ORANGE FIELD NATURALIST AND CONSERVATION SOCIETY Inc

NEWSLETTER MAY 2025

Thursday 8 May, 7.30 pm.
Nature Photography - trees to bees and everything in between.

Speakers
Nigel Hobden and Helmut Berndt.

Face to face at Nguluway Ngurang Seniors Village Hub, North Room
(Opposite side of carpark to Harris Farm)

Excursion
Sunday 11 May (Mother's Day)
Mogong Creek Trail
Nangar National Park

Next Meeting
Thursday 8 May, 7.30 pm,
Seniors Village Hub.

Nature Photography - trees to bees and everything in between.
Speakers – Nigel Hobden and Helmut Berndt.

Helmut and Nigel will share tips and tricks that they have learnt over the years, from camera settings to lens choices; photo composition, editing and equipment.

They will cover topics including landscape, macro, wildlife and astro photography. Some inspiring images and interesting accounts of taking photos will be shared.

Acripeza reticulata (Mountain katydid) from Mt Canobolas. Photo Helmut Berndt.

The Milky Way. Photo by Nigel Hobden.

Next Excursion - Sunday 11 May.
Mogong Creek Trail, Nangar National Park.

Nangar National Park is 70km to the west of Orange. This excursion will be along Mogong Creek Trail, a trail with restricted access in the parks eastern section. This full day excursion will start with a rest stop at Terarra Creek Picnic Area. We will then travel through the park to the start of the Mogong Creek Trail with occassional short stops on the way at places where we found orchids last year. Once on Mogong Creek Trail we will stop where there are different habitats as well as at the salt lick that animals use.

One of the habitats along Mogong Creek Trail. Photo Rosemary Stapleton.

Eastern Grey Kangaroos, Common Wallaroos, Red-necked Wallaby and Swamp Wallaby are found in the park. Over many years 87 species of birds have been recorded at four survey sites along Mogong Creek Trail. This includes many species of Honeyeater, different Cuckoos, and Speckled Warblers.

Due to the time of year there will not be many flowering plants, however we will see a number of different eucalypt communities.

People with moderate fitness will be able to take short walks in the bush that may have some steep sections. Others with a lower level of fitness can walk along the roadside, providing they are with someone else.

Meet at Orange High Bus Bay at 9.00 am. 4WD necessary and car pooling encouraged. BYO food, water and suitable clothing as it may be cold.

<u>Last Talk</u> – 10 April, 7.30 pm.
The ecology and conservation of the threatened Large-eared Pied Bat (*Chalinolobus dwyeri*) and Eastern Cave Bat (*Vespadelus troughtoni*).

Speaker Lachlan McRae, Fauna Ecologist. *Report by Rosemary Stapleton, photos by Lachlan McRae.*

Denis Marsh introduced Lachlan who is revealing the secret lives of the threatened Large-eared Pied Bat (*Chalinolobus dwyeri*) and the Eastern Cave Bat (*Vespadelus troughtoni*). His PhD research aims to fill some of the critical gaps in our knowledge of these microbats and ultimately to inform appropriate conservation management practices.

As Lachlan is about eighteen months into his three-year study, we were fortunate that he discussed some of his preliminary findings.

To begin, Lachlan provided some background on bats. Almost all microbats are insectivorous and navigate by echolocation; as such they have large ears and small eyes. They eat millions of insects so play an important role in the control of insect populations in both the natural environment and as pests of crops. Most microbats live in tree hollows or under bark however the two species Lachlan is studying use caves or overhangs. Very few such roosts are known, and this may be one of the reasons these species are threatened. Roost sites are important for shelter, socialising, breeding and for protection from predators.

The larger fruit bats (megabats), such as those along Ploughmans Lane, navigate by sight so have relatively small ears and large eyes.

There are 19 species of microbat listed as threatened in NSW. Two are endangered, the others are vulnerable. The endangered Large-eared Pied Bat is primarily found in eastern NSW and is one of two microbats listed nationally. This is the species found at Ophir Reserve. The Eastern Cave Bat is found along eastern NSW right up to Cape York. It is listed as vulnerable in NSW. Both species are significant within the NSW Biodiversity Offset Scheme (BOS). If a development is deemed to have a serious and irreversible impact on these species, local councils would be obligated to deny development approval.

Lachlan has eleven study sites throughout NSW and Qld, including multiple maternity sites, where these microbats congregate in spring and early summer to give birth. This is the time when there is a high level of insect activity. At Ophir Reserve the Large-eared Pied Bats roost and use the old gold mine tunnels. It is a special site as it is currently the only known active maternity roost in artificial structures.

One of several roost sites at Ophir.

To further identify where the microbats were roosting Lachlan placed harp traps at the entrance to known caves and placed a tiny transmitter on those he caught. These fall off naturally after ~ 10 days. Using the signal from the transmitters he was able to identify other roost sites.

A harp trap outside a tunnel at Ophir to catch microbats.

Lachlan's four research questions are:

- What habitat features are important and how do they respond to human-modified landscapes? Habitat use is being explored via the deployment of ultrasonic sound recorders to detect the echolocation calls of microbats.
- What factors influence roost selection? Features of occupied and unoccupied sites will be compared. It was thought that these microbats have high roost site fidelity however an important finding by Lachlan is that the microbats move around between available roost sites in each locality.
- What do they eat? Faeces samples from under roost sites have been collected and DNA metabarcoding will be used to identify prey species. This may indicate if the microbats are generalist feeders on insects or have a specialist diet. Dick suggested future research could look at the connection between the insects eaten by the microbats and the vegetation at the roost locations.
- Are their populations genetically fragmented and, if so, what are the barriers to gene flow? When catching microbats for tracking Lachlan also took a tiny sample of wing tissue for DNA analysis, which will help answer this question. The populations may well be fragmented as only one study has been done on flight distance and found that microbats only fly two kms from their roost site. An exciting find for Lachlan was one of his tracked Eastern Cave Bats at Glenbawn Dam 10km away from its roost site. An interesting result from the DNA analysis would be if speciation is occurring due to site fragmentation.

One of his study techniques was to place 28 'Audiomoth' listening devices in a grid pattern in the area surrounding known roost sites. Calling activity was recorded on six consecutive nights. Lachlan shared some preliminary results from McCullys Gap in the Upper Hunter and Ophir Reserve. At McCullys Gap the highest number of calls was from the roost site in cliffs and then above two farm dams some distance away down a valley. Lachlan suggested the microbats were feeding and drinking above the dams. At Ophir he thought the microbats might travel down a gully to the creek for water however it appears they might have been using the road. He thought the pattern at Ophir may be different as water was available all along the creek.

Large-eared Pied Bats at a maternity roost at Ophir.

As the microbats changed roost sites more frequently than expected Lachlan has also placed cameras on the roof of roost sites and along passages to monitor microbat movement. Some of the other data being collected is on the dimensions of occupied and unoccupied roost sites, aspect, temperature and light. These measurements may help explain the choice of roost sites and why these movements occur. Unfortunately, this is not possible at Ophir due to the easy access of the public to the sites.

The results of Lachlan's PhD will fill a gap and provide valuable information for assessments of the impact of developments. His preliminary recommendations are:

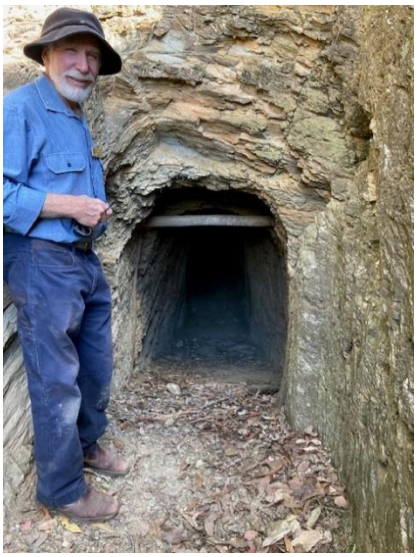
- It could be important to conserve or develop vegetation corridors linking roosting habitat to permanent water sources to facilitate movement of the microbats.
- The microbat's movement between several roost sites in a locality show the importance of preserving a network of caves and tunnels, whereas the current legislation states just one roost site needs to be preserved.
- In any assessment of roost habit by ecologists, multiple visits must be made to multiple roost sites due to the frequent movement of the microbats.

Everyone was fascinated in Lachlan's presentation, asked lots of questions and shared their observations of the Large-eared Pied Bats at Ophir. It highlighted to us how important and special Ophir Reserve is.

Thank you and congratulations to Lachlan for such an interesting and well thought out research project. I am sure we would welcome him back to present the final research results. Thanks also to Cilla for offering Lachlan a spare bed on a cold night and to Denis for supporting Lachlan and organising this talk.

<u>Last Excursion</u> – 13 April.
Ophir Reserve.
Report by Jenny Pratten.

OFNCS visited Ophir Reserve with leader Denis Marsh to observe the Large-eared Pied Bat, an endangered species. Ophir Reserve is one of possibly only six remaining locations of this microbat.



Denis Marsh, outside one of the tunnels at Ophir. Photo Jenny Pratten.

There is a network of at least five tunnels or adits within a 500m area in which the bats have been seen. We looked in three tunnels, finding the microbats in two of them. We saw individual bats in three spots and two groups of about four bats, highlighting to me just how vulnerable they are. Each location was not that far into the tunnels nor were they very high up or "hidden". In cold weather they tend to congregate in larger bunches to keep warm. Denis thought that one of the groups might have possibly been juveniles with a single individual nearby.

It is thought the bats move location every few days and so it is important they have a choice of numerous tunnels or caves in close proximity. The gold mining tunnels in the Ophir Reserve provide this. It is possible their numbers have declined in Australia due to habitat loss.

I was surprised how small the bats were (approx. a man's thumb) and how fluffy and soft their fur looked (like velvet). Again, their vulnerability was obvious.

The small group of Large-eared Pied Bats found in the second tunnel we visited.
Photo Rosemary Stapleton.

The Ophir Reserve is known for reef gold mining that commenced in the 1880's but turned out to be a failed mining venture. Close to the picnic area is a rock terrace which is the remains of the creekside tramway which transported ore from the Bluff tunnels to the Bluff stamper (which was located near the existing toilet block) for processing.

The rock terrace that is the remains of the tramway. Photo Jenny Pratten.

At the entrance to one tunnel was Bat's Wing Fern, *Histiopteris incisa,* despite the very dry season.

Bat's Wing Fern. Photo Jenny Pratten.

Another highlight of the trip for me was the beauty of the rock walls of the tunnels - striations of layer upon layer of different colours (see below). Maybe I should have studied Geology!

We were also lucky to have bryophyte scientist Alison Downing and her husband Kevin, from Sydney join the excursion. Alison had obtained approval from the Ophir Board to collect some moss and liverwort specimens under her scientific licence. After lunch Dick took Alison up to collect along the basalt that is outcropping near the cemetery. She has identified and catalogued them and commented that '*it was an interesting collection with quite a contrast between the bryophytes on the metasediments and on the basalts'*.

There weren't a lot of birds around. Pacific Black Ducks and Dusky Moorhens were on the creek and Yellow-faced Honeyeaters, Superb Fairywrens, Grey Fantails and Welcome Swallows at the picnic area. The swallows had built nests inside the tunnels. White-throated Treecreepers were at the second site. A Copper-tailed Skink was also seen on the bluff.

Thanks to Denis for leading a very different excursion that was both educational, interesting and enjoyable. After exploring the tunnels, we returned to the picnic area and had a relaxing lunch beside the creek before heading home in different directions.

OFNCS Committee News

Welcome to new members Jacinta Dean and Asad Shabbir. It has been a quiet month. Great news that Burrendong Botanic Gardens have received almost $1m for redevelopments.

June Talk and Excursion

Thursday 12 June – Feral Animal Control. Speaker - Sebastien Comte, from the Vertebrate Pest Research Unit, NSW DPI, on the cost-effective management of wild deer in Australia.

Sunday 15 June – Burrendong Botanic Gardens. Rachael MacSmith hopes to be there to tell us about the redevelopment plans.

Gaanha bula Mt Canobolas Update

The mountain was a drawcard for locals and visitors during the holiday break. Campers were at Federal Falls Picnic Area and families were enjoying the other picnic areas and walks.

On April 3 Nella Smith, friend and Murrumbidgee Field Nats member, was camping there and woke at 4am to see changing coloured lights in the sky to the south east. On checking with Nigel Hobden, it was a night of aurora activity so Nella may well have been lucky to see the Aurora Australis.

Two threatened bird species have also been seen on the mountain this month. A female and immature male Flame Robin were near Towac Picnic Area. They were with lots of Silvereyes, a few Red-browed Finches and White-browed Scrubwrens feeding in the roadside Fleabane.
A group of eight Dusky Woodswallows were hawking insects on Towac Way just off Mt Canobolas Road on 18 April.

Spring Creek Reservoir Bird Survey,
10 April 2025. *Report by Rosemary Stapleton.*

An elegant Black-shouldered Kite greeted Cilla and I as we started the quarterly bird survey. Helmut was already there photographing birds in flight and was delighted to capture the kite as it flew from its high perch (photo below). It joined its partner, and they hunted over the cleared paddock a little way down the road.

The water level was lower than it has been, probably for years, so there were some muddy edges along the bank. Several old dead stumps were exposed, and the Little Pied Cormorants were using them to take a break from their fishing. The northern end of the reservoir had the usual scattering of Eurasian Coots with small groups of Australasian Grebes fishing

among them. There were fewer Musk Ducks and no Grey Teal or Hardheads here.

Along the track there were many small groups of Silvereyes, probably feeding on the aphids or their sugary exudate that was on the willows and hawthorns. An occasional Grey Fantail, which had not migrated north, flitted in and out of the trees. Several Yellow-faced Honeyeaters had not made the trek north either.

The telescope came out to confirm that two of the ducks on the water were Freckled Ducks, a threatened species and very rare visitor that uses the reservoir in dry times or drought. Their 'ski jump' shaped bill gave them away. A couple of dozen Great Crested were lounging around and in the distance was a raft of about 60 of the smaller grebes, which were probably juveniles. The other big count was a flock of about 90 Little Black Cormorants that flew to the southern end of the reservoir to roost.

A total of 39 species were seen during the 2-hour count walking down the road. Goldfinches were the only extra species seen at the western end on the way out. Two Rakali were spotted swimming and hunting.

Council has still not erected signs showing the designated fishing area that was approved last year. Tracks down to the waters edge showed where people had been accessing the water in the areas where fishing is not allowed.

Next day Nigel Hobden went to look for the Freckled Ducks but couldn't find them. However, he did see two Blue-billed Ducks, another threatened species, and two Yellow Spoonbills.

Supporting Biological Control of Blue Heliotrope (*Heliotropium amplexicaule*).

Report by Lisa McCann and Rosemary Stapleton.

Thanks to Marita Sydes of NSW Department of Primary Industries and Regional Development (NSW DPIRD) for sharing a 'need to find' population/s of *Myosotis australis* (Austral forget-me-not) with OFNCS. This native species will help in further research into biological control agents against blue heliotrope, a native of South America.

There has been a great outcome, as Lisa McCann, whose property OFNCS visited in 2023, has since found some Austral forget-me-not plants flowering and seeding there.

Lisa reported, "*Not that far from Gaanha bula Mt Canobolas and still on Wiradjuri country, I found some Austral forget-me not within the NSW BCT conservation area on my property 'Mirrambeena'. I contacted Marita and NSW DPIRD research scientists, Asad Shabbir and Muhammad Nawaz visited my property shortly after. They left happy after a few hours of fieldwork collecting seeds and a couple of specimen plants."*

"The plants will be nurtured at NSW DPIRD facilities until after their identification is confirmed by a botanist. The species is important as it is a closely related native to the target weed, blue heliotrope, and will guide research on potential biological control agents to help manage the weed. Seeds of the species will be sent to Argentina to grow in a quarantine facility where collaborative testing of a potential biocontrol agent is underway. Myosotis australis - such a gorgeous, tiny, many-flowered and seemingly unassuming native plant!"

At 'Mirrambeena'. Above - Austral forget-me-not and below - Asad Shabbir, Muhammad Nawaz, and Lisa McCann. Photos Asad Shabbir.

Asad thanked Lisa and OFNCS, saying, "*I am sure this seed collection would be significant in terms of our understanding of host-range testing of potential biological control agents of blue heliotrope."*

Another great outcome is that Asad has joined Field Nats, so please welcome him when he comes to meetings or excursions.

Canowindra Fish Fossil Talk, 14 April 2025.
Report by Rosemary Stapleton.

Live music, grazing plates and The Friends of the Fossils, from the Age of Fishes Museum, welcomed us to a talk on 'The Devonian Age of Fishes - 360 million years ago' by Dr Alice Clement. It had generated interest from Field Nats with Tony and Penny, Bernie and Colina Huxtable and the Stapletons there.

Dr Clement is an Evolutionary Biologist, Palaeontologist and Lungfish Enthusiast at Flinders University. Her passion and wide knowledge of Devonian fishes came through as she explained the evolutionary lineage of the fish fossils from the Canowindra complex and where they fitted into the historic timescale and world-wide context. As the publicity said, '*the Devonian period was a time when ancient fish dominated prehistoric waters and shaped the evolution of life as we know it*.'

The Canowindra fossils are from a mass fish kill in a freshwater billabong about 360 million years ago, just before the first known mass extinction. Two groups of fish that were abundant then were found at Canowindra – placoderms (armoured fishes) and sarcopterygians (lobe-finned fishes). Fossil assemblages from Forbes and Grenfell are from earlier in the Devonian period.

Dr Alice Clement talking about the results of new technology. Photo Tony Caine.

Alice explained that advanced imagery has allowed palaeontologists to visualise, in a non-destructive way, preserved anatomical features of the fossils. These have never been seen before. She gave the example of the Gogo assemblage, in the Kimberly, where scanning has revealed evidence of soft tissue, embryos and even live young. This technology has meant what was widely accepted 20 years ago has been superseded and is providing results never dreamed of before.

This amazing imaging has led to the formation of VAMP; the Virtual Australian Museum of Palaeontology.
https://sites.flinders.edu.au/vamp/

Dr Clement and others from Flinders University were in the area for a week on an excursion with palaeontology students. They based themselves at Wellington Caves but also did excursions to other fossil sites such as Canowindra.

Two PhD students, Austin Fitzpatrick and Ramon Fritzen spent their days at Canowindra as Austin's PhD research is into the *Groenlandaspis* species. He hopes to formally describe the Canowindra species. It is a small 50cm long armoured fish of the placoderm group. The museum notes that the '*1993 excavation found at least 70 well preserved Groenlandaspis specimens which are the best examples found anywhere in the world*'. On his visit Austin was using a portable scanner to 'see within the slabs of fossils' and when taking a cast, he believes he found evidence of the fishes' dentition. An unusual find.

At the end of Alice's talk Doug asked about the future of the site on Fish Fossil Drive. The new recent owner is enthusiastic about fossils and would like to investigate the site further and develop it as an educational and tourist centre. Dr Clement talk highlighted the importance of the Canowindra fossils in a world-wide context. Austin's work, including finding a possible new specimen, shows that there is more to discover and learn at Canowindra.

The talk brought back memories for the Stapletons as we had been at the 1993 dig:

Catherine as a Canowindra school student and Doug and I through Doug's father Max being Cabonne Shire President at the time.

If you want to know more about the Canowindra fossils take a short trip to the Age of Fishes Museum, or visit https://www.agefishes.com/

To finish the night members of the audience, who had brought fossils, were able to discuss their finds with the palaeontologists and students.

Rosemary (standing) seeking identification of marine fossils, found in a limestone outcrop at Cudal, with Flinders University PhD students and visitors – Austin on left and Ramon right. Photo Catherine Stapleton.

Dates for your Diary

Cowra Woodland Bird Surveys – the 2025 dates are the weekends of 26–27 July and 18–19 October. All survey weekends start with a briefing and get together on the Friday night. New surveyors with some birding experience are always welcome and will be teamed with experienced surveyors to learn the ropes. Please email Jayden Gunn at cowrabirds@birdlife.org.au or 0409 679 360.

Also, part of the Cowra Woodland Program is a **planting weekend at Spring Forest** on May 31-June 1. Volunteers will plant and guard 600 seedlings to create more habitat for declining woodland birds in a paddock adjacent to the Mugga Ironbark and heath of this very large remnant area. It is double what was planted last year. If you are interested, contact David Taylor at email: david@taylorecology.net

Art Exhibition - The Hansen brothers, Nick, John and Sean are having an art exhibition at the new 'A Thousand Words Gallery', 68 Adelaide St, Blayney. The exhibit will officially open on Friday evening **May 23 and run until Sunday June 8**. Further details will be posted on the gallery's website in the near future. https://athousandwords.gallery

Capertee Valley Tree Planting Weekend - May 2-4. You can obtain further details and book your place via the Eventbrite webpage at this LINK. Or please contact Iain Paterson (0429 300 234 iain_paterson@live.com.au).

The **Aussie Bird Count** is on again from **20-26 October 2025**. Check out the 2024 Results – Aussie Bird Count. In NSW the top species counted was the Rainbow Lorikeet.

Sightings around Orange

If you see anything interesting, please email orangefieldnats@gmail.com or post it on Facebook.

Insects

Hai spotted this butterfly, a Meadow Argus, in his backyard on April 3.

Animals

Nigel Hobden spent the holiday break at Coolah and spotted ten Greater Gliders in a very small area (photo above). He said *'it was amazing to see so many. Some active others just hanging there looking at us'.*

Orchids

Despite the very dry conditions Rosemary and Catherine found two orchid species along the old road at Bumberry adjacent to Goobang NP on April 24. Just one plant of each.

Above – a very tiny Midge orchid possibly Corunastylis occidua ined. The cluster of flowers was less than a centimetre! And below a slightly larger flower spike of *Speculantha rubescens. Photos Rosemary Stapleton.*

Creature of the Month:
Freckled Duck, *Stictonetta naevosa.*

Text and photos by Rosemary Stapleton.

The Freckled Duck is a threatened species listed as vulnerable in NSW, so it was pleasing to see a pair on the survey at Spring Creek Reservoir. Perhaps this was an indication of the dry conditions further south and west. Maybe they have now gone to the flooded areas to the north west.

eBird has a good description of the Freckled Duck: '*Very finely-speckled dark-grayish duck with a dark eye and an obvious peaked crown. Beak is strongly curved like a ski-jump. Breeding males have a red base to their bill. Upper-wing is dark, while under-wing is paler gray*.'

Freckled Duck, 22 July 2014, Spring Creek

When not on the water filter feeding or dabbling Freckled Ducks often sit on stumps, logs or in camps on the shoreline of wetlands. They rest with their head under one of their wings and so it can be hard to see their diagnostic features.

Typical roosting stance, which can be frustrating for birders, 15 April 2016, Gum Swamp, Forbes.

This duck is mainly found inland where it breeds sporadically in flooded wetlands and swamps. It is considered uncommon although in some places it can regularly be seen around large permanent freshwater wetlands. However, it is not always found in the same location and occasionally disperses to coastal areas when conditions deteriorate. It is a summer visitor to north Queensland.

BirdLife Australia's Birdata has the Freckled Duck being recorded locally in 2014, then again during the drought years between 2018-20. This was mainly as a summer visitor, but also in July and August. These sightings were often at Spring Creek Reservoir with a few at Lake Canobolas and Gosling Creek. It has been recorded once at Ploughmans Wetland and on an OFNCS excursion in 2006 at the Agricultural Research Station dam. Further afield they are more often seen at Gum Swamp near Forbes and Fivebough Wetlands at Leeton.

L-R – Freckled Duck, Pink-eared Duck and Grey Teal. 24 May 2018, Spring Creek Reservoir when very low.

Sources

Menkhorst P, Rogers D, Clarke R, Davies J, Marsack P and Franklin K (2017). The Australian Bird Guide. CSIRO Publishing.

Pizzey, G and Knight F (2007) The Field Guide to the Birds of Australia, 8th edition. Harper Collins.

BirdLife Australia Birdata, https://birdata.birdlife.org.au/home

eBird, https://ebird.org/species/freduc1

Some of the excursion group waiting to go into Bluff tunnel, Ophir Reserve. Photo J Pratten.

Looking south from the basalt outcrop on Cemetery Road, Ophir Reserve. Photo Alison Downing.

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Please identify payments with your name and send confirmation of the payment to orangefieldnats@gmail.com
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Each additional family member – $5
Concession rate (emailed newsletters) – $12.50
Concession rate (printed newsletters) – $25
Note: concession rate is for *bona fide* pensioners and students only

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Orange Field Naturalist & Conservation Society acknowledges the traditional custodians of the land, including the people of the Wiradjuri Nation, and we pay our respects to Elders past, present and future.

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