



GUM TIPS

SUMMER 2022



La Nina
and Koalas

KCA invite for
Powerhouse 100
Climate Conversations

NSW Koala
Conference
Coffs Harbour

MARY MARY, QUITE CONTRARY!

Dr. Shali Fischer

Emerald Downs Mary has been with us at the Port Macquarie Koala Hospital for 6 years now, and as such, has become a favourite with volunteers and visitors alike.



Mary enjoys her leaf.

She was brought to us as a juvenile all those years ago because she was suffering from an ocular (eye) condition called glaucoma in her right eye. This is when pressure within the eye is elevated which can cause debilitating pain and blindness. There was no

hope for the eye to return to function, therefore, to alleviate the pain, her eye had to be surgically removed. Her remaining left eye was non-functional which left her with no sight in either eye.

Given the poor chances of her survival in the wild, she was registered for permanent status as an exhibit koala.

Contrary to what many might think of a blind animal, Mary is a feisty, agile koala who has certainly shown us that her blindness is no barrier to living a productive koala life even while in protective captivity.

She regularly climbs high amongst the canopy in her exhibit- which is why sometimes visitors really need to take time to see her in her yard.

Her companion in the same enclosure, Ocean Summer, respects her 'roommate' from afar and stays clear at meal time because Emerald Downs Mary has a healthy appetite and nothing gets between and her breakfast of fresh leaf!



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Cover image: Emerald Downs Mary – photo: Carol Grant



Mary up high in her enclosure.



Blindness hasn't effected Mary living a happy life.

Her most recent health check gave her an A+ for an ageing female, with just some mild osteoarthritis in her joints, not to be unexpected in an older koala. This condition is being monitored closely by the veterinary team.

Osteoarthritis in older koalas in our facility is catered for it by modifying their gunyahs (climbing posts) to allow more ease of access to favourite sleeping spots.

As koalas age, like people, they tend to get issues like worn teeth and creaky joints, however, as we know, Mary, at times, acts like a teenager, contrary to the general expectation of behaviour for an older soul.

CONTENTS

Mary Mary Quite Contrary.....2	New Facility Designed on Sustainable Practices.... 10
100 Climate Conversations.....4	The Vanishing - NSW Koala Conference..... 13
La Nina Rainfall Flooding and Koalas6	Mystery Cross 15
Case Study Motor Vehicle Victim Macksville Tracey.....9	Koala Adoptions 16

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100 CLIMATE CONVERSATIONS

KCA's Manager of Research & Breeding, Cheyne Flanagan, was invited to be one of 100 Australian Expert Activists for Climate Change featured in The Powerhouse Museum Sydney project.

From the Powerhouse Museum website: About – 100 Climate Conversations

The 100 Climate Conversations program showcases 100 invited visionary Australians who take effective action to respond to the most critical issue of our time – climate change. Within this cohort of invitees are farmers, traditional owners, architects, entrepreneurs, and scientists who each offer an inspired narrative of invention, community and resilience. This project will take 2 years to complete.

CHEYNE'S EXPERIENCE

Towards the end of the 2019/20 mega fires I was contacted by the Powerhouse Museum in Sydney to discuss the effects of drought and fires on wildlife. The reasoning behind these multiple conversations was focused around the proposal for an exhibit at the museum devoted to the myriad of issues surrounding climate change

Due to my work as Clinical Director of the hospital for many years, particularly having experienced so many bushfires and the effects on wild koalas, I was invited to be a part of this amazing exhibition.

On arrival on the 29th October for filming, I was blown away by the size of this exhibit, which features



The Powerhouse Museum Ultimo.



Exhibit areas inside the Powerhouse Museum.

an enormous wall of individual screens of all the people who have already been recorded and filmed previously – eventually there will be one hundred faces up there including mine! It was awe inspiring to recognize so many scientists, authors and those who are working so hard to make a difference. It was also daunting, scary and humbling that I was the 39th person to be recorded.

Beside the “wall of faces” is a large stage designed for recording and filming with a large sound studio to one side and modern seating for a small audience. Very simple, stylish and effective.





There was even a makeup professional to prepare me for filming. This, my Koala Hospital colleagues found hilarious, because appearing in public with makeup is simply not something on my agenda!

The audience is seated and two cameramen and three cameras are set up and it is all systems go.

(Hours of pre interviews, a list of questions/topics for the interviewing journalist on the day is used for the "Climate Conversation".)

Over the following 70 minutes we talked about the effects of long term droughts and the resulting fires, the global outpouring of support for wildlife and particularly koalas and literally how it felt being in the middle of that horrible period. We talked about the work the Koala Hospital and Koala Conservation Australia does and their vision for the future. Of course, there was a lot of conversation regarding the world's first Wild Koala Breeding Program that was born out of the 2019/20 megafires and what it will achieve.

All the conversations, like mine, are being hosted by some of the nation's most respected journalists and all are being recorded live in the Powerhouse exhibition studio.

After the interviews, video and transcripts are uploaded to the website and a podcast, produced in partnership with Spotify, is being released weekly.

Visitors to the museum can also sit in small pods and listen and watch any of the interviews of their choice.

Once the project has been completed and the exhibit draws to a close, all of the conversations will be archived for future generations to hear. The project runs from March 2022 – December 2023.

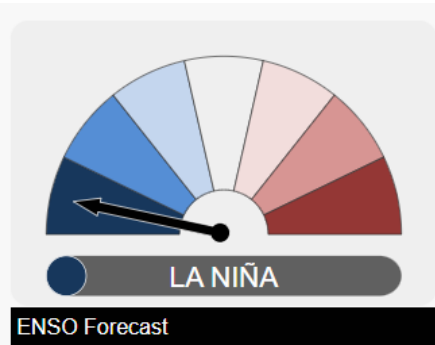
Check out the stellar line up of visionary Australians who are accelerating the #netzero carbon revolution -<https://lnkd.in/guYHBvPd> and listen to the podcast or register to come along to watch a session, quite the unique experience.



The live #100ClimateConversations podcast recording of Cheyne Flanagan from the Port Macquarie Koala Hospital hosted by Yaara Bou Melhem, at Powerhouse Ultimo.

LA NIÑA, RAINFALL, FLOODING AND KOALAS

Scott Castle



The CSIRO claimed that Port Macquarie has Australia's best climate. So why hasn't it stopped raining since 2020?

A La Niña weather pattern has us in its grasp, for the third time in three years. What does this mean... especially for koalas?

La Niña is an ocean-atmosphere phenomenon that occurs when a temperature contrast develops across equatorial Pacific Ocean. Once it begins, the ocean and atmosphere reinforce each other to form stronger than usual trade winds that blow from east to west. These strong winds pile up warmer than average water on the western Pacific Ocean. The pooled warm water helps air rise over the western Pacific Ocean and sink on the eastern side of the Pacific

basin. This rising and sinking air causes enhanced convection and cloud cover near Australia. Lower than normal air pressure delivers above average rainfall. Conversely, an El Niño cycle brings very little rainfall and drought.

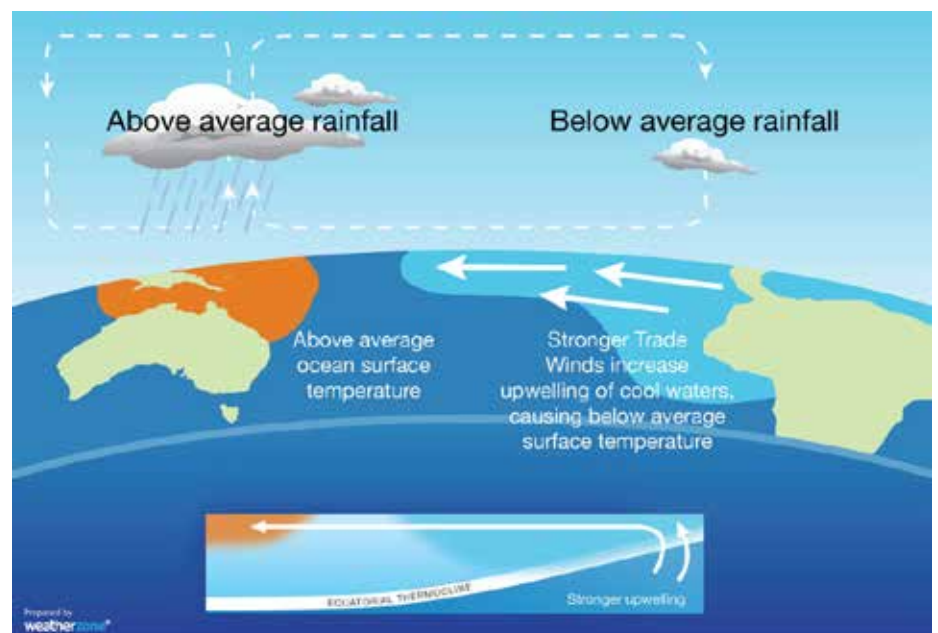
How does this affect koalas?

Koalas can swim! Let's put that out there right away. Koalas are adequate swimmers, however, as with other threats, koalas are likely to climb higher in the trees. As long as the trees stay upright during a flood or the raging torrent of a swollen river, the koalas will be able to hold on and survive. Likewise, joeys are also adept at holding onto their mothers, whether she's jumping between tree branches, being harassed by a male, or swimming!



Wet koala at Port Macquarie Koala Hospital.

Koalas also have very dense fur and are seemingly not bothered by rain. We often see our koala patients choosing to sit out in heavy rain and not under cover. The important thing to focus on is ensuring that the koalas have trees to sit in, and some vegetation to move through.





The current three-year La Niña cycle is coinciding with a negative Indian Ocean Dipole delivering immense amounts of rain over parts of Australia.

Eastern Australia has experienced record-breaking flood events over the past 19 months. New South Wales has been the worst-affected state with flooding in 43 local government areas (LGAs). These have been mostly in rural areas with some floods spanning hundreds of kilometres.

The Port Macquarie-Hastings LGA suffered devastating flooding in 2021, and it's been threatening to return ever since. It's rare to see La Niña events occurring back-to-back over consecutive years. This has only happened three times since 1950.



Maria River Plantation. Photo: Scott Castle

The 9,000 koala food trees planted last year at the KCA Maria Plantation, have endured very difficult conditions in their start to life.

The plantation paddocks were mostly inaccessible to machinery, large numbers of our seedlings were submerged and our established eucalypt trees suffered after having their roots sitting in water. Our staff and volunteers have worked tirelessly in these wet conditions to save the eucalyptus trees.

The inland plantation, Moripo west of Wauchope also suffered from very wet ground with many trees suffering and the crossing into the plantation becoming inaccessible.

The flooding causes erosion from the constant overland and subterranean flow which damages crops and natural environments

The high water levels and high velocity flows cause significant riverbank deterioration. This is amplified where there is limited vegetation in place to bind the soil together.



*The impact along Settlement Point Rd in Port Macquarie.
Photo: Alex McNaught. Port News
A car submerged in Gloucester NSW.
Photo: NSW Incidents Alerts Facebook*

Port Macquarie experienced widespread loss of riverside vegetation after the Hastings River peaked at over 8.5 metres.

KCA (Koala Conservation Australia) distributed 25,000 eucalyptus trees to local residents to help revegetate their riverbanks and properties. However, eucalyptus trees alone are not sufficient to support a healthy ecosystem and biodiversity so a variety of plants and trees need to be planted to be most effective.

Managing erosion with vegetation is important for securing the riverbanks, and also for river and creek health.

The roots and stable soil help keep water clean by filtering and trapping nutrients and sediment. The shade that vegetation provides also helps to moderate water temperature which improves

survivability of aquatic animals. Other planting strategies include buffers around floodplain wetlands, woodland blocks and corridors connecting existing bushland.

Serious flooding also effects the spread of pests and weed species. Insects such as fire ants and yellow crazy ants are highly mobile and raft on waterways, posing a serious problem post-flood. Also free floating aquatic plants are easily spread by floodwater. Water hyacinth for example, is one of the world's worst aquatic weeds that grow in still or slow moving fresh water and can become established post-flood.

Climate change continues to influence Australia and the rest of the world. As habitat is depleted and fragmented we see a continuing number of injured and diseased koalas coming into care.



*Moripo Plantation crossing.
Photo: Scott Castle*



A Farm near Wingham inundated by floodwaters. Photo: Billy Callaghan @Billy C Drones



CASE STUDY: ANOTHER MOTOR VEHICLE VICTIM - MACKSVILLE TRACEY



Dr. Shali Fischer

Macksville Tracey, an adult female koala was presented to the Port Macquarie Koala Hospital on the 25th August 2022. She had been found sitting in the middle of a road in Macksville, bleeding and unable to move properly. WIRES of Coffs Harbour (a local wildlife rescue group) was able to promptly rescue her and arrange for her to be transferred to the Port Macquarie Koala Hospital.

An initial assessment indicated she had signs of trauma consistent with a motor vehicle accident: frayed claws, multiple grazes and cuts and obvious damage to her left leg. She was given strong pain relief and booked for X-rays later the same day.

X-rays confirmed she had a fracture to her femur (thigh bone), as well as 5 rib fractures. Thankfully, there was no severe internal organ damage. She had



Tracey's leg after surgical repair.

her leg surgically repaired by vet Dr. Chris Livingstone at Port Macquarie Veterinary Hospital the following day. Tracey also sustained an eyelid laceration, which was repaired in a separate operation.

After surgery on her leg and eyelid, Tracy was cared for in a rehabilitation yard where her health and mobility was monitored daily. She continued to improve in her ability to climb - a very good sign for her long-term prognosis. In the subsequent weeks, she had post-operative X-rays done to ensure the bone had healed correctly. Once she is given the all clear, she will be given time in the climbing yard- the final step before being discharged and ready for release back into the wild.

Macksville Tracey has now had her second postoperative radiographs done to assess how her fracture repair is healing. We are awaiting

these X-rays to be sent to us for interpretation before we make a plan for her from here.

Tracey is one of the lucky ones. In the past few months, the Port Macquarie Koala Hospital has seen 13 koalas hit by cars. The majority of these accident victims were deceased on arrival, or had to be euthanized on humane grounds. It is a timely reminder that during breeding season, we need to protect our prized local koala population- stick to speed limits, slow down in koala zones and be diligent in scanning the road for koala activity, especially at dawn and dusk. We all have a role to play in ensuring that we protect these endangered animals.



An X-ray showing Tracey's fractured left leg.



Tracey's second scan. Volunteer Gaby checks Tracey's heartbeat.

NEW FACILITY DESIGN BASED ON SUSTAINABLE PRACTICES

The proposal for Koala Conservation Australia's koala breeding precinct at Cowarra has aimed to find economic and sustainable efficiencies across many aspects of the development therefore lowering the construction and operational carbon footprint.

From building materials, construction, and waste management to reducing energy consumption, global leaders in environmentally sustainable design (ESD), Cundell engineers and designers, guided the architects, Allen Jack and Cottier's (AJ+C) strategy for design and construction.

Building systems including heating, cooling and ventilation are based on maximising passive strategies such as orientation, natural airflow and insulation – all reducing the need for mechanical HVAC systems. Overhead fans are planned for the majority of rooms to further reduce reliance on air conditioning. Rainwater harvesting for re-use and irrigation will reduce reliance on mains potable water.



KCA area plan Stage 1



Preferencing locally sourced hardwoods and recycled materials will lower the centre's embodied emissions and harmonise with the bushland setting.

Sustainability Features

In designing the project, AJ+C with Cundall as sustainability consultants, have used a framework in terms of materials, energy consumption and environmental impact which include:

- On-site water and sewerage treatment technology that process all site generated liquid wastes for irrigation to selected areas away from Riparian zones.
- Cladding for the main buildings in Australian-owned forestry derived sustainable hardwood compressed timber panel comprising 100% natural content (97% timber and 3% wax) with no silica, glues, resins or formaldehydes used in its production, with benefits of being termite resistant.
- Roofing materials selected to reduce the 'heat island' effect through lower reflective finishes.
- Environmental Product Declarations are being requested where possible to ensure materials are low in toxins such as Volatile Organic Compounds (VOCs).

- Smart controls are proposed for air conditioning (where absolutely necessary), ventilation and lighting, enable effective zoning and overall energy demand management.

A series of small buildings and outdoor enclosures will follow the contour lines of the forest, sloping down towards a creek. On higher ground, east of the riparian zone, Koala Conservation Australia's (KCA) facilities will perch on a ridge, offering visitors a vantage point into the Koala yards through tree canopy. This approach of elevating the buildings and walkways above ground level (as opposed to on-ground slab construction) minimises disturbance and soil compaction.

The visitor spaces offer an immersive experience designed around an elevated deck where curated information and storytelling will unpack the story of koalas, their habitat, and their role in the forest ecosystem.

Adjacent to the viewing areas is the research centre where KCA, in partnership with Taronga Conservation Society, will work to breed disease-free koalas for release into the wild.

Named by the local Bunya people Guulabaa (place of koala), the site is on Birpai Country. The centre's design by architects AJ+C with landscape by Oculus

aims to be as low impact as possible, to both preserve the natural bush setting and ensure a quality habitat for koalas.

This sensibility is also seen as an important priority for the project stakeholders, including staff and volunteers of KCA, Forestry Corporation of NSW (FCNSW) and future visitors to the centre. In the aftermath of the Black Summer bushfires, the volunteer-led KCA reported a surge in visitor numbers by 50-75 percent, an increase in koala adoptions from around 300 a month to several thousand, and a rise in Facebook followers from 27,000 to around 150,000. This signals the huge public awareness and support of the world-wide community in helping bring koalas back to their forests.

The wild koala breeding centre, funded by the public through crowd-funding, donations and adoptions is due for completion in mid-2023. The science conducted here will be pioneering, and the breeding research will form a pilot program that, if successful, could be replicated at scale in other habitat areas, to boost koala repopulation efforts across Australia.

As the world's first centre for breeding koalas in the wild, its success may determine the survival of this rare marsupial, which was listed under Australian law as an Endangered Species in 2022.



First Floor design, Cowarra precinct.



Visitor Experience plan – First Floor.

IF YOU SEE A KOALA...

- Call the Port Macquarie Koala Hospital on 02 6584 1522 if you are on the Mid North Coast of NSW. In other areas contact your local wildlife rescue organisation.
- Follow the instructions of the phone operator.
- Stay at the scene until rescuers arrive. Keep the koala in your line of sight if possible.
- Minimise stress to the koala. Noise and activity, human touch and talking will all frighten the koala.



THE VANISHING – NSW KOALA CONFERENCE

Scientists, researchers, politicians, wildlife carers and members of the public gathered in Coffs Harbour in late October for the first, NSW State Koala Conference: The Vanishing.



From the Conference website - NSW State Koala Conference: The Vanishing (nature.org.au)

In 1991 scientists surveyed the 535,000 ha Pilliga Forests between Coonabarabran and Narrabri - the largest remaining tract of NSW native forest, west of the Great Divide. Of 280 sites mapped, 240 of the 280 sites mapped had koalas present. But when the surveys were repeated in 2011 only 44 of those 210 sites still had koalas - a loss of koalas from 166 sites. Of the 70 sites that had no koalas in 1991 only one showed evidence of koalas in 2011.

Devastated scientists calculated a 79% decline in Pilliga sites with koalas present.

Then in 2019 the Pilliga koala sites were revisited.

"Nothing is working. This animal is declining.

We have lost the Pilliga koalas, the largest population that once existed in New South Wales was known to be many thousands strong as recently as 20 years ago. In 2014 we were aware of the fact that there had been an 80 per cent population decline and we had some discussions with OEH and others about what needed to be done to secure the remaining populations.... In 2019 at the request of [OEH] we did 107 field sites across the southern parts of the Pilliga, through the Warrumbungles and into the northern parts of Gilgandra shire, and did not find one scat.

They are gone. How can we let that happen?"

Dr Steve Phillips, Principal Scientist, Biolink and presenter at the conference

The vanishing of Pilliga koalas is one of too many stories of lost koala colonies. It must spur us to action.



Catherine Cusack, convenor, NSW Koala Conference.



KCA Chairperson, Sue Ashton, presenting at the conference The Vanishing.

Hosted by Catherine Cusack, Nature Conservation Council of NSW, WWF, NSW National Parks Association, North East Forest Alliance, and North Coast Environment Council, the Coffs Harbour conference attracted people with extraordinary knowledge and expertise and provided a forum to raise concerns that, without immediate change, wild koalas in NSW face extinction.

The conference program offered four panels, each looking at a specific topic and all related to koala conservation.

Scientists, Dr. Steve Phillips BioLink, Dr. Kara Youngentob ANU research fellow and Prof.

Mark Krockenberger, University of Sydney, Koala Hub presented the first three panels and set the scene by putting the decline of koalas into context and explaining how the loss of habitat continues to have a negative impact on koala populations across the state.

Dr. Phillips said he had attended many koala forums over the past 40 years but hoped this Koala Conference would mark a turning point for the "fluffy national icon".

According to Dr. Phillips, koala populations are on a slippery slope to extinction and we should seriously be focusing on preventing this occurrence.

Wildlife carers from across the state: the South Coast, Sydney, Port Macquarie, Gunnedah and the Northern Rivers explained their current situation, painting a dismal picture of the decline in koalas entering their facilities for care. All presenters voiced concern that our koala populations have been devastated by drought, fire and disease and action needs to be taken now to stop their decline.

Politicians spoke about their concerns and the policies they would support or introduce to arrest the decline in koala populations.

The shadow NSW Minister for the Environment, Penny Sharpe and the Greens M.P. Cate Faehrmann, were in attendance and a short video message was played from the NSW Environment Minister, James Griffin, who was unable to attend in person.

Ms. Sharpe said the next government, whatever their

political alignment, would have an opportunity to save the endangered animal.

"We know we need to protect koala habitat and make sure all the money going towards koalas is focussed towards recovery," she said.

She said working with landowners and public agencies was crucial.

"If we are going to save koalas, everyone needs to be working in the same direction," she continued.

The final panel, with representatives from the North East Forests Alliance, WWF, NSW National Parks Association and the Environmental Defenders Office, offered ways to protect koala habitat.

Proud Gumbaynggirr man, Nathan Brennan, also spoke at the conference and said it was important to not focus exclusively on western science.



Dr. Steve Phillips, Biolink, presenting at the conference.





Left to right: Catherine Cusack, Dr. Steve Phillips, Prof. Mark Krockenberger and Dr. Kara Youngentob.



Delegates to the NSW Koala Conference The Vanishing.

"Aboriginal led conservation has been a successful framework that has looked after this country for a very long time. A lot of our cultural practices are based on sustainability and looking after country." Mr Brennan said.

A 2020 NSW parliamentary report found koalas would become extinct by 2050 in the state unless government intervention to

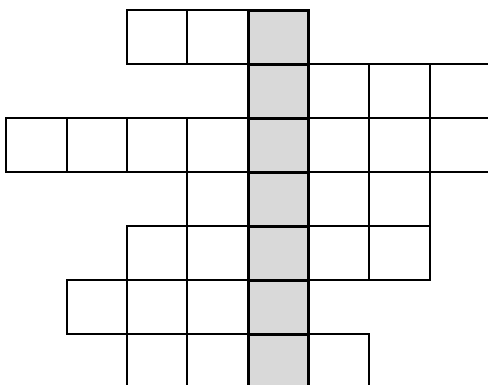
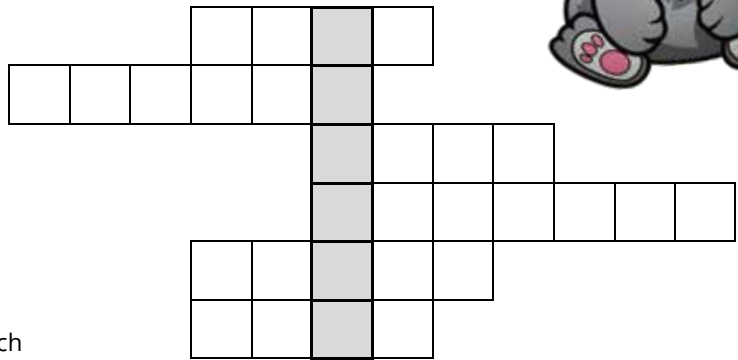
prevent habitat loss was mandated. There are hopes that the conference will help to make koala conservation a significant election issue for the state. Conference convenor, Catherine Cusack, emphasised that policy solutions are crucial ahead of the NSW state election which will be held in early 2023.

MYSTERY CROSS

SOLVE THE CLUES TO REVEAL THE SECRET WORDS



- Line 1 – Another word for the attention provided to patients at the koala hospital
- Line 2 – A newborn koala, about the size of a jellybean
- Line 3 – To rescue and keep safe
- Line 4 – To catch a koala in a special bag
- Line 5 – Pocket-like skin where marsupials carry their young
- Line 6 – A young koala, still using mums' pouch



- Line 1 – The soft hair that covers a koala
- Line 2 – Koalas use these for hearing
- Line 3 – Another word for gum tree
- Line 4 – A koala's favourite part of the plant to eat
- Line 5 – The Port Macquarie _____ Hospital
- Line 6 – The foot of a koala with claws
- Line 7 – A tall plant with a single trunk

KOALA EMERGENCY RESCUE LINE – 02 6584 1522

If you sight a koala call us.

Also Check the website: Contact Us | Koala Conservation Australia Ltd
(koalahospital.org.au) for your questions.

Or Email: info@koalahospital.org.au   



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To view more koalas for adoption go to 'Adopt' at koalahospital.org.au

Choose if you would like the Christmas version or regular certificate



ADOPT CAMPBELLTOWN ELLA

HER STORY: Campbelltown Ella arrived at the Port Macquarie Koala Hospital in March 2022 as a transfer from WIRES (Wildlife Information Rescue Education Service). She is unfit for release as she has neurological deficits, which means her ability to climb is compromised. We suspect this has been caused from trauma to the brain, possibly from being hit by a motor vehicle.

She spent months with us in a rehabilitation yard where we watched for progression of her symptoms and signs of other disease. A subsequent health check has given her the all clear.

Thankfully, her mobility is now good and her gentle demeanour helped us make the decision to transfer her to our facility. Her beautiful almond shaped eyes and the long silver-grey wisps of fur on her ears make her a crowd favourite.

If you would like to adopt Ella please scan the QR code here.

The majority of koalas admitted to the Koala Hospital are released once they have undergone checks and treatment for injury. Only koalas who cannot be released for medical reasons become permanent residents under licence.



Koala Conservation Australia Ltd.

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