that I found half-way down the road to the dam and brought it up with the front-end loader. It was a nice shape and Naomi Calleja, who was our senior preparator (and the Museum's first employee) prepared a square into the stone to hold the plaque. There was no chance of getting a bronze plaque at such short notice but we were able to get a temporary plaque in bronze-coloured plastic that was used during the

ceremony. The plastic plaque was glued into the prepared square with silicone and it was then covered over with a little red curtain.

On the morning of Foundation Day a large number of guests who had never been to Belmont Station came out to inspect the prep shed and look at some of the dinosaur bones we were preparing. Fossils of Matilda and Wade were all on display, although from memory the bones of Banjo were packed away as it was still a big secret at the time. After morning tea everyone headed back to town. The ceremony was held in the afternoon on The Jump-Up. The road up to The Jump-Up was very rough as it was still being carved out of the hillside and we had to zigzag around boulders through a few narrow gaps to get there.

We installed the Foundation Stone about 20m north of an old gum tree, where the kids' Dinosaur Excavation sand pit is today. There was no safety balustrading, so a bunch of us had to keep hanging around the edge of the cliff and watching that nobody stepped over the side. It was amazing the number of people who walked backwards towards the cliff while looking through the lens of their camera!

The opening was attended by about 60 people including local State MP Betty Kiernan and mayors from several nearby shires. I kicked the ceremony off with an introductory speech and then called up Winton Mayor Ed Warren to speak, followed by Betty Kiernan and Tim Fischer. I still remember the opening line of Tim Fischer's speech: "The spirit of Flynn is alive in Winton!" After his speech he called up Betty and the local mayors and together they flipped the red curtain to reveal the plaque.

In April 2012 the Foundation Stone was moved to the entrance of the Reception Centre, where it resides today. The new bronze plaque did eventually arrive and was promptly misplaced. When it turned up a few years later it was easier to just stick the bronze plaque on top of the stuck tight plastic-one.

"From little acorns do mighty oaks grow" they say. On 30 July this year it was ten years since that memorable day. It makes me proud to see how much has been achieved through the support of so many people since that day.

THE CRETACEOUS GARDEN **PROJECT**

The Museum's Cretaceous Garden at Dinosaur Canyon is flourishing. The conifers in particular are growing incredibly fast and some of the kauri pines (*Agathis robusta*) and hoop pines (*Araucaria cunninghamii*) have grown 50cm in the last three months. The Cypress pines (*Callitris columellaris*) have also grown and are now over 2m tall and producing seed cones. Although a bit slower, the three bunya pines (*Araucaria bidwillii*) have new shoots. The ginkgo trees are still dormant, although as deciduous northern hemisphere trees they are expected to take off over summer.

WATERFUL GORGE

The bunya, hoop and Cypress pines are all planted in Waterfall Gorge which is the stretch of gorge about halfway between Dinosaur Canyon Outpost and the site of the future Museum of Natural History. This section of cliff is where rainwater drains from the top of The Jump-Up and cascades down into the gorge. It takes very little rain to activate the waterfall so there are some spectacular views awaiting those lucky travellers who happen to visit after a heavy thunderstorm.

TREE FERN RAVINE

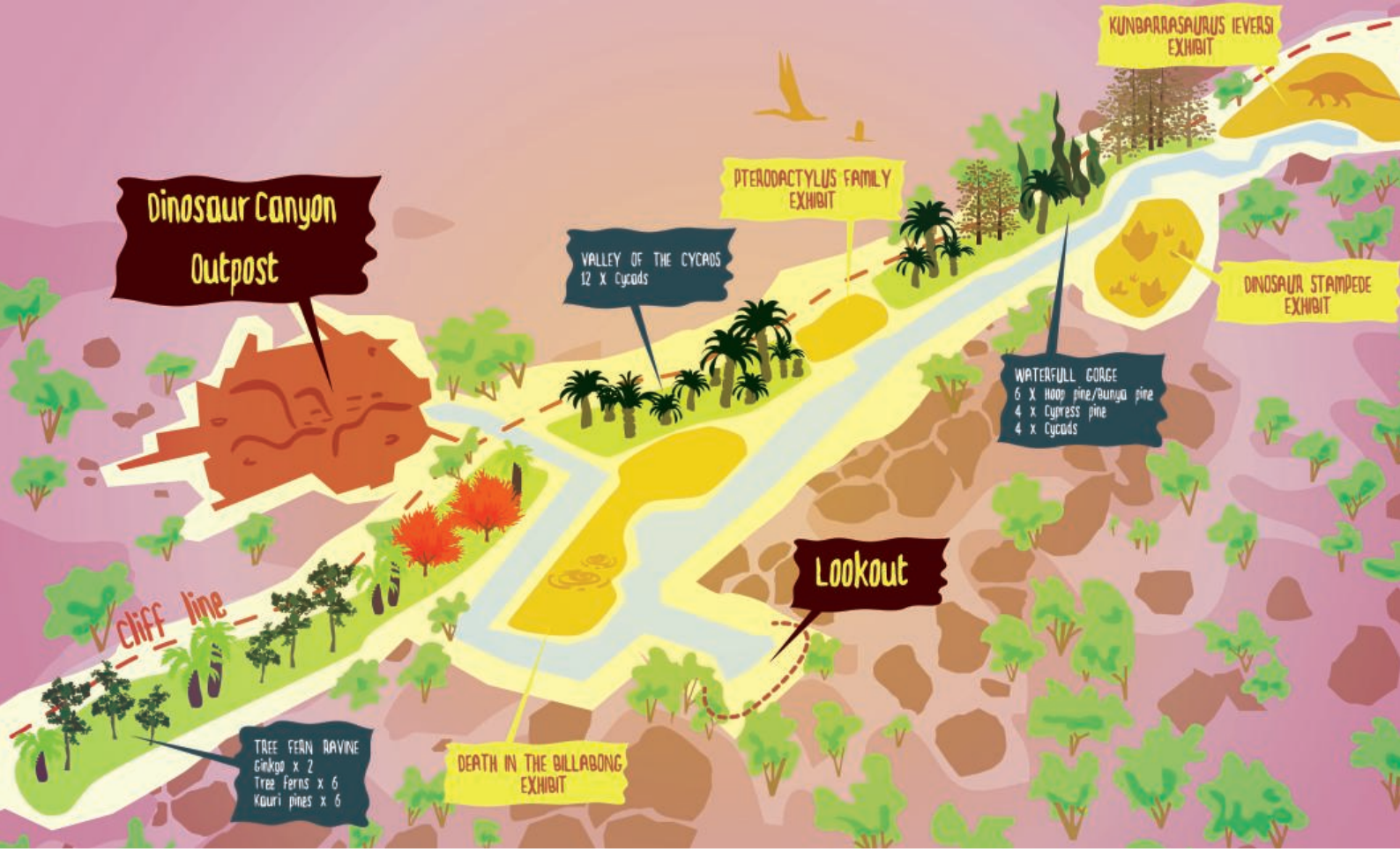
The kauri pines and tree ferns are planted in Tree Fern Ravine which is a shady, secluded area directly below Dinosaur Canyon Outpost. This area is also home to a few ginkgo trees, sometimes referred to as Chinese maidenhair trees. These trees are planted under the bridge that spans the length of the ravine across to Dinosaur Canyon, a place that is protected from the sun and wind. Hopefully this secluded atmosphere will enable them to survive and flourish.

There are six tree ferns (*Cyathea cooperi*) in Tree Fern Ravine. These cool, moist-environment trees have been planted with the shelter of the overhanging Jump-Up to give them the best possible chance to survive the hot, dry summers of western Queensland.

VALLEY OF THE CYCADS

In spite of the exciting progress of our other trees in the Cretaceous Garden, the most spectacular part is still the Valley of the Cycads. With another five small trees added in early September, there are now 18 cycads (*Macrozamia moorei*) between 30cm and 2m tall and they look fantastic. There has been a lot of fussing over these trees since they were planted, with numerous applications of organic fertiliser to keep them healthy and pesticide to keep the termites at bay. With summer fast approaching, it is the Museum's hope that there will be a burst of growth from these trees in the next couple of months.

It is only through the generosity of those wonderful people who donated to the Cretaceous Garden project that these beautiful trees are doing so well. The vision of majestic trees, straight from the age of dinosaurs, thriving throughout Dinosaur Canyon in years to come is inspirational and it certainly makes our hard work and near-vertical learning curve well worthwhile. While the Museum is focused on preserving the past, as a living exhibit the Cretaceous Garden will provide future generations with a tangible connection to the prehistoric past as well as the Museum's own beginnings. Thank you everyone for helping us get this far.



INTERESTED IN DONATING TO THE CRETACEOUS GARDEN PROJECT?

The Museum has only got to where it is today through the enthusiasm and generosity of its members. If you would like to contribute something towards helping us meet the costs of the Cretaceous Garden we would love to hear from you. All of our donors will be recognised on plaques throughout the garden so please stipulate if you do not wish for this to happen. Donations can be made online, or if you would like to donate over the phone please contact the Museum's visitor experience officers on +61 7 4657 0712, or email museumfinance@aaod.com.au

PLANTS OF THE JUMP-UP

BY KAREN CORKILL

The plants within the Cretaceous Garden are not the only interesting trees at the Museum. The native plants that grow and thrive on The Jump-Up are some of the hardiest and most well adapted in the world. The Jump-Up is home to lancewood, eucalyptus and mistletoe trees, spinifex and even a type of bacteria.

Lancewood trees (*Acacia shirleyi*) are chacacterised by long, thin leaves pointing up to the sky with dark, rough-textured bark. The leaves point up to the sky as it helps to reduce moisture loss during the hot, dry summers and enables the tree to channel water down into its root system via its leaves and branches. In this way lancewood trees usually receive three times more water during a rainstorm than the average tree.

Lancewood trees generally grow tall and straight but as there are not a lot of nutrients in the rocky surface of The Jump-Up they tend to grow twisted and gnarled around the Museum site.

Aside from lancewood trees there are also quite a few eucalyptus trees on The Jump-Up. Eucalyptus trees are made up of two types: the ghost gum (*Corymbia aparrerinja*)

Ghost gums

and Blake's ghost gum (*Corymbia blakei*). They can be difficult to tell apart but the main difference is that Blake's ghost gum tends to have bark on the lower part of its trunk where the other does not.

Mistletoe is also present on The Jump-Up. This particular kind of mistletoe is a semi-parasitic plant that taps into the host tree taking water and nutrients to create its own food or carbohydrates through photosynthesis. Mistletoe is spread predominately by the

Cyanobacteria on The Jump-Up

Lancewood tree and leaves

mistletoebird (*Dicaeum hirundinaceum*). After feasting on the berries of the plant the mistletoebird will pass the seeds through its system in less than 15 minutes to deposit them on another branch where they will begin to sprout.

Soft spinifex

The iconic spinifex (hummock grassland) plant is hard to miss in western Queensland. On The Jump-Up two genera of spinifiex (*Triodia* and *Plectrachne*) are present and these can be divided into hard and soft types based on their leaf anatomy. Hard spinifex spread their stomatal grooves over both surfaces of their leaves, and don't produce leaf resin. So, if you brush past it the hard leaves will go straight through your jeans and into your legs. Soft spinifex, however, have stomatal grooves on the lower surface of their leaves and produce a leaf resin making them less hard but still spiky. Soft spinifex is more prevalent on The Jump-Up.

Small clumps of spinifex create their own little ecosystem with lizards, birds and little marsupials living or making nests inside the tussocks. In terms of good eating, soft spinifex is the most palatable and is grazed on by cows and sheep. Termites also eat spinifex which is why termite mounds are often found amongst spinifex.

Lastly, while not a plant this interesting phenomenon on The Jump-Up can easily be missed by the untrained eye. The dark brown staining on the rock surface is called soil crust or cyanobacteria. Terrestrial cyanobacteria (similar to blue-green algae) is an ancient group of photosynthetic microbes that grows on the rock surface and gets its energy through photosynthesis. Over time this process will slowly erode the rock and put nutrients back into the ground.

FAREWELL RUMBO

BY TRISH SLOAN

Rumbo has been a vital part of the Museum's expansion, going above and beyond as a fantastic Museum Tour Guide and role model to others. As the Museum grew Rumbo was promoted to Laboratory Supervisor/ Education Co-ordinator and began in earnest to develop educational activities for school groups, as well as sand pits, signs, education material and more.

An incident I will never forget happened during the 2017 dig when Rumbo split his pants not just once, but twice! He took it in his stride and kept working (after fashioning a pair of hessian pants for himself of course).

Seven years ago we decided it was time to hire a new Museum Tour Guide. After a chat with the Chief of Operations about a possible applicant I followed up with a very short phone call. The bloke I spoke to sounded good and after a minute I blurted out, "When can you start?"

Not long after that eventful call Steven Rumbold was on site learning the ropes from another Museum Tour Guide, Alice. Soon Rumbold became Rumbo and he was confidently guiding groups of visitors through the Laboratory.

After a short contract with the Museum Rumbo left to take an amazing job in Africa. Despite his short stay he made an impression, and it was unanimously agreed that if he decided to return he would be welcomed back with open arms. So when he did return to Australia the Museum team welcomed him back into the fold.

Rumbo's ability to impart his passion of prehistory is simply amazing. Over the years he has helped train many new Museum Tour Guides every season. I also discovered that he was quick to ensure the guides were updating their interpretation material and delivering it to a consistently high standard. Rumbo has educated thousands of people during his time at the Museum, opening their minds to a whole new world of amazing discoveries.

There are so many great things this bearded fella did during his time at the Museum including develop lifelong friendships with myself and those around him.

On behalf of the entire Museum team I extend the biggest dino-filled thanks to Rumbo for his dedication, quick wit and commitment. I know he'll be back some day, even if it's only just for a visit.

PALAEO PETE FUN

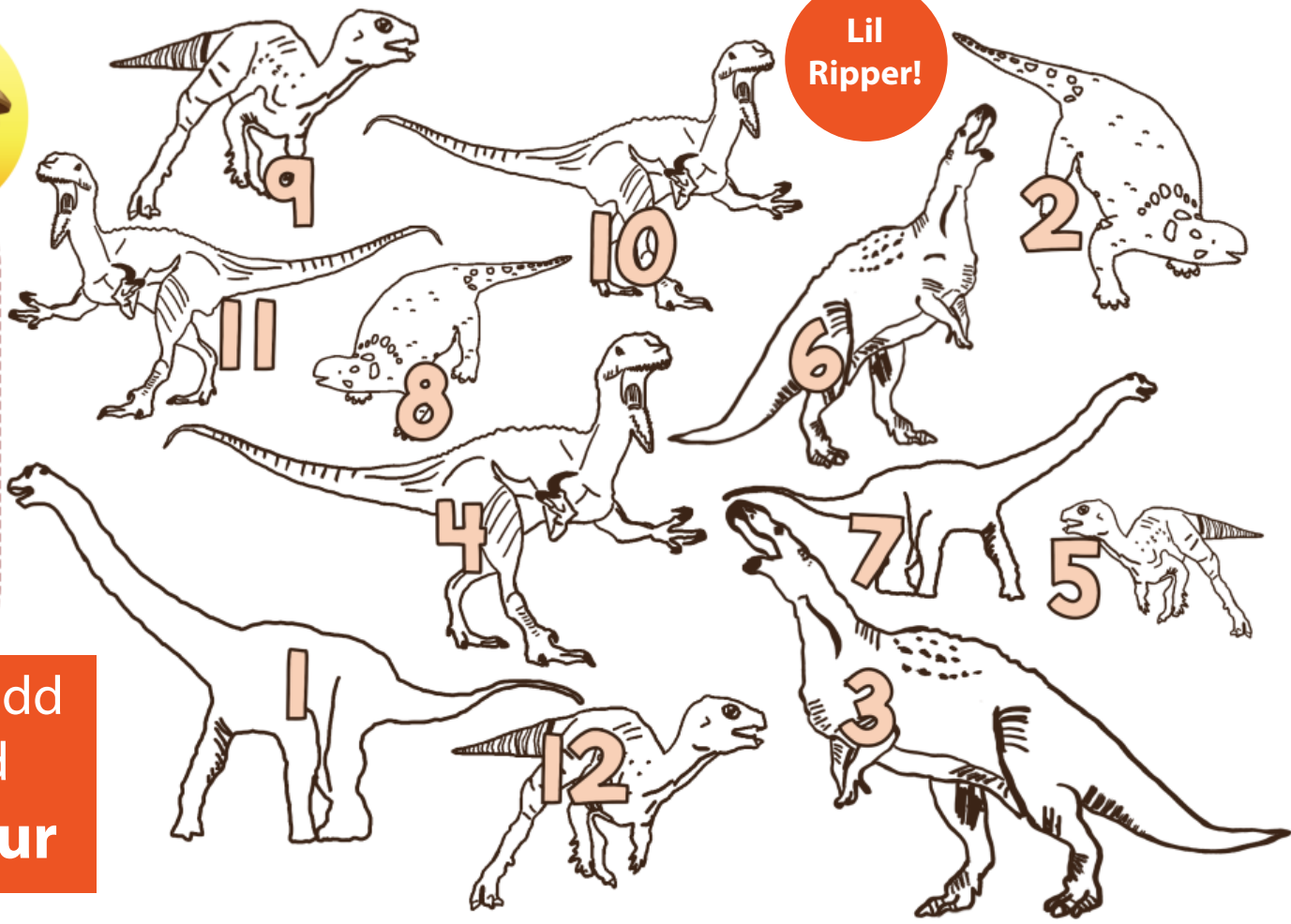
INSTRUCTION

Each player chooses a colour. The winner is the one with the most dinosaurs in their colour at the end.

TO PLAY

1. Grab a friend
2. Roll two dice
3. Add the numbers together
4. Colour the answer

Lil Ripper!



Roll, add and colour